

November 2024 | Initial Study

LANDFILL GAS TO ENERGY PLANT PROJECT

City of Newport Beach

Prepared for:

City of Newport Beach

Contact: Joselyn Perez
Community Development Department
Senior Planner
100 Civic Center Drive, Newport Beach
Newport Beach, California 92660
949.644.3312
jperez@newportbeachca.gov

Prepared by:

PlaceWorks

Contact: Dina El Chammas Gass, Senior Associate
3 MacArthur Place, Suite 1100
Santa Ana, California 92707
714.966.9220
info@placeworks.com
www.placeworks.com

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Abbreviations and Acronyms

AAQS	ambient air quality standards
AB	Assembly Bill
ACM	asbestos-containing materials
ADT	average daily traffic
AER	Annual Emissions Reporting
AM&M	Alternative Materials & Methods
amsl	above mean sea level
AQMP	air quality management plan
AST	aboveground storage tank
BAU	business as usual
BMP	best management practice
bgs	below ground surface
BMP	best management practices
CAA	Clean Air Act
CAFE	corporate average fuel economy
CalARP	California Accidental Release Prevention Program
CalEMA	California Emergency Management Agency
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFC	California Fire Code
CFMP	Conceptual Fuel Modification Plan

Abbreviations and Acronyms

cfs	cubic feet per second
CGS	California Geologic Survey
CMP	congestion management program
CNDDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalent
Corps	US Army Corps of Engineers
CSO	combined sewer overflows
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	environmental impact report
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gases
GWP	global warming potential
HCM	Highway Capacity Manual
HQTA	high quality transit area
HVAC	heating, ventilating, and air conditioning system
IPCC	Intergovernmental Panel on Climate Change
L _{dn}	day-night noise level
L _{eq}	equivalent continuous noise level
LBP	lead-based paint
LCFS	low-carbon fuel standard
LOS	level of service
LST	localized significance thresholds

Abbreviations and Acronyms

M _w	moment magnitude
MCL	maximum contaminant level
MEP	maximum extent practicable
mgd	million gallons per day
MMT	million metric tons
MPO	metropolitan planning organization
MT	metric ton
MWD	Metropolitan Water District of Southern California
NAHC	Native American Heritage Commission
NBPD	Newport Beach Police Department
NO _x	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
O&M	operations and maintenance
O ₃	ozone
OCWR	Orange County Waste & Recycling
OES	California Office of Emergency Services
NBFD	Newport Beach Fire Department
PFMP	Precise Fuel Modification Plan
PM	particulate matter
POTW	publicly owned treatment works
ppm	parts per million
PPV	peak particle velocity
PRC	California Public Resources Code
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RMP	risk management plan
RMS	root mean square
RPS	renewable portfolio standard
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCH	State Clearinghouse

Abbreviations and Acronyms

SIP	state implementation plan
SLM	sound level meter
SoCAB	South Coast Air Basin
SO _x	sulfur oxides
SQMP	stormwater quality management plan
SRA	source receptor area [or state responsibility area]
SUSMP	standard urban stormwater mitigation plan
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TCA	Transportation Corridor Agencies
TNM	transportation noise model
tpd	tons per day
TRI	toxic release inventory
TTCP	traditional tribal cultural places
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	urban water management plan
V/C	volume-to-capacity ratio
VdB	velocity decibels
VHFHSZ	very high fire hazard severity zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WEAP	Worker Environmental Awareness Program
WQMP	water quality management plan
WSA	water supply assessment

1. Introduction

1.1 PROJECT OVERVIEW

The Landfill Gas to Energy Plant project (proposed project) involves the installation and operation of a new renewable natural gas (RNG) processing plant and a pipeline interconnection facility (collectively referred to as the RNG facility). The proposed RNG facility would be constructed under a lease agreement with OC Waste & Recycling (OCWR), within the boundary of the closed Coyote Canyon Landfill (CCL), which is owned by the County of Orange and operated by OCWR. The project site is 4.14 acres and surrounded by a 12-foot perimeter wall. The proposed RNG facility would have a total footprint of 38,500 square feet (0.88 acres) and would convert existing landfill gas (LFG) into a pipeline-quality natural gas equivalent. The pipeline interconnection facility would be approximately 6,000 square feet, and the RNG processing plant would be approximately 32,500 square feet. The interconnection facility would include a point of receipt (POR) skid to monitor the quality of the RNG and an 8-inch pipeline extension dedicated to transfer of the RNG from the POR to the existing fossil natural gas pipeline tie-in point, owned by SoCalGas, in the western part of the site. Other project components include new internal access routes and utility and infrastructure improvements. These improvements would include installation of a fire hydrant, an on-site water tank, a septic tank system for the proposed control room, a storm drain for off-site disposal of stormwater, and new underground power and telecommunication lines. Project implementation requires a conditional use permit (CUP) from the City of Newport Beach (City).

1.2 PURPOSE OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT AND THE INITIAL STUDY

The California Environmental Quality Act (CEQA; Public Resources Code Section 21000 et seq.) requires that before a lead agency makes a decision to approve a project that could have one or more adverse effects on the physical environment, the agency must inform itself about and consider the project's potential environmental impacts, inform the public about the project's potential environmental impacts, give the public an opportunity to comment on the environmental issues, and take feasible measures to avoid or reduce potential harm to the physical environment.¹

The City of Newport Beach—in its capacity as lead agency pursuant to CEQA Guidelines Section 15050—is responsible for preparing environmental documentation in accordance with CEQA to determine if approval of the discretionary actions and subsequent development associated with the proposed project would have a significant impact on the environment. As part of the project's environmental review and in its capacity as lead

¹ Pursuant to Public Resources Code Section 21067, lead agency refers to the public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect on the environment.

1. Introduction

agency, the City authorized the preparation of this Initial Study (IS) in accordance with the provisions of CEQA Guidelines Section 15063. Pursuant to Section 15063, purposes of an IS are to:

- Provide the lead agency information to use as the basis for deciding whether to prepare an environmental impact report (EIR) or negative declaration.
- Enable an applicant or lead agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a negative declaration.
- Assist in the preparation of an EIR, if one is required.
- Facilitate environmental assessment early in the design of a project.
- Provide documentation of the factual basis for the finding in a negative declaration that a project will not have a significant effect on the environment.
- Eliminate unnecessary EIRs.
- Determine whether a previously prepared EIR could be used with the project.

As further defined by Section 15063, an Initial Study is prepared to provide the City with information for determining whether an EIR, negative declaration, or mitigated negative declaration (MND) would be appropriate for providing the necessary environmental documentation and clearance for the proposed project.

In of this IS, the City determined that an MND is the most appropriate CEQA document for the proposed project. This IS has been prepared to support the adoption of an MND, which is a written statement by the lead agency that briefly describes the reasons why a project that is not exempt from the requirements of CEQA will not have a significant effect on the environment and, therefore, does not require preparation of an EIR (CEQA Guidelines Section 15371). The CEQA Guidelines require preparation of an MND if the IS prepared for a project identifies potentially significant effects, but 1) revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed MND and IS are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and 2) there is no substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment. (CEQA Guidelines Section 15070[b]).

The City has considered the information contained in this IS in its decision-making processes. The IS was prepared with consultant support, but the analysis, conclusions, and findings made as part of its preparation fully represent the independent judgment and analysis of the City.

1.3 PROJECT LOCATION

The 4.14-acre project site is within the City of Newport Beach, Orange County, California. The City of Newport Beach is bordered by the Pacific Ocean to the south, the neighboring cities of Costa Mesa to the northwest and Irvine to the northeast, and Crystal Cove State Park to the east (see Figure 1, *Regional Location*). The project site is within the northeastern portion of the city.

1. Introduction

Regional access to the project site is from State Route (SR) 73, approximately 0.2 mile to the east via Newport Coast Drive, and from SR-1, approximately 2.7 miles to the south via Newport Coast Drive. Local access to the project site is via Newport Coast Drive.

The project site is at the top of a hill at 20662 Newport Coast Drive and within the boundary of the closed CCL. The project site is on an established level building pad. The pad was previously developed with a landfill gas-to-energy plant which has since been demolished. The entire project site is enclosed by a 12-foot perimeter wall with surrounding trees on all sides (Figure 2, *Coyote Canyon Landfill Map*, and Figure 3, *Local Vicinity*). The area immediately outside the perimeter wall that could be affected by the implementation of the proposed project includes understory species and viewshed trees. The trees are a mix of native and non-native species consisting of eucalyptus, Peruvian peppers, myporiums, white alders, western sycamores, and coast live oak.

1.4 ENVIRONMENTAL SETTING

1.4.1 Existing Land Use

The proposed RNG facility would be built on an approximately 0.88-acre portion of a 4.14-acre property with Assessor's Parcel Number 478-03-071 owned by the County of Orange. The site is within the boundary of the CCL, but in an area that was not used for active landfilling. As shown in Figure 4, *Site Aerial*, the site is completely disturbed (i.e., paved with concrete and asphalt) from the previous landfill gas-to-energy facility, which operated from 1988 to 2015. The facility was demolished and after its closure the site was cleared. Demolition of the previous gas-to-energy facility was evaluated in the Coyote Canyon Landfill Gas Recovery Facility Demolition and Telecom Update project approved in October 2016 (State Clearinghouse (SCH) number 2016081012). On the site currently are generators and tanks, 65-foot cell towers, a power panel and switchgear, a blower pad, and the county flare yard². There is a small, operational support building in the center of the site, three existing parking spots west of the building, and a cell tower in the southeast corner of the site.

The CCL was a Class III municipal solid waste landfill from 1963 to 1990 in the City of Newport Beach. The CCL began disposal operations in 1963 and ceased operations in 1990. The waste footprint of CCL occupied approximately 325 acres, and CCL accepted approximately 60 million cubic yards of household waste, commercial waste, industrial waste, and agricultural waste. On March 23, 1995, the Landfill's Final Closure Plan received certification from the California Department of Resources Recycling and Recovery (CalRecycle), the Regional Water Quality Control Board (RWQCB), and the Orange County Solid Waste Local Enforcement Agency (LEA). Closure for the landfill was officially recorded on May 7, 2003. The closed landfill is now operated and maintained by OCWR under that approved Final Closure Plan. The CCL operated under the Title V permit, which includes an LFG collection and control system with up to 428 vertical gas collection wells³ and an LFG flaring system consisting of four 20-foot flares and two blowers. In 2013, South Coast Air Quality

² Flare yard refers to an area or facility where LFG is collected and directed to a flare system.

³ Landfill gas can be collected by either a passive or an active collection system. A typical collection system, passive or active, is composed of a series of gas collection wells placed throughout the landfill. As gas is generated in the landfill, the collection wells offer preferred pathways for gas migration. Most collection systems are designed with a degree of redundancy to ensure continued operation and protect against system failure. Redundancy in a system may include extra gas collection wells in case one well fails.

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Management District (South Coast AQMD) issued a Title V permit to OCWR to allow a landfill gas-to-energy plant to begin operation to use the LFG generated from CCL to generate electricity. In December 2015, the original gas-to-energy plant closed because the landfill was no longer producing adequate LFG for the facility to remain economically viable. The equipment was removed during the construction of two monopole telecom facilities associated with the Coyote Canyon Landfill Gas Recovery Facility Demolition and Telecom Update project (SCH number 2016081012). The LFG is currently being flared by OCWR.

Beginning in 1994, the Transportation Corridor Agencies (TCA) established 122 acres of coastal sage scrub at the closed CCL, on the main, east, and south canyon landfill areas. This coastal sage scrub restoration was done by TCA as mitigation for the construction of SR-73. The coastal sage scrub restoration area provides an important linkage for the California gnatcatcher (*Poliophtila californica*) and other sensitive species between the San Joaquin Hills and Upper Newport Bay. There are several native and non-native trees surrounding the perimeter of the project site to screen the landfill gas-to-energy facility structures from nearby residential areas (Figure 4). Surface water runoff from the project site currently flows toward two different discharge locations. Approximately 75 percent of the surface runoff flows to a concrete ditch at the north of the project site, which discharges off site to a 24-inch concrete pipe owned by the City. The remaining 25 percent drains north toward a v-gutter at the entrance road that is intercepted by catch basins that deposit the flow to the same 24-inch concrete pipe (see Figure 5, *Utility Plan [Existing]*).

1.4.2 Surrounding Land Use

As shown in Figure 2 and Figure 3, the project site is immediately surrounded by open space on all sides. The main canyon landfill is immediately west of Newport Coast Drive (Figure 2). SR-73 is northeast of the project site and approximately 0.2 mile to the east via Newport Coast Drive. Sage Hill School is south of SR-73, and residential neighborhoods are north of SR-73. There are no sensitive receptors located near the project area. The closest sensitive receptors are the single-family residences approximately 1,300 feet south along Renata Street and the Sage Hill School approximately 1,500 feet to the north.

1.5 PROJECT DESCRIPTION

1.5.1 Proposed Land Use

The City is reviewing an application for the construction of an RNG facility within the boundary of the CCL. RNG is a term used to describe biogas (e.g., LFG) that has been upgraded to pipeline quality natural gas to be used in place of traditional, fossil, natural gas. The RNG facility would treat the current LFG and future quantities of LFG from the closed landfill to be injected into existing Southern California Gas Company (SoCalGas) infrastructure. The LFG is currently being flared off by OCWR. The RNG processing plant would not eliminate or displace OCWR's existing LFG collection and control systems at the CCL. While the current and future quantities of LFG would be diverted to the RNG facility and no longer be flared, the existing flares would remain. The flares would only be used as backup if the RNG facility goes offline, or to combust any excess LFG that is not sent to the RNG facility.

Figure 1 - Regional Location

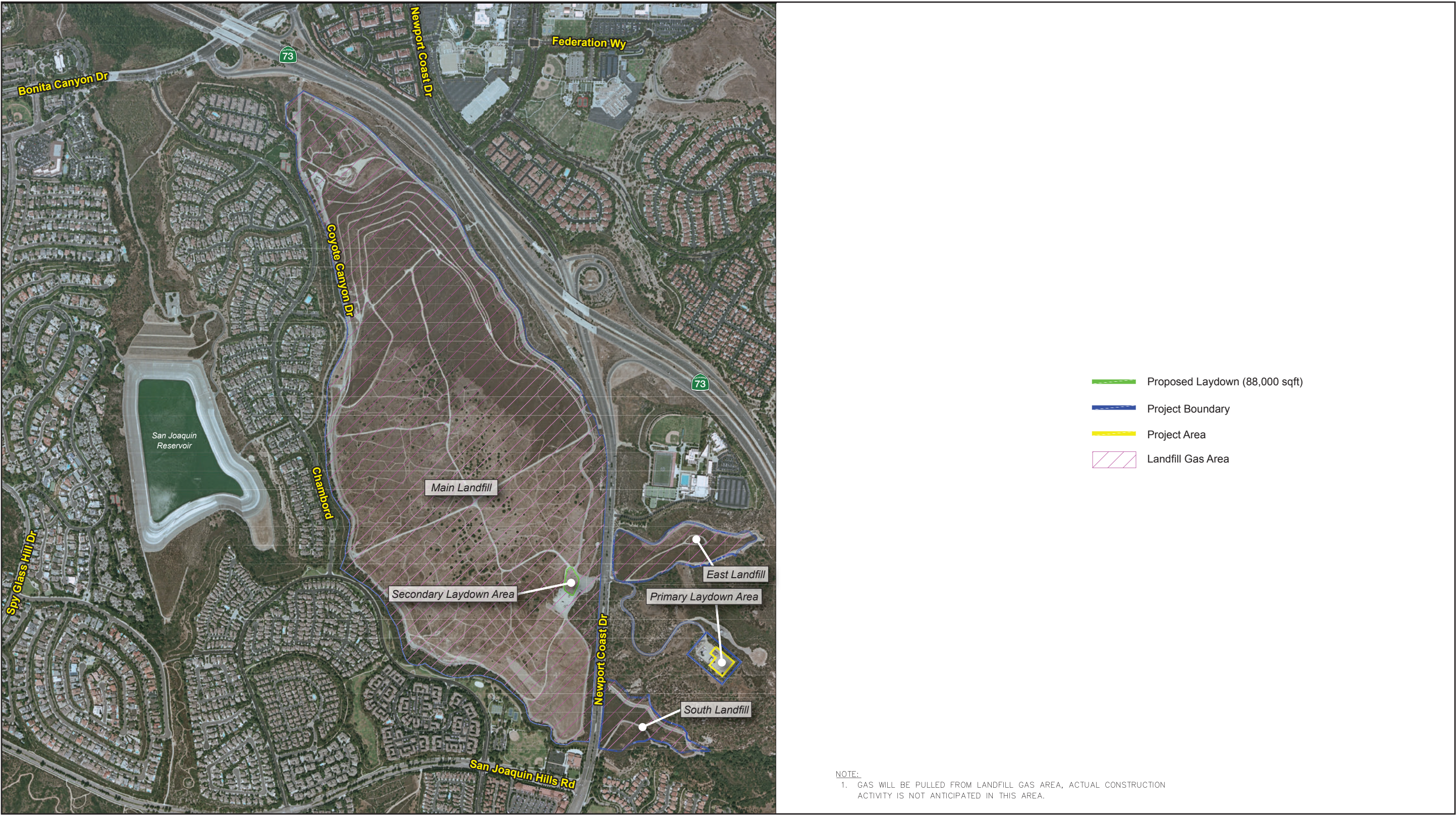


Source: Generated using ArcMap 2023; LSA 2023.

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Figure 2 - Coyote Canyon Landfill Map



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Figure 3 - Local Vicinity



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Figure 4 - Site Aerial



Project Boundary

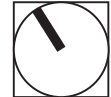
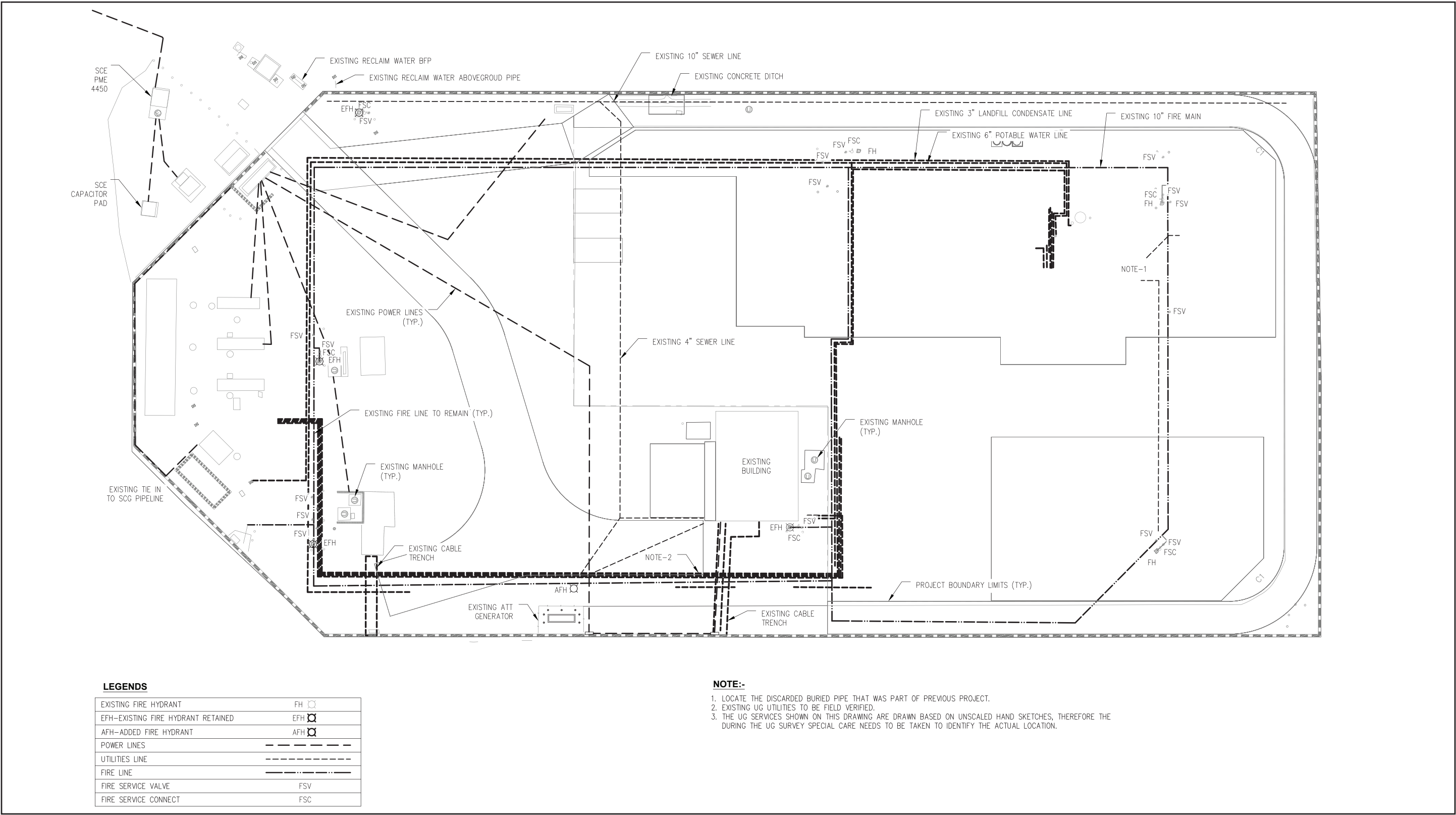


Source: Nearmap 2023.

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Figure 5 - Utilities Plan (Existing)



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1. Introduction

Figure 2 shows the landfill area from which the LFG is collected. No construction is proposed in this area. Construction will occur to the southeast of the landfill, within the 4.14-acre site that currently includes a county flare yard and blower station as well as 65-foot cell towers and associated generators (see Figure 4 and Figure 6, *Conceptual Site Plan*). Two locations for material laydown areas would be utilized; one area is on the project site (primary laydown area), and another 88,000 square-foot graded area (secondary laydown area) is in the landfill area across Newport Coast Drive (see Figure 2).

1.5.2 Site Plan and Character

Biofuels Coyote Canyon Biogas (project applicant) proposes to construct an RNG processing plant and SoCalGas (a local utility provider) would construct a supplemental pipeline interconnection facility. Both would be under a lease agreement with OCWR. The RNG facility would occupy 0.88 acres of the site (see Figure 6) and would not impact the existing LFG collection and control system. The RNG processing plant would have a total footprint of approximately 32,500 square feet composed of pipe racks, various vessels, condensate tank, flare, thermal oxidizer (TOX), and other processing equipment (see Figure 6 for the full list of processing equipment). The pipeline interconnection facilities would include a POR⁴ and 8-inch pipeline extension dedicated to transferring the RNG from the POR to the existing fossil natural gas pipeline tie-in point in the western part of the site. This tie-in point would be reused by SoCalGas to convey the RNG into their system.

Project features and improvements are discussed in more detail below—such as the RNG processing facilities; pipeline injection facilities; mobilization and staging areas; architectural design; landscaping, walls, and lighting; parking, vehicular access, and circulation; plant operations; and infrastructure.

1.5.2.1 RENEWABLE NATURAL GAS PROCESSING FACILITY

Raw biogas from the CCL typically has a methane (CH₄) content between 40 and 45 percent. The gas must go through a series of steps to be converted into RNG. Treatment includes removing moisture, carbon dioxide (CO₂), and trace-level contaminants (e.g., siloxanes, volatile organic compounds [VOCs], hydrogen sulfide [H₂S]) and reducing the nitrogen (N₂) and oxygen (O₂) content. Once purified, the RNG has a CH₄ content of between 96 to 98 percent.

Figure 7, *Renewable Natural Gas Process Flow Diagram*, depicts the general stages of biogas processing and end uses. The first stage of primary treatment (i.e., moisture and particulate removal) is covered by the existing landfill flaring facility operated by OCWR, the treated LFG would then be conveyed through a proposed underground LFG supply line underneath the proposed drive aisle to the RNG processing plant to complete the secondary (i.e., contaminant removal and compression) and advanced treatment (i.e., removal of additional impurities and compressions into a high-Btu gas). The flares operated by OCWR would only be used as backup if the RNG facility goes offline, or to combust any excess LFG that is not used by the RNG processing plant.

The bulk of the H₂S in the LFG is converted into elemental sulfur by the H₂S scrubbing system. Nearly all the VOCs and the CO₂, N₂, and O₂ are removed from the LFG and routed to a 60-foot TOX for destruction. The

⁴ The point of receipt monitors the quality of the RNG to ensure that it meets specifications and includes equipment to prevent non-compliant gas from entering the pipeline.

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gas stream routed to the TOX for destruction is commonly known as waste gas and contains only about 8 percent CH₄. To ensure stable combustion of the waste gas, it is necessary to provide supplemental fuel (i.e., conventional natural gas) to the TOX. The TOX is equipped with recuperative heat exchangers to minimize the amount of supplemental fuel required. The TOX is a continuous source of air emissions. An enclosed 40-foot RNG flare would also be installed to burn off-specification gas from various points in the RNG refining process. The flare has been designed to handle the full design flow of the off-specification RNG and allow the complete combustion process to occur within the flare prior to exiting the flare. As the proposed flare is an enclosed flare, no flames would be visible from the top of the flare tower. The pipeline receiving the RNG has a strict minimum requirement for CH₄ and strict upper limits on CO₂, N₂, and O₂. If these limits are exceeded, it will be necessary to divert the RNG to the proposed flare until the RNG quality returns to acceptable limits. The only other source associated with this facility is a natural gas emergency generator, which would only be operated if there was a loss of power at the facility. The emergency generator would allow the facility to continue to operate in the event the main power source is not available.

1.5.2.2 PIPELINE INJECTION

The RNG produced by the facility is intended to be injected into SoCalGas's existing distribution network. The RNG produced would need to meet the specification requirements of the California Public Utilities Commission (CPUC) and SoCalGas. It is anticipated that the RNG produced would primarily be used as a vehicle fuel.

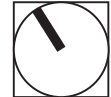
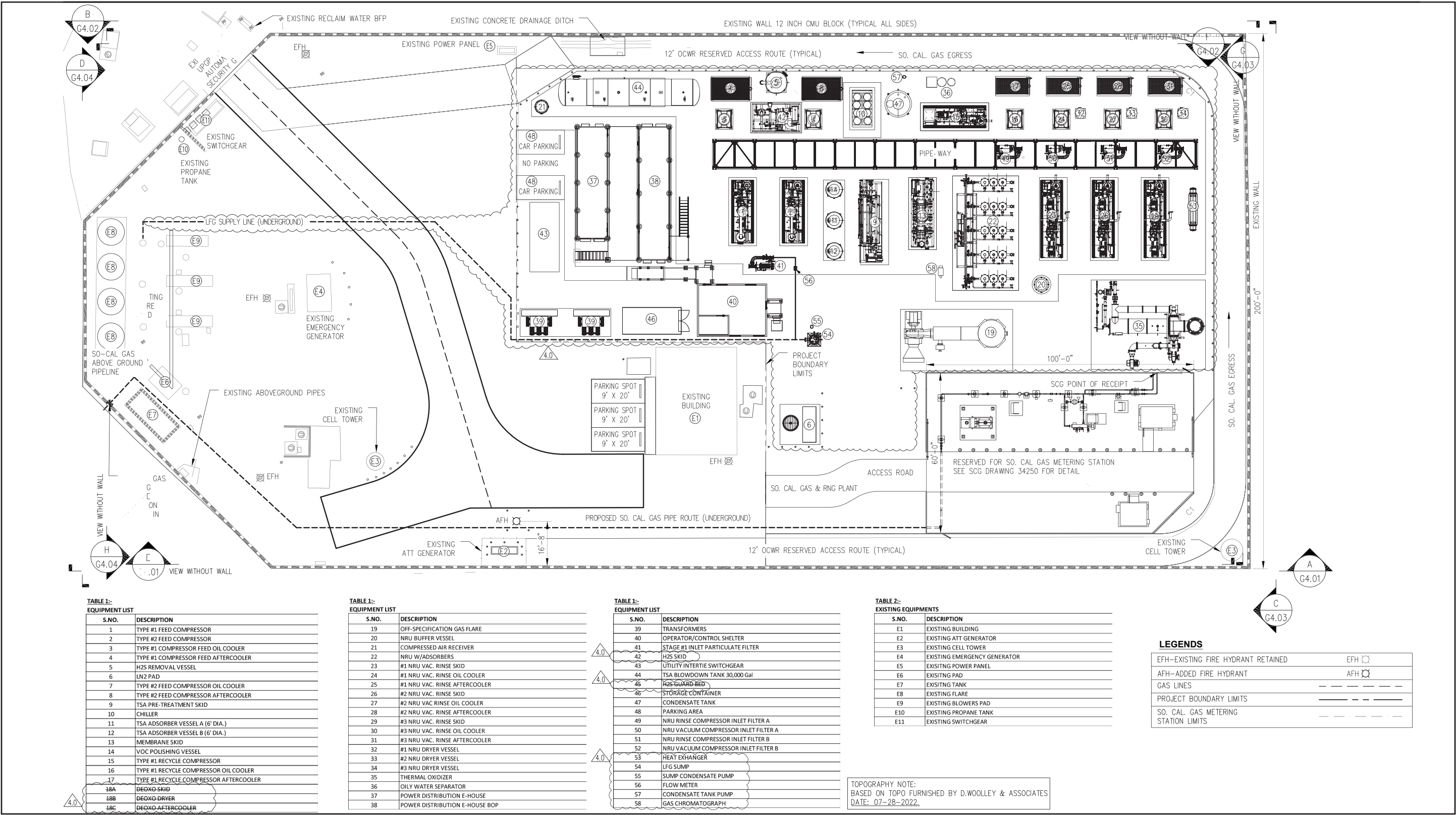
RNG would be delivered to SoCalGas' distribution network through a combination of new construction and existing infrastructure. A new interconnection facility would be required to deliver the RNG into SoCalGas's existing pipeline in the western part of the site. The interconnection facility would include a POR skid to monitor the quality of the RNG and a proposed 8-inch pipeline extension dedicated to transfer the RNG from the POR to the existing fossil natural gas pipeline tie-in point. The POR facility and pipeline extension would be constructed entirely within the existing OCWR pad, surrounded by perimeter walls. The construction area would include 6,000 square feet (60 feet x 100 feet) of permanent space for the POR facility, a temporary staging area, and a temporary workspace.

The POR skid monitors the quality of the RNG to ensure that it meets specifications and includes equipment to prevent noncompliant gas from entering the pipeline. The POR skid also meters and odorizes⁵ the RNG prior to injection. The POR skid would include an odorant tank, pipeline laterals, and approximately 320 feet of 6-inch polyethylene gas pipeline extension within the project compound (see Figure 6).

The proposed pipeline extension would include an 8-inch pipeline on OCWR property that would run across the southern border of the project site to the existing metering station. The metering station has no compressor and produces no noise (see Figure 6). No pipeline excavation or construction would be necessary outside of the OCWR walled compound. The proposed pipeline extension is dedicated to transferring RNG from the POR to the existing natural gas pipeline tie-in point in the western portion of the site on Newport Coast Drive.

⁵ Natural gas is odorless and explosive. The federal U.S. government mandates that any combustible gas in a distribution pipeline must contain an odorant so that if the gas is present at 1/5 of the lower explosive limit, a person can detect it, assuming they have a normal sense of smell. Odorizers inject odorant into natural gas to deliver a rotten egg odor.

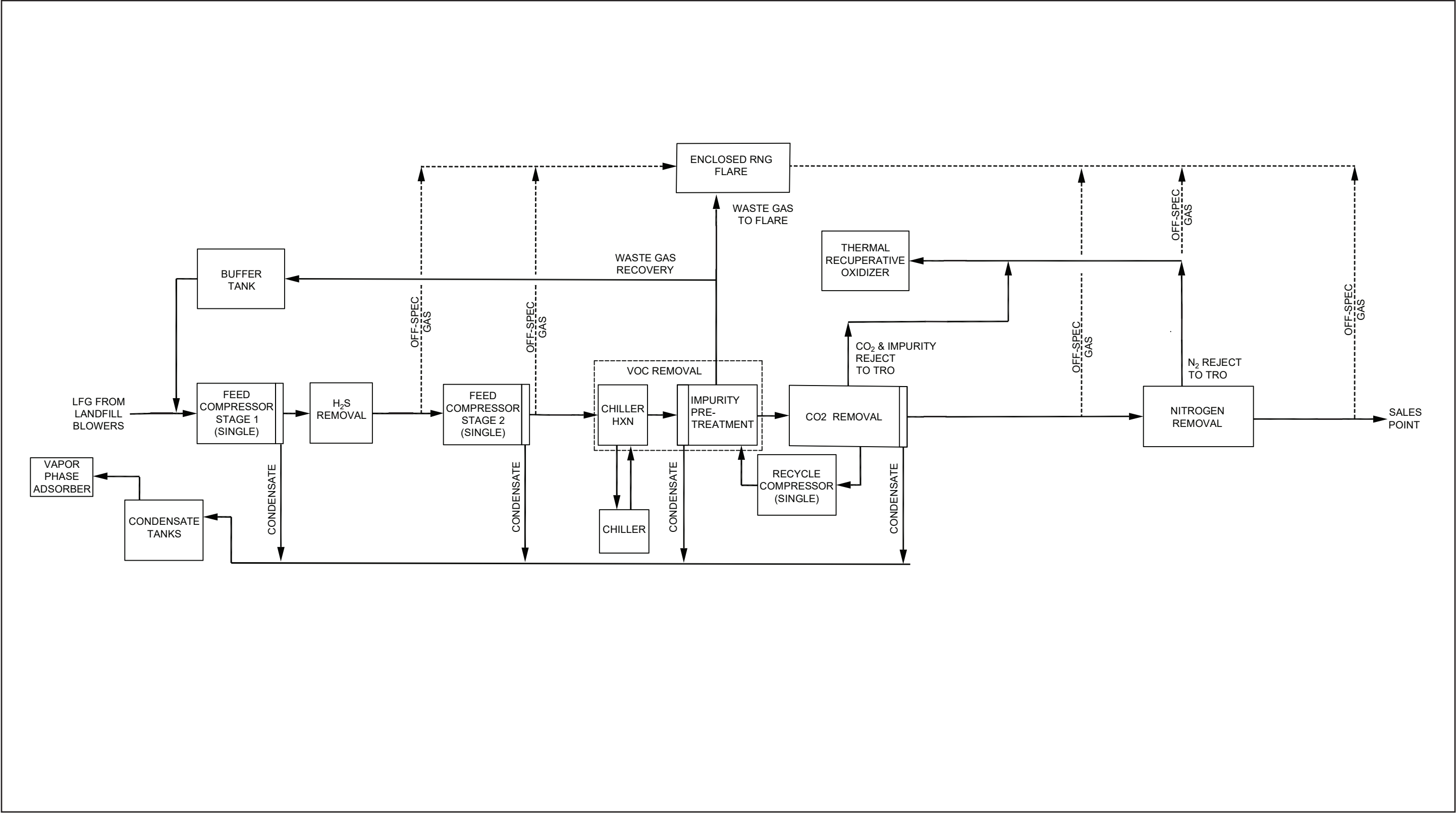
Figure 6 - Conceptual Site Plan



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Figure 7 - Renewable Natural Gas Process Flow Diagram



Source: Archaea Energy 2022.

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1. Introduction

The proposed delivery method also includes a regulated interconnection agreement between the project applicant and SoCalGas. Permitting, interconnection equipment, and construction (performed by SoCalGas) is included within the interconnection scope.

1.5.2.3 MOBILIZATION AND STAGING AREAS

Mobilization activities include the delivery of materials and equipment to the job site. Material and equipment staging during construction would be organized as follows:

- **Material Laydown.** Two locations for material laydown areas would be utilized—one area on the project site (primary laydown area) and another 88,000-square-foot graded area (secondary laydown area) within the landfill area across Newport Coast Drive (see Figure 2). The primary laydown area would serve to support ongoing work activities and would be limited to that end. The secondary laydown area would contain primary stockpiles of bulk materials for the proposed project and staged equipment loaded on tractor-trailer flat beds. The secondary laydown area within the landfill area would be set back and visibly obscured from Newport Coast Drive. This graded area is routinely used for equipment staging by OCWR and has no chaparral and coastal sage scrub species. Coordination with OCWR would be required to share the space accordingly. As materials and equipment are required for the proposed project, they would be transported to the project site via trucks one at a time.
- **Equipment and Material Deliveries.** Deliveries of equipment and material would be staged at the secondary laydown area and hauled one at a time across Newport Drive to proceed up to the project site for offloading. Material deliveries such as piping, fill, gravel, and cement would be staged similarly and hauled one at a time to proceed up to the project site. The existing traffic light at Newport Coast Drive and the roadway leading to the project site would meter construction traffic across Newport Coast Drive, avoiding any bottlenecks at the intersection.
- **Workforce Parking.** Vehicle parking will be provided in the secondary laydown area and a shuttle would transport crews daily to and from the project site.

1.5.2.4 ARCHITECTURAL DESIGN AND CHARACTER

The RNG processing plant and pipeline interconnection facility would install pipe racks, various vessels, a condensate tank, a flare, a TOX, a POR, and other processing equipment with a maximum height of 60 feet, as shown on Figures 8a through 8d, *Structural Elevations*. The 65-foot cell towers would be unaffected and would remain. The proposed structures would be designed to use a nonreflective painting with a camouflage motif to match the surrounding natural elements to lessen the aesthetic impacts of the RNG facility (Figure 9, *Adapted Pattern Palette*).

OCWR implemented a Tree Replacement and Revegetation Plan for aesthetics and visual purposes as part of the Coyote Canyon Landfill Gas Recovery Facility Demolition and Telecom Update project (SCH number 2016081012). The plan included removal of dead or unhealthy non-native viewshed trees and the installation and maintenance of understory species and native viewshed trees (e.g., white alders, western sycamores, and coast live oak) immediately outside the perimeter of the project site. The retained and newly installed trees were

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expected to break up views of the perimeter walls and structures, providing effective long-term visual screening. The existing telecommunication facilities have been designed to look like trees to blend in with the new native trees as they grow and mature.

In compliance with the City of Newport Beach Fire Department (NBFD) requirements, the proposed project would necessitate the removal of 28 trees that are immediately outside the perimeter wall of the project site within an approximately 20-foot-wide non-native grass sloped area (see Figure 10, *Trees to be Removed*). The trees would be removed to protect the surrounding area from fire risk associated with the proposed RNG facility.

1.5.2.5 LANDSCAPING, WALLS, AND LIGHTING

The proposed project would not include any landscaping. The proposed project would retain the existing 12-foot perimeter wall along the site perimeter. Site lighting would consist of security lighting and signage at daytime within the project site boundary. Lighting design would limit uplight and glare.

1.5.2.6 ACCESS, CIRCULATION, AND PARKING

The project would be accessed via Newport Coast Drive and an existing landfill access roadway (see Figure 3). As shown in Figure 6, a new 12-foot OCWR-reserved access route would run along the north, east, and south perimeters of the project site to accommodate the RNG facility's equipment spacing necessary for safe operation and maintenance. This access route would also serve as an egress for SoCalGas. Three existing parking spots west of the existing central building would be retained, and two additional parking spots would be provided adjacent to the proposed intertie switchgear (see Figure 6).

1.5.2.7 OPERATIONAL CHARACTERISTICS

Based on the proposed construction timeline outlined in Section 1.5.4, *Project Construction*, it is anticipated that the proposed project would be operational by December 2025. The proposed operating hours of the RNG facility would be 24 hours per day, seven days a week, with an annual scheduled shutdown for plant maintenance. Unplanned shutdowns are anticipated to be less than 10 times per year. The RNG facility will employ three operators on site for the continuous operation of the facility.

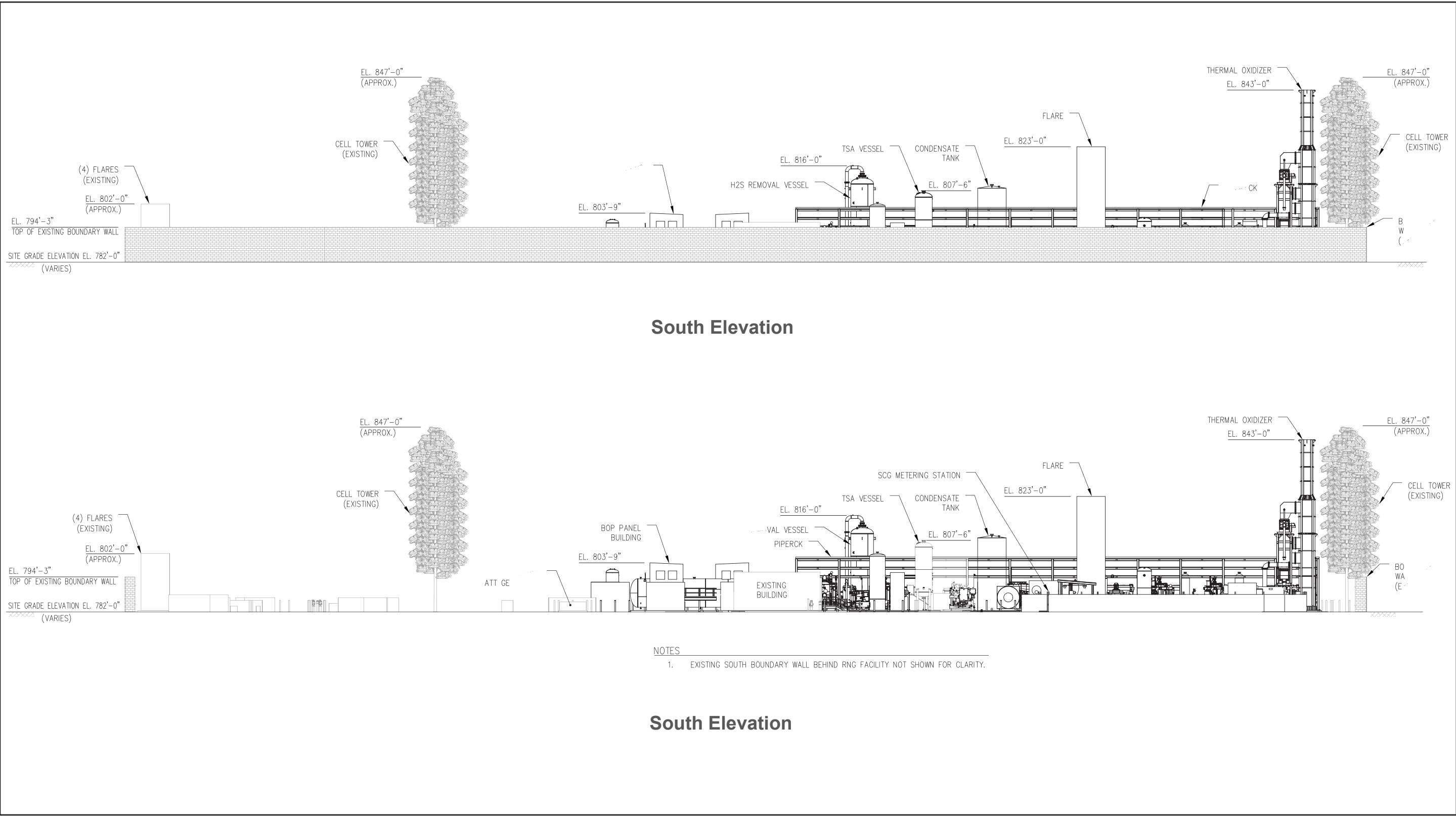
1.5.2.8 INFRASTRUCTURE AND UTILITY AND SERVICE SYSTEMS

Following is a discussion of the infrastructure and utility and service systems needed to accommodate the proposed project. All proposed infrastructure would require approval from the City and, where necessary, from the utility/service provider.

Water System

Irvine Ranch Water District (IRWD) would provide water delivery service to the project site. Within the project site, there are three fire hydrants on the western perimeter and one fire hydrant in the south-central area next to the existing building. An additional fire hydrant would be installed next to the existing generator. To the northwest of the project site, beyond the perimeter wall, there is an off-site reclaimed-water aboveground pipe and backflow prevention device (see Figure 11, *Utilities Plan [Proposed]*).

Figure 8a - Structural Elevations - South Elevation



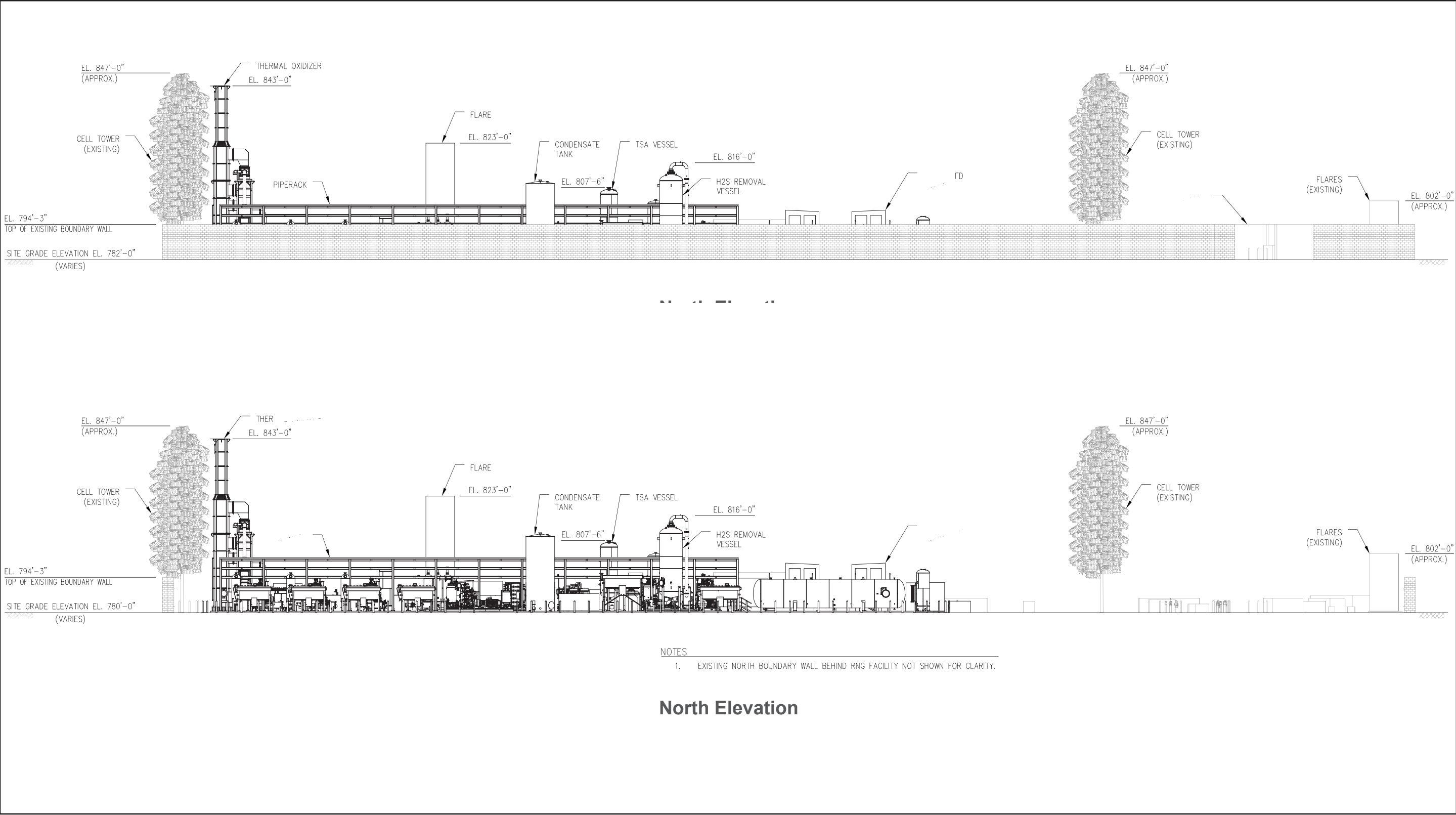
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Scale (Feet)

Source: Biogas Engineering 2023.

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Figure 8b - Structural Elevations - North Elevation

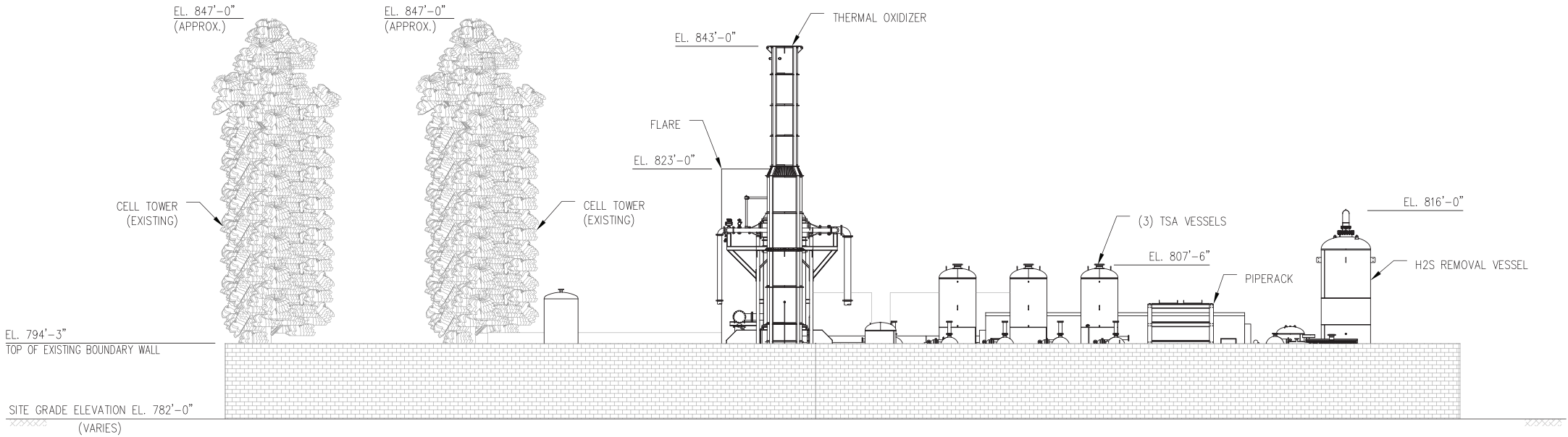


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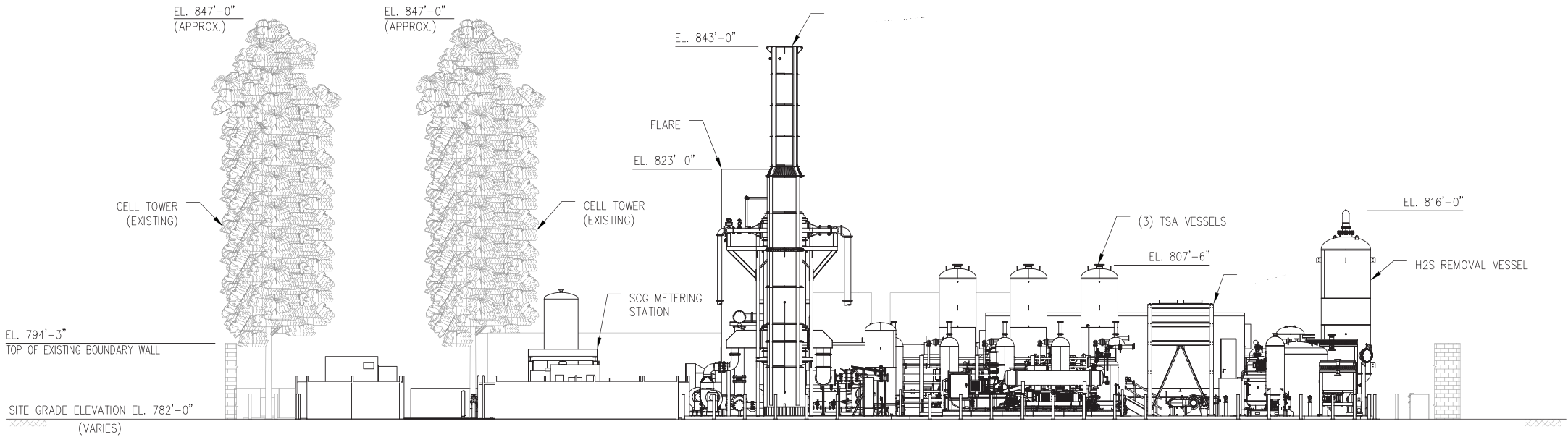
1. Introduction

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Figure 8c - Structural Elevations - East Elevation



East Elevation



- NOTES
- 1. EXISTING EAST BOUNDARY WALL BEHIND RNG FACILITY NOT SHOWN FOR CLARITY.

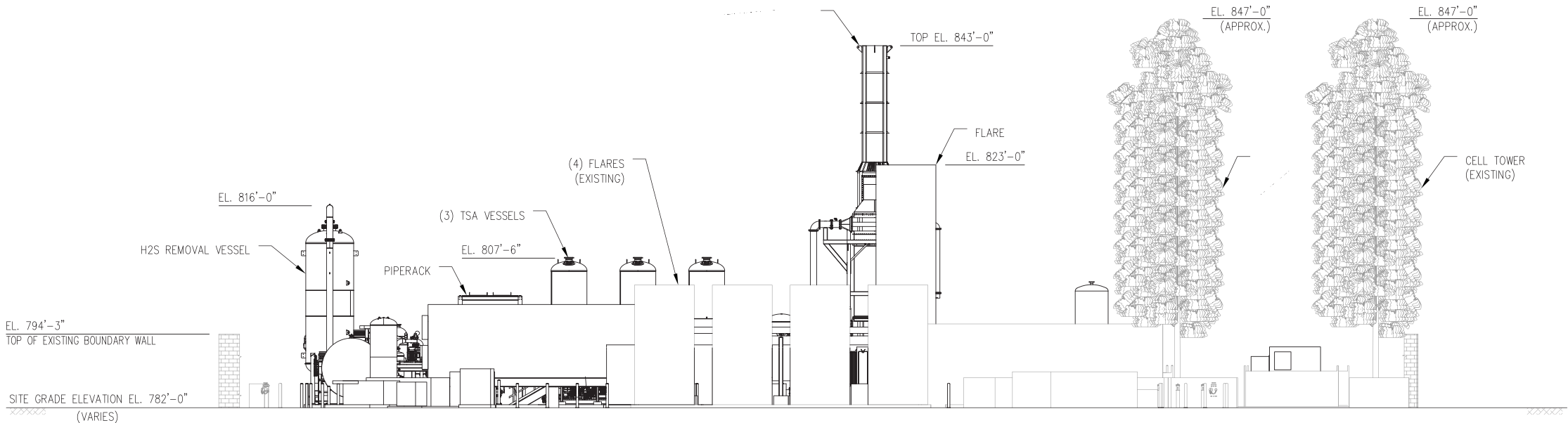
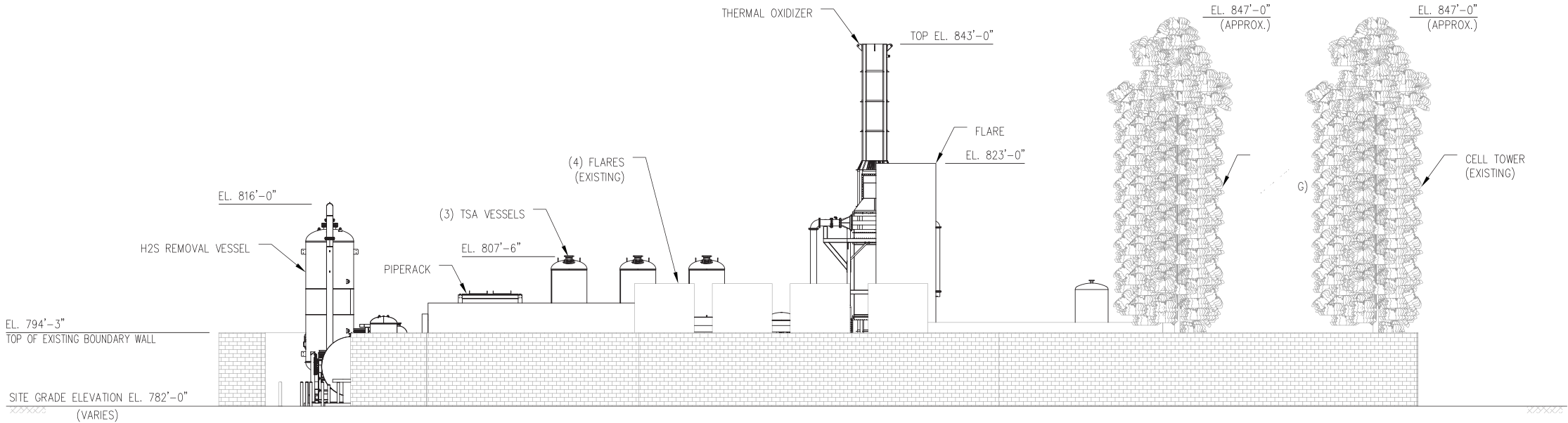
East Elevation



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Figure 8d - Structural Elevations - West Elevation



NOTES
1. EXISTING WEST BOUNDARY WALL BEHIND RNG FACILITY NOT SHOWN FOR CLARITY.

West Elevation



Source: Biogas Engineering 2023.

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Figure 9 - Adapted Pattern Palettes



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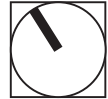
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Figure 10 - Trees to be Removed



Source: Dudek 2021.

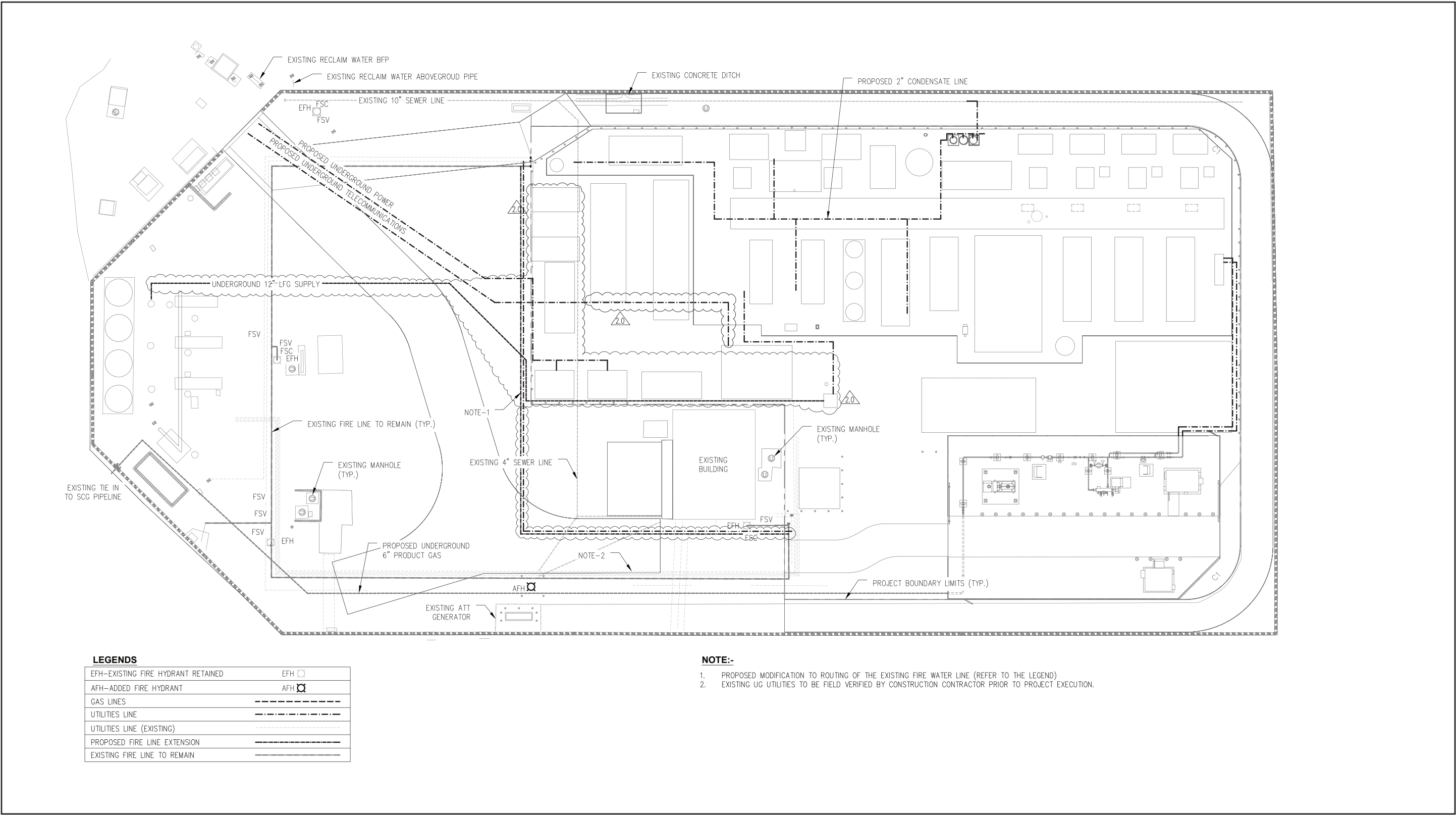
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1. Introduction

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Figure 11 - Utilities Plan (Proposed)



Source: Biogas Engineering 2023.

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The project site is developed with a 10-inch fire main and 6-inch potable water line (see Figure 5). The 6-inch potable water line serves the existing building on site. The proposed project would demolish the sections of the 10-inch fire line and 6-inch potable water line located in the eastern portion of the site within the proposed RNG processing plant footprint. Water would be routed to the proposed control building from OCWR's existing building and regulated through sub-metering. A 15,000-gallon on-site water tank would be installed to provide back-up water service. The back-up tank would be filled by water trucks. No off-site water line construction or upsizing would be required to accommodate the proposed project.

Wastewater System

IRWD would provide wastewater collection and conveyance service to the project site. An existing 10-inch sewer line runs along the northern perimeter of the project site, and an existing 4-inch sewer line runs down the center of the site. The 4-inch sewer line serves the existing building on the site. The proposed project would not include any modifications to these sewer lines. The proposed control room on site would have a septic system to collect the wastewater that would be trucked from the project site.

Condensate Lines

A 3-inch condensate line connects to an Orange County Sanitation District (OCSD) sewer line, which is capped and not in use. The 3-inch condensate line would be demolished as part of the proposed project and new 2-inch condensate lines would be connected to two condensate storage tanks. Condensate would be trucked off site (see Figure 11).

Drainage System

Surface water runoff from the project site currently flows toward two different discharge points located at the north and northwest end of the project site (see Figure 12, *Pre-Project Drainage Map*). Runoff from the eastern 75 percent of the site discharges to a concrete ditch at the north end of the project site and joins an off-site City-owned 24-inch concrete pipe. Runoff from the remaining 25 percent of the site drains to a v-gutter along the entrance of the road to the project site. This flow is intercepted by catch basins that discharge to the same off-site 24-inch concrete pipe.

Solid Waste System

Solid waste generated by the proposed project would be collected and hauled away by CR&R Environmental Services and transported to/disposed of at the Frank R. Bowerman Sanitary Landfill.

Telecommunication Systems

Southern California Edison (SCE) would provide electricity to the project site; SoCalGas would provide natural gas; and Sprint, AT&T, Verizon Wireless, and/or T-Mobile would provide telecommunications services. All new utility infrastructure would be installed underground or placed in enclosed spaces (e.g., utility closets). The proposed project would include new underground power and telecommunication lines (Figure 11).

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1.5.3 Wildland and Defensible Space

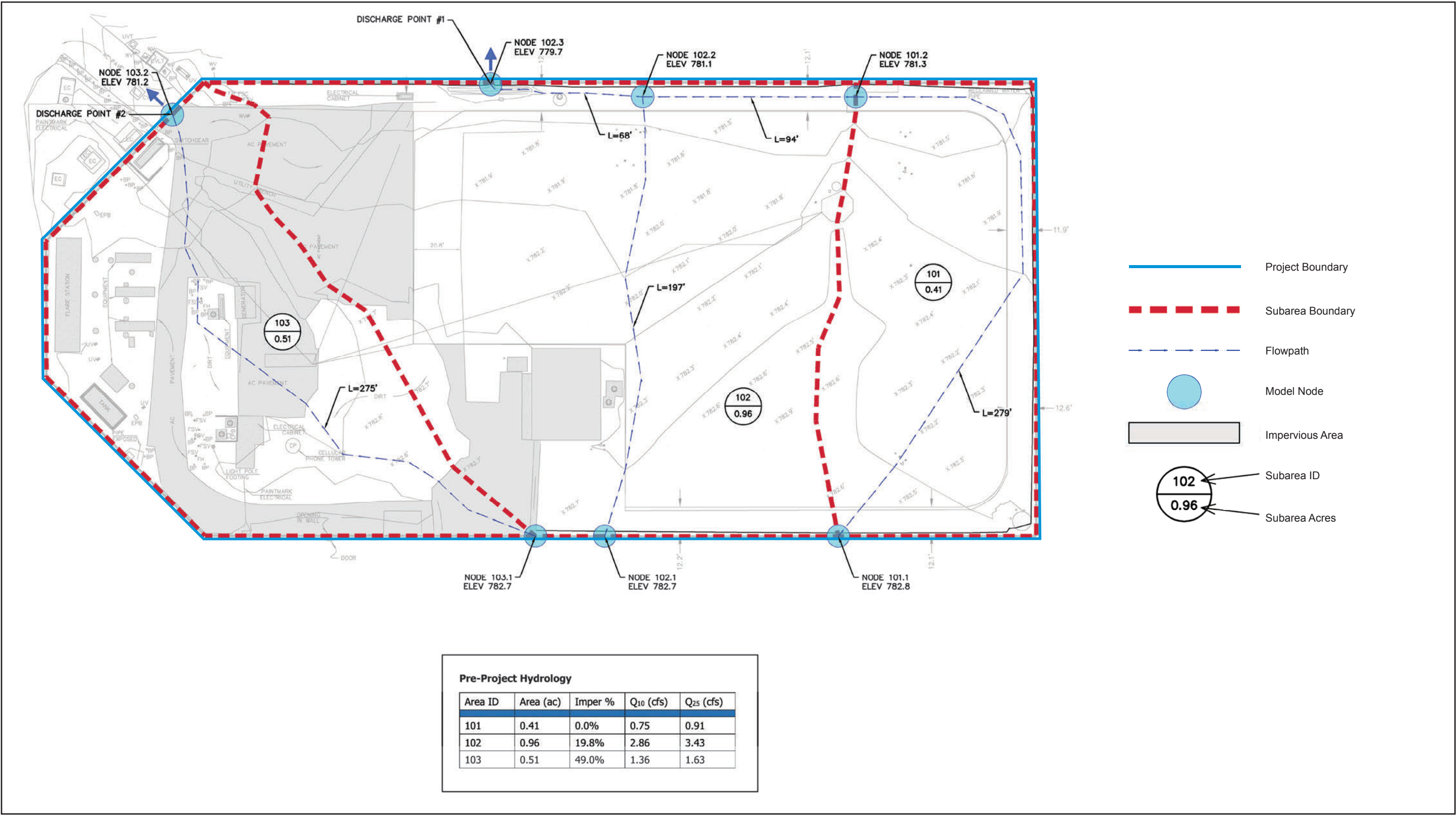
OCWR currently maintains the area outside the perimeter of the walled project site per the Tree Replacement and Revegetation Plan adopted by the City in July 2016 as part of the Coyote Canyon Landfill Gas Recovery Facility Demolition and Telecom Update project (SCH number 2016081012). The Tree Replacement and Revegetation Plan provided guidelines for the removal of dead or unhealthy non-native viewshed trees and installation of native viewshed trees and understory species within OCWR's property limits surrounding the project site. The Tree Replacement and Revegetation Plan proposed the removal of existing non-native trees and replacing them with native trees that provide long-term visual screening of the project site while still maintaining fire safety requirements by maintaining sufficient spacing between tree canopies.

In compliance with NBFD requirements, the proposed project would require the removal of 28 trees that are immediately outside the perimeter wall of the project site within an approximately 20-foot-wide non-native grass sloped area (see Figure 10). The trees would be removed to protect the surrounding area from fire risk associated with the proposed RNG facility. The City adopted Tree Replacement and Revegetation Plan would be supplemented with a project-specific Fuel Modification Plan that would be in compliance with the City's Fuel Modification Plans and Maintenance Standards for Developments and the requirements of NBFD.

1.5.4 Project Construction

Project development is anticipated to take approximately 12 months, from February 2025 to January 2026. Project development would include demolition and rerouting of water and condensate lines, site preparation and soil haul, rough/fine grading and soil haul, pipeline trenching and installation, building construction, paving, architectural coating, and finishing/landscaping. Installation of the POR and pipeline interconnection facilities would take three to four months, concurrent with installation of the RNG facility. Construction would occur from 7:00 a.m. to 6:30 p.m., Monday through Friday, except on federal holidays, in compliance with Section 10.28.040, Construction Activity: Noise Regulations, of the Newport Beach Municipal Code (NBMC). Neighboring residential community members would be notified by the applicant at least one week prior to the start of construction activities. Broader notifications will be made through various means, including placing signs at road crossings in advance of construction.

Figure 12 - Pre-Project Drainage Map



Source: BKF Engineers 2023.

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Table 1, *Construction Equipment*, includes typical equipment necessary for the proposed construction activities. The equipment numbers may vary depending on actual construction requirements.

Table 1 Construction Equipment

Equipment	Approximate Number	Use
Backhoe	2	Excavate and backfill
Boom Truck	1	Deliver and load/unload materials and equipment
Boom Man Lift – all terrain 60 feet	1	Access to elevated work areas
Bulldozer	1	Strip topsoil and move spoils and other materials
Cement Trucks	100	Pour foundations
Coating Rig	1	Apply coating to pipe welds
Ditching Machine	1	Dig trench
Dump Truck	1	Haul spoils and import backfill
Flatbed Trucks – 1.5 ton	2	Haul construction equipment and materials
Forklift Telescoping – all terrain	2	Load and unload and move materials
Mobile Crane – 120 ton	1	Hoist plant equipment and structures
Motor Grader	1	Remove topsoil and grade
Pickup Truck	3	Transport project personnel and light materials
Pipe Truck	1	Transport pipe sections
Radiograph Truck	1	X-ray welds
Scissor Lift – all terrain 26 feet	4	Access to elevated work areas
Side Boom Tractor	1	Lower pipe into open trenches
Tractor Trailer	8	Haul materials and equipment
Utility Tool Truck	6	Store tools
Vacuum Truck	1	Remove water, mud, and other materials from excavations
Water Truck	1	Control dust
Welding Trucks	2	Weld pipe

Source: SCS Engineers 2023.

Temporary power will be supplied to the staging areas during permitted construction hours, as needed, by the construction contractor via portable generators or through connections to nearby electrical infrastructure, if available.

1.5.5 General Plan and Zoning Designation

The Newport Beach General Plan and Newport Beach Zoning Code (Title 20 of the Newport Beach Municipal Code) are the prevailing planning and regulatory plans that govern development and use of the project site. The project site land use and zoning designation is Open Space (OS). The OS designation is intended to provide areas for a range of public and private uses to protect, maintain, and enhance the community's natural resources. Major utilities in the OS designation are allowed with a CUP.

1. Introduction

1.5.6 Required Actions and Approvals

This document is intended to serve as the primary environmental document for all future actions and approvals associated with the proposed project, including all discretionary and nondiscretionary/ministerial actions and approvals requested or required to implement the proposed project.

A discretionary action is an action taken by a government agency that calls for an exercise of judgment in deciding whether to approve a project. Following is a discussion of the discretionary actions and approvals required by government agencies with oversight of the proposed project.

1.5.6.1 LEAD AGENCY

The City is the lead agency under CEQA and has the principal approval authority over the proposed project. Following is a list and discussion of the various discretionary actions and approvals required for project implementation.

- Adoption of an MND and mitigation monitoring and reporting program
- CUP

Further, City review of the proposed project would result in the production of a comprehensive set of draft conditions of approval that will be available for public review prior to consideration of the proposed project for approval by the City. If approved, the proposed project would be required to comply with all imposed conditions of approval.

Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program

This IS has been prepared to support the adoption of an MND. The MND and accompanying IS are appropriate for providing the necessary environmental documentation and clearance for the proposed project and related subsequent activities.

A Mitigation Monitoring and Reporting Program has been prepared that details the required mitigation measures to ensure that project-related environmental effects are reduced to less-than-significant levels. As required by CEQA, the program specifies the required timing for implementing each mitigation measure as well as the responsible parties for implementing and monitoring each mitigation measure.

Conditional Use Permit

The project site is designated and zoned OS, which allows for major utilities with approval of a CUP. As such, the proposed RNG facility would require the approval of a CUP. A CUP provides the process for reviewing uses and associated operational characteristics that may be appropriate in the applicable zoning district, but whose effects on a site and surroundings cannot be determined before being proposed for a specific site. A CUP would ensure compliance with all applicable requirements of Title 20 (Planning and Zoning) of the NBMC.

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1.5.6.2 RESPONSIBLE AND TRUSTEE AGENCIES

A responsible agency is a public agency that proposes to carry out or approve a project for which a lead agency is preparing or has prepared an environmental document. For the purposes of CEQA, the term “responsible agency” includes all public agencies other than the lead agency that have discretionary approval power over the project. The term “trustee agency” means a state agency with jurisdiction by law over natural resources that are held in trust for the people of California and could be affected by a project.

The South Coast AQMD, IRWD, and OCWR are the only agencies identified as responsible agencies for this project. The project applicant would be required to obtain a lease from OCWR for use of the property and an application for the Authority to Construct/Permit to Operate with the South Coast AQMD. For facilities requiring the pretreatment of wastewater, the project applicant would need to submit detailed plans, specifications, and other pertinent data showing the pretreatment facilities and operating procedures for IRWD’s review. IRWD may also require monitoring and metering of the facility’s discharges and the periodic filing of discharge reports to IRWD.

1.5.7 Incorporation by Reference

The information in this IS/MND is based, in part, on the following documents that include the project site or provide information addressing the general project area or use:

- **City of Newport Beach General Plan.** The Newport Beach General Plan gives long-range guidance and direction for decisions affecting the future character of Newport Beach. It is the blueprint and official statement of the community’s physical development as well as its economic, social, and environmental goals. The Newport Beach General Plan was used throughout this IS as the fundamental planning document governing development on the project site.
- **City of Newport Beach Zoning Code.** Title 20 (Planning and Zoning) of the Newport Beach Municipal Code is the regulating tool that the City uses to implement the Newport Beach General Plan, establishing the basic regulations under which land in the City is developed and used. This includes regulations and controls for the design and improvement of development sites, allowable uses, building setback and height requirements, and other development standards. Title 20 of the municipal code’s basic intent is to promote and protect the public health, safety, convenience, and welfare of present and future citizens of Newport Beach. Title 20 was used throughout this IS as a fundamental regulatory document governing development on the project site.

1.5.8 Baseline Conditions

The most recent operating conditions of the CCL have been used throughout this IS/MND as the “baseline conditions” to compare the impacts of the proposed project.

When evaluating the potential impacts of a proposed project, CEQA requires the analysis of impacts against the physical environmental conditions existing at the time the environmental analysis commences, or what is referred to as the environmental baseline. “This environmental setting will normally constitute the baseline

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physical conditions by which a lead agency determines whether an impact is significant” (CEQA Guidelines Section 15125[a]).

2. Environmental Checklist

2.1 PROJECT INFORMATION

1. **Project Title:** Landfill Gas to Energy Plant Project

2. **Lead Agency Name and Address:**

City of Newport Beach
Community Development Department
100 Civic Center Drive, Newport Beach
Newport Beach, California 92660

3. **Contact Person and Phone Number:**

Joselyn Perez, Senior Planner
949.644.3312

4. **Project Location:**

The project site is in the northeastern portion of Newport Beach in Orange County, California. The 4.14-acre project site is at the top of a hill at 20662 Newport Coast Drive within the boundary of the closed Coyote Canyon Landfill (CCL), which is owned by the County of Orange and operated by OC Waste & Recycling (OCWR). The project site is on a previously established level building pad, enclosed by a 12-foot perimeter wall with surrounding trees on all sides. The project site can be accessed from State Route (SR-) 73, approximately 0.2 mile to the east via Newport Coast Drive, and from SR-1, approximately 2.7 miles to the south via Newport Coast Drive.

5. **Project Sponsor's Name and Address:**

Biofuels Coyote Canyon Biogas
201 Helios Way, Floor 6
Houston, TX 77079

6. **General Plan Designation:** Open Space (OS)

7. **Zoning:** Open Space (OS)

8. **Description of Project:**

The proposed project would develop 0.88 acres within the project site with a new renewable natural gas (RNG) processing plant and a pipeline interconnection facility (collectively referred to as the RNG facility) under a lease agreement with OCWR. The RNG facility would have a total building footprint of 38,500 square feet (0.88 acres) composed of pipe racks, various vessels, condensate tank, flare, TOX, and other processing equipment.

2. Environmental Checklist

The first stage of primary treatment is covered by the existing landfill flaring facility at the project site operated by OCWR. LFG from the existing flare yard would be conveyed to the proposed RNG facility through a proposed underground LFG supply line for secondary and advanced treatment. The RNG (treated LFG) would then be injected into SoCalGas infrastructure via the proposed 6,000-square-foot pipeline interconnection facility. The interconnection facility would include a POR skid to monitor the quality of the RNG and a proposed 8-inch pipeline extension dedicated to transfer the RNG from the POR to the existing fossil natural gas pipeline tie-in point in the western part of the site. Other project components include vehicular access, installation of a fire hydrant, a water tank on site, a septic tank for the proposed control room, and new underground power and telecommunication lines.

9. Surrounding Land Uses and Setting:

The project site is entirely enclosed inside a 12-foot perimeter wall and is surrounded by open space on all sides. The main portion of the closed CCL area is west of the project site, across Newport Coast Drive. There are no sensitive receptors immediately adjacent to project site. The closest sensitive receptors are the single-family residences approximately 1,300 feet south, along Renata Street and the Sage Hill School approximately 1,500 feet to the north.

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participating agreement):

- South Coast AQMD
- OCWR

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process (PRC Section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code Section 5097.94 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code Section 21082.3(c) contains provisions specific to confidentiality.

The following California Native American tribes are on the City's notification list pursuant to Assembly Bill (AB) 52:

- Juaneño Band of Mission Indians - Acjachemen Nation
- Gabrielino-Tongva Tribe
- Gabrieleño Band of Mission Indians - Kizh Nation

The City notified these tribes on December 5, 2023, and received no responses.

2. Environmental Checklist

2.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture / Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology/Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials |
| <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Wildfire | <input type="checkbox"/> Mandatory Findings of Significance |

2.3 DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature



Date: November 22, 2024

2. Environmental Checklist

2.4 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) **Earlier Analyses Used.** Identify and state where they are available for review.
 - b) **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) **Mitigation Measures.** For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

2. Environmental Checklist

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
- the significance criteria or threshold, if any, used to evaluate each question; and
 - the mitigation measure identified, if any, to reduce the impact to less than significance.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?		X		
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Disturb any human remains, including those interred outside of dedicated cemeteries?			X	

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X
VII. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
VIII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X
IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?		X		
X. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		X		
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:		X		
i) result in a substantial erosion or siltation on- or off-site;		X		
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
iv) impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	
XI. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?			X	
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
XIII. NOISE. Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
XIV. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X
XV. PUBLIC SERVICES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?		X		
Police protection?			X	
Schools?				X
Parks?				X
Other public facilities?				X
XVI. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
XVII. TRANSPORTATION. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?		X		
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d) Result in inadequate emergency access?				X
XVIII. TRIBAL CULTURAL RESOURCES.				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			X	
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or				X
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			X	
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	

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Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	
XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?		X		
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?		X		
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X	
XXI. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

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Section 2.4 includes a checklist of environmental impacts. This section provides an evaluation of the impact categories and questions contained in the checklist and identifies mitigation measures, if applicable.

3.1 AESTHETICS

The analysis in this section is based partly on the following technical study, which is included in Appendix A to this IS:

- *Aesthetics Simulations*, VisionScape Imagery, September 2023.

Except as provided in Public Resources Code Section 21099, would the project:

a) Have a substantial adverse effect on a scenic vista?

Less-Than-Significant Impact. Newport Beach is in a unique physical setting that provides a variety of coastal views, including those of the open waters of the ocean and bay, sandy beaches, rocky shores, wetlands, canyons, and coastal bluffs. The City has historically been sensitive to the need to protect and provide access to these scenic and visual resources and has developed a system of public parks, piers, trails, and viewing areas. Coastal views are also provided from several streets and highways and, due to the grid street pattern in West Newport, Balboa Peninsula, Balboa Island, and Corona del Mar, many north- to south-trending streets provide view corridors to the ocean and bay.

Significant vistas, as identified in the City's Local Coastal Program, include public coastal views from the following roadway segments:

- Back Bay Drive
- Balboa Island Bridge
- Bayside Drive from Coast Highway to Linda Island Drive
- Bayside Drive at Promontory Bay
- Coast Highway/Santa Ana River Bridge
- Coast Highway/Newport Boulevard Bridge and Interchange
- Coast Highway from Newport Boulevard to Marino Drive
- Coast Highway/Newport Bay Bridge

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- Coast Highway from Jamboree Road to Bayside Drive
- Eastbluff Drive from Jamboree Road to Back Bay Drive
- Irvine Avenue from Santiago Drive to University Drive
- Jamboree Road from Eastbluff Drive/University Drive to State Route 73
- Jamboree Road in the vicinity of the Big Canyon Park
- Jamboree Road from Coast Highway to Bayside Drive
- Lido Island Bridge
- Via Lido Drive
- Newport Center Drive from Newport Center Drive E/W to Farallon Drive/Granville Drive
- Ocean Boulevard
- State Route 73 from Bayview Way to University Drive
- Superior Avenue from Hospital Road to Coast Highway
- University Drive from Irvine Avenue to the Santa Ana—Delhi Channel (Newport Beach 2018)

The closest roadway segment to the project site is Ocean Boulevard, which is approximately 3.4 miles southwest of the project site. Additionally, the proposed RNG facility would be built on an approximately 0.88-acre portion of a 4.14-acre property and enclosed behind a 12-foot wall with public view opportunities limited primarily to motorists along Newport Coast Drive and residences at the northerly end of Arbella, Marisol, Renata, and Portica Streets. The proposed components of the RNG facility that would be visible from these areas are shown in Appendix A. As shown in the visual simulations, the proposed 40-foot enclosed RNG flare and 60-foot thermal oxidizer would have limited view impacts in comparison to existing conditions and would not obstruct any scenic vistas. Therefore, the proposed project would have a less-than-significant impact.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. A scenic highway is generally considered a stretch of public roadway that is designated as a scenic corridor by a federal, state, or local agency. The California Department of Transportation (Caltrans) defines a scenic highway as any freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality.

Based on Caltrans's California Scenic Highway Mapping System, the project site is not on or near a state-designated scenic highway. The closest officially designated State Scenic Highway in Orange County is a 4.2-mile segment on the SR-55 along the Santa Ana River located approximately 2.6 miles to the southwest of the

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project site (Caltrans 2024). Furthermore, the project site does not contain unique or locally important scenic resources. There are no rock outcroppings, significant vegetation, or historic buildings on site, as shown in Figure 4. Therefore, no impact to scenic resources is expected to occur due to project development.

- c) **In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**

Less-Than-Significant Impact. The project site is zoned OS (Open Space) and is designated OS (Open Space) in the General Plan Land Use Element. Major Utilities in the OS designation are allowed with a CUP. The General Plan protects open spaces through land use and natural resources policies, and thus, the existing aesthetic qualities of the open space areas of Newport Beach are maintained. General Plan Policy LU 1.3 would protect the natural setting that contributes to the character and identity of Newport Beach and the sense of place it provides for its residents and visitors. This policy aims to preserve open space resources, beaches, harbors, parks, bluffs, preserves, and estuaries as visual, recreational, and habitat resources. Policy LU 1.6 requires public views, including scenic and visual resources such as open space, mountains, canyons, ridges, the ocean, and the harbor, be preserved and where possible, enhanced from public vantage points. There are several policies within the Natural Resources Element that encourage the preservation of natural landforms such as coastal bluffs and, thus, maintain and enhance the open space areas within the city. For example, Policy NR 23.1 would preserve cliffs, canyons, bluffs, significant rock outcroppings, and site buildings to minimize alteration of the site's natural topography and preserve the features as a visual resource. In addition, Natural Resources Goal NR 21 aims to minimize visual impacts of signs and utilities, and Policy NR 21.1 states that signs, utilities, and antennas shall be sited and designed to minimize visual impacts.

The project site is situated on a ridge at an elevation of approximately 780 feet above mean sea level. The site is relatively flat, but there is a drop in elevation around the site on three sides. On the eastern side of the site, elevations rise to the next hill. The general topographic gradient for the area appears to be falling to the northwest, although there are numerous local variations due to the hill and canyon topography in the area. At the project site, the topographical gradient is slightly falling to the north (OCWR 2016). The project site is approximately 3 miles northeast of the Pacific Ocean and approximately 3.8 miles east of Upper and Lower Newport Bay. The site is completely paved and is surrounded by a 12-foot-high perimeter wall. The RNG facility would be within the walled site. The flare would be properly sized to handle the full design flow of the LFG and allow the complete combustion process to occur within the flare prior to exiting the flare. No flames would be visible from the top of the flare tower.

The closed Coyote Canyon Landfill consists of the main canyon landfill (west of Newport Coast Drive and north of San Joaquin Hills Road), and the east and south canyon landfill areas (east of Newport Coast Drive). Land uses that are immediately adjacent to the project site include the landfill areas, an Irvine Ranch Water District water pumping station, and designated open space. In addition, Sage Hill High School is immediately north of the east canyon landfill area, approximately 1,500 feet north of the project site (see Figures 2 and 3). The closest homes to the project site that have direct views of the project site looking to the north are along the northerly end of Arbell, Marisol, Renata, and Portica Streets, approximately 1,280 feet south of the project

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site, as shown on Figure 3. The San Joaquin Hills Transportation Corridor (SR-73) is immediately north of Sage Hills High School and Newport Coast Drive is approximately 0.15 miles west of the site.

Viewshed simulations of the proposed facility were performed and are included as Appendix A. The visual simulations depict a worst-case scenario with all trees within the 20-foot buffer of the project site removed. It should be noted that not all these trees would be removed (see Figure 10).

The viewshed simulations were taken from three locations based on the closest motorists and residences to the project site:

- **View 1:** Looking southeast from Newport Coast Drive (just south of Sage Hill High School).
- **View 2:** Looking northeast from Newport Coast Drive (just northeast of San Joaquin Hills Road).
- **View 3:** Looking north from the residences at Renata Street.

As shown by these viewshed simulations, the Tan and Camo Pattern Palettes blend the proposed facility to the extent that the view of the site from Newport Coast Drive looking southeast (View 1) is very minimally affected. View 2, which constitutes views from motorists on Newport Coast Drive looking northeast, is slightly affected by the proposed facility. Newport Coast Drive is not a scenic highway and motorists on this road would be driving at an average speed of 60 miles per hour. The view of the proposed facility is not directly within the line of sight of motorists but rather to the northeast and the changes due to the proposed facility would not be noticeable, especially with the Camo Pattern Palette. For View 3, the changes visible from the residences due to the proposed facility are also slightly noticeable, especially with the Camo Pattern Palette. The proposed facility would also not block any views of the San Joaquin Hills and the Santa Ana River; hillsides, ridgelines and canyons; the ocean, harbor, or bays; or coastal views.

Therefore, the proposed project would be consistent with General Plan Policies LU 1.6 and LU 1.3 and would preserve scenic and visual resources. The proposed project would also be consistent with Policies NR 21.1 and NR 23.1 by preserving cliffs, canyons, bluffs, and significant rock outcroppings, and by siting utilities to minimize alteration of the site's natural topography.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Less-Than-Significant Impact. Lighting effects are associated with the use of artificial light during the evening hours. There are two primary sources of light emanating from building interiors and passing through windows and openings, and light from exterior sources (i.e., street lighting, building illumination, security lighting, parking lot lighting, landscape lighting, and signage). Excessive light and/or glare can impair vision, cause a nuisance, affect sleep patterns, and generate safety hazards for drivers. Uses such as residences, elderly care facilities, schools, and hotels are considered light sensitive because occupants have expectations of privacy during evening hours and may be disturbed by bright light. Light spill or trespass is considered a nuisance and is typically defined as the presence of unwanted light on properties adjacent to the property being illuminated. With respect to lighting, the degree of illumination may vary widely depending on the amount of light

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generated, height of the light source, presence of barriers or obstructions, type of light source, and weather conditions.

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light on surfaces of buildings or objects, including highly polished surfaces (such as glass windows or reflective materials) and from broad expanses of light-colored surfaces. Daytime glare is common in urban areas and is typically associated with buildings with exterior façades largely or entirely composed of highly reflective glass. Glare can also be produced during evening and nighttime hours by the reflection of artificial light sources such as automobile headlights. Excessive glare not only impedes visibility, but also increases the ambient heat reflectivity in a given area. Glare-sensitive uses include residences, hotels, transportation corridors, and aircraft landing corridors.

As shown in Figure 3, the project site is surrounded by open space, which is not considered a light-sensitive receptor. Daytime lighting would include proposed security lighting and signage. The closest light-sensitive receptors to the project site include the single-family residences approximately 1,300 feet south along Renata Street and a Sage Hill School approximately 1,500 feet to the north. No impact would occur, and no mitigation measures are necessary.

Nighttime Lighting and Glare

Project development would introduce sources of artificial light from proposed security lighting to the project site and surrounding area similar to the existing gas-to-energy facility. Since project development would take place within the boundaries of the project site, sources of artificial lighting would remain similar to existing nighttime light and glare in the project area. Considering the existing sources of lighting on site, the amount and intensity of nighttime lighting proposed would not be substantially greater or different than existing lighting. It is unlikely that conventional lighting and illuminated operations realized under the proposed project would discernibly, much less adversely, affect ambient light conditions. Additionally, the 12-foot perimeter wall and existing trees surrounding the project site would help shield lighting that would emanate from the project site onto Newport Coast Drive, San Joaquin Hills Road, and SR-73. The enclosed 40-foot RNG flare has also been designed to handle the full design flow of the LFG and allow the complete combustion process to occur within the flare prior to exiting the flare. As the proposed flare is an enclosed flare, no flames would be visible from the top of the flare tower.

Furthermore, project development would be required to comply with California's Building Energy Efficiency Standards for Nonresidential Buildings (CCR, Title 24, Part 6), which outlines mandatory provisions for lighting control devices and luminaires. The City has also adopted specific lighting standards for streetlights and fence, and drainage (Newport Beach 2024a). Compliance with the lighting provisions of the Building Energy Efficiency Standards and the City's lighting standards ensure the proposed project would not result in significant nighttime light and glare impacts.

Daytime Glare

The proposed structures would be designed to use a nonreflective painting with a camouflage motif to match the surrounding natural elements to lessen the aesthetic and daytime glare impacts of the RNG facility (see Figure 9). Additionally, the revegetation effort as part of OCWR's Tree Replacement and Revegetation Plan

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would help shield glare that may reflect from the project site onto Newport Coast Drive, San Joaquin Hills Road, and SR-73. Therefore, daytime glare impacts from project-related architectural design and building materials would be less than significant, and no mitigation measures are necessary.

3.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB). Would the project:

- a) **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

No Impact. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on the project site. The project site is listed as "Other Land", which includes vacant and nonagricultural land surrounded by urban development (DLRP 2022a). As shown on Figure 3, the project site is surrounded by open space and is not adjacent to farmland or agricultural uses. Therefore, project development would not convert mapped farmland to nonagricultural use. No impact would occur, and no mitigation measures are necessary.

- b) **Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

No Impact. The zoning designation on the project site is designated OS and not for agricultural use. Under Williamson Act contracts, private landowners voluntarily restrict their land to agricultural land and compatible open space uses; in return, their land is taxed based on actual use, rather than potential market value. There are no Williamson Act contracts in effect on the project site (DLRP 2022b). No impact would occur and no mitigation measures are necessary.

- c) **Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?**

No Impact. Public Resources Code Section 12220 defines forest land as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

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Timberland is defined in Public Resources Code Section 4526 as “land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis.”

A Timberland Production Zone is defined in Government Section Code CCC as “...an area which has been zoned pursuant to [Government Code] Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, ‘timberland preserve zone’ means ‘timberland production zone.’”

The project site is zoned OS and is not used for forest land as defined by these criteria. No impacts to forest land or timberland would occur, and no mitigation is necessary.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The project site is completely paved with an existing county flare and blower station along with a cell tower and associated generator. Forest land is not present on or in the vicinity of the project site. Therefore, no impacts would occur, and no mitigation is necessary.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. See Sections 3.2(a) through 3.2(d). The project site and its immediate vicinity do not have any agricultural or forestry land uses. Therefore, the project would not involve any changes to land uses or any changes to the environment that would result in the conversion of farmland or forest land to other land uses. No impact would occur, and no mitigation is necessary.

3.3 AIR QUALITY

This section addresses the impacts of the proposed project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthy pollutant concentrations. Appendix B1 provides a background discussion on the air quality regulatory setting, meteorological conditions, existing ambient air quality in the vicinity of the project site, and air quality modeling. Additionally, the analysis in this section is based partly on the following technical studies, which are included as Appendices B2 and B3, respectively, to this Initial Study:

- **Air Quality Impact Analysis** for a Renewable Natural Gas Plant for Biofuels Coyote Canyon, Biogas LLC Newport Beach, California, SCS Engineers, December 2023.
- **Permit to Construct/Permit to Operate Application** for a Renewable Natural Gas Plant for Biofuels Coyote Canyon, Biogas LLC Newport Beach, California, SCS Engineers, December 11, 2023, and revised on July 22, 2024.

3. Environmental Analysis

The primary air pollutants of concern for which ambient air quality standards (AAQS) have been established are ozone (O₃), carbon monoxide (CO), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and lead (Pb). Areas are classified under the federal and California Clean Air Act as either in attainment or nonattainment for each criteria pollutant based on whether the AAQS have been achieved. The South Coast Air Basin (SoCAB), which is managed by the South Coast AQMD, is designated nonattainment for ozone (O₃), and PM_{2.5} under the state and federal AAQS, nonattainment for PM₁₀ under the state AAQS, and nonattainment for lead (Los Angeles County only) under the federal AAQS (CARB 2024).

Furthermore, the South Coast AQMD has identified regional thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including VOC, CO, nitrogen oxides (NO_x), SO₂, PM₁₀, and PM_{2.5}. Development projects below the regional significance thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation. Where available, the significance criteria established by the South Coast AQMD may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

No Impact. The South Coast AQMD adopted the 2022 Air Quality Management Plan (AQMP) on December 2, 2022. Regional growth projections are used by South Coast AQMD to forecast future emission levels in the SoCAB (South Coast AQMD 2022). For Southern California, these regional growth projections are provided by the Southern California Association of Governments (SCAG) and are partially based on land use designations included in city/county general plans. Typically, only large, regionally significant projects have the potential to affect regional growth projections. In addition, the consistency analysis is generally only required in connection with the adoption of general plans, specific plans, and significant projects.

Changes in population, housing, or employment growth projections have the potential to affect SCAG's demographic projections and, therefore, the assumptions in South Coast AQMD's AQMP. These demographic trends are incorporated into SCAG's 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to determine priority transportation projects and vehicle miles traveled (VMT) in the SCAG region. As discussed further in Section 3.14, Population and Housing, because the proposed project would employ only three employees, it would not result in substantial growth compared to the residents and workers in the City. Additionally, as demonstrated in Section 3.3(b), the regional emissions that would be generated by the operational phase of the proposed project would be less than the South Coast AQMD emissions thresholds and, therefore, would not be considered by South Coast AQMD to be a substantial source of air pollutant emissions that would have the potential to affect the attainment designations in the SoCAB. Therefore, the proposed project would not affect the regional emissions inventory or conflict with strategies in the AQMP. Impacts would be less than significant.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?

Less-Than-Significant Impact. The following describes project-related impacts from regional short-term construction activities and regional long-term operation of the proposed project.

3. Environmental Analysis

Regional Short-Term Construction Impacts

Construction activities would generate air pollutants. These emissions would primarily be 1) exhaust from off-road diesel-powered construction equipment, 2) dust generated by construction activities, 3) exhaust from on-road vehicles, and 4) off-gassing of VOCs from paints and asphalt.

Construction activities associated with the proposed project are expected to disturb approximately 0.88 acre on the project site. The proposed project would involve site preparation, grading, pipeline trenching, pipeline installation, building/facility construction, paving, architectural coating, and finishing/landscaping. Construction would occur for 12 months, specifically from February 2025 to January 2026. Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version 2022.1, and are based on the preliminary construction information provided by the project applicant and CalEEMod default inputs (see Appendix B1) Project-related construction emissions from the modeling have been extracted and are shown in Table 2, *Maximum Daily Regional Construction Emissions*. As shown, the maximum daily emissions for VOC, NO_x, CO, SO₂, PM₁₀, and PM_{2.5} from project-related construction activities would be less than their respective South Coast AQMD regional significance threshold values. Therefore, regional air quality impacts from project-related construction activities would be less than significant, and no mitigation measures are necessary.

Table 2 Maximum Daily Regional Construction Emissions

Construction Phase	Pollutants (lbs/day) ^{1, 2}					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Site Preparation, Rough Grading, and Fine Grading Overlap	3	24	24	<1	8	4
Site Preparation	1	8	9	<1	4	2
Pipeline Trenching	<1	4	6	<1	<1	<1
Pipeline Installation	1	7	11	<1	<1	<1
Pipeline Installation, Building/Facility Construction, Paving, Architectural Coating, and Finishing/Landscaping Overlap	5	48	57	<1	2	1
Building/Facility Construction, Paving, Architectural Coating, and Finishing/Landscaping Overlap	5	40	45	<1	2	1
Finishing/Landscaping	<1	2	3	<1	<1	<1
Maximum Daily Emissions	5	48	57	<1	8	4
South Coast AQMD Regional Construction Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Source: CalEEMod Version 2022.1.

Notes: lbs = pounds; VOC = volatile organic compound; NO_x = nitrogen oxides; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = coarse inhalable particulate matter; PM_{2.5} = fine inhalable particulate matter; South Coast AQMD = South Coast Air Quality Management District; CalEEMod = California Emissions Estimator Model.

¹ Based on the preliminary information provided by the project applicant. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast AQMD of construction equipment.

² Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403 such as watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour (25 miles per hour as modeled) on unpaved surfaces, and street sweeping with Rule 1186-compliant sweepers.

3. Environmental Analysis

Long-Term Operation-Related Air Quality Impact

Long-term operation-related impacts would be from emissions generated from non-permitted (i.e., land uses) and permitted sources (i.e., thermal oxidizer) associated with the proposed project. Typical long-term air pollutant emissions that would be generated by the land use components (non-South Coast AQMD permitted) of the proposed project would be from area sources (e.g., landscaping equipment, aerosols, and architectural coatings), energy use (i.e., natural gas), and mobile sources (i.e., on-road vehicles). Based on the anticipated three employees, and the nature of the proposed operations, the proposed project is projected to generate up to six average daily passenger vehicle trips and two average daily heavy-heavy duty truck trips.

Permitted sources would be subject to South Coast AQMD permitting requirements which would ensure compliance with applicable emissions standards. Specifically, the TOX, enclosed RNG flare, and natural gas-powered emergency generator would be sources subject to South Coast AQMD Regulation XIII and would require South Coast AQMD permits to be installed and to operate. These permits are separate from the general construction and occupancy permits issued by the City. Emissions from the permitted equipment would be generated by combustion of the waste gas by the TOX, supplemental natural gas fuel used for the TOX, and off-specification gas by the RNG flare in addition to combustion of natural gas by the natural gas-powered emergency generator.

California Environmental Quality Act Regional Daily Thresholds

Table 3, *Comparison of Project Emissions to Regional Daily Thresholds*, is provided to evaluate potential CEQA-related impacts associated with the proposed project consistent with CEQA Guidelines Section 15125(a) (Section 1.5.8, Baseline Conditions). The maximum daily emissions generated by both the land uses and permitted equipment proposed under the project are provided in Table 3. Additionally, the table accounts for existing emissions currently generated by the four existing LFG flares at CCL. The daily emissions shown for the existing flares are based on the actual emissions generated by the four existing flares based on the latest available emissions data from calendar years 2021 and 2022, as reported to the South Coast AQMD Annual Emissions Reporting (AER) program. Daily existing emissions shown in Table 3 are derived from the annual average between the annual emissions reported in the AER report for calendar years 2021 and 2022, divided by 365 days per year. Emissions for the proposed permitted equipment represent emissions generated under the potential-to-emit scenario, which represents the amount of emissions that could be generated from operation of the proposed permitted equipment operating at maximum capacity under its operational design. As shown in Table 3, the net change in emissions resulting from implementation of the proposed project would not exceed the South Coast AQMD regional significance thresholds. Therefore, impacts to regional air quality from operation of the proposed project would be less than significant, and no mitigation measures are necessary.

3. Environmental Analysis

Table 3 Comparison of Project Emissions to Regional Daily Thresholds

Source	Criteria Air Pollutants (lbs/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Project Land Use Emissions¹						
Mobile ²	0.013	0.086	0.145	0.001	0.042	0.011
Area ³	0.051	0.001	0.069	0.000	0.000	0.000
Energy ⁴	0.001	0.018	0.015	0.000	0.001	0.001
Total	0.065	0.105	0.229	0.001	0.043	0.013
Project Permitted Equipment Emissions⁵						
Thermal Oxidizer – Main Fuel	12	17	58	11	5	5
Thermal Oxidizer – Supplemental Fuel	<1	12	40	<1	<1	<1
Enclosed RNG Flare	12	47	112	18	33	33
Natural Gas-Powered Emergency Generator	1	1	1	<1	<1	<1
Total	25	77	211	29	39	39
Total Daily Emissions						
Project Land Uses	0.065	0.105	0.229	0.001	0.043	0.013
Project Permitted Equipment ⁶	25	77	211	29	39	39
Project Total	25	77	211	29	39	39
Existing Flare Emissions ⁷	11	88	58	41	24	24
Net Change	14	(12)	153	(12)	15	15
South Coast AQMD Regional Threshold	55	55	550	150	150	55
Exceeds Limits?	No	No	No	No	No	NA

Source: CalEEMod Version 2022.1.

Notes: VOC = volatile organic compound; NO_x = nitrogen oxides; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = coarse inhalable particulate matter; PM_{2.5} = fine inhalable particulate; RNG = renewable natural gas; South Coast AQMD = South Coast Air Quality Management District; NA = not applicable.

"<1" = a value less than 1; () = negative value

¹ Emissions from non-permitted components of the proposed project.

² Emissions generated from employee vehicle trips. The quantified emissions are based on six average daily passenger vehicle trip ends generated by three employees and on two average daily truck trip ends generated by one heavy-duty truck.

³ Emissions from architectural coatings, general household cleaning products, and landscaping equipment.

⁴ Emissions from California Emissions Estimator Model (CalEEMod) default natural gas demand used for building heating.

⁵ Based on emissions data provided by SCS Engineers (see Appendix B1).

⁶ Represent the potential-to-emit scenario.

⁷ Represent the average daily based on actual annual emissions data as reported in the South Coast AQMD Annual Emissions Report (AER) for years 2021 and 2022 for the four existing Orange County Waste and Recycling flares (Appendix B1). Because the AER provides only annual emissions data, the annual emissions data are divided by 365 days per year to derive the average daily emissions.

Permitting Thresholds

The proposed project would be subject to South Coast AQMD Regulation XIII. In accordance with South Coast AQMD Rule 1303 (b)(2), Emission Offsets, the project source estimated potential to emit emissions are compared to the offset trigger levels specified in South Coast AQMD Rule 1304(d)(2)(B), Table A. As shown in Table 4, *Comparison of Project Emissions to South Coast Air Quality Management District Offset Trigger Levels*, the permitted equipment under the proposed project would not exceed the offset trigger levels. Thus, the proposed project would not be required to offset emissions.

3. Environmental Analysis

Table 4 Comparison of Project Emissions to South Coast Air Quality Management District Offset Trigger Levels

Source	Criteria Air Pollutants (tons/year)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Thermal Oxidizer – Main Fuel	2.12	2.60	8.65	2.01	0.92	0.92
Thermal Oxidizer – Supplemental Fuel	0.004	0.54	1.81	0.01	0.06	0.06
Enclosed RNG Flare	0.21	0.85	2.04	0.33	0.25	0.25
Natural Gas-Powered Emergency Generator	0.02	0.01	0.01	0.0001	0.002	0.002
Total Annual Emissions	2.352	3.996	12.515	2.347	1.236	1.236
Rule 1304 Offset Trigger Limits ¹	4	4	29	4	4	NA
Exceeds Limits?	No	No	No	No	No	NA

Source: SCS Engineers (see Appendix B1).

Notes: VOC = volatile organic compound; NO_x = nitrogen oxides; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = coarse inhalable particulate matter; PM_{2.5} = fine inhalable particulate; RNG = renewable natural gas; NA = not applicable.

¹ South Coast AQMD Rule 1304(d)(2)(B).

c) Expose sensitive receptors to substantial pollutant concentrations?

Less-Than-Significant Impact. The proposed project could expose sensitive receptors to elevated pollutant concentrations if it causes or significantly contributes to elevated pollutant concentration levels. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

Construction Phase

Criteria Air Pollutants (LSTs)

Localized significance thresholds (LSTs) are based on the state AAQS, which are the most stringent AAQS to provide a margin of safety in the protection of public health and welfare. They are designated to protect sensitive receptors most susceptible to further respiratory distress, including asthmatics, the elderly, very young children, people already weakened by other disease or illness, and people engaged in strenuous work or exercise. The screening-level construction LSTs are based on the size of the project site, distance to the nearest sensitive receptor, and source receptor area (SRA). The nearest off-site sensitive receptors to the project site are the single-family residences approximately 1,200 to 1,300 feet to the south and southwest and the students at Sage Hill School High School approximately 1,500 feet to the north.

Air pollutant emissions generated by construction activities would cause temporary increases in air pollutant concentrations. Table 5, *Localized Construction Emissions*, shows that the maximum daily construction emissions (pounds per day) generated during on-site construction activities compared with the South Coast AQMD screening-level LSTs, for sensitive receptors within 1,250 feet (381 meters) of the project site. Additionally, Table 5 also compares on-site emissions associated with grading of the laydown and parking area to the screening-level LSTs for sensitive within 1,325 feet (404 meters) for NO_x and CO and within 1,890 feet (576

3. Environmental Analysis

meters) for PM₁₀ and PM_{2.5}.⁶ As shown in Table 5, the construction-related on-site emissions would not exceed the screening-level LSTs. Therefore, air quality impacts from project-related construction activities would be less than significant, and no mitigation measures are necessary.

Table 5 Localized Construction Emissions

Construction Activity	Pollutants (lbs/day) ¹			
	NO _x	CO	PM ₁₀ ²	PM _{2.5} ²
Site Preparation, Rough Grading, and Fine Grading Overlap	23	23	8	4
Site Preparation	7	9	4	2
Pipeline Trenching	3	5	<1	<1
Pipeline Installation	7	11	<1	<1
Pipeline Installation, Building Construction, Paving, Architectural Coating, and Finishing/Landscaping Overlap	47	55	2	1
Building Construction, Paving, Architectural Coating, and Finishing Overlap	40	44	1	1
Finishing/Landscaping	2	3	<1	<1
South Coast AQMD 1 Acre or Less Screening-Level LST ³	188	4,959	103	55
Exceeds LST?	No	No	No	No
Rough Grading (Laydown and Parking Area) ⁴	7	9	4	2
South Coast AQMD 1 Acre or Less Screening-Level LST ⁵	194	5,320	156	90
Exceeds Screening-Level LST?	No	No	No	No

Source: CalEEMod Version 2022.1; South Coast AQMD 2008 and 2011.

Notes: lbs = pounds; NO_x = nitrogen oxides; CO = carbon monoxide; PM₁₀ = coarse inhalable particulate matter; PM_{2.5} = fine inhalable particulate matter; South Coast AQMD = South Coast Air Quality Management District; LST = localized significance threshold; SRA = source receptor area.

In accordance with South Coast AQMD methodology, only on-site stationary sources and mobile equipment are included in the analysis.

¹ Where specific information for project-related construction activities or processes was not available modeling was based on California Emissions Estimator Model (CalEEMod) defaults. These defaults are based on construction surveys conducted by the South Coast AQMD.

² Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403 such as watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour (25 miles per hour as modeled) on unpaved surfaces, and street sweeping with Rule 1186-compliant sweepers.

³ Screening level LSTs are based on receptors within 1,250 feet (381 meters) in SRA 20 and an acreage disturbed of less than 1 acre per day.

⁴ On-site rough grading emissions associated with the main project site are used as a proxy for grading emissions associated with this area.

⁵ Screening level LSTs are based on nearest Sage High School receptors within 1,325 feet (404 meters) for NO_x and CO who would not be exposed 24 hours/day and residences located 1,890 feet (576 meters) for PM₁₀ and PM_{2.5}, who are assumed to be exposed 24 hours/day, in SRA 20.

Toxic Air Contaminants (Health Risks)

Emissions from construction equipment primarily consist of diesel particulate matter. In 2015, the Office of Environmental Health Hazards Assessment adopted guidance for preparation of health risk assessments, which included the development of a cancer risk factor and non-cancer chronic reference exposure level for diesel particulate matter over a 30-year time frame (OEHHA 2015). Currently, South Coast AQMD does not require the evaluation of long-term excess cancer risk or chronic health impacts for a short-term project. The proposed project is anticipated to be completed in approximately nine months, which would limit the exposure to on-site

⁶ Reference distance of 1,325 feet is to Sage High School, where students would be the nearest sensitive receptor not exposed to daily emissions 24 hours a day. Reference distance of 1,890 feet is to a multi-family residence south of the laydown and parking area where tenants are assumed to be exposed to daily emissions 24 hours a day.

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and off-site receptors. Furthermore, construction activities would not generate on-site exhaust emissions exceeding the screening-level construction LSTs as previously discussed. Thus, construction emissions would not pose a health risk to on-site and off-site receptors, and project-related construction health impacts would be less than significant.

Operation Phase

Criteria Pollutants (LSTs)

Operation of the proposed facility could expose receptors to a substantial source of criteria air pollutants. According to South Coast AQMD's Localized Significance Threshold Methodology (2008), South Coast AQMD considers a sensitive receptor to be a receptor such as residence, hospital, convalescent facility where it is possible that an individual could remain for 24 hours. Criteria air pollutant concentrations at off-site receptors are shown in Table 6, *Off-Site Criteria Air Pollutant Concentrations*. As shown in the table, the long-term (24-hour and annual) particulate matter concentrations at off-site receptors would not exceed the South Coast AQMD significance thresholds for PM₁₀ and PM_{2.5}. Additionally, the 1-hour and annual average NO_x concentrations in addition to the 1-hour and 8-hour CO concentrations, when added to existing background levels, would not exceed the respective CAAQS. Therefore, localized criteria air pollutant impacts to off-site residential receptors would be less than significant, and no mitigation measures are necessary.

Table 6 Off-Site Criteria Air Pollutant Concentrations

	PM ₁₀ (24-Hour)	PM ₁₀ (Annual)	PM _{2.5} (24-Hour)	NA
PM₁₀ and PM_{2.5} Concentrations				
MER Concentration (µg/m ³)	1.77	0.13	0.56	NA
South Coast AQMD Threshold	2.50	1.00	2.50	NA
Exceeds Threshold?	No	No	No	NA
	CO (1-Hour)	CO (8-Hour)	NO _x (1-Hour)	NO _x (Annual)
CO and NO_x Concentrations				
MER Concentration (ppm)	0.08	0.02	0.02	0.0002
Background Level (ppm)	2.10	1.50	0.05	0.01
Total (ppm)	2.18	1.52	0.07	0.01
South Coast AQMD Threshold – State/Federal	20.0/35.0	9.0/9.0	0.18/NA	0.03/0.0534
Exceeds Threshold?	No	No	No	No

Sources: SCS Engineers (see Appendix B1).

Notes: PM₁₀ = coarse inhalable particulate matter; PM_{2.5} = fine inhalable particulate matter; NA = not applicable; MER = maximum exposed receptor; µg/m³ = micrograms per cubic meter; South Coast AQMD = South Coast Air Quality Management District; CO = carbon monoxide; NO_x = nitrogen oxides; ppm = parts per million.

3. Environmental Analysis

Carbon Monoxide Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 parts per million or the eight-hour standard of 9.0 parts per million. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest, because vehicles queue for longer periods and are subject to reduced speeds.

In 2007, the SoCAB was designated in attainment for CO under both the state and federal AAQS. The CO hotspot analysis conducted for the attainment by South Coast AQMD did not predict a violation of CO standards at the busiest intersections in Los Angeles during the peak morning and afternoon periods.⁷ As identified in South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide, peak CO concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not of congestion at a particular intersection. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection to more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2023). The proposed project would result in up to eight average daily trips. Due to the nominal number of new vehicle trips the proposed project could generate, the proposed project would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the project site. Localized air quality impacts related to mobile-source emissions would be less than significant, and no mitigation measures are required.

Toxic Air Contaminants (Health Risks)

A Health Risk Assessment was prepared by SCS Engineers in accordance with South Coast Rule 1401 to determine if toxic air contaminant emissions associated with the proposed stationary sources (i.e., TOX and enclosed RNG flare) at the facility could pose a risk to nearby sensitive receptors such as residents and students (Appendix B3).

The nearest residential sensitive receptors are the single-family residences to the south at reference distances of 1,394 feet and 1,493 feet from the proposed RNG flare and TOX, respectively. If operational emissions from the proposed stationary equipment do not pose a risk to the nearest single-family residence to the south, then there also would be no risk to sensitive receptors that are located at greater distances. The nearest off-site worker receptor location is at Sage High School about 1,722 feet north of the project site. Health risk was evaluated using the South Coast AQMD Rule 1401 health risk calculation tool version 1.03 (RiskTool), except where the RiskTool could not demonstrate that health risk was less than the limits in Rule 1401. The RiskTool was generated for each of the two sources individually with both under two operating scenarios, one with main waste gas and one with the supplemental fuel for the TOX, and one with the off-specification RNG and one

⁷ The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

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with waste gases for the enclosed RNG flare; and risk results for all were combined for analysis. The Tier 3 AERSCREEN model was used for all sources, as the risk did not pass Tier 1 and 2 (SCS Engineers 2024).

Carcinogenic Health Risks

Health risks associated with exposure to carcinogenic compounds at the proposed project site can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. The South Coast AQMD has established a maximum incremental cancer risk of 10 in a million for CEQA projects. Results of the health risk assessment are shown in Table 7, *Off-Site Health Risk Assessment Results – Air Toxics*. As shown in the table, the incremental cancer risk for the residential and commercial maximum exposed receptors would be below the significance threshold of 10 in a million. Therefore, cancer risk impacts to off-site sensitive receptors would be less than significant, and no additional mitigation measures are necessary.

Table 7 Off-Site Health Risk Assessment Results – Air Toxics

Source	Residential Cancer Risk (per million)	Commercial Cancer Risk (per million)	Acute Hazard Index	Chronic Hazard Index
Thermal Oxidizer	2.41E-07	1.74E-08	3.23E-03	9.13E-03
Thermal Oxidizer – Supplemental Fuel	8.33E-09	4.28E-10	4.05E-06	4.04E-04
Enclosed RNG Flare	4.74E-08	1.63E-09	1.18E-03	1.18E-03
Enclosed RNG Flare (Part 2)	1.69E-07	9.75E-09	2.47E-03	9.95E-03
Natural Gas-Powered Emergency Generator	4.01E-07	2.51E-08	5.56E-02	7.24E-03
Total	8.66E-07	5.43E-08	6.13E-02	2.79E-02
South Coast AQMD Threshold	10	10	1.0	1.0
Exceeds Threshold?	No	No	No	No

Sources: SCS Engineers 2024 (Appendix B3).

Notes: RNG = renewable natural gas; South Coast AQMD = South Coast Air Quality Management District.

Noncarcinogenic Health Risks

To quantify noncarcinogenic impacts, the hazard index (HI) approach was used. The individual HI is the ratio of the estimated maximum one-hour concentration of a toxic air contaminant for a potential maximally exposed individual to its acute reference exposure level. The individual chronic HI is the ratio of the estimated long-term level of exposure to a toxic air contaminant for a potential maximally exposed individual to its chronic reference exposure level. A health hazard is presumed to exist where the HI value equals or exceeds 1.0. As shown in Table 7, the health risk assessment performed for the proposed project indicates that the chronic and acute HI is less than 1.0 for both the residential and worker maximum exposed receptors (Appendix B3). Therefore, chronic and acute noncarcinogenic impacts to off-site sensitive receptors would be less than significant, and no mitigation measures are necessary.

- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

3. Environmental Analysis

Less-Than-Significant Impact. The following discusses potential odor impacts associated with development and operation of the proposed project. The threshold for odor is if a project creates an odor nuisance pursuant to South Coast AQMD Rule 402, Nuisance, which states:

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. As proposed, the project would not involve installing a new waste transfer station, or waste receiving area. Instead, the proposed project would involve conveyance of the LFG currently produced from the closed CCL to the proposed RNG facility via the new proposed underground supply line. Thus, it would not result in the intake of additional waste or installation of new areas where waste decomposition could occur compared to existing conditions. Furthermore, no construction is proposed in the landfill area of the CCL, and the proposed project would also not impact the existing LFG collection and control systems at the CCL. These systems are currently monitored and continuously maintained by OCWR as part of the CCL post-closure maintenance and monitoring to regulate surface emissions and subsurface migration of LFG in accordance with South Coast AQMD Rule 1150.1.

Once the LFG is conveyed to the proposed RNG facility, the bulk of the hydrogen sulfide (H_2S), which is the primary odor-causing compound in LFG, would be converted into elemental sulfur, which is odorless. The remaining hydrogen sulfide (H_2S) in addition to VOCs, CO_2 , nitrogen (N_2), and oxygen (O_2) would be removed from the LFG. These removed compounds, also known as waste gas, would be routed to the proposed TOX for destruction via combustion. These processes would purify the LFG resulting in RNG with a CH_4 content between 96 to 98 percent. Any off-specification RNG would be diverted to the proposed enclosed RNG flare for burn-off, which would not generate any odors. Overall, other than the combustion devices, the LFG treatment process would be a closed-loop, pass-through system, which would control and minimize the release of odors or other emissions. Within-specification RNG would be delivered to the POR skid via the proposed piping built for this purpose. Once delivered to the POR, the RNG would be odorized before injection. The odorization process would also be a sealed-loop system, which would control and minimize the release of odors or gas. Thus, due to the design and process of the proposed RNG facility, the proposed project would not generate odors that would affect a substantial number of people.

During project-related construction activities, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. However, any construction-related odor emissions would be temporary, low in concentration, and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reach any sensitive receptor,

3. Environmental Analysis

they would be diluted to below any level of air quality concern. Construction-related odors would not affect a substantial number of people. Therefore, overall, potential odor impacts from operation- and construction-related activities of the proposed project would be less than significant, and no mitigation measures are required.

3.4 BIOLOGICAL RESOURCES

Surrounding the 4.14-acre site, and beyond the 12-foot wall, there is an approximately 20-foot-wide non-native grass slope landscaped with trees. On September 23, 2024, Katrina Burritt (Dudek), an International Society of Arboriculture (ISA)-Certified Arborist, conducted a tree inventory within the 20-foot-wide non-native grass slope landscaped with trees. She observed the trees species and numbers shown in Table 8, *Tree Species Adjacent to Primary Development Location*. To protect the surrounding area from fire risk, the Newport Beach Fire Department is requiring the removal of 28 trees (Table 8) surrounding the 4.14-acre project site. The recommendation for removal of trees is based on the spacing, health, and species per direction from the Fire Marshal. A tree information matrix is included in Appendix C. Figure 10 shows the trees to remain and the trees to be removed. Due to the proximity of the preserved trees to the removed trees, erosion would not be a significant issue. All removed trees would be flush-cut to the ground-and the remaining stumps are to remain in place with no stump grinding. Stumps would be treated as needed to remove and prohibit re-sprouting.

Table 8 Tree Species Adjacent to Primary Development Location

Common Name	Scientific Name	Remaining	Removal	Number of Trees
Arroyo Willow	<i>Salix lasiolepis</i>	1	7	8
Blue Elderberry	<i>Sambucus mexicana</i>		1	1
California Pepper	<i>Schinus molle</i>	1		1
California Sycamore	<i>Platanus racemosa</i>	11	5	16
Coast Live Oak	<i>Quercus agrifolia</i>	34	5	39
Lemon-Scented Gum	<i>Corymbia citriodora</i>	1	5	6
Mulefat	<i>Baccharis salicifolia</i>		1	1
White Alder	<i>Alnus rhombifolia</i>	9	4	13
Total		57	28	85

The 4.14-acre site and surrounding 20-foot buffer of trees is within the Central-Coastal NCCP/HCP Reserve. The secondary laydown yard is within a Central-Coastal NCCP/HCP Special Linkage and is also a habitat conservation area for the TCA.

Would the project:

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- a) **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

Less-Than-Significant Impact With Mitigation Incorporated. Ground-disturbing activities would occur within the 4.14-acre site that currently includes a county flare yard and blower station as well as 65-foot cell towers and associated generators (see Figure 4). Two locations for material laydown areas would be utilized; one area is on the project site (primary laydown area), and another 88,000-square-foot graded area (secondary laydown area) is in the landfill area across Newport Coast Drive (see Figure 2). The secondary laydown area is directly across from OCWR office trailers and equipment storage facility. Currently, the area is graded and has no biological resources as it has routinely been used for equipment staging. A portion of the 88,000-square-foot area has gravel, and the other portion is dirt. Therefore, the proposed development would not result in permanent direct impacts to coastal sage scrub, chaparral, or other native plant communities within the ground-disturbing areas.

However, trees surrounding the 4.14-acre project site would be removed. The trees provide habitat for nesting birds protected under the Migratory Bird Treaty Act and the California Fish and Game Code. Additionally, the trees provide roosting habitat for pallid bat (*Antrozous pallidus*), Yuma myotis (*Myotis yumanensis*), and big free-tailed bat (*Nyctinomops macrotis*), both of which are California Department of Fish and Wildlife (CDFW) Species of Special Concern (see Appendix C). To avoid potential impacts to nesting birds and reduce potential impacts to bats, Mitigation Measures **BIO-1** and **BIO-2** would be implemented.

Additionally, construction-related, short-term indirect impacts may include inadvertent spillover impacts outside of the construction footprint, dust accumulation on special-status or listed species with any potential to occur, noise, chemical spills, and stormwater erosion and sedimentation. Based on the location of the project and the coastal sage scrub that surrounds the ground-disturbing and tree removal areas, the proposed project would be required to implement the Central-Coastal Subregional NCCP/HCP Minimization/Mitigation Measures Construction-Related Impacts, “Standard Mandatory Construction Conditions Mitigation Measures” (included as Mitigation measure **BIO-3**). Mitigation measures **BIO-4** through **BIO-6** would be implemented to further avoid inadvertent spillover impacts.

Crotch’s bumble bee (*Bombus crotchii*) is a candidate for listing under the California Endangered Species Act. As described previously, the 4.14-acre project site consists of disturbed and developed areas with planted trees along the side slopes. The site and surrounding planted area have a low potential for the Crotch’s bumble bee to occur due to limited floral resources and nesting habitat (see Appendix C). There is a potential for Crotch’s bumble bee to fly over the site from surrounding habitat. The project site currently has four 20-foot flares that operate 24 hours a day (two at a time); after project completion, these flares would only be used as backup if the RNG facility goes offline, or to combust any excess LFG that is not used by the RNG facility. The proposed project would construct a 40-foot enclosed flare; no flames would be visible from the top of the flare tower; and it would not operate 24 hours a day. Therefore, indirect impacts associated with heat from the constructed flare would be reduced compared to existing conditions. Furthermore, the site is on a hilltop with adjacent undeveloped land. If Crotch’s bumble bee flew through this area, they would be expected to fly at elevations in line with the surrounding habitat elevations. Therefore, based on the location of the project site on top of a

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hill and higher than surrounding elevations, combined with the proposed construction of a higher enclosed flare (compared to existing conditions), the proposed project would have a less-than-significant impact on Crotch's bumble bee.

Potential long-term (post-construction) indirect impacts from operations and maintenance (O&M) activities are not anticipated due to the type of project. All O&M activities would occur within the direct project footprint and long-term indirect impacts from maintenance would be minimal.

With implementation of Mitigation Measures **BIO-1** through **BIO-6**, impacts to special-status species as a result of the proposed project would be less than significant.

Mitigation Measures

BIO-1 Preconstruction Nesting Bird Surveys and Avoidance. Construction activities shall avoid the migratory bird nesting season (typically February 1 through August 31) to reduce any potential significant impact to birds that may be nesting in the project site. Additionally, vegetation within the proposed impact area can be removed outside of the nesting season to minimize the potential for birds to nest in the impact footprint. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the project site and within 500 feet of all impact areas must be conducted to determine the presence/absence of protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans, along with an appropriate buffer established around the nest, which shall be determined by the biologist based on the species' sensitivity to disturbance (typically 300 feet for passerines and 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing. On-site construction monitoring shall be conducted when construction occurs in close proximity to an active nest buffer. No project activities shall encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that the nestlings have fledged and the nest is no longer active.

BIO-2 Preconstruction Bat Survey and Avoidance. Prior to the removal of trees that could support roosting bats during the maternity roosting season (March through August), a bat biologist shall survey the areas that could provide suitable roosting habitat for bats to confirm they contain no potential maternity roosts. If a potential maternity roost is present, the following measures shall be implemented to reduce the potential impact to special-status bat species to a less-than-significant level:

1. **Maternity Roosting Season Avoidance.** All proposed construction activities that could impact suitable roosting habitat, including bat roost exclusion, shall occur outside the general bat maternity roosting season of March through August to reduce any potentially

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significant impact to maternity roosting bats. If the maternity roosting season cannot be avoided, then implement Items 2 and 3 below, prior to the maternity roosting season, to ensure no impacts occur to roosting bats during the exclusion process.

2. **Replacement Roost Installation.** If there is a potential or known maternity roost within a tree to be removed, replacement roost installation shall occur outside of the maternity roosting season. At least one month prior to the exclusion of bats from a roost, the biologist shall procure and install bat boxes from a reputable vendor, such as Bat Conservation and Management, to allow bats sufficient time to acclimate to a new potential roost location. The bat boxes shall be installed in close proximity to the trees and in an area that is in close proximity to suitable foraging habitat (i.e., near coast live oak woodland). Additionally, the bat boxes shall be oriented to the south or southwest, and the area chosen for the bat boxes must receive sufficient sunlight (at least 6 hours) to allow the bat boxes to reach an optimum internal temperature (approximately 90°F) to mimic the existing bat roost. The bat boxes shall be suitable to house crevice-roosting bat species and large enough to contain a minimum of 50 bats (e.g., Four Chamber Premium Bat House or Bat Bunker Plus). The bat boxes shall be installed on a minimum 20-foot-tall steel pole. The bat boxes should be installed under the guidance of the bat biologist.
3. **Roost Exclusion.** Roost exclusion must only occur outside of the maternity roosting season, and during the time when bats are most active (early spring or fall) to increase the potential to exclude all bats from roosts and minimize the potential for a significant impact to occur by avoiding the maternity roosting season. Approximately 1 month after bat boxes have been installed, exclusion of the existing roost shall occur. The primary exit points for roosting bats shall be identified, and all secondary ingress/egress locations shall be covered with a tarp, wood planks, or other methods, as directed by the bat biologist, to prevent bats from leaving from other locations. The primary exit point shall remain uncovered to allow exclusion devices to be installed. Exclusion devices may consist of a screen (poly netting, window screen, or fiberglass screening), foam, wood, or backer rods installed at the primary exit point, so bats are not able to return to the roost after emerging. The exclusion devices shall be installed under the direction of the bat biologist and shall be installed at night to increase the potential that bats have already left the roost and are less likely to return. Once it is confirmed by the bat biologist that all primary and secondary exit/entrance points have been covered and the exclusion devices are properly in place, a one-week exclusion period shall commence. A passive acoustic monitoring detector shall be deployed during the one-week exclusion period to monitor if bat activity has decreased during the exclusion period. Periodic monitoring (one or two evenings) by the bat biologist during the exclusion period should also be conducted to observe if any bats are still emerging from trees to be removed. On the final night of the exclusion period, an active monitoring survey should be conducted to ensure that no bats are emerging from trees to be removed and to confirm that exclusion has been successful. Continued presence of roosting bats in trees that are to be removed shall require an adjustment to the exclusion devices and schedule. The exclusion devices may remain in place until the start of tree removal. After the initial bat survey, if any additional bats are

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found roosting in any proposed tree removal locations, additional exclusion shall be required and follow the same methodology described in this mitigation measure.

BIO-3

Standard Mandatory Construction Conditions Mitigation Measures.

1. To the extent practicable, no clearing of coastal sage scrub (CSS) habitat that is occupied by nesting gnatcatchers shall occur during the breeding and nesting season (February 15 through July 15). It is expressly understood that this provision and the remaining provisions of these “construction minimization measures” are subject to public health and safety considerations. These considerations include unexpected slope stabilization, erosion control, and emergency facility repairs. In the event of such public health and safety circumstances, the applicant shall provide United States Fish and Wildlife Service (USFWS)/California Department of Fish and Wildlife (CDFW) with the maximum practicable notice (or such notice as is specified in the NCCP/HCP) to allow for capture of gnatcatchers, cactus wrens, and any other CSS Identified Species that are not otherwise flushed and shall carry out the following measures only to the extent practicable in the context of the public health and safety considerations.
2. Prior to the commencement of clearing operations or other activities involving significant soil disturbance, all areas of CSS habitat to be avoided under the provisions of the NCCP/HCP, shall be identified with temporary fencing or other markers clearly visible to construction personnel. Additionally, prior to the commencement of clearing operations or other activities involving disturbance of CSS, a survey shall be conducted to locate gnatcatchers and cactus wrens within 100 feet of the outer extent of projected soil disturbance activities and the locations of any such species shall be clearly marked and identified on the construction/grading plans.
3. A monitoring biologist, acceptable to the USFWS/CDFW shall be on site during any clearing of CSS. The applicant shall advise USFWS/CDFW at least 7 calendar days (and preferably 14 calendar days) prior to the clearing of any habitat occupied by identified species to allow USFWS/CDFW to work with the monitoring biologist in connection with bird flushing/capture activities. The monitoring biologist shall flush identified species (avian or other mobile identified species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. If birds cannot be flushed, they shall be captured in mist nets, if feasible, and relocated to areas of the site to be protected or to the NCCP/HCP Reserve system. It shall be the responsibility of the monitoring biologist to ensure that identified bird species shall not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis.
4. Following the completion of initial clearing/earth movement activities, all areas of CSS habitat to be avoided by construction equipment and personnel shall be marked with temporary fencing or other appropriate markers clearly visible to construction personnel.

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No construction access, parking, or storage of equipment or materials shall be permitted within such marked areas.

5. In areas bordering the NCCP Reserve System or Special Linkage/Special Management areas containing significant CSS identified in the NCCP/HCP for protection, vehicle transportation routes between cut-and-fill locations shall be restricted to a minimum number during consistent with project construction requirements. Waste dirt or rubble shall not be deposited on adjacent CSS identified in the NCCP/HCP for protection. Preconstruction meetings involving the monitoring biologist, construction supervisors, and equipment operators shall be conducted and documented to ensure maximum practicable adherence to these measures.
6. CSS identified in the NCCP/HCP for protection and within the likely dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on the leaves, as recommended by the monitoring biologist.

BIO-4 **Education Program.** An education program (Worker Environmental Awareness Program [WEAP]) for all persons employed or otherwise working in the project area shall be administered before performing impacts. The WEAP shall consist of a presentation from the designated biologist that includes a discussion of the biological resources and mitigation measures described in the California Environmental Quality Act (CEQA) document. Interpretation for non-English-speaking workers shall be provided, and the same instruction shall be provided to all new workers before they are authorized to perform work in the project area. After completion of the WEAP, employees shall sign a form stating they attended the program and understand all protection measures.

BIO-5 **Hazardous Waste.** The applicant shall immediately stop work and, pursuant to pertinent State and federal statutes and regulations, arrange for repair and cleanup by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so.

BIO-6 **BMPs to Avoid Indirect Impacts to Special-Status Resources.** To reduce any indirect impacts to special-status biological resources adjacent to construction and due to tree removals, best management practices (BMPs) shall be implemented to control dust pollution, prevent discharge of potentially harmful chemicals, and prevent changes in hydrology. BMPs shall include, but not be limited to, installing erosion and sedimentation control devices, applying water to control dust, placing drip pans under equipment when not in use, refueling in designated areas, and containing concrete washout properly, among other practices.

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- b) **Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

Less-Than-Significant Impact With Mitigation Incorporated. The 4.14-acre site, which includes the primary laydown area, is currently entirely developed. Surrounding the 4.14-acre site, there is an approximately 20-foot-wide non-native grass slope landscaped with trees. The secondary laydown area is disturbed habitat.

The project site, access road to the project site, and the open space immediately outside of the perimeter wall enclosing the project site does not contain any riparian habitat or surface water bodies (USFWS 2024a). The California Department of Fish and Wildlife's Lands Viewer tool indicates that the site is not within an ecological reserve or wildlife area (CDFW 2024a). Therefore, there would be no direct impacts to riparian habitat or other sensitive natural communities.

Construction-related, short-term indirect impacts may include inadvertent spillover impacts outside of the construction footprint, dust accumulation on sensitive natural communities, chemical spills, and stormwater erosion and sedimentation. Mitigation measures **BIO-3** through **BIO-7** would be implemented to avoid inadvertent construction related spillover impacts. Potential long-term (post-construction) indirect impacts from O&M activities are not anticipated due to the type of project. All O&M activities would occur within the direct project footprint, and long-term indirect impacts from maintenance would be minimal.

With implementation of Mitigation Measures **BIO-3** through **BIO-7**, impacts would be less than significant.

Mitigation Measure

BIO-7 Avoidance of Coastal Sage Scrub. For the proposed demolition activities and construction of the RNG facility, all vehicles using the project site access road shall remain on the asphalt access road. To prevent any impacts to coastal sage scrub, no staging areas, stockpiles, equipment storage, or vehicle turn outs shall be permitted on the shoulder of the access road.

- c) **Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

No Impact. Wetlands are defined under the federal Clean Water Act as land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include areas such as streams, swamps, marshes, and bogs. No waters of the U.S./State, including wetlands, regulated by the United States Army Corps of Engineers, CDFW, or RWQCB exist on the project site. Based on the USFWS National Wetlands Inventory,⁸ approximately 30 feet east of the 4.14-acre project site, there is mapped riverine habitat and freshwater forested/shrub wetland habitat approximately 400 feet northeast of the project site (USFWS 2024b).

⁸ Riverine system includes all wetlands and deep-water habitats within a channel (USFWS 2024).

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The project site is a completely paved lot, and project development would take place within the boundaries of the project site and would not impact waters of the U.S./State, including wetlands. The secondary laydown area is disturbed and would not impact waters of the U.S./State, including wetlands. Therefore, project development would not impact waters of the U.S./State, including wetlands directly.

Construction-related, short-term indirect impacts may include inadvertent spillover impacts outside of the construction footprint, dust accumulation on waters, chemical spills, and stormwater erosion and sedimentation. Potential long-term (post-construction) indirect impacts from O&M activities are not anticipated due to the type of project. All O&M activities would occur within the direct project footprint, and long-term indirect impacts from maintenance would be minimal.

With implementation of Mitigation Measures **BIO-3** through **BIO-7**, indirect impacts to sensitive natural communities would be less than significant.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact. There are no corridors valuable for overland wildlife movement or migration on the project site. The project site is completely paved with an existing county flare and blower station along with a cell tower and associated generator, which does not provide suitable habitat for overland wildlife movement or habitat for any native resident or wildlife species. As mentioned in Section 3.4(c), project development would take place within the boundaries of the project site and would not impact the nearby wetland habitats. No impact would occur, and no mitigation is necessary.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The City of Newport Beach does not have a tree preservation policy or ordinance that protects trees on privately owned land. Therefore, the project will not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less-Than-Significant Impact With Mitigation Incorporated. The 4.14-acre site project site and surrounding 20-foot buffer of trees is in the Central-Coastal NCCP/HCP Reserve. The secondary laydown yard is in a Central-Coastal NCCP/HCP Special Linkage and is also habitat conservation for the TCA. No coastal sage scrub or other covered habitat would be impacted by the project. To avoid inadvertent impacts to covered habitats and covered species, the Central-Coastal Subregional NCCP/HCP Minimization/Mitigation Measures Construction-Related Impacts, Mitigation Measure **BIO-3** would be implemented.

With implementation of **Mitigation Measure BIO-3**, the proposed development would not result in a taking or disturbance of coastal sage scrub, chaparral, or other native plant communities outside of the ground-disturbing areas (see Figures 2 and 4). Therefore, the proposed project is not anticipated to impact the Central-

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Coastal NCCP/HCP Reserve and Special Linkage in any way. Implementation of the proposed project would not conflict with provisions of an adopted conservation plan and no impact would occur.

3.5 CULTURAL RESOURCES

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?

No Impact. CEQA Guidelines Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally, a resource is considered “historically significant” if it meets one of the following criteria:

- i) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- ii) Is associated with the lives of persons important in our past;
- iii) Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
- iv) Has yielded, or may be likely to yield, information important in prehistory or history.

The project area does not contain any historic resources from the National Register of Historic Places, California Register of Historic Places, or on the list of State Historical Landmarks. On-site structures that would be demolished are less than 40 years old and have no known significance related to architectural character, construction method, artistic value, or historic value related to important persons or events. No impact to historic resources would occur due to implementation of the proposed project, and no mitigation is necessary.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

Less-Than-Significant Impact With Mitigation Incorporated. Archaeological sites are often located along creek areas, ridgelines, and vistas. Newport Beach contains many significant archaeological sites. For instance, the Upper Newport Bay area has yielded some evidence for the earliest human occupation of Orange County and dates to about 9,500 years before present. Over 50 sites have been documented in the Newport Beach area, including the Newport Coast area and Banning Ranch, many yielding substantial information regarding the prehistory of the City and county, and have included human burials. At least two and possibly three distinct cultural groups inhabited the area, including the Tongva and Acjachemem tribes, although the boundaries of their tribal territories are unclear (Newport Beach 2006).

Archaeological resources were discovered at the CCL when the landfill was still operational prior to 1990, but no archaeological resources have been discovered at the project site (OCWR 2016). Most sites were destroyed

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either unintentionally during landfill use prior to 1990, deliberately during landfill use after testing showed the site was not significant, or deliberately during landfill use after the conclusion of data recovery excavation. Moreover, the site is completely disturbed (i.e., paved with concrete and asphalt) from the original construction of the gas-to-energy facility. In the unlikely event that archaeological resources are discovered during project construction, the project applicant would be required to comply with provisions of Section 21083.2 of the CEQA Guidelines and Mitigation Measure **CUL-1**. The applicant would comply with the Mitigation Measure **CUL-1**, and impacts would be less than significant.

Mitigation Measure

CUL-1 The project applicant shall retain an archaeological and paleontological resource monitor to monitor the project's subsurface areas during land disturbance from demolition and construction activities. If any archaeological or paleontological resources are discovered, the archaeological/paleontological monitor shall have the authority to stop work, assess the resources found, and implement a plan for the removal of the archaeological/paleontological resources if deemed significant.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less-Than-Significant Impact. California Health and Safety Code Section 7050.5 requires that in the event that human remains are discovered within the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes or has reason to believe the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. The proposed project would comply with existing law.

Furthermore, the 4.14-acre site is already completely paved from the original construction of the gas-to-energy facility built in 1987. Therefore, it is extremely unlikely that human remains would be discovered upon implementation of the proposed project. Impacts to human remains would be less than significant, and no mitigation is necessary.

3.6 ENERGY

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less-Than-Significant Impact. The following discusses the potential energy demands from construction activities associated with the construction and operation of the proposed project.

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Short-Term Construction Impacts

Construction of the proposed project would create temporary increased demands for electricity and vehicle fuels compared to existing conditions and would result in short-term transportation-related energy use.

Electrical Energy

The majority of construction equipment would be gas- or diesel-powered, and electricity would not be used to power most of the construction equipment. Electricity use during construction would vary during different phases of construction. Later construction phases could result in the use of electric-powered equipment for interior construction and architectural coatings (if applicable). It is anticipated that the majority of electric-powered construction equipment would be hand tools (e.g., power drills, table saws) and lighting, which would result in minimal electricity usage during construction activities. Therefore, project-related construction activities would not result in wasteful or unnecessary electricity demands, and impacts would be less than significant.

Natural Gas Energy

It is not anticipated that construction equipment used for the proposed project would be powered by natural gas, and no natural gas demand is anticipated during construction. Therefore, impacts would be less than significant with respect to natural gas usage.

Transportation Energy

Transportation energy use during construction of the proposed project would come from delivery vehicles, transport trucks, and construction employee vehicles. In addition, transportation energy demand would come from use of off-road construction equipment. It is anticipated that the majority of off-road construction equipment, such as those used during site preparation and grading, would be gas or diesel powered.

The use of energy resources by vehicles and equipment would fluctuate according to the phase of construction and would be temporary. In addition, all construction equipment would cease operating upon completion of project construction. Thus, impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure. Furthermore, to limit wasteful and unnecessary energy consumption, the construction contractors are anticipated to minimize nonessential idling of construction equipment during construction, in accordance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.

Construction trips would also not result in unnecessary use of energy since the project site is centrally located and is served by numerous regional freeway systems (e.g., SR-73) that provide the most direct routes from various areas of the region. Thus, energy use during construction of the project would not be considered inefficient, wasteful, or unnecessary. Impacts would be less than significant.

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Long-Term Impacts During Operation

The primary operational use of energy would be from operation of the facility equipment. Additionally, and to a lesser extent, the proposed project would also generate energy demand associated with operation of the proposed buildings, which could include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems; and indoor and outdoor lighting.

Electrical and Natural Gas Energy

Operation of the proposed project would consume electricity for various purposes, including, but not limited to, cooling and ventilation of buildings as well as operation of electrical systems, lighting, and use of on-site equipment. Electrical service to the proposed project would be provided by SCE through connections to existing off-site electrical lines and new on-site infrastructure. Overall, implementation of the proposed project would result in an annual electricity demand of 32,000 megawatt hours per year, or 115,200 gigajoules (GJ).⁹ Furthermore, the proposed project would also utilize natural gas for building heating in addition to the operation of on-site equipment. As stated, supplemental natural gas would be required for the TOX in combustion of waste gas and annual supplemental natural gas demand would be 16.43 million standard cubic feet, or 17,021,480 thousand British thermal units (kBtu) per year. Natural gas demand other than the supplemental fueling, such as for building heating would be 68,226 kBtu per year. Overall, operation of the proposed project would have an annual natural gas demand of 17,089,706 kBtu per year (18,031 GJ per year).¹⁰

While operation of the proposed project would result in electricity and natural gas demands, the proposed project is anticipated to generate 573,000 million British thermal units per year of RNG. This amount would be equivalent to about 604,572 GJ per year of energy and result in a net increase of 471,341 GJ per year in energy supply when compared to the 133,231 GJ per year of energy that would be expended to operate the proposed facility. In addition, the proposed project would generally support the generation and procurement of RNG. As discussed in Section 3.6(b) below, procurement of RNG would be consistent with the goals of California's Biomethane Procurement Program, which sets an overall short-term procurement goal of 17.6 billion cubic feet per year of biomethane by 2025 and 72.8 billion cubic feet per year by 2030. Therefore, the proposed project would not result in wasteful or unnecessary consumption of energy resources, and impacts would be less than significant.

Transportation Energy

The proposed project would consume transportation energy during operations from the use of motor vehicles associated with employees. Overall, the proposed project would employ only three employees, which would result in a nominal eight vehicles trips per day. As discussed in Section 3.17(b) of this IS/MND, the limited number of projected daily vehicle trips would be below the City's screening threshold of 300 vehicle trips per day for a VMT analysis and would result in a less than significant VMT impact. Overall, the limited number of project-related vehicle trips would contribute to minimizing VMT and transportation fuel demands. Furthermore, the project site would be accessible by the regional freeway systems (e.g., SR-73) that provide the

⁹ Based on conversion factor of 3.6 GJ/MWh.

¹⁰ Based on conversion factors of 0.001 MMBtu/kBtu and 1.0551 GJ/MMBtu.

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most direct routes from various areas of the region. Thus, operation-related fuel usage associated with the proposed project would not be considered inefficient, wasteful, or unnecessary. Therefore, energy impacts as it pertains to operation-related transportation energy would be less than significant, and no mitigation measures are required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. The following evaluates consistency of the proposed project with California's Renewables Portfolio Standard program and the Biomethane Procurement Program.

California Renewables Portfolio Standard Program

The state's electricity grid is transitioning to renewable energy under California's Renewable Energy Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. Electricity production from renewable sources is generally considered carbon neutral. Executive Order S-14-08, signed in November 2008, expanded the state's renewable portfolios standard (RPS) to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (Senate Bill [SB] X1-2). SB 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

On September 10, 2018, Governor Brown signed SB 100, which supersedes the SB 350 requirements. Under SB 100, the RPS for public-owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 50 percent by 2026, 52 percent by 2027, and 60 percent by 2030. The bill also established a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Additionally, SB 1020 adds interim targets to SB 100 framework to require renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent of all retail electricity sales by 2040. Under SB 100 and SB 1020, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

The statewide RPS goal is not directly applicable to individual development projects, but to utilities and energy providers such as SCE, which is the utility that would provide all of electricity needs for the proposed project. Compliance of SCE in meeting the RPS goals would ensure the state in meeting its objective in transitioning to renewable energy. Overall, the proposed project involves conversion of LFG currently generated at the CCL into RNG that would be used as transportation fuel. While the proposed project would not involve generation of renewable electricity, it would not hinder implementation of the RPS program. Implementation of the proposed project would not conflict with or obstruct implementation of California's RPS Program. Therefore, no impacts would result, and no mitigation measures are necessary.

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Biomethane Procurement Program

SB 1440, signed into law in September 2018, directed the California Public Utilities Commission to evaluate and consider adopting specific biomethane procurement targets for investor-owned utilities. The biomethane procurement program was approved by the California Public Utilities Commission on February 24, 2022. It sets an overall short-term procurement goal of 17.6 billion cubic feet per year of biomethane by 2025 and 72.8 billion cubic feet per year by 2030. In general, the procurement targets are proportioned to each utility based on the proportionate share of natural gas deliveries. The program directs utilities to primarily procure biomethane from landfill sources and then from other non-dairy sources. Implementation of the proposed project would result in conversion of LFG generated at the CCL into RNG, which would be injected into the SoCalGas natural gas grid. Thus, the proposed project would advance the procurement goals of SoCalGas and be consistent with the Biomethane Procurement Program. Therefore, no impacts would occur, and no mitigation measures are necessary.

3.7 GEOLOGY AND SOILS

The analysis in this section is based partly on the following technical studies, which are included as Appendices D and E, respectively, to this IS:

- Preliminary Geotechnical Investigation, Proposed RNG Plant Equipment Area, Coyote Landfill. Project No. 23775.1, LOR Geotechnical Group Inc., December 10, 2021.
- County of Orange/Santa Ana Region Priority Project Preliminary Water Quality Management Plan (P-WQMP), BKF Engineers, June 24, 2024.

Would the project:

- a) **Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**
 - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

Less-Than-Significant Impact. The potential for ground rupture due to fault movement is generally considered related to the seismic activity of known fault zones. The City is in the northern part of the Peninsular Ranges Province, an area that is exposed to risk from multiple earthquake fault zones (Newport Beach 2006). The highest risks originate from the Newport-Inglewood fault zone, the Whittier fault zone, the San Joaquin Hills fault zone, and the Elysian Park fault zone, each with the potential to cause moderate to large earthquakes that would cause ground shaking in the city and nearby communities.

The Alquist-Priolo Earthquake Fault Zoning Act was signed into state law in 1972. Its primary purpose is to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy

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across the trace of an active fault. The act delineates “Earthquake Fault Zones” along faults that are “sufficiently active” and “well defined.” The project site is not in proximity to any active fault zones, Alquist-Priolo Earthquake Fault Zones, or active surface faults (CGS 2015, 2022). The nearest mapped active fault¹¹ is the Pelican Hill fault of the Newport-Inglewood fault zone approximately 1.3 miles southwest of the project site (CGS 2015). Due to the distance to the active fault, the potential for surface rupture of a fault on site is considered very low. Therefore, impacts would be less than significant, and no mitigation is necessary.

ii) Strong seismic ground shaking?

Less-Than-Significant Impact. Seismic activity along nearby or more distant fault zones (see previous discussion of fault zones under Subsection 3.7(a)(i)) is likely to cause ground shaking on the project site. The Pelican Hill fault of the Newport-Inglewood fault zone and other faults in the region—Elsinore fault zone approximately 20.5 miles northeast of the project site—are potentially capable of producing the most intense ground accelerations on the site, given the distance (CGS 2015).

However, the proposed project will be designed to comply with provisions of the California Building Code (CBC), which are designed to minimize effects of ground shaking on buildings to the greatest degree feasible. The proposed development would be required to adhere to the provisions of the CBC, which are enforced by the City during the development review and building plan check process. Adherence to the requirements of the CBC for structural safety during a seismic event would reduce hazards from strong seismic ground shaking.

Furthermore, requirements for geotechnical investigations are included in CBC Appendix J, Section J104.3, Geotechnical Reports. The project applicant prepared a preliminary geotechnical investigation report pursuant to the CBC and would prepare a final report prior to the issuance of grading permits. The preparation of a final report would be imposed by the City as a condition of project approval. The geotechnical report would include calculations of seismic design parameters for the final design that shall be reviewed by a qualified structural engineer. In summary, compliance with the provisions of the CBC and required implementation of the design recommendations outlined in the final geotechnical report would reduce hazards arising from strong seismic ground shaking. Therefore, impacts would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less-Than-Significant Impact. Liquefaction occurs when loose, water-saturated sediments lose strength and fail during strong ground shaking. Liquefaction is defined as the transformation of granular material from a solid state into a liquefied state because of increased pore-water pressure (CDC 2023). This subsurface process can lead to near-surface or surface ground failure that can result in property damage and structural failure. If surface ground failure does occur, it is usually expressed as lateral spreading, flow failures, ground oscillation, and/or general loss of bearing strength.

¹¹ A fault that has ruptured during Holocene time (the last 11,700 years).

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In order to determine a region's susceptibility to liquefaction, the following three major factors must be analyzed: 1) the intensity and duration of ground shaking, 2) the age and textural characteristics of alluvial sediments, and 3) the depth of groundwater. Research and historical data indicate that loose, granular materials at depths of less than 50 feet with silt and clay contents of less than 30 percent saturated by relatively shallow groundwater table are most susceptible to liquefaction (CGS 2008). Areas of Newport Beach are susceptible to liquefaction along the coastline that includes Balboa Peninsula, in and around the Newport Bay and Upper Newport Bay, in the lower reaches of major streams in Newport Beach, and in the floodplain of the Santa Ana River (Newport Beach 2006).

Based on a review of California Geological Survey's California Earthquake Hazards Zone Application, the project site is not in a liquefaction hazard zone (CGS 2021). Additionally, the preliminary geotechnical investigation report prepared by LOR Geotechnical Group Inc. for the proposed project estimated groundwater to be more than 50 feet beneath the site and underlain by sedimentary bedrock. Therefore, the report found no possibility of liquefaction (LOR Geotechnical Group Inc. 2021).

To prevent potential impacts related to ground failure on the project site, the preliminary geotechnical investigation report recommends a series of design features and measures to be incorporated during the construction of the proposed RNG facility. These include detailed recommendations related to grading procedures in accordance with CBC, preparation of fill areas and foundation areas with structural concrete slabs (mat foundations), and the design of buildings foundations/footings for retaining walls (LOR Geotechnical Group Inc. 2021).

Moreover, project site grading, design, and construction would conform with the recommended design parameters of the required final geotechnical report. Preparation of the final geotechnical report would be required prior to the issuance of grading permits. Therefore, impacts associated with liquefaction would be less than significant.

iv) Landslides?

Less-Than-Significant Impact. Landslides are perceptible downward movements of a mass of earth (soil and/or debris), rock or a combination of the two under the influence of gravity. Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes. Based on reconnaissance mapping and review of aerial photographs, the preliminary geotechnical investigation report found no landslides in the site vicinity. In addition, the site is not located within an earthquake-induced landslide zone as identified by the California Geological Survey (LOR Geotechnical Group Inc. 2021). Therefore, the potential for seismically induced landslides to impact the site is considered low. Impacts related to landslides would be less than significant, and no mitigation is necessary.

b) Result in substantial soil erosion or the loss of topsoil?

Less-Than-Significant Impact with Mitigation Incorporated. Erosion is the movement of rock and soil from place to place and is a natural process. Common agents of erosion in the project region include wind and flowing water. Significant erosion typically occurs on steep slopes where stormwater and high winds can carry

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topsoil down hillsides. Erosion can be increased greatly by earth-moving activities if erosion control measures are not used.

Project development would involve demolition, excavation, grading, removal of trees, and construction activities that would disturb soil and leave exposed soil on the ground surface. Common means of soil erosion from construction sites include water, wind, and tracking off site by vehicles.

The preliminary geotechnical investigation report found undocumented fill soils associated with past use and/or demolition of the former power plant above sedimentary bedrock (LOR Geotechnical Group Inc. 2021). Based on the borings, the fill soils consisted of fine to coarse-grained silty sand to sandy silt soils that range from 1.5 to 12.5 feet in thickness. While the sedimentary bedrock consists of laminated to typically thinly bedded siltstone with much lesser sandstone materials. These types of soils are susceptible to erosion by running water, therefore the preliminary geotechnical investigation report recommends measures to prevent surface water from flowing over slope faces (e.g., plant deep-rooted ground cover and prevent over watering on slopes). In addition, the earthwork operations recommended to be conducted during the development of the site (e.g., fill slopes shall be overfilled during construction and then cut back to expose fully compacted soil) would mitigate any near surface loose soil conditions (LOR Geotechnical Group Inc. 2021).

Since the proposed project would disturb less than one acre of land (0.88-acre footprint), it is not subject to the requirements of the State Water Resources Control Board's General Construction Permit, which regulates sites that disturb one acre or more and requires filing Permit Registration Documents as well as the preparation of a Stormwater Pollution Prevention Plan. However, other existing regulatory requirements would apply to construction activities on the site, such as the implementation of grading erosion control measures specified in the CALGreen (California Green Building Standards Code) Building Code. Additionally, the provisions for erosion control in Chapter 15.10, Excavation and Grading Code, of the Newport Beach Municipal Code, would require the proposed project to prepare and submit a grading plan and erosion control plan for review by the City's Building Official. These would include detailed plans for temporary and/or permanent sediment, pollution, and erosion control facilities. Due to the proximity of the preserved trees to the removed trees, erosion would not be a significant issue. All removed trees would be flush cut to the ground and the remaining stumps are to remain in place with no stump grinding. Additionally, Mitigation Measure **BIO-6** would reduce any erosion impacts due to the removal of trees beyond the perimeter walls.

After project completion, the project site would be developed with a new RNG facility and the potential for soil erosion or the loss of topsoil would be expected to be extremely low. Furthermore, the project applicant prepared a preliminary water quality management plan (WQMP) for City review (Appendix E). Best management practices (BMPs) specified for the proposed project in the WQMP would also minimize sediment pollution of stormwater (see Section 3.10, Hydrology and Water Quality). Overall, compliance with the BMPs, Mitigation Measure **BIO-6**, CALGreen, and municipal code standards would reduce potential soil erosion impacts during construction and operation to a less-than-significant level.

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- c) **Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?**

Less-Than-Significant Impact. Hazards from liquefaction and landslides are addressed in Section 3.7(a)(iii) and Section 3.7(a)(iv), respectively. As concluded in these sections, impacts would be less than significant. The following is a discussion of the potential erosion impacts resulting from other site geologic and soil conditions.

Lateral Spreading

Lateral spreading is a phenomenon that occurs in association with liquefaction and includes the movement of non-liquefied soil materials. Due to the low risk of liquefaction on the project site, lateral spreading is not considered a hazard to the site, and no impacts are expected to occur.

Subsidence

The major cause of ground subsidence is the excessive withdrawal of groundwater. Soils with high silt or clay content are particularly susceptible to subsidence. The project site is not mapped in an area of subsidence by the United States Geological Survey, and the project does not propose any groundwater withdrawal that would create or worsen ground subsidence (USGS 2024b). Additionally, groundwater was not encountered at the maximum depth of approximately 21.5 feet, and the underlying bedrock is generally considered non-water bearing (LOR Geotechnical Group Inc. 2021). Therefore, impacts associated with subsidence would be less than significant.

Collapsible Soils

Collapsible soils shrink upon being wetted and/or subjected to a load. Since the boring samples indicated medium expansive soil/bedrock materials, the preliminary geotechnical investigation report recommended that existing fills under any proposed flatwork and/or paved areas would be removed and replaced with engineered compacted fill. All undocumented fill material would be removed from all proposed structural and/or fill areas with removals on the order of 0.5 to 12.5 feet, and likely deeper locally, in order to encounter competent bedrock upon which engineered compacted fill can be placed (LOR Geotechnical Group Inc. 2021).

A final geotechnical investigation would be required prior to the issuance of grading permits and would be imposed by the City as a condition of project approval. The final geotechnical investigation would include a detailed assessment of the suitability of site soils for supporting the proposed structures and other site improvements, and the specific design recommendations for the building foundation to minimize hazards from unsuitable soils. Site grading, design, and construction of the proposed project would conform to the design recommendations of the final geotechnical report. Therefore, project development would not cause substantial hazards arising from collapsible soils, and impacts would be less than significant.

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- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?**

Less-Than-Significant Impact. Section 1803.5.3 of the 2013 CBC defines expansive soils as those that meet specific criteria related to plasticity index and soil particle size. Highly expansive soils swell when they absorb water and shrink as they dry and can cause structural damage to building foundations and roads. Thus, they are less suitable for development than non-expansive soils.

The near-surface soils on the project site generally consist of fine to coarse-grained silty sand to sandy silt soils. Due to medium expansive soil conditions, the preliminary geotechnical investigation report recommended foundation design conditions (i.e., that all structures be supported on reinforced, stiffened mat foundations resting over 24 inches of engineered compacted fill placed over competent native earth materials), reinforced exterior concrete flatwork, and evaluation of imported fill for their expansion potential during grading operation (LOR Geotechnical Group Inc. 2021). Additionally, project site grading, design, and construction would conform with the recommended design parameters of the final geotechnical report. Impacts associated with expansive soils would be less than significant.

- e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

No Impact. The proposed project would construct a septic system at the control building for the RNG processing plant. The system would include a holding tank and the contents would regularly be trucked off-site for disposal. Therefore, the septic system would be self-contained and would not require infiltration into the soil. No impacts would occur.

- f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

Less-Than-Significant Impact. Paleontological resources are fossils (i.e., the recognizable remains or evidence of past life on earth) such as bones, shells, leaves, tracks, burrows, and impressions.

Changes in geological land formations over time, brought upon by tectonic activity, have resulted in a mix of aquatic and terrestrial animals typically associated with the Ice Age (2.5 million years ago to 15,000 years ago) underlying the City (Newport Beach 2006). Other areas with significant fossils and known paleontological deposits include the Banning Ranch area and the Fossil Canyon in the North Bluffs area. The site is in the San Joaquin Hills, which are underlain by Paleocene to Pliocene age marine and non-marine sedimentary rocks overlain by Pleistocene and Holocene surficial units (LOR Geotechnical Group Inc. 2021).

As shown on Figure 4, the project site is completely paved and is surrounded by a 12-foot-high perimeter wall. No pipeline excavation or construction would be necessary outside of the OCWR walled compound. Therefore, impacts to paleontological resources would be less than significant.

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3.8 GREENHOUSE GAS EMISSIONS

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as greenhouse gases (GHGs), into the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change has identified four major GHGs—water vapor, CO₂, methane (CH₄), and ozone (O₃)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the Intergovernmental Panel on Climate Change that contribute to global warming to a lesser extent include nitrous oxide (N₂O), sulfur hexafluoride (SF₆)¹².

Information on manufacturing of cement, steel, and other “life cycle” emissions that would occur as a result of the project are not applicable and are not included in the analysis.¹³ Black carbon emissions are not included in the GHG analysis because the CARB does not include this pollutant in the state’s SB 32 and AB 1279 inventory and treats this short-lived climate pollutant separately.¹⁴ A background discussion on the GHG regulatory setting and GHG modeling can be found in Appendix B1 to this IS.

The analysis in this section is based partly on the following technical studies, which is included as Appendix B3 to this IS:

- Permit to Construct/Permit to Operate for a Renewable Natural Gas Plant for Biofuels Coyote Canyon, Biogas LLC Newport Beach, California, SCS Engineers, December 11, 2023, and Revised on July 25, 2024.

Would the project:

- a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Less-Than-Significant Impact. Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even

¹² Water vapor (H₂O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

¹³ Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (CNRA 2018). Because the amount of materials consumed during the operation or construction of the project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

¹⁴ Particulate matter emissions, which include black carbon, are analyzed in Section 3.3, Air Quality. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The state’s existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2017).

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a very large one, does not generate enough GHG emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact.

The proposed project would generate GHG emissions from construction activities, energy use (e.g., electricity and natural gas demands), area sources (e.g., landscaping equipment and architectural coatings), mobile sources (e.g., employee trips), and from water usage (e.g., from normal facility use and water used for operational processes) and solid waste generation. Annual average construction emissions were amortized over 30 years and included in the emissions inventory to account for GHG emissions from the construction phase of the project (South Coast AQMD 2009). The project would also generate GHG emissions from the proposed stationary equipment that includes the TOX, enclosed RNG flare, and natural gas-powered emergency generator. The South Coast AQMD adopted threshold for permitted/industrial projects is 10,000 metric tons of carbon dioxide-equivalent (MTCO_{2e}) per year and is utilized to evaluate the total emissions associated with the land use and permitted components of the proposed project.

Project-related GHG emissions from the proposed land uses and permitted stationary sources are shown in Table 9, *Project-Related Greenhouse Gas Emissions*. As shown in the table, both the total and regulated emissions are shown for the permitted stationary equipment. The former is included for informational purposes only. Emissions of CO₂ generated from combustion of biogas are considered biogenic and do not contribute to a net increase in atmospheric CO₂. Thus, only the regulated GHG emissions from the proposed permitted stationary sources are evaluated to the 10,000 MTCO_{2e} per year threshold. As shown in Table 9, the proposed project at buildout would generate total emissions (both land use and permitted components) of 7,845 MTCO_{2e} annually, which would not exceed the South Coast AQMD 10,000 MTCO_{2e} per year GHG significance threshold for permitted/industrial projects. Therefore, GHG emissions impacts associated with the proposed project would be less than significant, and no mitigation measures are necessary.

Table 9 Project-Related Greenhouse Gas Emissions

Source	MTCO _{2e} /year	Percent of Project Total
Land Use Emissions		
Mobile ¹	13	<1%
Area ²	<1	<1%
Energy – Electricity ³	7,755	99.6%
Energy – Natural Gas ⁴	4	<1%
Water ⁵	1	<1%
Waste	1	<1%
Refrigerants	<1	<1%
Amortized Construction Emissions ⁶	12	<1%
Total Land Use Emissions	7,785	100%
Permitted Sources – Total^{7,8}		
Thermal Oxidizer – Main	6,120	12%
Thermal Oxidizer – Supplemental	4,231	8%
Enclosed RNG Flare	39,902	79%
Natural Gas-Powered Emergency Generator	0.03	<1%
Total Emissions	50,280	100%

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Table 9 Project-Related Greenhouse Gas Emissions

Source	MTCO ₂ e/year	Percent of Project Total
Permitted Sources – Regulated^{7,9}		
Thermal Oxidizer – Main	31	52%
Thermal Oxidizer – Supplemental	4	7%
Enclosed RNG Flare	24	40%
Natural Gas-Powered Emergency Generator	0.03	<1%
Total Emissions	60	100%
Total Land Use and Regulated Permitted Emissions		
Land Use Emissions	7,785	NA
Regulated Permitted Sources Emissions	60	NA
Total Emissions	7,845	NA
South Coast AQMD's Bright-Line Permitted Sources Threshold ¹⁰	10,000	NA
Exceeds Bright-Line Threshold	No	NA

Source: CalEEMod Version 2022.1.

Notes: MTCO₂e: metric tons of carbon dioxide-equivalent; RNG = renewable natural gas; South Coast AQMD = South Coast Air Quality Management District; NA = not applicable; CalEEMod = California Emissions Estimator Model; CO₂ = carbon dioxide.

Summed totals may not equal to totals shown due to rounding.

¹ Emissions generated from employee vehicle trips. The quantified emissions are based on six average daily passenger vehicle trip ends generated by three employees and on two average daily truck trip ends generated by one heavy-heavy duty truck.

² Emissions from landscaping equipment and based on CalEEMod defaults.

³ Based on anticipated electricity demand of 32,000 megawatt hours per year for the proposed facility.

⁴ As discussed in Section 3.19(a) of this IS/MND, the estimated water demand for the proposed project is 89,222 gallons per year (gpy). However, water sector emissions shown in this table are modeled based on annual water demand of 368,613 gpy and represent a conservative estimate.

⁵ Emissions from CalEEMod default natural gas demand used for building heating.

⁶ Construction emissions are amortized over a 30-year project lifetime per recommended South Coast AQMD methodology (South Coast AQMD 2009).

⁷ Based on information provided by SCS Engineers (see Appendices B1 and B3).

⁸ Shown for informational purposes only and includes biogenic CO₂ emissions generated from combustion of natural gas.

⁹ Excludes biogenic CO₂ emissions generated from combustion of natural gas.

¹⁰ South Coast AQMD adopted threshold for permitted/industrial facilities. Because the proposed project is an industrial project that requires a permit from South Coast AQMD, total emissions are compared to South Coast AQMD's adopted threshold for industrial projects of 10,000 MTCO₂e/yr.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact. Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan and the SCAG's RTP/SCS. A consistency analysis with these plans is presented below.

California Air Resources Board Scoping Plan

CARB's latest Climate Change Scoping Plan outlines the state's strategies to reduce GHG emissions in accordance with the targets established under AB 32, SB 32, and AB 1279 (CARB 2022). The Scoping Plan is applicable to state agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

Statewide strategies to reduce GHG emissions in the 2022 Climate Change Scoping Plan include 1) implementing SB 100, which expands the RPS to 60 percent by 2030; 2) expanding the Low Carbon Fuel Standards to 18 percent by 2030; 3) implementing the Short-Lived Climate Pollutant Reduction Strategy, which

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reduces methane and hydrofluorocarbons to 40 percent below 2013 levels by 2030 and black carbon emissions to 50 percent below 2013 levels by 2030; 4) continuing to implement SB 375; 5) creating a post-2020 Cap-and-Trade Program; and 6) developing an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Statewide strategies to reduce GHG emissions include the low carbon fuel standards, California Appliance Energy Efficiency regulations, California Renewable Energy Portfolio standard, changes in the CAFE standards, and other early action measures as necessary to ensure the state is on target to achieve the GHG emissions reduction goals of AB 32, SB 32, and AB 1279. The proposed project would generate and provide RNG to SoCalGas. Expanding use of RNG is one of the primary strategies identified by CARB in the Scoping Plan scenario to achieve the long-range GHG reduction targets. Additionally, the proposed project would also align with the strategy of diversifying the transportation fuel supply away from fossil fuels, which would be consistent with the Low Carbon Fuel Standard. Overall, the proposed project would be consistent with the strategies of the CARB Scoping Plan. Therefore, no impacts would occur, and no mitigation measures are necessary.

Southern California Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy

SCAG adopted the 2024–2050 RTP/SCS (Connect SoCal 2024) in April 2024 (SCAG 2024). Connect SoCal 2024 identifies that land use strategies that focus on new housing and job growth in areas rich with destinations and mobility options are consistent with a land use development pattern that supports and complements the proposed transportation network. The overarching strategy in Connect SoCal 2024 is to plan for the Southern California region to grow in more compact communities in transit priority areas and priority growth areas; provide neighborhoods with efficient and plentiful public transit; establish abundant and safe opportunities to walk, bike, and pursue other forms of active transportation; and preserve more of the region's remaining natural lands and farmlands (SCAG 2024). Connect SoCal 2024's transportation projects help more efficiently distribute population, housing, and employment growth, and forecast development is generally consistent with regional-level general plan data to promote active transportation and reduce GHG emissions. The projected regional development, when integrated with the proposed regional transportation network in Connect SoCal 2024, would reduce per-capita GHG emissions related to vehicular travel and achieve the GHG reduction per capita targets for the SCAG region.

Connect SoCal 2024 does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency for governments and developers. Due to the limited number of employees (i.e., three) anticipated for the proposed project, the proposed project would generate a minimal number of daily vehicle trips at eight daily one-way trips. As discussed in Section 3.17(b) of this IS/MND, the proposed project would result in less-than-significant VMT impacts. The proposed project would not interfere with SCAG's ability to implement the regional strategies outlined in Connect SoCal 2024. Therefore, no impacts would occur, and no mitigation measures are necessary.

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3.9 HAZARDS AND HAZARDOUS MATERIALS

The analysis in this section is based partly on the following technical studies, which are included as Appendices F through I to this IS:

- Hazardous Material Inventory Statement, SCS Engineers, October 10, 2023.
- The EDR Radius Map Report with GeoCheck, Environmental Data Resources Inc. (EDR), October 17, 2023.
- Preparedness, Prevention, and Contingency (PPC) Plan/Emergency Action Plan (EAP)/Spill Prevention Control and Countermeasure (SPCC) Plan, Archaea Energy, April 9, 2024.
- Site Severe Weather Response Plan, Archaea Energy, November 8, 2022.

Would the project:

- a) **Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?**

Less-Than-Significant Impact.

Construction Phase

The construction activities on the project site would use hazardous materials including gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, and paint thinner. However, the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard. These activities would also be short-term or one time in nature and would cease upon completion of the proposed project's construction phase. Project construction workers would be trained in safe handling and hazardous materials use. All spills or leakage of petroleum products during construction activities are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable state and local regulations for the cleanup and disposal of that contaminant. All contaminated waste would be collected and disposed of at an appropriately licensed disposal or treatment facility. The storage of hazardous materials would be contained in designated hazardous materials storage areas and their use would be carefully prescribed in terms of the defined hazardous materials handling plans, the Safety and Health Programs, and the Hazardous Materials Business Plan (HMBP). The construction contractor would be responsible for implementing best management practices (BMPs) consistent with hazardous materials storage, handling, emergency spill response, and reporting specified in the HMBP.

On-Site Contaminated Soils

The project site had 10 aboveground storage tanks: a 12,000-gallon tank stored LFG condensate; a 2,000-gallon tank stored turbine oil; a 1,200-gallon tank stored caustic fluids; a 800-gallon tank stored sulfuric acid; a 2000-gallon tank stored heat transfer oil; a 405-gallon tank stored dispersant (water cooling tower treatment chemical); a 55-gallon tank stored biocide (water cooling tower treatment chemical); two 100-gallon tanks stored

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propane; and a 9,000-gallon tank stored deionized makeup water. When the gas-to-energy facility ceased operations in December 2015, all the liquids contained in nine aboveground tanks were collected by a licensed hazardous waste hauler and taken to a hazardous waste facility for proper disposal. The aboveground storage tank containing LFG condensate remains since this tank is needed as part of the LFG collection and flaring system. Based on the hazardous materials assessment conducted in 2006, hazardous substances were observed in containers, drums, and aboveground tanks. However, these containers, drums and aboveground tanks were in good condition with secondary containment (OCWR 2016). Therefore, there would be no significant impacts associated with the aboveground storage tanks.

Another potential hazardous incident that could occur during construction would involve the fuels, oils, and grease dripping from construction equipment. However, construction personnel would be trained to handle the materials properly and the small quantities of fuel, oil, and grease that might drip from construction equipment would have relatively low toxicity. In addition, construction activities may result in small oil spills during refueling of construction equipment at the two laydown areas. If a fuel spill occurs, then the contaminated soil would be placed into barrels or trucks for off-site disposal as hazardous waste.

As discussed above, the construction contractor would be responsible for implementing construction BMPs, consistent with hazardous materials storage, handling, emergency spill response, and reporting specified in the HMBP. Therefore, compliance with applicable laws and regulations governing the use, storage, transportation of hazardous materials and disposal of potentially contaminated soils would ensure that impacts would be less than significant.

Operation Phase

The operation of the RNG facility would require the use of the hazardous materials listed on Table 10, *Use of Hazardous Materials During Operation*. Most of the substances fall into one of four categories: maintenance products, oils, acids, and gases. As mentioned previously, most of the equipment on site is surrounded by a concrete secondary containment area.

Table 10 provides a summary of the hazardous materials to be used and stored during operation of the RNG facility. The sum of the regulated substances subject to the requirements of the California Accidental Release Program (CalARP Program) are less than threshold quantities (SCS Engineers 2023).

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Table 10 Use of Hazardous Materials During Operation

Chemical	Concentration (%)	Physical State	Amount (lbs)
Methane	36–39	Gas	157
Hydrogen Sulfide	0.00477	Gas	0.01
Carbon Dioxide	0.8–44	Gas	243
Nitrogen	100	Liquid	10,064
BSR-50	—	—	26,130
Zinc Oxide	20–60	Solid	—
Iron Hydroxide Oxide	20–60	Solid	—
Silicon Dioxide	5–30	Solid	—
Water (absorbed)	<15	—	—
F200 1/8" Aluminum Oxide	80–100	Solid	19,206
Grade 06 Silicon Oxide	99–100	Solid	26,712
Oxigone 230	—	—	1,700
Platinum Oxide	<1	Solid	—
Aluminum Oxide	BALANCE	Solid	—
Norbit Activated Carbon	100	Solid	26,366
RC-Inert Balls	—	—	14,280
Silicon Dioxide	50–70	Solid	—
Aluminum Oxide	10–30	Solid	—
Titanium Oxide	0–2	Solid	—
Ferric Oxide	0–2	Solid	—
Magnesium Oxide	0–1	Solid	—
Potassium Oxide	0–5	Solid	—
Sodium Oxide	0–2	Solid	—
Moisture	<1	—	—
mSORB Synthetic Zeolite	100	Solid	17,062
Sulfatrap R7J	—	Solid	6,303
Cupric Hydroxide	>60	—	—
Potassium Nitrate	<2	—	—
Aluminum Oxide	<10	—	—
Spotleak 1039	—	Liquid	895
T-Butyl Mercaptan	48–51	—	—
Tetrahydrothiophene	48–51	—	—
Refrigerant R-410A	—	Liquid	25.5
Difluoromethane	50	—	—
Pentafluoromethane	50	—	—
Lubricant CPI-6005-150 Polyalphaolefin	100	Liquid	—
During Operation	—	—	17,062
During Maintenance	—	—	34,123
Transformer Insulating Oil Biotran-35	—	—	—
Vegetable Ester	99	Liquid	19,916
Agent Package	1	Liquid	201

Source: SCS Engineers 2023. Appendix F: Hazardous Material Inventory Statement.

Notes: lbs = pounds; — = no data available.

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Belowground Oil/Water Separator

Most of the equipment on site would be surrounded by a concrete secondary containment area. There would be drains in the secondary containment areas, which would lead to a belowground oil/water separator approximately nine feet below ground surface. Three drain risers would connect the oil/water separator to the surface. The aqueous phase would be discharged to the IRWD industrial wastewater system, and the retained oil phase would be periodically removed by pumping into a transport truck for off-site disposal by a qualified hazardous materials hauler.

If a spill or leak into the environment involves hazardous materials equal to or greater than the specific reportable quantity, the federal, state, and local reporting requirements would be adhered to during the cleanup activities. The project applicant would be responsible for verifying that the use, storage, and handling of hazardous materials during operations are in compliance with the applicable laws, ordinances, regulations, and standards. This would include the implementation of BMPs consistent with hazardous materials handling, emergency spill response, and reports as specified in the HMBP. Therefore, the expected potential hazard to employees or the environment during operation would be less than significant.

The California Fire Code (CFC), Chapter 50 and 58, includes specific requirements for the safe storage and handling of hazardous materials that would reduce the potential for a release or for the mixing of incompatible materials. The design of the proposed project provides for chemical storage and handling facilities in compliance with the current CFC and other applicable regulations. Moreover, the Spill Prevention, Control, and Countermeasure (SPCC) Plan includes specific guidelines to be implemented during operations to prevent/control discharge of hazardous substances, such as secondary containment requirements contained in 40 Code of Federal Regulations (CFR) Part 112 and other state regulations (Appendix G). Upon compliance with these requirements, hazards related to accidental release of hazardous materials would be less than significant.

All construction, operation, and maintenance of the RNG facility would occur in compliance with the California Department of Safety and Health (CAL/OSHA) Standards Part 1910, Occupational Safety and Health Administration Safety and Health Regulations. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee training programs. Upon compliance with CAL/OSHA Standards Part 1910 and the use of contractors and/or employees with the appropriate training, other hazards related to worker safety during construction, operation, and maintenance accident occurrence would be less than significant.

If an incident did occur at the project site, Newport Coast Fire Station 8 is located 1.3 miles southwest and can typically respond within less than 5 minutes, 20 seconds. This fire station is equipped with three Type I Engines and a Type III Engine. Therefore, compliance with existing regulations and based on the fire station response, potential impacts would be reduced to a less-than-significant level.

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b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less-Than-Significant Impact. Please refer to the discussion under Section 3.9(a). As concluded in that section, hazards to the public or the environment arising from the routine use of hazardous materials during project operation and construction phases would be less than significant. A Preliminary Site Consequence Assessment was prepared for the proposed project to outline the potential for flammable vapor clouds, jet fire¹⁵, and toxic vapor clouds from the proposed project and the possible effect they pose on the surrounding vegetation; public receptors in the surrounding area; the proposed control room on the project site; and the existing OCWR building on the project site. The analysis was divided into two parts: ground level modeling for occupied buildings, personnel and public receptors, and vegetation ignition modelling at 20 feet elevation. The assessment found no adverse effects to public receptors which included:

- Sage Hill Highschool
- Car passengers on Newport Coast Drive
- Car passengers on SR 73

The assessment found that occupied buildings on the site could be affected by emergency conditions at the proposed RNG facility and included design requirements that would mitigate these impacts. The design requirements include reinforcing all windows at the existing OCWR building to prevent shattering from overpressure. For the proposed control room, the assessment includes design requirements that include framing the structure in reinforced concrete or structural steelwork, designing joints to ensure ductile behavior, using ductile material for walls and roofs, restraining internal non-structural features, and installing windows and doors that conform to specific performance standards to withstand blast loading and overpressure conditions. Therefore, the impact to occupied buildings, personnel, and public receptors would be less than significant.

The assessment found that under the worst-case scenario jet fires could affect vegetation up to 10 feet beyond the perimeter wall in the northeast portion of the site. However, the proposed project includes design features such as equipment layout, hazardous area classification¹⁶, ignition source controls, fire and gas detection systems, process control alarms, process control shutdowns, and emergency shutdown systems. Operators would also be trained to intervene in emergency situations. Therefore, the impact of jet fires to the surrounding vegetation would be less than significant.

Strict adherence to all emergency response procedures in the Emergency Action Plan (EAP) and the Site Severe Weather Response Plan would also be required throughout the duration of the project. The EAP states that the RNG facility personnel will be given a discharge prevention briefing annually, at a minimum, which includes their responsibilities for compliance with the requirements of the spill laws and emergency response regulations applicable to the RNG facility (Appendix H). This training will include preventing, reporting, stopping,

¹⁵ A jet fire is a turbulent diffusion flame that occurs when a fuel is continuously released under pressure in a specific direction with momentum. The fuel can be a liquid, vapor, or gas that is discharged into open space from an orifice. The momentum of the discharged material mixes with the surrounding atmosphere, creating a high temperature flame.

¹⁶ Hazardous area classification (HAC) is a method of evaluating the likelihood of a flammable atmosphere forming in an area and how long it might last. This classification helps determine if electrical, mechanical, or other equipment needs specific protective features to prevent the risk of fire or explosion.

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containing, cleaning up, and disposing of spill materials. The list of emergency contacts and spill reporting procedures would also be maintained in the RNG facility's SPCC Plan. The Site Severe Weather Response Plan outlines procedures for on-site employees to facilitate emergency scheduling when the National Weather Service or General Administration declares a Severe Weather Watch (Appendix I).

It is unlikely that operation of the proposed project would cause the release of hazardous materials into the environment. However, in the event of a hazardous materials spill of greater amount or toxicity than on-site personnel could safely contain and clean up, assistance would be requested from the NBFD hazmat team. Therefore, compliance with applicable laws and regulations would ensure that impacts would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less-Than-Significant Impact. There are no existing or proposed schools located within one-quarter mile of the project site. The nearest school to the project site is the Sage Hill High School at 20402 Newport Coast Drive, approximately 0.28 mile to the northwest.

As substantiated in Sections 3.9(a) and 3.9(b), project operation would not emit hazardous substances or hazardous wastes in quantities posing substantial hazards to the public or the environment. Additionally, the use of hazardous materials during the project's construction phase would not be in such quantities or stored in such a manner as to pose a significant safety hazard. These activities would be short term and would cease upon completion of the proposed project's construction phase. Further, the use, storage, transport, and disposal of hazardous materials on site would be required to conform to existing laws and regulations. As a result, no significant impacts are anticipated.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. An environmental site assessment and records search was performed by Environmental Data Resources Inc. (EDR) (Appendix G). As shown in Table 11, *Hazardous Material Sites*, the EDR Radius Map Report indicated that the project site has 12 listings on hazardous material databases.

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Table 11 Hazardous Material Sites

Site Name	Facility Status	Database Acronyms
Coyote Canyon Landfill	NA	RGA LF
Coyote Canyon Energy LLC	NA	FINDS
Gas Recovery Systems LLC Coyote Canyon Facility	CPS-SLIC: Completed – Case Closed	CPS-SLIC, HWTS, HAZNET
Coyote Canyon Landfill (Closed)	CPS-SLIC: Completed – Case Closed ENF: Historical and Resolved	SWF/LF, CPS-SLIC, LDS, ENF, Financial Assurance, CIWQS, CERS
Gas Recovery Systems LLC Coyote Canyon Facility	NA	AST, Orange Co. Industrial Site, EMI, NPDES, CIWQS, CERS
Coyote Canyon Energy LLC	NA	HWTS, HAZNET
Coyote Canyon Energy LLC	NA	RCRA NonGen/NLR
OC Waste & Recycling, Coyote	NA	EMI
Landfill Coyote Canyon (Closed)	NA	FINDS
OC Waste & Recycling, Coyote	NA	FINDS
Coyote Canyon Landfill (Closed)	NA	CERS
OC Waste & Recycling, Coyote	NA	EMI

Source: The EDR Radius Map Report with GeoCheck (see Appendix G)

Notes: RGA LF = Recovered Government Archive Solid Waste Facilities List, FINDS = Facility Index System/Facility Registry System, CPS-SLIC = Statewide SLIC Cases (GeoTracker), HWTS = Hazardous Waste Tracking System, HAZNET = Facility and Manifest Data, SWF/LF = Solid Waste Information System, LDS = Land Disposal Sites Listing (GeoTracker), ENF = Enforcement Action Listing, CIWQS = California Integrated Water Quality System, CERS = CalEPA Regulated Site Portal Data, AST = Aboveground Petroleum Storage Tank Facilities, EMI = Emissions Inventory Data, NPDES = National Pollutant Discharge Elimination System, RCRA NonGen/NLR = RCRA – Non Generators/No Longer Regulated.

The only cases that could potentially create a significant hazard are cases listed as Statewide SLIC Cases (CPS-SLIC) and Enforcement Action Listing (ENF). CPS-SLIC are cleanup program sites included in GeoTracker for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. ENF provides a list of Water Board Enforcement Actions. As shown in Table 11, there were two sites classified as CPS-SLIC and ENF cases. Both CPS-SLIC cases are closed cases and the ENF case was reported as historical and resolved (Appendix G). Therefore, no hazardous material sites were listed on the project site. Additionally, construction activities would occur within the boundaries of the project site and would not disturb off-site properties that may be listed on a hazardous materials database. Therefore, no impact would occur, and no mitigation measures are necessary.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?**

No Impact. The nearest public-use airport to the project site is the John Wayne Airport, approximately 6.9 miles to the northwest. The Airport Environs Land Use Plan for the John Wayne Airport, adopted in 2008, establishes safety compatibility zones to support the continued use and operation of the John Wayne Airport. The project site is outside of the Airport Impact Zones, Safety Zones, and Noise Contours (ALUC 2008). Therefore, no impact would occur.

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f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less-Than-Significant Impact. The City has an Emergency Operations Plan (EOP) that establishes policies and procedures to ensure effective response and recovery operations during large-scale emergencies within the city (Newport Beach 2022). Emergency management organization staff that support emergency response, report to the Emergency Operations Center (EOC) or Department Operations Centers (DOC) or are assigned to field response duties should use the EOP to guide their actions in completing assigned tasks.

The City conforms to the requirements of the Standardized Emergency Management System (SEMS) and National Incident Management System (NIMS) guidelines for all local emergencies and response activities. SEMS is required by the California Emergency Services Act (Government Code Section 8607[a]) for managing multi-agency and multi-jurisdictional responses to emergencies in California. The system unifies all of California's emergency management community elements into a single integrated system and standardizes key elements. The City utilizes SEMS during incidents that require a multi-agency response or when the incident involves multiple jurisdictions. The NIMS provides a comprehensive approach to emergency management for all hazards. NIMS integrates existing best practices into a consistent, nationwide approach to domestic emergency management applicable to all jurisdictional levels (public and private) and across functional disciplines. NIMS incorporates Incident Command System (ICS), a standardized on-scene emergency management concept designed to provide an integrated organizational structure for single or multiple emergencies and to facilitate emergency response across jurisdictional boundaries.

The perimeter width of the proposed internal drive aisle would potentially be inadequate for fire apparatus movement or deployment for firefighting. Additionally, the Fire Marshal noted a concern regarding unsafe conditions for firefighting personnel due to the confinement of the compound wall and RNG facility equipment and structures. As shown in Figure 6, the OCWR-reserved access route drive aisle would be constrained to a 12-foot width within the masonry block walls to accommodate the RNG facility's equipment spacing necessary for safe operation and maintenance. Pursuant to Fire Code sections 503.1.1 Exception 1.2 and 503.2.2, to address the inadequate lane width and confinement concern an additional fire hydrant would be located within the open "courtyard" area plan southwest of the project site bringing the total available hydrants to five. These five different locations would allow fire apparatus equipment and crews to deploy at a safe distance from the RNG facility given the spread of hydrant locations throughout the project site. This approach allows for the preferred tactic to fight any RNG facility fire incidents from the courtyard area in lieu of the RNG facility perimeter.

Additionally, the EAP outlines fire hazards, mitigation techniques to control or extinguish fires, and emergency evacuation and response procedures for fire emergencies (Appendix H). The NBFDF would review and approve the EAP. Compliance with the City's EOP and EAP would ensure that impacts would be reduced to a less-than-significant level.

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g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less-Than-Significant Impact With Mitigation Incorporated. The project site is in a Fire Hazard Severity Zone and is surrounded by open space and includes proposed equipment that have the potential to produce flammable vapor clouds and jet fires under accidental conditions (CAL FIRE 2024). As discussed under Section 3.9(b), a Preliminary Site Consequence Assessment was prepared for the proposed project to outline possible fire effects on the surrounding vegetation and public receptors in the surrounding area.

The assessment found that under the worst-case scenario, jet fires could affect vegetation up to 10 feet beyond the perimeter wall in the northeast portion of the site. However, the proposed project includes design features such as equipment layout, hazardous area classification, ignition source controls, fire and gas detection systems, process control alarms, process control shutdowns, and emergency shutdown systems. Operators would also be trained to intervene in emergency situations. Therefore, the impact of jet fires to the surrounding vegetation would be less than significant.

Development of the proposed project would also comply with all City, CBC, and CFC requirements including the provision of adequate fire flows, on-site hydrants, and backflow assemblies. Other applicable regulations include the California Public Resources Code (PRC), which requires internal combustion engines, like those used in construction, to be equipped with a spark arrester. This type of device is commonly used for removing and retaining carbon and other flammable particles from the exhaust flow for engines that use hydrocarbon fuels. These engines must be maintained in effective working order or be constructed, equipped, and maintained for the prevention of fire.

Within the project site, there are three fire hydrants on the western perimeter and one fire hydrant in the south-central area next to the existing building. An additional fire hydrant would be installed next to the existing generator. To address the inadequate internal drive aisle width and confinement concern an additional fire hydrant would be within the open “courtyard” area plan. These five different hydrant locations would allow fire apparatus equipment and firefighting crews to deploy at a safe distance from the RNG facility.

Project development would also adhere to fire protection-related regulations and emergency procedures applicable within the City’s EOP and the project-specific EAP (Appendix G). The EAP outlines fire hazards and mitigation techniques to control or extinguish fires. Compliance with the applicable codes and regulations would ensure that the proposed project would not result in a fire hazard or exacerbate the fire risk in its surroundings. If an incident does occur at the project site, Newport Coast Fire Station 8 is 1.3 miles southwest and can typically respond within less than 5 minutes, 20 seconds. This fire station is equipped with three Type I Engines and a Type III Engine.

In compliance with Nbfd requirements, the proposed project would also remove 28 trees that are immediately outside the perimeter of the project site within an approximately 20-foot-wide non-native grass-sloped area (see Figure 10). The trees would be removed to protect the surrounding area from fire risk associated with the proposed RNG facility. OCWR currently maintains the area outside the perimeter of the walled project site per the Tree Replacement and Revegetation Plan adopted by the City in July 2016 as part of the Coyote Canyon Landfill Gas Recovery Facility Demolition and Telecom Update project (SCH number 2016081012). With the

3. Environmental Analysis

removal of the trees, the Tree Replacement and Revegetation Plan would need to be supplemented with a project-specific Fuel Modification Plan per Mitigation Measure **HAZ-1** to ensure the proper removal of vegetation in line with NBFD requirements. Therefore, adherence to existing local, State, and federal laws and implementation of Mitigation Measure **HAZ-1** would ensure that this impact remains less than significant.

Mitigation Measure

HAZ-1 A Fuel Modification Plan shall be prepared by the project applicant and submitted to Newport Beach Fire Department (NBFD) for review and approval in concurrence with project plan approval and prior to any site disturbances. The Fuel Modification Plan shall follow NBFD Guideline G.02, including:

- a. Site Assessment conducted prior to conducting fire behavior modeling and/or evaluations of potential wildfire hazard.
- b. Fire behavior evaluation that incorporates site-specific fuel, terrain, and weather inputs and may include modeling to support fuel modification zone specifications.
- c. Preparation of a Conceptual Fuel Modification Plan (CFMP) that provides the delineated zones, widths, planting requirements, topographic information, existing vegetation/fuels locations, proposed structure locations, proposed fuel modification zone locations, proposed treatment prescriptions, site photographs, results from fire behavior modeling efforts, and other information required under NBFD's Guidelines. This CFMP will be submitted to NBFD for review and comment. Once accepted, the Precise Fuel Modification Plan (PFMP) can be created.
- d. The PFMP will follow NBFD's Guidelines and include:
 - i. Location and detail of permanent zone markers
 - ii. Plant palette and spacing design in accordance with approved guidelines
 - iii. Irrigation plans and specifications
 - iv. Structure footprint or delineation of proposed development
 - v. All applicable maintenance requirements and assignment of responsibility
 - vi. Additional notes, as required by NBFD
 - vii. Three sets of plans will be submitted for NBFD review
- e. A Technical Report shall accompany the CFMP and provide fire risk assessment information, fire behavior modeling results, WindNinja wind pattern analysis, and technical analysis of any proposed alternative approaches.

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- f. If necessary, an Alternative Materials & Methods (AM&M) report justifying any alternative approach or reduced fuel modification zone widths associated shall be required. The AM&M report examines the requirements, the deviation from the requirements, other mitigating site features (terrain, structure location, earthen berms, overall structural exposure, etc.) and provides additional measures, as necessary, to justify that the intent of the code requirements are being satisfied. AM&M reports provide scientific justifications that the proposed fuel modification shall provide equivalent function as the standard NBFD fuel modification area with the addition of proposed mitigation measures, per NBFD Guideline A-01.

3.10 HYDROLOGY AND WATER QUALITY

The analysis in this section is based partly on the following technical studies, which are included as Appendices E and Appendix J, respectively, to this IS:

- County of Orange/Santa Ana Region Priority Project Preliminary Water Quality Management Plan (P-WQMP), BKF Engineers, June 24, 2024. (Appendix E)
- Coyote Canyon Landfill Project: Preliminary Drainage Report, BKF Engineers, December 14, 2023. (Appendix J)

Would the project:

- a) **Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?**

Less-Than-Significant Impact with Mitigation Incorporated. The City, including the project site, is in the San Diego Creek subwatershed. San Diego Creek lies within the 97,000-acre Newport Bay Watershed and is the major tributary to Upper Newport Bay. The Newport Bay Watershed is bounded in the northeast by the Loma Ridge Foothills and the Santa Ana Mountains. The southern edge is bounded by the San Joaquin Hills. Runoff originating in the northern hills flows south through flood control channels into the San Diego Creek Channel, through the Tustin Plain, and then into Upper Newport Bay. The San Diego Creek channel system underwent significant natural and man-made changes during the 20th century (OCDPW 2024).

Water quality in Newport Beach is regulated by the Santa Ana RWQCB and its Water Quality Control Plan (Basin Plan), which contains water quality standards and identifies beneficial uses (wildlife habitat, agricultural supply, fishing, etc.) for receiving waters along with water quality criteria and standards necessary to support these uses consistent with federal and state water quality laws.

Impacts to water quality of receiving waters generally range over three different phases of a development project:

- During the earthwork and construction phase, when the potential for erosion, siltation, and sedimentation would be the greatest.

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- Following construction and before the establishment of ground cover, when the erosion potential may remain high.
- Following project completion, when impacts related to sedimentation would decrease markedly, but those associated with urban runoff would increase.

Following is a discussion of the potential water quality impacts resulting from urban runoff that would be generated during the construction and operational phases of the proposed project.

Construction

Clearing, grading, excavation, and construction activities associated with the proposed RNG facility have the potential to impact water quality through soil erosion and by increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials, such as fuels, solvents, and paints, may present a risk to surface water quality. Finally, the refueling and parking of construction vehicles and other equipment on site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system.

The proposed RNG facility would have a total footprint of 38,500 square feet (0.88 acres), which includes the RNG processing plant and pipeline interconnection facility. Since the proposed project would disturb less than one acre of land, it is not subject to the requirements of the State Water Resources Control Board's General Construction Permit, which regulates sites that disturb one acre or more and requires filing Permit Registration Documents as well as the preparation of a Stormwater Pollution Prevention Plan. However, other existing regulatory requirements would apply to construction activities on the site, such as the implementation of grading erosion control measures specified in the CALGreen Building Code. Examples of control measures considered BMPs are shown in Table 12, *Water Quality Protection Construction Best Management Practices*.

Table 12 Water Quality Protection Construction Best Management Practices

Category	Purpose	Examples
Erosion Controls and Wind Erosion Controls	<ul style="list-style-type: none"> • Use project scheduling and planning to reduce soil or vegetation disturbance (particularly during the rainy season) • Prevent or reduce erosion potential by diverting or controlling drainage • Prepare and stabilize disturbed soil areas 	Scheduling, preservation of existing vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextile and mats, wood mulching, earth dikes and drainage swales, velocity dissipation devices, slope drains, streambank stabilization, compost blankets, soil preparation/roughening, and non-vegetative stabilization
Sediment Controls	<ul style="list-style-type: none"> • Prevent the mobilization of soil particles through the use of tarping, matting, or other covers. 	Silt fence, sediment basin, sediment trap, check dam, fiber rolls, gravel bag berm, street sweeping and vacuuming, sandbag barrier, straw bale barrier, storm drain inlet protection, manufactured linear sediment controls, compost socks and berms, and biofilter bags
Wind Erosion Controls	<ul style="list-style-type: none"> • Apply water or other dust palliatives to prevent or minimize dust nuisance 	Dust control soil binders, chemical dust suppressants, covering stockpiles, permanent vegetation, mulching, watering, temporary gravel construction, synthetic covers, and minimization of disturbed area

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Table 12 Water Quality Protection Construction Best Management Practices

Category	Purpose	Examples
Non-stormwater Management Controls	<ul style="list-style-type: none"> Prohibit discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment Conduct various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-stormwater discharges and contamination of any such discharges 	Water conservation practices, temporary stream crossings, clear water diversions, illicit connection/discharge, potable and irrigation water management, and the proper management of the following operations: paving and grinding, dewatering, vehicle and equipment cleaning, fueling and maintenance, pile driving, concrete curing, concrete finishing, demolition adjacent to water, material over water, and temporary batch plants
Waste Management and Controls (i.e., good housekeeping practices)	<ul style="list-style-type: none"> Manage materials and wastes to avoid contamination of stormwater 	Stockpile management, spill prevention and control, solid waste management, hazardous waste management, contaminated soil management, concrete waste management, sanitary/septic waste management, liquid waste management, and management of material delivery storage and use
Tracking Controls	<ul style="list-style-type: none"> Minimize the tracking of soil off site by vehicles 	Stabilized construction roadways and construction entrances/exits, and entrance/outlet tire wash

Source: Compiled by PlaceWorks from information provided in the California Stormwater Quality Association's (CASQA's Construction BMP Handbook).

Additionally, the provisions for erosion control in Chapter 15.10, Excavation and Grading Code, of the Newport Beach Municipal Code, would require the proposed project to prepare and submit a grading plan and erosion control plan for review by the City's Building Official. These would include detailed plans for temporary and/or permanent sediment, pollution, and erosion control facilities. The proposed project would be required to comply with applicable regulations from Chapter 14.36, Water Quality. Section 14.36.040, Control of Urban Runoff, would require all new development and significant redevelopment within the City to comply with the Orange County Drainage Area Management Plan and conditions/requirements established by the City related to the reduction or elimination of pollutants in stormwater runoff from the project site. Section 14.36.030, Illicit Connections and Prohibited Discharges, also prohibits the construction, maintenance, operation, and utilization of any illicit connection or prohibited discharge. Due to the proximity of the preserved trees to the removed trees, erosion would not be a significant issue. All removed trees would be flush-cut to the ground and the remaining stumps are to remain in place with no stump grinding. Furthermore, Mitigation Measure **BIO-6** would reduce any erosion impacts due to the removal of trees beyond the perimeter walls. Compliance with these measures would reduce water quality impacts from construction to less than significant.

Operation

Operational-related activities of the proposed project (e.g., runoff from paved areas of the site) would generate pollutants that could adversely affect the water quality of downstream receiving waters if effective measures are not used to keep pollutants out of and remove pollutants from urban runoff.

Operation of the proposed project is required to comply with the requirements of the NPDES Orange County MS4 Permit (Order No. R8-2009-0030) and NPDES Permit No. CAS618030, as amended by Order No. R8-

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2010-0062. The County of Orange, incorporated cities of Orange County including Newport Beach, and the Orange County Flood Control District (OCFCD) are co-permittees under the MS4 Permit. The General MS4 Permit requires that new development or significant redevelopment projects use BMPs, including site design planning, source control, and stormwater treatment facilities, to ensure that the water quality of receiving waters is protected.

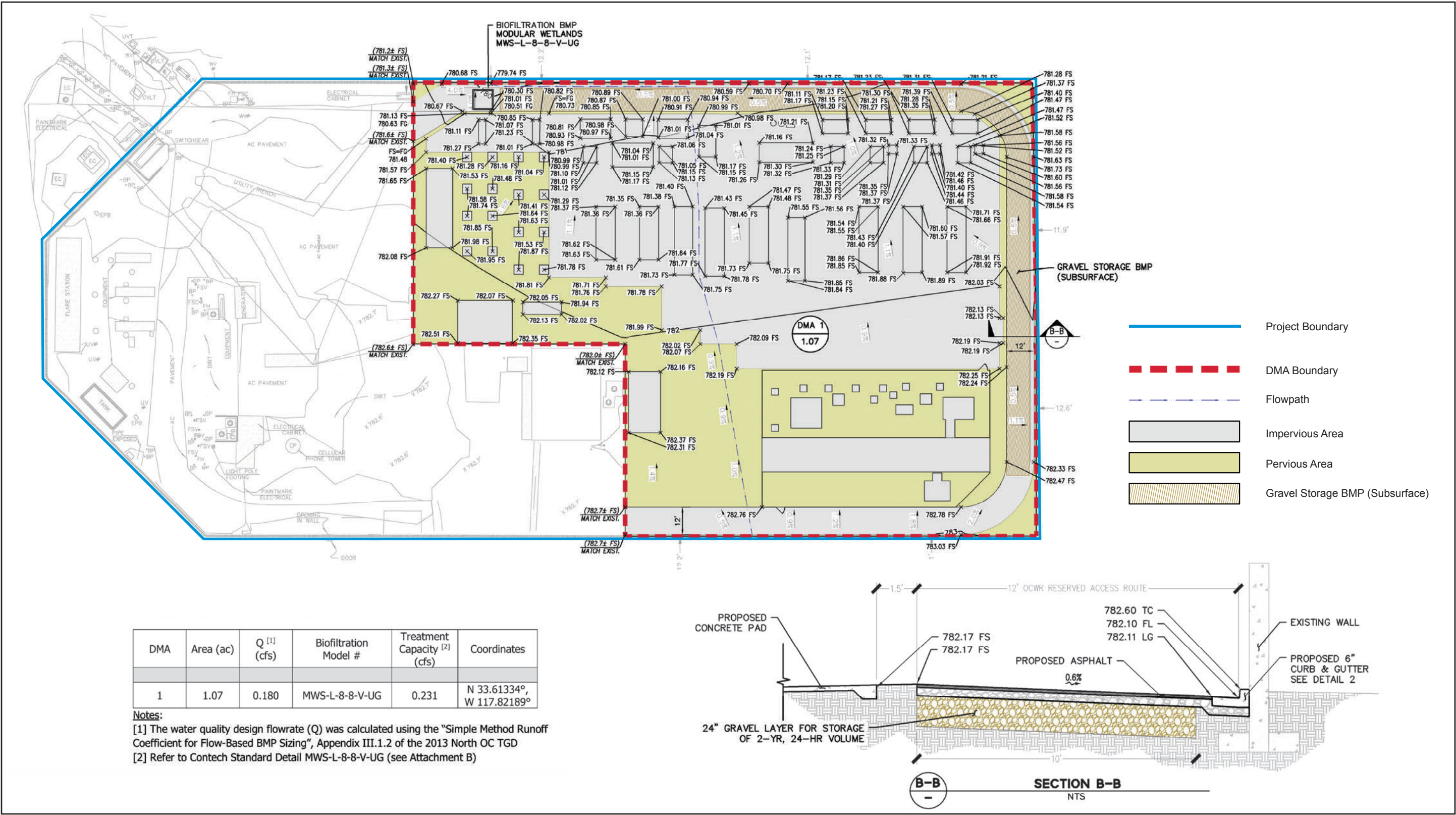
The Orange County Stormwater Program (Stormwater Program) is a requirement of the MS4 Permit and is a cooperative of the County of Orange, OCFCD, and all 34 Orange County cities. The Stormwater Program's specific water pollutant control elements are documented in the Drainage Area Management Plan (DAMP). The DAMP satisfies the NPDES permit conditions to reduce pollutant discharges to the maximum extent practicable for the protection of water quality at receiving water bodies and the support of designated beneficial uses. The description and detail of how this is being accomplished on a local level is contained in each Permittees' Local Implementation Plans (LIP). The City's LIP includes the provision to prepare a project-specific WQMP for specified categories of development aimed at reducing pollutants in post-development runoff.

In accordance with the LIP and MS4 Permit, the proposed project qualifies as a "Priority Development Project" since it includes the addition or replacement of 5,000 or more square feet of impervious surface on an already developed site. Specifically, the proposed project would add approximately 30,930 square feet (0.71 acre) of impervious surface to the project site. Therefore, the proposed project is required to prepare a WQMP in accordance with the City's Model WQMP and Orange County Department of Public Works Technical Guidance Document for the Preparation of Conceptual/Preliminary and/or Project Water Quality Management Plans (TGD) (Newport Beach 2024g). The Model WQMP and TGD include instructions on selecting BMPs for a project, including low impact development (LID) BMPs, alternatives to LID BMPs in case LID BMPs are impractical on a site, and source control BMPs.

LID is a stormwater management and land development strategy that combines a hydrologically functional site design with pollution prevention measures to compensate for land development impacts on hydrology and water quality. LID techniques mimic the site's predevelopment hydrology by using site design techniques that store, infiltrate, evapotranspire, biofilter, or detain runoff close to its source. Source control BMPs reduce the potential for pollutants to enter runoff and are classified in two categories—structural and nonstructural. Structural source control BMPs have a physical or structural component, such as inlet trash racks, trash bin covers, and an efficient irrigation system, to prevent pollutants from contacting stormwater runoff. Nonstructural source control BMPs are procedures or practices used in project operation, such as stormwater training or trash management and litter control practices.

A preliminary WQMP for the proposed project was prepared for City review and is included Appendix E. In accordance with the Model WQMP LID performance criteria, the proposed project would be required to treat the 85th percentile, 24-hour storm event with on-site flow-based biofiltration systems. To fulfill this requirement, a single Modular Wetlands system would be incorporated into the site at the northwest corner of the project site (Figure 13, *Water Quality Best Management Practice Features*). The Modular Wetlands system would have a treatment capacity of 0.23 cubic feet per second which would be able to fully retain the project's water quality design flowrate of 0.18 cubic feet per second (BKF Engineering 2024).

Figure 13 - Water Quality Best Management Practice Features



Source: BKF Engineers 2024.

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Additionally, per the TGD, a hydrologic condition of concern is considered to exist on the project site if any streams downstream from the proposed project are determined to be potentially susceptible to hydromodification impacts, and the post-development runoff volume for the 2-year, 24-hour storm event exceeds the pre-development runoff volume by more than 5 percent.¹⁷ The preliminary WQMP identified three water bodies that would experience potential hydromodification impacts, which include a 72 inch concrete pipe owned by the City, Bonita Creek, and San Deigo Creek Reach 1. Additionally, post-development runoff volume is expected to increase by 140 percent over the pre-development volume. Therefore, the increase in the 2-year 24-hour runoff volume of 0.05 acre-feet (2,178 cubic feet), would need to be stored on site. To store the 2-year, 24-hour storm runoff volume, the proposed project would implement a gravel storage BMP which involves storing stormwater runoff in a gravel layer underneath the site's access road that extends along the eastern and northern perimeter of the project site, as shown in Figure 13. The gravel storage BMP would be able to retain 3,054 cubic feet of runoff (BKF Engineers 2024).

Under post-development conditions, drainage on the project site would flow overland toward the access road on the northern and eastern perimeters of the site where the flow would be intercepted by a series of storm inlets which drain into the 24-inch-deep gravel layer beneath the road. A perforated pipe embedded in the gravel would then route the flows to the Modular Wetlands unit at the northwest corner of the project site. Larger storm flows would spill over the Modular Wetland's internal bypass weir and smaller storm flows would enter the Wetland's media bed for treatment. Outflows from the Modular Wetlands unit would drain to an existing off-site storm drainpipe, which flows to the City-owned 24-inch lateral reinforced concrete pipe. The 24-inch drains to the OCPCD Facility No. F04P04 (78-inch) that successively discharges to Bonita Creek, San Diego Creek Reach 1, and Newport Bay (BKF Engineers 2024).

Additionally, source control BMPs, as shown in Section IV.3 of the preliminary WQMP (see Appendix E) would also be implemented, and a separate Operation and Maintenance Plan has been prepared for the project, a copy of which would remain on site and in the possession of the designated responsible maintenance individual. All proposed drainage system improvements would require City approval.

Based on the preceding, water quality and waste discharge impacts from project operation activities would be less than significant, and no mitigation measures are necessary.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less-Than-Significant Impact. The project site is in the Orange County Groundwater Basin. The IRWD would provide water to the project site. IRWD's water supply sources include imported water, local groundwater, recycled water, and local surface water. Potable and non-potable groundwater supplies are extracted from both the Orange County Groundwater Basin and the Irvine and Lake Forest subbasins. Recycled water is produced at IRWD's Michelson and Los Alisos water recycling plants, and surface water sources are the drainage tributary areas to the Irvine Lake and Harding Canyon Reservoir. In the event IRWD does not have sufficient recycled water supplies to meet customer demands, IRWD can supplement the recycled water

¹⁷ A hydrologic condition of concern is a combination of upland hydrologic conditions and stream biological and physical conditions that poses the potential for physical and/or biological degradation of a stream.

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system with untreated imported water. This water supply is introduced into the system via Irvine Lake and conveyed through IRWD's Irvine Lake pipeline. IRWD can also supplement its recycled water system with non-potable groundwater pumped from the Orange County Groundwater Basin. Approximately 13 percent of IRWD's water needs are met by imported water, 50 percent from local groundwater wells, 30 percent by recycled water, and the rest by surface water sources (IRWD 2021a).

The proposed project would not substantially deplete groundwater supplies or interfere with groundwater recharge. As discussed in the proposed project's Geotechnical Investigation, groundwater was not encountered during subsurface investigations to the maximum depth explored (21.5 feet) (see Appendix D). On-site water use under the proposed project would be limited to dust control and soil compaction during construction, restroom facilities, and emergency fire protection. Therefore, implementation of the proposed project would not create a substantial demand on groundwater sources and would not significantly change the amount of groundwater available and pumped from local wells. Due to the developed nature of the site, the project site does not have the capacity to serve as a significant source for groundwater recharge. Since the proposed project does not involve the direct withdrawal of groundwater for municipal use, it would not substantially interfere with recharge capabilities. Therefore, the development of the site to the proposed RNG facility would not substantially deplete groundwater supplies or interfere with groundwater recharge. Impacts would be less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in a substantial erosion or siltation on- or off-site?

Less-Than-Significant Impact with Mitigation Incorporated. Erosion and siltation impacts potentially resulting from alteration of the drainage pattern due to the proposed project would, for the most part, occur during the project's construction phase, which would include site preparation and grading activities. Environmental factors that affect erosion include topographic, soil, and wind and rainfall characteristics. Siltation is most often caused by soil erosion. Following is a discussion of the potential erosion and siltation impacts that could occur during the construction and operational phases of the proposed project.

Construction

The proposed project would be required to prepare a grading plan and erosion control plan in compliance with Chapter 15.10 of the Newport Beach Municipal Code. Chapter 14.36 also includes requirements that would reduce erosion during construction activities. Compliance with the Municipal Code would reduce the volume of sediment-laden runoff discharging from the site. Furthermore, Mitigation Measure **BIO-6** would reduce any erosion impacts due to the removal of trees beyond the perimeter walls. Therefore, construction-related impacts would be less than significant.

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Operation

The proposed project would be constructed within a 0.88-acre footprint, which includes the 32,500-square-foot RNG facility and associated pipeline interconnection facility. Project development would not alter the course of a stream or a river and would not substantially alter the existing drainage pattern of the site area. Runoff from the site would be diverted into a proposed Modular Wetland unit for treatment prior to discharge to the 24-inch storm drain City storm drain.

Additionally, the proposed project would be implemented in accordance with the preliminary WQMP and abide by the requirements of the MS4 permit and the TGD. For example, in addition the hydromodification and treatment BMPs proposed (gravel storage BMP and Modular Wetland unit), project design and operation would include implementation of a series of non-structural and structural source control BMPs specified in the preliminary WQMP, which would minimize runoff and soil erosion and siltation into stormwater and thus minimize sedimentation downstream. Furthermore, as noted above, the proposed project would comply with Section 14.36.040 and Section 14.36.030 of the Newport Beach Municipal Code which outlines City requirements for development to reduce discharge of pollutants from project sites.

Therefore, project development would not substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation on or off site. Operation-related impacts would be less than significant, and no mitigation measures are necessary.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Less-Than-Significant Impact. Under existing conditions, runoff from the site travels toward two discharge locations. Approximately 75 percent of the flow at the eastern portion of the site discharges to a concrete ditch at the north end of the project site. The other 25 percent of the flow discharges into a v-gutter along the entrance road at the northwest end of the project site which is intercepted by catch basins. All flows from the site ultimately discharge into a 24-inch concrete pipe owned by the City. This pipe conveys flows to an OCFCD facility that discharges into Bonita Creek, San Diego Creek Reach 1, and Newport Bay. These discharge locations can be seen in Figure 12.

The proposed project would maintain the existing drainage patterns as runoff would continue to flow to these two discharge locations, as shown in Figure 14, *Post-Project Drainage Map*. The eastern portion of the site would drain northerly toward the proposed perimeter access road that borders the north and east boundaries of the project site. The access road gutter would direct flows toward multiple storm inlets that discharge into the proposed gravel layer BMP beneath the access road. The gravel layer would have a perforated pipe that would flow to the proposed Modular Wetlands unit BMP at the northwest corner of the project site. Flows from the Modular Wetlands unit would continue to be piped off site via the 24-inch concrete pipe. Flows from the western portion of the site would continue to drain into the gutter along the entrance road. Larger storm flows would spill over the Modular Wetland's internal bypass weir and smaller storm flows would enter the Wetland's media bed for treatment.

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The project's preliminary drainage report calculated the flows under 10-year and 25-year storm events, as appropriate for industrial land uses with non-habitable structures, per the City's direction. Table 13, *Existing and Proposed Runoff Flows*, shows the flows to the two discharge points under existing conditions and proposed conditions.

Table 13 Existing and Proposed Runoff Flows

	Q ₁₀ (cfs)	Q ₂₅ (cfs)
Existing Conditions		
Drainage Point No. 1	2.4	2.93
Drainage Point No. 2	1.36	1.63
Proposed Conditions		
Drainage Point No. 1	3.61	4.33
Drainage Point No. 2	1.36	1.63
Change Between Proposed and Existing		
Drainage Point No. 1	1.21	1.40
Drainage Point No. 2	0	0

Source: BKF Engineering 2023 (Appendix J)

Notes: Q₁₀ = flow from the 10-year storm event; Q₂₅ = flow from the 25-year storm event; cfs = cubic feet per second
See location of drainage points in Exhibits 2 and 3 of the preliminary drainage report (Appendix J).

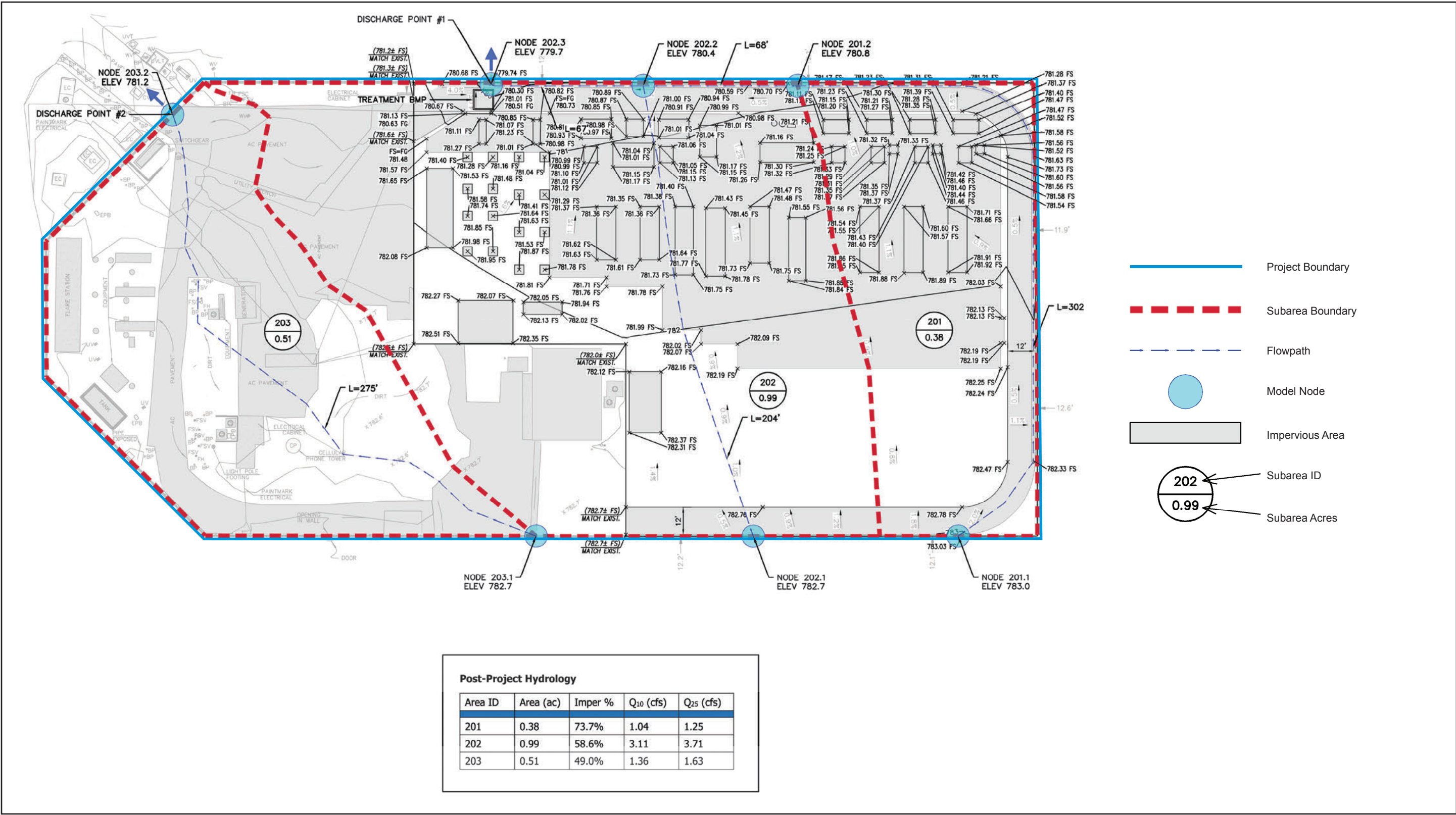
As shown in Table 13, post-project discharge rates for the 10-year and 25-year event exceed the pre-project rates for Drainage Point No. 1. The pre-project condition under these calculations is based on the existing condition of the project site which is vacant with 100 percent pervious surfaces. However, previous use of the site included a landfill gas-to-energy facility which operated from 1988 to December 2015. The facility was demolished and after its closure, the site was cleared. Under these previous conditions, the site was completely developed with 100 percent impervious surfaces and the storm drainage system had capacity to accommodate 10- and 25-year flows. Since the project site under proposed conditions would consist of 66.4 percent pervious area, the post-project condition flow rate for the 10- and 25-year flows would be less than pre-project condition when it was 100 percent impervious. Therefore, the City considers the proposed project to have no additional impact on the site's drainage conditions (Gutierrez 2024). Impacts with respect to flooding from surface runoff are therefore considered less than significant.

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less-Than-Significant Impact. Project impacts on the capacity of storm drainage systems would be less than significant, as previously substantiated in Section 3.10(c)ii. No mitigation measures are necessary.

Project stormwater pollution impacts would be less than significant, as previously discussed in Section 3.10(a). No mitigation measures are necessary.

Figure 14 - Post-Project Drainage Map



Source: BKF Engineers 2023.

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iv) Impede or redirect flood flows?

Less-Than-Significant Impact. The proposed project is not within a 100-year flood, a dam inundation area, or a tsunami inundation zone, as analyzed within the Newport Beach Natural Hazards Mitigation Plan (Newport Beach 2016). Additionally, as discussed in the preliminary geotechnical report for the proposed project (Appendix D), flooding associated with water storage facilities is considered very low since no water bodies and water storage facilities are located upstream of the project site. Therefore, no impact to flood flows is expected to occur and no mitigation measures are necessary.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less-Than-Significant Impact. As noted in Section 3.10.c.iv, the project site is not in a 100-year flood zone, tsunami inundation zone, or dam inundation area. A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam or other artificial body of water. The project site is approximately 1.2 miles southeast of the San Joaquin Reservoir in the City of Newport Beach; however, this reservoir is downstream of the project site. Additionally, the City's Natural Hazards Mitigation Plan considers the probability of a seiche occurring within the City to be very low since it requires very specific conditions to exist, including specific earthquake parameters (e.g., location and distance of epicenter, frequency of seismic waves) and the shape of the enclosed waterbody. Based on the preceding, the proposed would not result in the release of pollutants as the result of floods, tsunami, or seiche. Therefore, impacts would be less than significant, and no mitigation measures are necessary.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less-Than-Significant Impact. The City is under the jurisdiction of the Santa Ana RWQCB. RWQCBs adopt a water quality control plan, or basin plan, that recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface waters, and local water quality conditions and problems. The Santa Ana River Basin Water Quality Control Plan is the plan adopted by the Santa Ana RWQCB. The water quality control plan is the basis for the RWQCB's regulatory programs and establishes water quality standards for the ground and surface waters of the region. The term "water quality standards," as used in the federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The water quality control plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards (Santa Ana RWQCB 2019). As noted previously, the proposed project would not result in significant impacts to water quality following compliance with the Santa Ana River Basin Water Quality Control Plan and conformance with Newport Beach Municipal Code Chapter 14.36.

The Sustainable Groundwater Management Act (SGMA) requires local public agencies and groundwater sustainability agencies in high- and medium-priority basins to develop and implement groundwater sustainability plans or prepare an alternative to a groundwater sustainability plan. According to the California Department of Water Resources SGMA Basin Prioritization Dashboard, the project is not underlain by a

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groundwater basin (Department of Water Resources 2024). Thus, the proposed project is not anticipated to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan and no impact would occur. As indicated under Sections 3.10(a) and 3.10(b), the proposed project would not degrade groundwater quality, substantially decrease groundwater supplies, or interfere substantially with groundwater recharge. Thus, impacts would be less than significant.

3.11 LAND USE AND PLANNING

Would the project:

a) Physically divide an established community?

No Impact. As shown in Figure 4, the site is completely disturbed from the original construction of the gas-to-energy facility. The proposed RNG facility would not introduce a new land use that would disrupt existing land use patterns, nor would it introduce a physical barrier that would separate land uses that are not already separated. The proposed project would not physically change the surrounding neighborhood street patterns or otherwise impede movement through the neighborhoods, and no impact would occur.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The prevailing adopted planning and regulatory plans that govern development and use of the project site are the Newport Beach General Plan and Newport Beach Zoning Code (Title 20, *Planning and Zoning*, of the City's Municipal Code). The development and design standards in the Zoning Code, which implement the City's General Plan, constitute the regulations that govern development of the project site. The following is an analysis of the proposed project's consistency with these land use regulations.

General Plan and Zoning Consistency

The general plan land use designation and zoning designation of the project site is Open Space (OS).

General Plan

Pursuant to the Newport Beach General Plan's Land Use Element, the OS designation is intended to provide areas for a range of public and private uses to protect, maintain, and enhance the community's natural resources (Newport Beach 2006). Open spaces may include incidental buildings, such as maintenance equipment and supply storage, which are not traditionally included in determining intensity limits.

The proposed project would help further the following goal and policy of the City's General Plan, as follows:

Natural Resources Element

Goal NR 24. Increased energy efficiency in City facilities and operations and in private developments.

- **NR Policy 24.5. New Methane Extraction Activities.** Allow new methane extraction activities to reduce reliance on fossil fuels.

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Additionally, as shown in Figure 4, the project site is already completely disturbed and contains gas-to-energy structures. Project development would not change the existing land use and would require a CUP to ensure compliance with all applicable requirements of the Newport Beach land use designation.

Further, the City's development review process would result in the production of a comprehensive set of draft conditions of approval that would be available for public review prior to consideration of the proposed project for approval by the City. Thus, the City would ensure that approval of the proposed project would not conflict with any of the City's applicable land use plan, policies, or regulations that have been adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, project implementation would not conflict with the Newport Beach General Plan and no land use conflict related to General Plan consistency is expected to occur.

Zoning

The project site is zoned OS, which allows for major utilities with approval of a CUP. The OS zoning district allows for major utilities with approval of a CUP. A CUP provides a process for reviewing uses and associated operational characteristics that may be appropriate in the applicable zoning district, but whose effects on a site and surroundings cannot be determined before being proposed for a specific site. A CUP would ensure consistency with all applicable requirements of the NBMC. Compliance with the CUP would also help ensure that the proposed project would be designed and implemented in a manner that is not detrimental to the project site or its surroundings. Compliance with the applicable development and design standards would be ensured through the City's building development review process (Newport Beach 2024f).

Through the City's development review process—which includes a comprehensive set of draft conditions of approval that will be available for public review—the City would ensure that approval of the proposed project would not conflict with any of the City's applicable land use plan, policies, or regulations that have been adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, project implementation would not conflict with the City's Zoning Code and no land use impact related to zoning consistency is expected to occur.

3.12 MINERAL RESOURCES

Would the project:

- a) **Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?**

Less-Than-Significant Impact. For the purpose of CEQA analysis, mineral resources refer to aggregate resources that consist of sand, gravel, and crushed rock. Aggregate resources provide bulk and strength in construction materials such as Portland cement and asphaltic concrete. Other nonfuel mineral resources include metals such as gold, silver, iron, and copper and industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone.

The California Geological Survey (CGS) classifies the regional significance of mineral resources in accordance with the California Surface Mining and Reclamation Act (SMARA) of 1975. The State Geologist is responsible

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for classifying areas within California that are subject to urban expansion or other irreversible land uses. SMARA also allowed the State Mining and Geology Board (SMGB), after receiving classification information from the State Geologist, to designate lands containing mineral deposits of regional or statewide significance. Classification into Mineral Resource Zones (MRZ) is completed by the State Geologist in accordance with the SMGB's priority list and according to the presence or absence of significant mineral resources.

Of the four MRZ categories, lands classified as MRZ-2 are of the greatest importance. Such areas are underlain by demonstrated mineral resources or are located where geologic data indicate that significant measured or indicated resources are present. MRZ-2 areas are designated by SMGB as being "regionally significant." Such designations require that a lead agency's land use decisions involving designated areas be made in accordance with its mineral resource management policies (if any exist) and that it consider the importance of the mineral resource to the region or the state as a whole, not just to the lead agency's jurisdiction. The MRZ-1 zone depicts areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. MRZ-3 indicates areas of undetermined mineral resource significance.

Based on the Newport Beach General Plan Natural Resources Element, areas within Newport Beach are either classified as MRZ-1 or MRZ-3. The project location is categorized as MRZ-3 and land northwest of the project site is categorized as MRZ-1 (Newport Beach 2006). The project site consists of a disturbed paved lot and is not suitable and has never been used for mining. In addition, the project site is not designated as a mineral resource recovery facility. Most of the active oil and gas wells are in the West Newport (located in the Banning Ranch area) and Newport production areas (Newport Beach 2006). Furthermore, Section 1401 of the City's Charter does not allow new drilling, or production or refining of oil, gas, or other hydrocarbon substances within the city. Therefore, implementation of the proposed project would not result in the loss of the availability of known mineral resources that would be of value to the region and residents. Impacts would be less than significant, and no mitigation is necessary.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. See Section 3.12(a). Although the project site is in an area classified as MRZ-3 the City's General Plan Natural Resources Element does not identify the site as a locally important mineral resource recovery site. Furthermore, Section 1401 of the City's Charter does not allow new drilling, or production or refining of oil, gas, or other hydrocarbon substances within the city. Therefore, there would be no loss of availability of a locally important mineral resource recovery site delineated in the General Plan and no impact would occur.

3.13 NOISE

The analysis in this section is based partly on the following technical study, which is included as Appendix K to this IS:

- Noise Impact Analysis: Proposed Landfill Gas to Renewable Natural Gas Project at Coyote Canyon Landfill, Newport Beach, California, LSA, July 17, 2024.

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Would the project result in:

- a) **Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

Less-Than-Significant Impact. The proposed project, once operational, consists of a variety of pieces of equipment, as shown in Figure 6, including the following pieces which generate noise:

- Feed Compressors
- Compressor Feed Oil Coolers
- Compressor Feed After Coolers
- Temperature Swing Adsorption (TSA) Pretreatment Skid
- Chiller
- Membrane Skid
- Recycle Compressor
- Recycle Compressor Oil Cooler
- Recycle Compressor After Cooler
- Off-Spec Gas Flare
- Nitrogen Rejection Unit (NRU)
- NRU Vacuum Rinse Skids
- NRU Vacuum Rinse Skid Oil Coolers
- NRU Vacuum Rinse Skid After Coolers
- Flare
- TOX
- Generator

The nearest sensitive receptors to the proposed project site are the existing Sage High School located approximately 1,400 feet to the north and existing single-family homes in the Tesoro Community located approximately 1,250 feet to the south.

Applicable Noise Standards

The City regulates noise based on the criteria presented in the Noise Element of the General Plan as well as the Municipal Code. To protect City residents from excessive noise, the Noise Element contains the following policies:

- **N 4.1 Stationary Noise Sources:** Enforce interior and exterior noise standards outlined in Table N3, and in the City's Municipal Code to ensure that sensitive noise receptors are not exposed to excessive noise levels from stationary noise sources, such as heating, ventilation, and air conditioning equipment.

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Table N3 Construction Equipment

Land Use Categories		Allowable Noise Levels (dBA)			
Categories	Uses	Interior ^{a,b}		Exterior ^{a,b}	
		Interior Noise Level (L_{eq} dBA) 7 a.m. to 10 p.m.	Interior Noise Level (L_{eq} dBA) 10 p.m. to 7 a.m.	Exterior Noise Level (L_{eq} dBA) 7 a.m. to 10 p.m.	Exterior Noise Level (L_{eq} dBA) 10 p.m. to 7 a.m.
Residential	Single Family, Two Family, Multiple Family (Zone I)	45	40	50	50
	Residential Portions of Mixed-Use Developments (Zone III)	45	40	60	60
Commercial Industrial	Commercial (Zone II)	NA	NA	65	60
	Industrial or Manufacturing (Zone IV)	NA	NA	70	70
Institutional	Schools, Day Care Centers, Churches, Libraries, Museums, Healthcare Institutions (Zone I)	NA	NA	55	50

Source: LSA 2024.

Notes: dBA = A-weighted decibels; L_{eq} = equivalent continuous noise level; NA = not applicable.

The A-weighting filter deemphasizes the very low and very high frequency components of the sound in a manner similar to the frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.

L_{eq} = equivalent continuous sound level. The equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. This is the metric used by the City Newport Beach for stationary sources.

^a If the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

^b It shall be unlawful for any person at any location within the incorporated area of the City of Newport Beach to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such a person which causes the noise level when measured on any other property, to exceed either of the following:

- The noise standard for the applicable zone for any fifteen-minute period;
- A maximum instantaneous noise level equal to the value of the noise standard plus 20 dBA for any period of time (measured using A-weighted slow response).
- In the event the ambient noise level exceeds the noise standard, the noise standard applicable to said category shall be increased to reflect the maximum ambient noise level.
- The noise standard for the residential portions of the residential property falling within one hundred feet of a commercial property, if the intruding noise originates from that commercial property.
- If the measurement location is on a boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

- **N 4.6 Maintenance or Construction Activities:** Enforce the Noise Ordinance noise limits and limits on hours of maintenance or construction activity in or adjacent to residential areas, including noise that results from in-home hobby or work-related activities.

- **N 5.1 Limiting Hours of Activity:** Enforce the limits on hours of construction activity.

Section 10.26.025, Community Noise Control, of the City's municipal code provides the exterior and interior residential noise standards, which represent the maximum acceptable noise levels as measured from any receiving property in the City. It is considered unlawful to create noise on any property that results in noise levels exceeding 55 dBA L_{eq} for a period of 15 minutes at residential uses during daytime hours from 7:00 a.m. to 10:00 p.m. and 50 dBA L_{eq} for a period of 15 minutes at residential uses during nighttime hours from 10:00 p.m. to 7:00 a.m. For commercial uses, exterior noise levels shall not exceed 65 dBA L_{eq} during daytime hours

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and 60 dBA L_{eq} during nighttime hours. Maximum instantaneous noise levels may not exceed the above values plus 20 dBA for any period of time.

Section 10.28.040, Construction Activity – Noise Regulations, states:

- A. No person shall, while engaged in construction, remodeling, digging, grading, demolition, painting, plastering or any other related building activity, operate any tool, equipment or machine in a manner which produces loud noise that disturbs, or could disturb, a person of normal sensitivity who works or resides in the vicinity, unless authorized to do so in accordance with subsection (B) of this section.
- B. The provisions of subsection (A) of this section shall not apply to the following:
 - 1. Work performed on any weekday, which is not a federal holiday, between the hours of 7:00 a.m. and 6:30 p.m.
 - 2. Work performed on a Saturday, in any area of the City that is not designated as a high-density area, between the hours of 8:00 a.m. and 6:00 p.m.

The City's Noise Element and Municipal Code do not provide specific noise level requirements associated with construction activities; therefore, the Federal Transit Administration (FTA) criteria were used in the analysis. Table 14, Federal Transit Administration General Assessment Construction Noise Criteria, shows the FTA's Detailed Analysis Construction Noise Criteria based on the composite noise levels of the two noisiest pieces of equipment per construction phase. This provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction when the noise criteria are exceeded.

Table 14 Federal Transit Administration General Assessment Construction Noise Criteria

Land Use Categories	Daytime 1-hour L_{eq} (dBA)	Daytime 1-hour L_{eq} (dBA)
Residential	80	70
Commercial	85	85
Industrial	90	90

Source: LSA 2024.

Notes: dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level.

Overview of Existing Noise Environment

The primary existing noise sources in the project area are transportation facilities, including SR 73 and Newport Coast Drive. In addition, periodic aircraft operations are audible on the project site. In order to assess the existing noise conditions in the area, long-term noise measurements were conducted at the project site. Three long-term, 24-hour measurements were taken from January 10, 2022, to January 12, 2022. The locations of the noise measurements are shown on Figure 3 of Appendix K. The results are summarized in Table 15, *Existing Noise Level Measurements*.

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Table 15 Existing Noise Level Measurements

Location Number	Location Description	Daytime Noise Levels (dBA L _{eq})	Nighttime Noise Levels (dBA L _{eq})	Primary Noise Sources
Residential	Located at the south side of the project site, near hairpin turn of the access road. On chain-link fence north of the channel.	37.6-48.1	36.5-43.3	Very quiet
Commercial	Located at the north side of the project site, just south of Sage Hill School. On chain-link fence north of the access road and channel.	44.0-55.9	36.3-49.5	Faint traffic on SR-73
Industrial	Located at the west side of the project site, approximately 270 feet east of Newport Coast Drive. On sign on the west side of the access road.	49.0-57.5	39.4-53.4	Faint traffic on Newport

Source: LSA 2024.

Notes: dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level; SR = State Route.

Airport-related noise levels are primarily associated with aircraft engine noise made while aircraft are taking off, landing, or running their engines while still on the ground. The closest airport to the project site is John Wayne Airport (JWA), approximately 4.8 miles to the northwest. The project site is outside the 60 dBA Community Noise Equivalent Level (CNEL) noise contour of JWA based on the JWA Airport Impact Zones map in the Airport Environs Land Use Plan, and the 2023 Fourth Quarter 65 dB CNEL contour for JWA. Because the project is located outside of the nearest airport's 60 dBA CNEL contour, no further analysis related to airport noise is required for the proposed project.

Short-Term Construction Related Impacts

Two types of short-term noise impacts would occur during project construction, including: equipment delivery and construction worker commutes; and project construction operations.

The first type of short-term construction noise would result from transport of construction equipment and materials to the project site and construction worker commutes. These transportation activities would incrementally raise noise levels on access roads leading to the site. It is expected that larger trucks used in equipment delivery would generate higher noise impacts than trucks associated with worker commutes. The single-event noise from equipment trucks passing at a distance of 50 feet from a sensitive noise receptor would reach a maximum level of 84 dBA L_{max}. However, the pieces of heavy equipment for grading and construction activities would be moved on site just one time and would remain on site for the duration of each construction phase. This one-time trip, when heavy construction equipment is moved on and off site, would not add to the

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daily traffic noise in the project vicinity. The total number of daily vehicle trips would be minimal when compared to existing traffic volumes on the affected streets, and the long-term noise level changes associated with these trips would not be perceptible. Therefore, equipment transport noise and construction-related worker commute impacts would be short term and would not result in a significant off-site noise impact.

The second type of short-term noise impact is related to noise generated during grading, equipment installation, and pipeline construction on the project site. Construction is undertaken in discrete steps, each of which has its own mix of equipment, and consequently its own noise characteristics. These various sequential phases would change the character of the noise generated on the project site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Maximum construction noise levels during the pipe installation phase, lasting approximately four months, was calculated as being 83 dBA L_{eq} at a distance of 50 feet from the construction area. Construction noise levels from equipment installation, lasting 12 months, is expected to be approximately 77 dBA L_{eq} at 50 feet. Additionally, minor grading would be necessary prior to equipment installation and pipe installation, however those noise levels would be similar to the pipeline installation and would be of shorter duration.

Construction noise levels would fluctuate throughout the construction period as equipment moves between the various areas on the project site. The average distance to off-site receivers would be greater than the shortest distance measured from the site boundary to the off-site receivers. In order to assess the specific noise levels at the surrounding receptors, the average noise level experienced during construction was assessed based on the average distance of activities to the surrounding receptors which would be 1,700 feet from the property line of the existing school use to the north and 1,380 feet from the existing single-family homes to the south. At those distances, the combined construction noise levels from pipe installation and equipment installation would be 55 dBA L_{eq} and 56 dBA L_{eq} , respectively.

While construction-related, short-term noise levels have the potential to be higher than existing ambient noise levels in the project area under existing conditions, the noise impacts would no longer occur once project construction is completed. As stated above, noise impacts associated with construction activities are regulated by the City's noise ordinance. The proposed project would be required to comply with the construction hours specified in the City's Noise Ordinance, which states that construction activities are allowed between 7:00 a.m. and 6:30 p.m., Monday through Friday, and from 8:00 a.m. to 6:00 p.m. on Saturday. No construction is permitted outside of these hours or on Sundays and federal holidays.

As it relates to off-site uses, construction-related noise impacts would remain below the 80 dBA L_{eq} 1-hour construction noise level criteria as established by the FTA for residential land uses. Therefore, construction noise impacts would be less than significant.

Long-Term Operational Noise Impacts

Noise impacts associated with the long-term operation of the project must comply with the standards presented in the City's Municipal Code discussed above. Noise associated with the proposed project includes the operation

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of various pieces of equipment necessary to operate the proposed LFG facility. It is assumed that all equipment has the potential to operate continuously, 24 hours a day, 7 days a week. The proposed oil coolers would be the only equipment that would have variable noise levels based on temperature that is generally tied to higher temperatures during daytime hours and cooler temperatures during the more sensitive nighttime hours.

In order to calculate the expected impacts due to long-term operational stationary source activities, the software SoundPLAN was used. SoundPLAN is a noise modeling program that allows 3D calculations to be made taking into account topography, ground attenuation, and shielding from structures and walls. Within the model, the noise library allows for the input of many noise sources and calculates the composite noise levels experienced at any receptor necessary. The results from any calculation can be presented both in both tabular and graphic formats. The proposed operations assumed in this analysis were based on conversations with the project engineer and are conservative in nature (i.e., all operations are occurring simultaneously).

Graphics showing the results of the SoundPLAN modeling during full site operations for both daytime and nighttime conditions including the 12-foot perimeter wall, are provided in Attachment C of Appendix K. Table 16, *Noise Level Impacts at Surrounding Sensitive Receptors*, presents the composite noise levels at the nearest sensitive receptors. The results show that the noise levels at the sensitive receptors to the north and to the south would experience noise levels below the daytime 55 dBA L_{eq} standard and nighttime 50 dBA L_{eq} standard from the proposed project operations, thus impacts would be less than significant.

Table 16 Noise Level Impacts at Surrounding Sensitive Receptors

Location	Overall Project Noise Level (dBA L_{eq})	
	Daytime	Nighttime
High School - North	45.5	42.9
Single Family Homes - South	48.0	46.6

Source: LSA 2024. Appendix K.
Notes: dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less-Than-Significant Impact. Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernible. Typically, there is a more adverse reaction to effects associated with the shaking of a building. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items on shelves or hanging on walls, or a low-frequency rumbling noise.

Applicable Vibration Standards

The City's Municipal Code has two policies, NBMC 15.10.125 (Protection of Adjoining Property) and NBMC 15.10.140 (Grading Inspection), related to reducing construction vibration impacts associated with excavation near adjacent properties. However, these requirements do not apply to the proposed project because there

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would be no major excavation or dewatering, and there are no neighboring structures around the project site. Additionally, the City's Noise Element does not provide specific vibration impact criteria associated with construction activities; therefore, Federal Transit Administration (FTA) criteria were used in the analysis.

Construction Damage Criteria

The criteria for environmental impact from groundborne vibration and noise are based on the maximum levels for a single event. FTA guidelines consider a vibration level of up to 102 vibration decibels (VdB) safe for buildings consisting of reinforced concrete, steel, or timber (no plaster) and would not result in any construction vibration damage. For an engineered concrete and masonry (no plaster) building and a non-engineered timber and masonry building, the construction building vibration damage criteria is 98 Vdb and 94 VdB respectively.

Construction Annoyance Criteria

The City has not identified or adopted vibration standards. However, the 2006 General Plan EIR identified a limit of 72 VdB for frequent events (more than 70 vibrations events per day) at residential uses and buildings where people normally sleep. For infrequent events with fewer than 70 vibration events per day, the vibration limit is 80 VdB. It should be noted that the General Plan EIR conservatively identified a residential-nighttime threshold of 72 VdB for all circumstances of vibrational energy; including for construction activities which due to City noise ordinances, would not be expected to occur during the nighttime period (10:00 p.m. to 7:00 a.m.). The 2006 General Plan EIR also identified a limit of 75 VdB for frequent events (more than 70 vibrations events per day) at institutional land uses with primarily daytime uses. For infrequent events with fewer than 70 vibration events per day, the vibration limit is 83 VdB. For the purposes of the proposed project, these levels are identified as appropriate for office uses.

Construction Vibration Building Damage and Annoyance Potential

Groundborne noise and vibration from construction activity would be very low at surrounding uses. While there is currently limited information regarding vibration source levels, to provide a comparison of vibration levels expected for a project of this size, a large bulldozer, similar to a crane, would generate approximately 87 VdB of groundborne vibration when measured at 25 feet based on the Transit Noise and Vibration Impact Assessment Manual. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project boundary (assuming the construction equipment would be used at or near the project boundary) because vibration impacts occur normally within the buildings. Vibration levels above 94 VdB would result in potential damage to nonengineered timber and masonry building and levels above 72 VdB would have the potential to cause annoyance at sensitive residential receptors.

The closest off-site structures to the project site are the existing school buildings to the north, approximately 1,400 feet from the potential construction activities and the existing single-family homes to the south, approximately 1,250 feet from the potential construction activities. Operation of equipment similar to a large bulldozer would generate groundborne vibration levels of up to 36 VdB at these receptors (refer to Appendix K). At this level, vibration from construction would be well below both the damage and annoyance thresholds as described above. Therefore, this impact would be less than significant.

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- c) **For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

No Impact. The nearest public-use airport to the project site is the John Wayne Airport, approximately 6.9 miles to the northwest. The project site is outside of the Airport Impact Zones, Safety Zones, and Noise Contours (ALUC 2008). Therefore, no impact would occur.

3.14 POPULATION AND HOUSING

Would the project:

- a) **Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

No Impact. The proposed project would develop an RNG facility to treat the current LFG and future quantities of LFG from the closed adjacent landfill into the existing SoCalGas infrastructure. No residential development is proposed, and the proposed project would not directly induce population growth in the area.

As discussed in Section 3.19, Utilities and Service Systems, adequate infrastructure and utilities are available to serve the project site and all the new utility infrastructure would be installed underground or placed in enclosed spaces (Figure 11). The new underground power and telecommunications lines would not extend into undeveloped areas nor result in unplanned growth. The project site is also provided with adequate road access via Newport Coastal Drive, and project development would not require extension of roadways.

Operation of the RNG facility would employ three operators on site routinely, which is not considered substantial growth in a city with approximately 83,411 residents (DOF 2023a) and over 44,000 workers (DOF 2023b). Therefore, implementation of the proposed project would not result in substantial direct or indirect population growth in the area. No impact would occur, and no mitigation is necessary.

- b) **Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

No Impact. No housing exists or is proposed to be developed on the project site (Figure 4). Therefore, project development would not displace housing or people. No impact would occur.

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3.15 PUBLIC SERVICES

The analysis in this section is based partly on the service provider questionnaire responses, which are included as Appendix L to this IS.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?

Less-Than-Significant Impact With Mitigation Incorporated. NBFD provides fire protection and emergency services to all of Newport Beach, including the project site from multiple fire stations: Newport Coast Fire Station 8 (6502 Ridge Park Road), Fashion Island Fire Station 3 (868 Santa Barbara), Corona Del Mar Fire Station 5 (410 Marigold Avenue), Santa Ana Heights Fire Station 7 (20401 Acacia Street), Balboa Island Fire Station 4 (124 Marine Avenue), Mariner's Fire Station 6 (1348 Irvine Avenue), Peninsula Fire Station 2 (2807 Newport Boulevard), and Balboa Fire Station 1 (110 E. Balboa Boulevard). The nearest and first response station to the project site is Newport Coast Fire Station 8, which is about 0.5 miles to the southwest.

The proposed project would require similar fire protection services as other businesses, with the exception that for projects involving flares, local fire departments receive calls from the public related to their periodic use to burn excess biogas. The flare would be properly sized to handle the full design flow of the LFG and allow the complete combustion process to occur within the flare prior to exiting the flare. The flames would be enclosed, and no flames would be visible from the top of the flare tower.

Considering the existing firefighting resources available in and near the city, project impacts on fire protection and emergency services (including response times) are not expected. In the event of an emergency at the project site that requires more resources than Newport Coast Fire Station 8 could provide, NBFD would direct resources to the site from other stations in nearby cities. The project site is a developed site that was already served by NBFD, so the proposed project would not expand NBFD's service area. It should be noted that there are substantial fire hazards specifically associated with the operation of an RNG facility. These hazards are analyzed under Section 3.9, Hazards and Hazardous Materials, and Section 3.20, Wildfire, of this IS/MND.

The City involves NBFD in the development review process to ensure that the necessary fire prevention and emergency response features are incorporated into development projects. As mentioned previously in Section 3.9(f), to address the inadequate internal drive aisle width and confinement concern brought up by the Fire Marshal, an additional fire hydrant would be within the open "courtyard" area plan for a total of five fire hydrants. These five hydrant locations would be at key locations on-site to meet hose-pull requirements and allow fire apparatus equipment and firefighting crews to deploy at a safe distance from the RNG facility. All site and building construction proposed as a part of the RNG facility would be subject to review and approval by the City and NBFD prior to building permit and certificate of occupancy issuance.

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Project development is also required to comply with the most current adopted fire codes, building codes, and nationally recognized fire and life safety standards of the City and NBFD, which impose design standards and requirements to minimize and mitigate fire and emergency response risk. Compliance with these codes and standards is ensured through the City's and NBFD's development review and building permit process. Moreover, the EAP outlines fire hazards, mitigation techniques to control or extinguish fires, and emergency evacuation and response procedures for fire emergencies (Appendix G). Adherence to the City's and NBFD's standards and EAP would reduce potential fire hazards.

In compliance with NBFD requirements, the proposed project would also remove 28 trees that are immediately outside the perimeter of the project site within an approximately 20-foot-wide non-native grass-sloped area (see Figure 10). The trees would be removed to protect the surrounding area from fire risk associated with the proposed RNG facility. OCWR currently maintains the area outside the perimeter of the walled project site per the Tree Replacement and Revegetation Plan adopted by the City in July 2016 as part of the Coyote Canyon Landfill Gas Recovery Facility Demolition and Telecom Update project (SCH number 2016081012). With the removal of the trees, the Tree Replacement and Revegetation Plan would need to be supplemented with a project-specific Fuel Modification Plan per Mitigation Measure **HAZ-1** to ensure the proper removal of vegetation in line with NBFD requirements.

Based on the preceding, the proposed project is not expected to adversely affect the NBFD's ability to provide adequate service and or require new or expanded fire facilities that could result in adverse environmental impacts with the implementation of Mitigation Measure **HAZ-1**.

b) Police protection?

Less-Than-Significant Impact. The Newport Beach Police Department (NBPD) provides police protection services to the entire city, including the project site. Project implementation could result in an increase in calls for police protection service when compared to the existing gas-to-energy facility since the RNG facility would employ three operators on site routinely. Based on the staffing level and equipment, the NBPD would be able to provide police services to the project site in a timely manner. Thus, police service demands are not anticipated unless there was an unlikely event of a gas leak or other industrial accident (Clemente 2024).

Furthermore, proposed physical project features and improvements would help minimize impacts on police services. For example, the existing landfill access roadway would connect to a proposed internal drive aisle with an automated security gate at the northwestern boundary of the project site. Additionally, the project site is surrounded by an existing 12-foot concrete masonry unit block wall.

To ensure a timely response, NBPD recommends installation of a Knox Box (emergency access) key to allow the police and fire departments to enter the secure location and a safety system to alert the NBPD in the event of a gas leak. NBPD also recommends training to the employees on the latest safety industry practices and to conduct a walk-through with stakeholders (NBFD, Orange County Fire Authority, Orange County Intelligence Assessment Center, and the NBPD) to create a safety pre-plan for the project site (Clemente 2024).

These project design features and NBFD recommendations would be implemented to enhance the security and safety of the site during and after business hours. These features would also help prevent loitering or trespassing

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on the site and help prevent the need for calls for police services. The City also involves the NBPD in the development review process in order to ensure that the necessary police protection features are incorporated into development projects. All site and building improvements proposed under the proposed project would be subject to review and approval by the NBPD. Finally, in the event of an emergency at the project site that requires more resources than the NBPD could provide, the NBPD would request assistance from other nearby police departments.

Based on the preceding, the proposed project would not adversely affect NBPD's ability to provide adequate service and would not require new or expanded police facilities that could result in adverse environmental impacts. Impacts would be less than significant.

c) Schools?

No Impact. The increase in student generation and the need for new or the expansion of existing school facilities is tied to population growth. No residential development is proposed under the proposed project, and project development is not expected to generate an increase in the student population in the area. Therefore, no impacts to schools would occur.

d) Parks?

No Impact. The nearest public parks to the project site are the Newport Ridge Community Park to the southwest along Newport Ridge Drive East and Bommer Vista Point Park to the north along Summit Park Drive. The proposed project would develop an RNG facility that would not include new residential development and would not increase the population in the area. Therefore, the operation of the proposed project would not increase demand for public parks or require new park facilities. No adverse impacts to parks would occur, and no mitigation measures are necessary.

e) Other public facilities?

No Impact. Impacts to public facilities are typically generated by an increase in local population. Because the proposed project is a proposed RNG facility that would have only three employees working at any one time, its operation would not be expected to increase demand for public facilities such as libraries, daycare centers, or senior centers. Implementation of the proposed project would not result in adverse impacts to other public facilities and no mitigation measures are necessary.

3.16 RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed project would not increase the local population. Therefore, its operation would not accelerate the physical deterioration of existing nearby parks and recreational facilities. No adverse impact to existing recreational amenities would occur and no mitigation measures are necessary.

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- b) **Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?**

No Impact. The proposed project would develop an RNG facility and would not include recreational facilities, nor require the construction or expansion of recreational facilities. Therefore, the proposed project would not result in adverse impacts related to recreational facilities. No impact would occur, and no mitigation are necessary.

3.17 TRANSPORTATION

Would the project:

- a) **Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

Less-Than-Significant Impact With Mitigation Incorporated. The proposed project would construct an RNG facility at the CCL to treat LFG from the closed adjacent landfill to be injected into SoCalGas infrastructure. The project would be accessed via Newport Coast Drive and an existing one-lane landfill access roadway (Figure 3). The landfill access roadway would connect to a proposed internal drive aisle, which would also function as a fire access lane.

The proposed project could result in a temporary increase in construction traffic associated with hauling activities during the AM peak hours at the SR-73 on- and off-ramps at Newport Coast Drive. However, implementation of Mitigation Measures **TRANS-1** through **TRANS-4** would mitigate potential traffic safety hazards to a less-than-significant level.

As described under Section 1.5.2.7, Operational Characteristics, the RNG facility would operate 24 hours per day and employ three operators on site routinely. Therefore, the proposed project would generate minimal daily trips. Therefore, project-related traffic would not result in a substantial number of additional trips to the circulation system that could result in a substantial detriment in the operation of nearby intersections and roadway segments. Impacts would be less than significant.

Mitigation Measure

- TRANS-1** Prior to the initiation of demolition activities at the project site, the applicant shall prepare a traffic control plan for demolition and construction. The traffic control plan shall include the staggering of truck trips throughout the day on Newport Coast Drive, so that the minimum practicable number of truck trips will occur during the AM peak period, to reduce impacts as much as possible to Sage Hill High School and both the State Route 73 on and off-ramps at Newport Coast Drive.
- TRANS-2** All demolition and construction vehicle drivers shall be informed that turning right on the red light at the traffic signal at the intersection of the project site access road and Newport Coast Drive shall be prohibited for the duration of demolition and construction activities. A sign shall be posted at the entrance to the intersection to remind drivers that they are prohibited from making a right-turn at the red light onto Newport Coast Drive.

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- TRANS-3 For the duration of the demolition and construction activities, electronic signage shall be placed near Sage Hill High School to inform drivers regarding the duration of the demolition and construction activities and to indicate that large trucks may be present for the duration of construction and demolition activities.
- TRANS-4 Construction spotters with walkie-talkies shall be assigned on both ends of the project site access road to guide trucks during project demolition and construction activities. Trucks shall only be able to travel in one direction on the one lane paved access road at a time. Trucks that are waiting to go up the access road shall wait across the street on the main canyon landfill property until the spotter informs them that it is safe to proceed up the access road to the project site.

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3 (b)?

Less-Than-Significant Impact. With adoption of SB 375, the state signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and contribute to the reduction of GHG, as required by the California Global Warming Solutions Act of 2006 (AB 32). VMT corresponds to the number of vehicles multiplied by the distance traveled in a given period over a geographical area (daily trips x average trip length). Additionally, AB 1358 (Complete Streets Act) requires local governments to plan for a balanced, multimodal transportation network that meets the needs of all users.

On September 27, 2013, SB 743 started a process that fundamentally changed transportation impact analysis as part of CEQA compliance. Changes include the elimination of auto delay, level of service (LOS), and similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts in many parts of California (if not statewide). As part of the updated CEQA Guidelines, the new criteria “shall promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses” (PRC Section 21099(b)(1)). On January 20, 2016, the Governor’s Office of Planning and Research (OPR) released revisions to the CEQA guidelines for the implementation of SB 743. Final review and rulemaking for the new guidelines were completed in December 28, 2018, when the Natural Resources Agency certified and adopted the CEQA Guidelines update package, including guidelines implementing SB 743. OPR allowed agencies an opt-in period to adopt the guidelines, but they became mandatory on July 1, 2020.

Under SB 743, a city can decide to screen out certain projects from needing a complete VMT analysis. OPR has advised that certain projects could be cleared from further analysis based on size, type, location, and/or proximity to a major transit stop or high-quality transit. The City adopted the VMT Implementation Guide in May 2020, which includes land use project screening criteria (Newport Beach 2020). The City’s VMT analysis methodology is supplemented by the City SB 743 VMT Implementation Guide dated April 6, 2020, the General Plan, Coastal Land Use Plan, and Newport Beach Municipal Code and any policies adopted by the Community Development Director. The City’s land use project screening criteria flags projects that generate a net increase of 300 or less daily trips. If projects meet this land use screening criteria, then the project would be considered to have a less-than-significant impact on transportation, and no further VMT analysis is required (Newport Beach 2020).

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As described under Section 1.5.2.7, Operational Characteristics, the RNG facility would operate 24 hours per day and employ three operators on-site routinely. Therefore, the proposed project would generate relatively few trips associated with three operators and meet the City's land use screening criteria of 300 or less vehicle daily trips. The proposed project's trip generation would be well below the threshold for required VMT analysis, and impacts would be less than significant.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The project would be accessed via Newport Coast Drive and an existing landfill access roadway (Figure 3). No new roadways would be constructed outside the 0.88-acre portion of the site that would include the proposed RNG facility. As shown in Figure 6, a new 12-foot OCWR-reserved access route would run along the north, east, and south perimeters of the project site to accommodate the RNG facility's equipment spacing necessary for safe operation and maintenance. This access route would also serve as an egress for SoCalGas.

The proposed project would not change the layout of the existing one-lane paved driveway to the site from Newport Coast Drive and would not add incompatible uses to area roadways. No impact would occur, and no mitigation measures are required.

d) Result in inadequate emergency access?

No Impact. As shown in Figure 6, a new 12-foot OCWR-reserved access route would run along the north, east, and south perimeters of the project site to accommodate the RNG facility's equipment spacing necessary for safe operation and maintenance. As mentioned previously under Section 3.9(f), to address the inadequate internal drive aisle width and confinement concern an additional fire hydrant would be located within the open "courtyard" area plan. These five different hydrant locations would allow fire apparatus equipment and firefighting crews to deploy at a safe distance from the RNG facility.

Furthermore, the proposed project would be subject to the City of NBFD guidelines and standards based on the CFC, California Vehicle Code, and the Newport Beach Municipal Code (Newport Beach 2024b). Compliance with the City's Fire Department guidelines and standards would ensure emergency resources respond to an incident in a safe and effective manner. No impacts would occur.

3.18 TRIBAL CULTURAL RESOURCES

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural

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landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- i) **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or**

No Impact. As shown in Figure 4, the site is presently developed with the landfill gas-to-energy facility, five buildings, boiler and dilution fan structure, five-pad mounted transformers, generator breaker, cooling tower structure, LFG blowers, four flares, exhaust stack, and several aboveground storage tanks. The landfill gas-to-energy facility operated from 1988 to December 2015. Since that time, the OCWR has been flaring the collected LFG, in compliance with South Coast AQMD and Local Enforcement Agency (LEA) regulations.

The project site is not identified on any state or local historic registers or sources, including the National Register of Historic Places, the California Register of Historic Resources, the California Built Environment Resources Directory, the California Historical Landmarks, and the California Points of Historical Interest (NPS 2024). All of the existing gas-to-energy structures located on the project site that would be demolished are less than 40 years old and are not historic resources. Therefore, no impact to historical resources would occur.

- ii) **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

Less-Than-Significant Impact. Conducting consultation early in the CEQA process allows tribal governments, public lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. The intent of the consultations is to provide an opportunity for interested Native American contacts to work together with the lead agency (in this case, the City) during the project planning process to identify and protect tribal cultural resources.

The provisions of CEQA, PRC Sections 21080.3.1 et seq. (or AB 52), require meaningful consultation with California Native American tribes on potential impacts to tribal cultural resources, as defined in PRC Section 21074. Tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the California Register of Historical Resources or local register of historical resources (OPR 2017).

As part of the AB 52 process, Native American tribes must submit a written request to the relevant lead agency if it wishes to be notified of projects that require CEQA public noticing and are within its traditionally and culturally affiliated geographical area. The lead agency must provide written, formal notification to the tribes that have requested it within 14 days of determining that a project application is complete or deciding to undertake a project. The tribe must respond to the lead agency within 30 days of

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receipt of the notification if it wishes to engage in consultation on the project, and the lead agency must begin the consultation process within 30 days of receiving the request for consultation. Consultation concludes when either 1) the parties agree to mitigation measures to avoid a significant effect, if one exists, on a tribal cultural resource, or 2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. AB 52 also addresses confidentiality during tribal consultation per PRC Section 21082.3(c).

In accordance with the provisions of AB 52, the City sent formal notifications letters on December 5, 2023, to the following tribes: Juaneño Band of Mission Indians - Acjachemen Nation, Gabrielino-Tongva Tribe, Gabrieleño Band of Mission Indians - Kizh Nation. The 30-day noticing requirement under AB 52 was completed on January 4, 2024, 30 days from the date the City sent the notification letter. The City received no responses. Therefore, the City has complied with its obligation under AB 52, and the consultation process is deemed complete (Appendix M).

The project site is heavily developed and has already been subject to similar construction and ground-disturbing activities that would occur under the proposed project. Impacts to tribal cultural resources would be less than significant.

3.19 UTILITIES AND SERVICE SYSTEMS

Would the project:

- a) **Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

Less-Than-Significant Impact. Following is a discussion of the proposed project's potential impacts on water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunication facilities.

Wastewater Treatment Facilities

IRWD would provide wastewater collection and conveyance service to the project site. An existing 10-inch sewer line runs along the northern perimeter of the project site, and an existing 4-inch sewer line runs down the center of the site. The 4-inch sewer line serves the existing building on the site. The proposed project would not include any modifications to these sewer lines. The proposed control room on site would have a septic system with a holding tank to collect the wastewater which would be trucked from the project site.

Additionally, the existing 3-inch condensate line on the project site would be demolished and replaced with 2-inch condensate lines. The RNG processing plant is estimated to produce approximately 1,724 gallons per day (gpd) of condensate; 279 gpd of clean condensate and 1,445 gpd of oily condensate. Clean condensate would be directed to two condensate tanks. The tanks would store the condensate until trucked off site for disposal. The remaining 1,445 gpd of condensate would be routed to an oil/water separator, held in an aboveground tank, and tested before being discharged to the IRWD industrial wastewater system via the 10-inch sewer line (Ennin 2024). For facilities requiring the pretreatment of wastewater, IRWD's require the submittal of detailed

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plans, specifications, and other pertinent data showing the pretreatment facilities and operating procedures for IRWD's review. IRWD may also require monitoring and metering of the facility's discharges and the periodic filing of discharge reports to IRWD (IRWD 2019).

For the purposes of this analysis, it is conservatively assumed that wastewater transported from the project site both through IRWD's sewer system and the septic system would be treated at either the Michelson Water Recycling Plant (MWRP) or the Los Alios Water Recycling Plant (LAWRP). The MWRP has a capacity of 28 mgd and treats an average of 20.3 mgd, leaving a residual capacity of 7.7 mgd. The capacity of LAWRP is 7.5 mgd and an average of 3.43 mgd is currently treated at this facility, leaving a residual capacity of 4.07 mgd (IRWD 2018). The wastewater produced from the condensate and septic system for the control room would represent a small fraction of the residual capacities of the water recycling plants that would treat the wastewater produced by the proposed project. No additional wastewater treatment facilities would be needed to accommodate the proposed project. Therefore, project development would not require the construction of new or expanded wastewater treatment facilities resulting in less-than-significant impacts.

Water Supply Facilities

The project site is within the service area of IRWD, which would provide water service to the proposed project for use at the control room. As shown in Figure 5, the project site currently contains an existing 10-inch fire main and 6-inch potable water line. The proposed project would demolish the sections of the 10-inch fire line and 6-inch potable water line located in the eastern portion of the site within the proposed RNG processing plant footprint. However, lines from the existing OCWR building would be routed to the proposed control building and sub-metering would be installed to provide water service for use of the control building. The proposed project may also include the installation of a back-up 15,000-gallon on-site water tank that would be filled by vendor-provided water trucks. The three existing fire hydrants on the project site would also remain with an additional fire hydrant to be installed next to the existing generator (see Figure 11). Access to water would also be available from OCWR's existing building via a submeter if needed. No off-site water line construction or upsizing would be required to accommodate the proposed project and therefore, the proposed project would not require expansion of water conveyance facilities.

To estimate the water use of the proposed control building, the CalEEMod default for annual indoor nonresidential water consumption in the general office building category was used. Based on a generation rate of 177,734 gallons per 1,000 square feet per year, the 502 square foot control building would consume approximately 89,222 gallons (0.27 acre-feet year) of water per year (CAPCOA 2022). IRWD's Urban Water Management Plan estimates that the water district will have a residual potable water capacity of 51,880 acre-feet per year (afy) in 2025 and 28,270 afy in 2040. Additionally, IRWD estimates that it will have sufficient water supplies to meet proposed growth for normal, single dry, and multiple dry years (IRWD 2021). Therefore, the increase in water consumption under the proposed project would not exceed IRWD's projected water supply. Impacts with respect to water supply facilities would be less than significant.

Stormwater Drainage Facilities

As described in Section 3.10, runoff from the project site would continue to drain into two discharge locations under the proposed project (see Figure 14 for the location of the discharge points). The eastern portion of the

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site would drain toward the proposed perimeter access road that borders the north and east boundaries of the project site where the water would be collected and conveyed by a pipe in the gravel layer underneath the access road to Modular Wetlands unit. These flows would ultimately be conveyed to a OCFCF facility that discharges into Bonita Creek, San Diego Creek Reach 1, and Newport Bay. As substantiated in the discussion of 3.10.c.ii, the proposed BMPs would be designed to accommodate the flows from the project site under 10-year and 25-year storm events would not produce runoff that would result in flooding on or off site. The proposed project would therefore not require any new or expanded stormwater facilities, and impacts would be less than significant.

Other Utilities

SCE would provide electricity to the project site; SoCalGas would provide natural gas; and telecommunications services would be provided by Sprint, AT&T, Verizon Wireless, and/or T-Mobile. All new utility infrastructure would be installed underground or placed in enclosed spaces (e.g., utility closets). The proposed project would include new underground power and telecommunication lines in addition to natural gas pipelines for building heating, as seen in Figure 11. Additionally, SoCalGas would construct a supplemental pipeline interconnection facility for operation of the RNG facility that includes a pipeline extension and POR skid. The pipeline extension would connect to an existing pipeline tie-in point at the western boundary of the project site.

As described in Section 3.6, Energy, implementation of the proposed project is anticipated to consume 32 million kWh of electricity per year. Total electricity consumption in SCE's service area is forecast to increase by approximately 23,715 gigawatt-hours between 2024 and 2035 (CEC 2021). SCE forecasts that it will have sufficient electricity supplies to meet demands in its service area, and the electricity demand due to the proposed project is within the forecast increase in SCE's electricity demands. Project development would not require SCE to obtain new or expanded electricity supplies.

The natural gas demand associated with the proposed buildings is anticipated to be 68,226 kBTU per year (0.68 therms). Supplemental natural gas would also be required for the TOX in combustion of waste gas and the annual supplemental natural gas demand for this process would be 17,021,480 kBTU per year (170.3 therms). Overall, operation of the proposed project would have an annual natural gas demand of 17,089,706 kBTU per year. (170.9 therms). The total gas consumption in the SoCalGas service area was approximately 7,700 million therms in 2016, with little to no growth projected up to 2030 (CEC 2018). SoCalGas is therefore expected to have sufficient natural supplies to meet demands in its service area, and the increase in demand due to the proposed project would be within the forecasted increase for SoCalGas' natural gas supply. Project development would not require SoCalGas to obtain new or expanded natural gas supplies. Additionally, the proposed project would support the generation and procurement of RNG, offsetting its use of natural gas supplies.

While the proposed project includes the construction of new electrical, natural gas, and telecommunications infrastructure to support the operation of the RNG facility, these infrastructure improvements are part of the proposed project and the environmental impacts of the proposed project have been analyzed and mitigated in this IS/MND. No additional utility infrastructure would be needed to serve the proposed project, and therefore impacts are less than significant.

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- b) **Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

Less-Than-Significant Impact. As described in Section 3.19(a), the water demand for the proposed project would be met by IRWD's existing water supply. IRWD estimates it will have a residual potable water capacity of 51,880 afy in 2025 and 28,270 afy in 2040. Additionally, IRWD estimates that it will have sufficient water supplies to meet proposed growth for normal, single dry, and multiple dry years (IRWD 2021). The proposed project is assumed to consume approximately 0.27 afy of water which represents a nominal increase in comparison to IRWD's residual capacity.

Additionally, the proposed project would be required to comply with the provisions of CALGreen, which contains requirements for water conservation measures for indoor water use. Based on the preceding, there are adequate water supplies to meet the water demands of the proposed project, and project development would not require IRWD to obtain new or expanded water supplies. Therefore, impacts would be less than significant, and no mitigation measures are necessary.

- c) **Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

Less-Than-Significant Impact. As discussed above in Section 3.19(a), there is existing wastewater treatment capacity at the two water treatment facilities that would serve the proposed project to accommodate the increase in wastewater generated by the proposed project. Project development would not require construction of new or expanded wastewater treatment facilities. Therefore, impacts would be less than significant, and no mitigation measures are necessary.

- d) **Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

Less-Than-Significant Impact. Solid municipal waste from the project site is transported to the Frank R. Bowerman Landfill, located at 11002 Bee Canyon Access Road, Irvine. The landfill is owned and operated by the County of Orange and has available capacity through 2053. Capacity and disposal data for the Frank R. Bowerman Sanitary Landfill is shown in Table 17, *Landfill Capacity*. As shown in the table, the landfill has a residual capacity of 4,156 tons per day.

Table 17 Landfill Capacity

Landfill Name	Current Remaining Capacity (tons) ¹	Maximum Daily Disposal Capacity (tons)	Average Daily Disposal, 2020 (tons) ²	Residual Daily Disposal Capacity (tons)	Estimated Close Date
Frank R. Bowerman Sanitary Landfill	205,000,000	11,500	7,344	4,156	2053

Sources: CalRecycle 2019a, 2019b.

¹ A Volume-to-Weight conversion rate of 2,000 lbs/cubic yard (1 tons/cubic yard) for "Compacted - MSW Large Landfill with Best Management Practices" is used as per CalRecycle's 2016 Volume-to-Weight Conversion Factors, https://www.epa.gov/sites/production/files/201604/documents/volume_to_weight_conversion_factors_memo_randum_04192016_508fnl.pdf.

² Average daily disposal is calculated based on 300 operating days per year. The facility is open six days per week, Monday through Saturday, except certain holidays.

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To estimate the solid waste generated by the proposed project, the CalEEMod default rate for solid waste disposal in the general light industry category was used. Based on a generation rate of 1.24 tons per 1,000 square feet per year and a total 1,594 square feet of building space, the proposed project would consume approximately 1.98 tons of waste per year (CAPCOA 2022). Therefore, the Frank R. Bowerman Sanitary Landfill would have adequate landfill capacity for the project's forecasted solid waste disposal, and project development would not require additional landfill capacity. Also, the total net increase of solid waste expected to be generated under the proposed project would be minimal compared to the total permitted daily maximum solid waste tonnage per day of the Frank R. Bowerman Sanitary Landfill.

Additionally, project development would be required to implement the requirements of Chapter 6.06, State Mandated Municipal Solid Waste Diversion Programs, of the Newport Beach Municipal Code. This chapter governs the collection, storage, and transportation of solid waste, food scraps, green waste, wood and recyclable materials generated within the City and the diversion of food scraps, green waste, wood and recyclable materials from the landfill. State law requires that waste streams to landfills be reduced by 50 percent by 2020 and beyond pursuant to AB 939 and requires mandatory solid waste and recycling collection (Public Resources Code Section 41780).

Additionally, the proposed project would comply with the current CALGreen and AB 341. The 2022 CALGreen requires that all newly constructed buildings and demolition projects divert at least 65 percent of the nonhazardous construction and demolition materials generated at the project site from landfills. AB 341 mandates a solid waste diversion rate of 75 percent by 2020.

Based on the preceding, impacts on landfill capacity and the City's ability to attain solid waste reduction goals would be less than significant, and no mitigation measures are necessary

e) **Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

Less-Than-Significant Impact. In addition to the regulations described in Section 3.19(d), the proposed project would comply with the following federal, state, and local laws and regulations governing solid waste disposal, including:

- The **EPA** administers the Resource Conservation and Recovery Act of 1976 and the Solid Waste Disposal Act of 1965, which govern solid waste disposal.
- **AB 341** (Chapter 476, Statutes of 2011) increases the statewide waste diversion goal to 75 percent by 2020, and mandates recycling for commercial and multifamily residential land uses.
- **AB 939** (Integrated Solid Waste Management Act of 1989; Public Resources Code 40050 et seq.) required every California city and county to divert 50 percent of its waste from landfills by the year 2000 by such means as recycling, source reduction, and composting. In addition, AB 939 requires each county to prepare a countywide siting element specifying areas for transformation or disposal sites to provide capacity for solid waste generated in the county that cannot be reduced or recycled for a 15-year period.

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- **AB 1327** (California Solid Waste Reuse and Recycling Access Act of 1991) requires local agencies to adopt ordinances mandating the use of recyclable materials in development projects.

Project-related construction and operation phases would be implemented in accordance with all applicable federal, state, and local laws and regulations pertaining to solid waste disposal. Therefore, no impact would occur, and no mitigation measures are necessary.

3.20 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less-Than-Significant Impact. As described under Section 3.9, Hazards and Hazardous Materials, the City has adopted an EOP that establishes policies and procedures to ensure effective response and recovery operations during large-scale emergencies within the city (Newport Beach 2022). Emergency management organization staff that support emergency response, report to the EOC or DOC, or are assigned to field response duties should use the EOP to guide their actions in completing assigned tasks. The Nbfd constantly monitors the fire hazard in the City and has ongoing programs to investigate and alleviate hazardous situations. Newport Beach staffs 8 fire stations, 24 hours per day, 365 days per year. Fires generally represent only 5 percent of all calls, with structure fires occurring less than 2 percent of the time (Newport Beach 2022).

As described in Section 1.5.2.6, Access, Circulation, and Parking, the project would be accessed via Newport Coast Drive and the existing landfill access roadway (Figure 3). No new roadways would be constructed outside the 0.88-acre portion of the site that would include the proposed RNG facility. As shown in Figure 6, a new 12-foot OCWR-reserved access route would run from the project site entrance along the north, east, and south perimeters of the project site to accommodate the RNG facility's equipment spacing necessary for safe operation and maintenance. This access route would also serve as an egress for SoCalGas. As mentioned previously under Section 3.9.f, pursuant to Fire Code Sections 503.1.1 Exception 1.2 and 503.2.2, to address the inadequate internal drive aisle width and confinement concern an additional fire hydrant would be located within the open "courtyard" area plan. These five different hydrant locations would allow fire apparatus equipment and firefighting crews to deploy at a safe distance from the RNG facility. This access route would also serve as an egress for SoCalGas, which would help minimize increased evacuation time or emergency access response times for the three operators on site.

Emergency response and evacuation could be hindered by construction activities. However, there would be one off-site location for material laydown to support ongoing work activities and deliveries of equipment would be staged at this laydown area to proceed to the project site one at a time. Workforce parking would be provided in the off-site laydown area within the landfill with a shuttle to transport the crew and material laydown areas would not block Newport Coast Drive. During the construction period, there would be no permanent on-site population; thus, the proposed project would not impede emergency access to or evacuation from the surrounding community. Therefore, construction and operation of the proposed project would not impair an emergency response plan or evacuation plan, and impacts would be less than significant.

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- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less-Than-Significant Impact With Mitigation Incorporated. The 2019 Strategic Fire Plan for California, the City's EOP, the City's 2016 Local Hazard Mitigation Plan, and the City's General Plan Safety Element collectively help reduce wildfire hazards on a statewide and local scale. Project development is also required to comply with the most current adopted fire codes, building codes, and nationally recognized fire and life safety standards of the City and NBFDF, which impose design standards and requirements to minimize and mitigate fire and emergency response risk. The NBFDF's Fire Prevention Division provides a full range of services encompassing community education and preparedness, emergency planning, fire prevention, code enforcement, fire inspections, vegetation management, and plan check services of new and tenant improvement construction projects. The Fire Prevention staff ensures that fire protection requirements are met for new development and proposed fire suppression systems meet the CFC, Newport Beach Municipal Code, and the National Fire Prevention Association codes and standards (Newport Beach 2024c). If a property is within a Very High Fire Hazard Severity Zone (FHSZ) then Chapter 49 of the CFC, Newport Beach Municipal Code Title 9.04.090 Amendments to the Chapter 49, *Requirements for Wildland Urban Interface Fire Areas*, and California Government Code Section 51175-51189 including NBFDF's Guidelines and Standards G.02 *Fuel Modification Plans and Maintenance Standard* apply (Newport Beach 2024d). Compliance with these codes and standards is ensured through the City's and NBFDF's development review and building permit process. The project-specific EAP also outlines fire hazards and mitigation techniques to control or extinguish fires (Appendix H).

As described under Section 3.9(b), the Preliminary Site Consequence Assessment outlined design requirements to withstand blast loading and overpressure conditions. Under the worst-case scenario, jet fires could affect vegetation up to 10 feet beyond the perimeter wall. However, the proposed project includes design features such as equipment layout, hazardous area classification, ignition source controls, fire and gas detection systems, process control alarms, process control shutdowns, and emergency shutdown systems to mitigate the impact of jet fires to the surrounding vegetation. The site is also surrounded by a 12-foot perimeter wall that is inherently fire resistant. Through compliance with regulatory requirements for building and landscaping design, the proposed project would be built and operated in a manner to minimize the risk of wildfire.

However, due to the surrounding open space and the project site in a Very High FHSZ, there would be a potential risk with off-site wildfires reaching the project site (CAL FIRE 2024). The NBFDF noted these deficiencies associated with the project location. The Fire Marshal and Deputy Fire Marshal performed a site walk on May 28, 2024, and September 23, 2024, and identified 28 trees for removal. The trees are immediately outside the perimeter wall of the project site within an approximately 20-foot-wide non-native grass-sloped area (see Figure 10).

OCWR maintains the surrounding open space based on the Tree Replacement and Revegetation Plan, which was part of the Coyote Canyon Landfill Gas Recovery Facility Demolition and Telecom Update project approved in October 2016 (SCH number 2016081012). With the removal of the trees per NBFDF requirements, the Tree Replacement and Revegetation Plan would need to be supplemented with a project-specific Fuel

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Modification Plan per Mitigation Measure **HAZ-1** to ensure the proper removal of vegetation in line with NBFD requirements.

The project site is relatively flat, but there is a drop in elevation around the site on three sides with surrounding hill and canyon topography in the area. The proposed project would not create steeper slopes through grading, nor would the proposed development modify the existing prevailing winds.

Adherence to the State and local regulations, NBFD requirements, and Mitigation Measure **HAZ-1** would minimize the risk of ignition and spread of wildfires due to vegetation, therefore reducing the potential for exacerbating wildfire risks. Therefore, wildfire risks would not be exacerbated due to slope, prevailing winds, or vegetation, and impacts would be less than significant with mitigation.

- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

Less-Than-Significant Impact With Mitigation. The proposed project would include infrastructure and utility/service system improvements to support the project development. These improvements would include installation of a fire hydrant, a water tank on-site, a septic tank system for the proposed control room, a storm drain for off-site disposal of stormwater, and new underground power and telecommunication lines. The 15,000-gallon on-site water tank would be installed to provide back-up water service. Based on the analysis in Section 3.19, Utilities and Service Systems, the proposed project would not result in the need for expanded water and sewer lines off-site. The proposed project would not install off-site roads, fuel breaks, emergency water sources, off-site power lines, or other utilities that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. Therefore, this impact discussion is focused on whether wildfire risk would be exacerbated due to the installation and routine maintenance of associated infrastructure development on the project site.

As described under the impact discussion in Section 3.20(b), project development would be required to comply with the most current adopted fire codes, building codes, and nationally recognized fire and life safety standards of the City and NBFD, which impose design standards and requirements to minimize and mitigate fire and emergency response risk. The project applicant would ensure that the project contractor cuts, rakes, and removes all combustible ground-level vegetation to a height of six feet or less in the construction, access, and staging areas to reduce the threat of fire ignition pursuant to CFC Sections 304.1.1 and 304.1.2. Construction of the internal roadway would be required to comply with PRC Section 4442, which requires that engines that use hydrocarbon fuels be equipped with a spark arrester, and that these engines be maintained in effective working order to help prevent fire. Pursuant to CFC Section 906, the contractor would have portable fire extinguishers in areas where flammable or combustible liquids are stored, used, or dispensed.

The NBFD's Fire Prevention staff ensures that fire protection requirements are met for new development and proposed fire-suppression systems meets the CFC, Newport Beach Municipal Code, and the National Fire Prevention Association codes and standards (Newport Beach 2024c). If a property is within a Very High FHSZ then Chapter 49 of the CFC, Newport Beach Municipal Code Title 9.04.090 Amendments to the Chapter 49, *Requirements for Wildland Urban Interface Fire Areas*, and California Government Code Section 51175-51189,

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including NBFD's Guidelines and Standards G.02 *Fuel Modification Plans and Maintenance Standard* apply (Newport Beach 2024d). Compliance with these codes and standards would ensure that the installation of these infrastructure improvements would not exacerbate fire risk during construction or lead to ongoing impacts to the environment.

The project applicant shall also supplement the Tree Replacement and Revegetation Plan with a project-specific Fuel Modification Plan per Mitigation Measure **HAZ-1** to ensure the proper removal of vegetation in line with NBFD requirements.

The ongoing maintenance of the proposed project, including occasional repaving of the internal drive aisle and repairing utility lines, would be on a smaller scale than the initial installation/construction of the proposed project and would be required to follow a similar protocol to comply with PRC Section 4442. PRC Section 4442 restricts the type of equipment that can be used on grass- or brush-covered areas of the site to those with hydrocarbon fuels equipped with spark arresters and states these engines must be maintained in effective working order to help prevent fire. Additionally, CCR Title 14, Division 1.5, Chapter 7, Subchapter 2, *SRA/VHFHSZ Fire Safe Regulations*, requires that buildings be set back from the center of the roadway by 30 feet, and with defensible space requirements. Finally, open space would be maintained with equipment that complies with PRC Section 4442 to help prevent fire. Compliance with these State and local regulations would further minimize the risk of wildfire on or surrounding the project site from the ongoing maintenance of the project infrastructure. Additionally, no spark producing or hot works of any kind would be performed on red flag days. For these reasons, the installation and maintenance of the new infrastructure and utility/service systems would not exacerbate wildfire risks, and impacts would be less than significant with mitigation.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less-Than-Significant Impact. The project site is relatively flat, and the preliminary geotechnical investigation report found no landslides in the site vicinity (LOR Geotechnical Group Inc. 2021). As mentioned under impact discussion 3.7b, the type of soils found on the project site are susceptible to erosion by running water, therefore the preliminary geotechnical investigation report recommends measures to prevent surface water from flowing over slope faces (e.g., plant deep-rooted ground cover and prevent over watering on slopes). In addition, the earthwork operations recommended to be conducted during the development of the site (e.g., fill slopes shall be overfilled during construction and then cut back to expose fully compacted soil) would mitigate any near surface loose soil conditions (LOR Geotechnical Group Inc. 2021). These recommended erosion control measures would help to minimize potential impacts due to slope instability.

The project site is also not designated by FEMA as being in a 100-year flood hazard zone (FEMA 2009). Additionally, described in Section 3.10, Hydrology and Water Quality, the proposed project would be required to prepare and submit a grading plan and erosion control plan for City review in addition to complying with erosion control measures in CALGreen. Development of the project site would not involve the alteration of any natural drainage channel or watercourse. To reduce impacts to water quality and drainage, the project site design would implement a Modular Wetland Unit and gravel layer water storage BMPs. Therefore, the proposed

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project would not increase stormwater runoff or change drainage patterns in a manner that would impact downslope or downstream properties.

The project applicant would be required to submit a site-specific final geotechnical report prepared by a registered geotechnical engineer for City review and approval before project development. The final geotechnical report would contain, at a minimum, a description of the geological and geotechnical conditions at the site, an evaluation of site-specific seismic hazards based on geological and geotechnical conditions, and recommended measures to reduce potential impacts related to liquefaction and/or slope stability hazards. The project applicant must implement the recommendations in the approved report during project design and construction. Implementation of the BMPs and approved geotechnical report requirements would reduce potential for slope instability landslide movement.

Furthermore, as discussed in impact discussion 3.20b, the proposed project would be required to comply with the most current adopted fire codes, building codes, and nationally recognized fire and life safety standards of the City and NBFD. These regulations would ensure fire and landslide resilient construction, and therefore would reduce the potential for post-wildfire flooding or landslides downstream or downslope. Management of stormwater and erosion controls during construction and operation would prevent downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. Therefore, the proposed project would not expose people or structures to significant risks related to runoff, slope instability, or drainage changes, and impacts would be less than significant.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

- a) **Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

Less-Than-Significant Impact with Mitigation Incorporated. The project site is a flat, paved lot, containing existing county flares, a blower station, 65-foot cell towers, and associated generators inside a 12-foot perimeter wall. The project site does not contain any special-status vegetation or animal species or corridors for wildlife movement. As mentioned in Section 3.4(a), project development would take place within the boundaries of the project site, except for the secondary laydown area within the landfill and the removal of 28 trees around the perimeter of the project site. Mitigation Measures **BIO-1** through **BIO-7** would ensure impacts from these activities would be less than significant.

As substantiated in Section 3.5, Cultural Resources, the project area does not contain any historic resources and the on-site structures to be demolished have no historic value. Mitigation Measure **CUL-1** was included to reduce potential impacts related to adverse change in archaeological resources to a less-than-significant level. In Section 3.7, Geology and Soils, impacts to paleontological resources were deemed less than significant and in Section 3.18, Tribal Cultural Resources, impacts to tribal cultural resources were deemed to be less than significant.

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With implementation of the above mitigation measures, project development would not degrade the quality of the environment; reduce the population, range, or habitat of a species of fish or wildlife or a rare or endangered plant or animal species; or eliminate an important example of the major periods of California history or prehistory. Impacts to all categories are less than significant or have been mitigated to a level of less than significant, and therefore no additional mitigation measures are required.

- b) **Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)**

Less-Than-Significant Impact with Mitigation Incorporated. Cumulative impacts can occur as a result of the interactions of environmental changes from multiple projects that affect the same resources, which include but are not limited to potential impacts to the transportation network, watershed, air basin, noise environment, or other environmental conditions. Such impacts could be short-term and temporary from overlapping construction impacts, or long-term due to permanent land use changes. There are future pending projects within the vicinity of the project site, including the Sage Hill Middle School and Gymnasium Building Project (SCH Number 2023120397), AT&T Telecom Gazebo Project (SCH Number 2023060095), and Coyote Canyon Regrading and Header Project. However, as discussed in Sections 3.1 through 3.20, the impacts of the proposed project would be less than significant with mitigation measures incorporated and would not combine with other projects to create a significant effect.

The project site has been previously developed with uses that extended within the same footprint of the proposed project so cumulative impacts to agricultural and mineral resources would not change from existing conditions. With implementation of Mitigation Measures **BIO-1** through **BIO-7**, impacts to sensitive species would be mitigated to less than significant and would result in no cumulative impacts. The proposed project would also implement specific features to ensure that impacts to wildfire and hydrology and water quality are less than significant, resulting in less-than-significant cumulative impacts. Impacts related to archaeological resources, paleontological resources, and hazards and hazardous materials are generally confined to a specific site and do not affect off-site areas. As such, impacts would also be less than significant.

Furthermore, the evaluation of air quality and GHG impacts considered the proposed project’s cumulative contribution to federal or state nonattainment pollutants within the SoCAB and the proposed project has very minimal traffic impacts. Through the analyses, no significant cumulative impacts were identified for the proposed project. Implementation of the proposed project would not require the construction of new or expansion of existing utility infrastructure and services. The proposed project would also have no impact on recreation and housing.

In consideration of the preceding factors, the proposed project’s contribution to cumulative impacts would be rendered less than significant; therefore, project impacts would not be cumulatively considerable.

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- c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Less-Than-Significant Impact with Mitigation Incorporated. As discussed in the respective topical sections of this IS/MND, implementation of the proposed project would not result in significant impacts or substantial adverse effects on human beings in the areas of air quality, GHG, noise, . Mitigation measures would be incorporated to reduce impacts to biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and soils, public services, transportation, and wildfire. Therefore, impacts related to these environmental effects are less than significant with mitigation incorporated.

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5. List of Preparers and Organizations and Persons Consulted

LIST OF PREPARERS

Lead Agency

Joselyn Perez, Senior Planner and Project Manager

PlaceWorks

JoAnn Hadfield, Principal

Dina El Chammas Gass, Senior Engineer/Project Manager

Nicole Vermilion, Principal/Technical Team Manager

Tony Chung, Associate Principal/Noise and Vibration

Steve Bush, Senior Engineer Health Risk Assessment

Scott Ashlock, Associate Principal Visual Simulations

John Vang, Senior Associate II AQ/GHG/Energy

Alex Reyes, Associate/Visual Simulations

Emily Parks, Associate/General CEQA

Lexie Zimny, Associate

ORGANIZATIONS AND PERSONS CONSULTED

Archaea Energy

Baffour Ennin, Director of Project Development/Project Manager

Nick Bauer, Director of Project Development/Assistant Project Manager

Nevin Edwards, Air Permitting Manager Environmental and Permitting Oversight

5. List of Preparers and Organizations and Persons Consulted

Newport Beach Fire Department

James Gillespie, Fire Marshal

Raymi Wun, Deputy Fire Chief

Newport Beach Police Department

Gary Clemente, Lieutenant

Orange County Waste & Recycling

Leila Barker, Senior Environmental Planner

Aimee Halligan, CEQA & Habitat Program Manager

Shawn Samia, Civil Engineer

Farrokh Shoaie, Civil Engineer & Project Manager

South Coast Air Quality Management District

Barbara Radlein, Planning and Rules Manager

Sam Wang, Program Supervisor

Sahar Ghandimi, Air Quality Specialist

SCS Engineers

Gabrielle Stephens, Project Director Permitting Support

Maria Bowen, Project Manager Permitting Support

Appendix

Appendix A Aesthetic Simulations

Appendix

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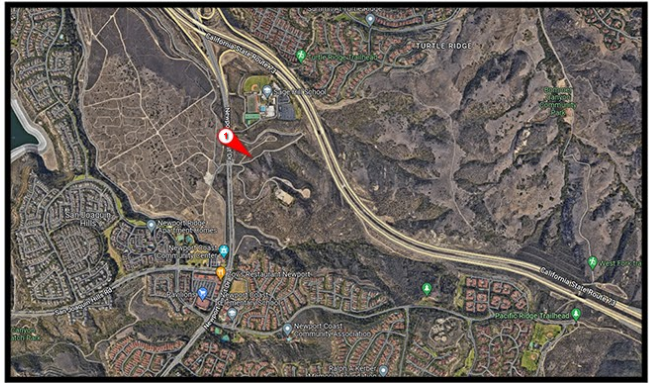
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CAMO - TREES REMOVED

COYOTE CANYON - Newport Beach, CA

View 1





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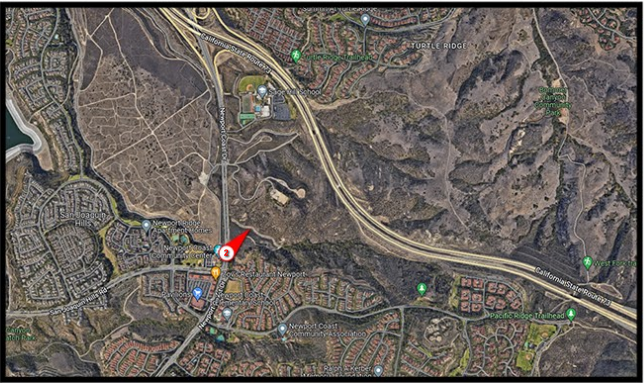
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View 2





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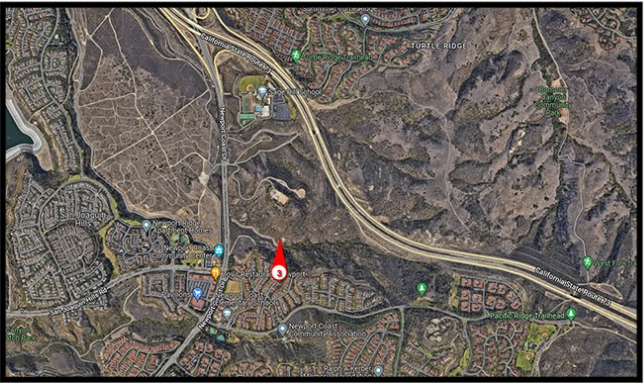
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View 3



Appendix

Appendix B1 Air Quality and Greenhouse Gas Technical Report

Appendix

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Air Quality and Greenhouse Gas Background and Modeling Data

AIR QUALITY

Air Quality Regulatory Setting

The Project has the potential to release gaseous emissions of criteria pollutants and dust into the ambient air; therefore, it falls under the ambient air quality standards promulgated at the local, state, and federal levels. The Project Site is in the SoCAB and is subject to the rules and regulations imposed by the South Coast Air Quality Management District (South Coast AQMD). However, South Coast AQMD reports to California Air Resources board (CARB), and all criteria emissions are also governed by the California and national Ambient Air Quality Standards (AAQS). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the Project are summarized below.

AMBIENT AIR QUALITY STANDARDS

The Clean Air Act (CAA) was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS, based on even greater health and welfare concerns.

These National AAQS and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect “sensitive receptors” most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants. As shown in Table 1, *Ambient Air Quality Standards for Criteria Pollutants*, these pollutants include ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (Pb). In addition, the state has set standards for

sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard ¹	Federal Primary Standard ²	Major Pollutant Sources
Ozone (O ₃) ³	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m ³	150 µg/m ³	
Respirable Fine Particulate Matter (PM _{2.5}) ⁴	Annual Arithmetic Mean	12 µg/m ³	9 µg/m ³	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m ³	
Lead (Pb)	30-Day Average	1.5 µg/m ³	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m ³	
	Rolling 3-Month Average	*	0.15 µg/m ³	
Sulfates (SO ₄) ⁵	24 hours	25 µg/m ³	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo = 0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard ¹	Federal Primary Standard ²	Major Pollutant Sources
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H ₂ S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hours	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2016; US EPA 2024a.

Notes: ppm: parts per million; µg/m³: micrograms per cubic meter

* Standard has not been established for this pollutant/duration by this entity.

1 California standards for O₃, CO (except 8-hour Lake Tahoe), SO₂ (1 and 24 hour), NO₂, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equalled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2 National standards (other than O₃, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

3 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

4 On February 7, 2024, the national annual PM_{2.5} primary standard was lowered from 12.0 µg/m³ to 9.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

5 On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

AIR POLLUTANTS OF CONCERN

Criteria Air Pollutants

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. Air pollutants are categorized as primary or secondary pollutants. Primary air pollutants are those that are emitted directly from sources and include CO, VOC, NO₂, SO_x, PM₁₀, PM_{2.5}, and Pb. Of these, CO, SO₂, NO₂, PM₁₀, and PM_{2.5} are “criteria air pollutants,” which means that ambient air quality standards (AAQS) have been established for them. VOC and oxides of nitrogen (NO_x) are air pollutant precursors that form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O₃) and NO₂ are the principal secondary pollutants. A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.

Carbon Monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion, engines and motor vehicles operating at slow speeds are the primary source of CO in the SoCAB. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (South Coast AQMD 2005; US EPA 2024d). The SoCAB is designated as being in attainment under the California AAQS and attainment (serious maintenance) under the National AAQS (CARB 2024a).

Volatile Organic Compounds (VOC) are composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of VOCs. Other sources include evaporative emissions from paints and solvents, asphalt paving, and household consumer products such as aerosols (South Coast AQMD 2005). There are no AAQS for VOCs. However, because they contribute to the formation of O₃, South Coast AQMD has established a significance threshold (South Coast AQMD 2023a). The health effects for ozone are described later in this section.

Nitrogen Oxides (NO_x) are a by-product of fuel combustion and contribute to the formation of ground-level O₃, PM₁₀, and PM_{2.5}. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO₂). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO_x produced by combustion is NO, but NO reacts quickly with oxygen to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO₂ is only potentially irritating. NO₂ absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO₂ exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO₂ exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between elevated short-term NO₂ concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (South Coast AQMD 2005; US EPA 2024d). On February 21, 2019, CARB's Board approved the separation of the area that runs along the State Route 60 corridor through portions of Riverside, San Bernardino, and Los Angeles counties from the remainder of the SoCAB for state nonattainment designation purposes. The Board designated this corridor as nonattainment.¹ The remainder of the SoCAB is designated in attainment (maintenance) under the National AAQS and attainment under the California AAQS (CARB 2024a).

Sulfur Dioxide (SO₂) is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release

¹ CARB is proposing to redesignate SR-60 Near-Road Portion of San Bernardino, Riverside, and Los Angeles Counties in the SoCAB as attainment for NO₂ at the February 24, 2022 Board Hearing (CARB 2023d).

significant quantities of SO₂. When sulfur dioxide forms sulfates (SO₄) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_x). Thus, SO₂ is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO₂ may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO₂, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing) at lower concentrations and when combined with particulates, SO₂ may do greater harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics (South Coast AQMD 2005; US EPA 2024d). The SoCAB is designated as attainment under the California and National AAQS (CARB 2024a).

Suspended Particulate Matter (PM₁₀ and PM_{2.5}) consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM₁₀, include particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤0.01 millimeter). Inhalable fine particles, or PM_{2.5}, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤0.0025 millimeter). Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Both PM₁₀ and PM_{2.5} may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. The US Environmental Protection Agency's (EPA) scientific review concluded that PM_{2.5}, which penetrates deeply into the lungs, is more likely than PM₁₀ to contribute to health effects and at far lower concentrations. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing) (South Coast AQMD 2005; South Coast AQMD 2022). There has been emerging evidence that ultrafine particulates, which are even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.0001 millimeter) have human health implications because their toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (South Coast AQMD 2022). However, the EPA and the California Air Resources Board (CARB) have not adopted AAQS to regulate these particulates. Diesel particulate matter is classified by CARB as a carcinogen (CARB 1999; CARB 2024d). Particulate matter can also cause environmental effects such as visibility impairment,² environmental damage,³ and aesthetic damage⁴ (South Coast AQMD 2005; South Coast AQMD 2022; US EPA 2024d). The SoCAB is a nonattainment area for PM_{2.5} under California and National AAQS and a nonattainment area for PM₁₀ under the California AAQS (CARB 2024a).⁵

² PM_{2.5} is the main cause of reduced visibility (haze) in parts of the United States.

³ Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

⁴ Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

⁵ CARB approved the South Coast AQMD's request to redesignate the SoCAB from serious nonattainment for PM₁₀ to attainment for PM₁₀ under the National AAQS on March 25, 2010, because the SoCAB did not violate federal 24-hour PM₁₀

Ozone (O₃) is a key ingredient of “smog” and is a gas that is formed when VOCs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O₃ is a secondary criteria air pollutant. O₃ concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O₃ poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O₃ can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O₃ also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O₃ also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O₃ harms sensitive vegetation during the growing season (South Coast AQMD 2005; US EPA 2024d). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2024a).

Lead (Pb) is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (South Coast AQMD 2005; South Coast AQMD 2022; USEPA 2024d). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA’s regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted more strict lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.⁶ As a result of these violations, the Los Angeles County portion of the SoCAB is designated as nonattainment under the National AAQS for lead (South Coast AQMD 2012; CARB 2024a). However, lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011 (South Coast AQMD 2012). CARB’s State Implementation Plan (SIP) revision was submitted to the EPA for approval. Because emissions of lead are found only in projects that are permitted by South Coast AQMD, lead is not a pollutant of concern for the project.

standards from 2004 to 2007. The EPA approved the State of California’s request to redesignate the South Coast PM₁₀ nonattainment area to attainment of the PM₁₀ National AAQS, effective on July 26, 2013.

⁶ Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (South Coast AQMD 2012).

Table 2, *Criteria Air Pollutant Health Effects Summary*, summarizes the potential health effects associated with the criteria air pollutants.

Table 2 Criteria Air Pollutant Health Effects Summary

Pollutant	Health Effects	Examples of Sources
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Chest pain in heart patients • Headaches, nausea • Reduced mental alertness • Death at very high levels 	Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Ozone (O ₃)	<ul style="list-style-type: none"> • Cough, chest tightness • Difficulty taking a deep breath • Worsened asthma symptoms • Lung inflammation 	Atmospheric reaction of organic gases with nitrogen oxides in sunlight
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Increased response to allergens • Aggravation of respiratory illness 	Same as carbon monoxide sources
Particulate Matter (PM ₁₀ and PM _{2.5})	<ul style="list-style-type: none"> • Hospitalizations for worsened heart diseases • Emergency room visits for asthma • Premature death 	Cars and trucks (particularly diesels) Fireplaces and woodstoves Windblown dust from overlays, agriculture, and construction
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Aggravation of respiratory disease (e.g., asthma and emphysema) • Reduced lung function 	Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes
Lead (Pb)	<ul style="list-style-type: none"> • Behavioral and learning disabilities in children • Nervous system impairment 	Contaminated soil

Source: CARB 2024b.

Toxic Air Contaminants

The public's exposure to air pollutants classified as toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant (HAP) pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code §7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency (Cal/EPA), acting through CARB, is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a

substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics “Hot Spot” Information and Assessment Act of 1987. Under AB 2588, toxic air contaminant emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

Diesel Particulate Matter

In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

CARB has promulgated the following specific rules to limit TAC emissions:

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- 13 CCR Chapter 10, Section 2480, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- 13 CCR Section 2477 and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

Community Risk

In addition, to reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources. CARB’s recommendations on the siting of new sensitive land uses were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in

these studies is that proximity to air pollution sources substantially increases exposure and the potential for adverse health effects. There are three carcinogenic toxic air contaminants that constitute the majority of the known health risks from motor vehicle traffic, DPM from trucks, and benzene and 1,3-butadiene from passenger vehicles. CARB recommendations are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

AIR QUALITY MANAGEMENT PLANNING

The South Coast AQMD is the agency responsible for improving air quality in the SoCAB and ensuring that the National and California AAQS are attained and maintained. South Coast AQMD is responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). Since 1979, a number of AQMPs have been prepared.

2022 AQMP

South Coast AQMD adopted the 2022 AQMP on December 2, 2022, which serves as an update to the 2017 AQMP. On October 1, 2015, the EPA strengthened the National AAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb) (2015 Ozone National AAQS.). The SoCAB is currently classified as an “extreme” nonattainment for the 2015 Ozone National AAQS. Meeting the 2015 federal ozone standard requires reducing NO_x emissions, the key pollutant that creates ozone, by 67 percent more than is required by adopted rules and regulations in 2037. The only way to achieve the required NO_x reductions is through extensive use of zero emission (ZE) technologies across all stationary and mobile sources. South Coast AQMD’s primary authority is over stationary sources which account for approximately 20 percent of NO_x emissions. The overwhelming majority of NO_x emissions are from heavy-duty trucks, ships and other State and federally regulated mobile sources that are mostly beyond the South Coast AQMD’s control. The region will not meet the standard absent significant federal action. In addition to federal action, the 2022 AQMP requires substantial reliance on future deployment of advanced technologies to meet the standard. The control strategy for the 2022 AQMP includes aggressive new regulations and the development of incentive programs to support early deployment of advanced technologies. The two key areas for incentive programs are (1) promoting widespread deployment of available ZE and low-NO_x technologies and (2) developing new ZE and ultra-low NO_x technologies for use in cases where the technology is not currently available. South Coast AQMD is prioritizing distribution of incentive funding in Environmental Justice areas and seeking opportunities to focus benefits on the most disadvantaged communities (South Coast AQMD 2022).

Lead State Implementation Plan

In 2008, EPA designated the Los Angeles County portion of the SoCAB nonattainment under the federal lead (Pb) classification due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in Vernon and the City of Industry exceeding the new standard. The rest of the SoCAB, outside the Los Angeles County nonattainment area remains in attainment of the new standard. On May 24, 2012, CARB approved the SIP revision for the federal lead standard, which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to EPA for approval.

South Coast AQMD PM_{2.5} Redesignation Request and Maintenance Plan

In 1997, the EPA adopted the 24-hour fine PM_{2.5} standard of 65 micrograms per cubic meter (µg/m³). In 2006, this standard was lowered to a more health-protective level of 35 µg/m³. The SoCAB is designated nonattainment for both the 65 and 35 µg/m³ 24-hour PM_{2.5} standards (24-hour PM_{2.5} standards). In 2020, monitored data demonstrated that the SoCAB attained both 24-hour PM_{2.5} standards. The South Coast AQMD has developed the 2021 Redesignation Request and Maintenance Plan for the 1997 and 2006 24-hour PM_{2.5} Standards demonstrating that the SoCAB has met the requirements to be redesignated to attainment for the 24-hour PM_{2.5} standards (South Coast AQMD 2021b).

AB 617, Community Air Protection Program

Assembly Bill (AB) 617 (C. Garcia, Chapter 136, Statutes of 2017) requires local air districts to monitor and implement air pollution control strategies that reduce localized air pollution in communities that bear the greatest burdens. In response to AB 617, CARB has established the Community Air Protection Program.

Air districts are required to host workshops to help identify disadvantaged communities disproportionately affected by poor air quality. Once the criteria for identifying the highest priority locations have been identified and the communities have been selected, new community monitoring systems would be installed to track and monitor community-specific air pollution goals. In 2018 CARB prepared an air monitoring plan (Community Air Protection Blueprint), that evaluates the availability and effectiveness of air monitoring technologies and existing community air monitoring networks. Under AB 617, the Blueprint is required to be updated every five years.

Under AB 617, CARB is also required to prepare a statewide strategy to reduce TACs and criteria pollutants in impacted communities; provide a statewide clearinghouse for best available retrofit control technology; adopt new rules requiring the latest best available retrofit control technology for all criteria pollutants for which an area has not achieved attainment of California AAQS; and provide uniform, statewide reporting of emissions inventories. Air districts are required to adopt a community emissions reduction program to achieve reductions for the communities impacted by air pollution that CARB identifies.

Existing Conditions

CLIMATE/METEOROLOGY

South Coast Air Basin

The Project Site lies in the South Coast Air Basin (SoCAB), which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (South Coast AQMD 2005).

Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The lowest average temperature recorded in Newport Beach is reported at 67.2°F in December, and the highest average temperature is 81.9°F in August (USA.com 2024).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from October through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains. Rainfall averages 13.93 inches per year in the vicinity of the area (USA.com 2024).

Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the (South Coast AQMD 2005).

Wind

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur, both in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the transport and diffusion of pollutants by inhibiting their eastward transport. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (South Coast AQMD 2005).

Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. These are the marine/subsidence inversion and the radiation inversion. The combination of winds and inversions are critical determinants in leading to the highly

degraded air quality in summer and the generally good air quality in the winter in the project area (South Coast AQMD 2005).

AREA DESIGNATIONS

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the State Implementation Plan (SIP). Areas are classified as attainment or nonattainment areas for particular pollutants, depending on whether they meet ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

- **Unclassified:** a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- **Attainment:** a pollutant is in attainment if the CAAQS for that pollutant was not violated at any site in the area during a three-year period.
- **Nonattainment:** a pollutant is in nonattainment if there was at least one violation of a state AAQS for that pollutant in the area.
- **Nonattainment/Transitional:** a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SoCAB is shown in Table 3, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*.

Table 3 Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	No Federal Standard
Ozone – 8-hour	Extreme Nonattainment	Extreme Nonattainment
PM ₁₀	Serious Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment ¹
CO	Attainment	Attainment
NO ₂	Attainment	Attainment/Maintenance
SO ₂	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only) ²
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2024a.

1 The SoCAB is pending a resignation request from nonattainment to attainment for the 24-hour federal PM_{2.5} standards. The 2021 PM_{2.5} Redesignation Request and Maintenance Plan demonstrates that the South Coast meets the requirements of the CAA to allow US EPA to redesignate the SoCAB to attainment for the 65 µg/m³ and 35 µg/m³ 24-hour PM_{2.5} standards. CARB will submit the 2021 PM_{2.5} Redesignation Request to the US EPA as a revision to the California SIP (CARB 2021).

2 In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new 2008 federal AAQS as a result of large industrial emitters. Remaining areas for lead in the SoCAB are unclassified. However, lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011 (South Coast AQMD 2012). CARB's SIP revision was submitted to the EPA for approval.

EXISTING AMBIENT AIR QUALITY

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site are best documented by measurements taken by the South Coast AQMD. The Project Site is located within Source Receptor Area (SRA) 20: Central Orange County Coastal. The air quality monitoring station closest to the Project is the Mission Viejo–26081 Via Pera Monitoring Station, which is one of 31 monitoring stations South Coast AQMD operates and maintains within the SoCAB.⁷ Data from this station includes O₃, PM₁₀, and PM_{2.5}. Data for NO₂ was supplemented from Anaheim–Pampas Lane Monitoring Station. Table 4, *Ambient Air Quality Monitoring Summary*, shows regular violations of the state and federal O₃, state PM₁₀, and federal PM_{2.5} standards in the last five years.

Table 4 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels during Such Violations ^{1,2}				
	2018	2019	2020	2021	2022
Ozone (O₃)					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	2	3	20	2	1
State & Federal 8-hour ≥ 0.070 ppm (days exceed threshold)	9	11	32	8	5
Max. 1-Hour Conc. (ppm)	0.121	0.106	0.171	0.105	0.110
Max. 8-Hour Conc. (ppm)	0.088	0.087	0.122	0.081	0.088
Nitrogen Dioxide (NO₂)					
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppb)	0.0660	0.0594	0.0709	0.0671	0.0530
Coarse Particulates (PM₁₀)					
State 24-Hour > 50 µg/m ³ (days exceed threshold)	1	0	2	0	0
Federal 24-Hour > 150 µg/m ³ (days exceed threshold)	0	0	0	0	0
Max. 24-Hour Conc. (µg/m ³)	55.6	45.1	56.2	35.2	31.0
Fine Particulates (PM_{2.5})					
Federal 24-Hour > 35 µg/m ³ (days exceed threshold)	1	0	6	0	0
Max. 24-Hour Conc. (µg/m ³)	38.9	20.8	46.6	32.6	22.6

Source: CARB 2024c.

Notes: ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter; * = Data not available

¹ Data for O₃, PM₁₀, and PM_{2.5} obtained from the Mission Viejo – 26081 Via Pera Monitoring Station and NO₂ from Anaheim – Pampas Lane Monitoring Station.

² Most recent data available as of October 2023.

MULTIPLE AIR TOXICS EXPOSURE STUDY V

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on existing ambient concentrations of TACs and the potential health risks from air toxics in the SoCAB. In April 2021, South Coast AQMD released the latest update to the MATES study, MATES V. The first MATES analysis, MATES I, began in 1986 but was limited because of the technology available at the time. Conducted in 1998, MATES II was the first MATES iteration to include a comprehensive monitoring program, an air toxics emissions

⁷ Locations of the SRAs and monitoring stations are shown here: <http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf>.

inventory, and a modeling component. MATES III was conducted in 2004 to 2006, with MATES IV following in 2012 to 2013.

MATES V uses measurements taken during 2018 and 2019, with a comprehensive modeling analysis and emissions inventory based on 2018 data. The previous MATES studies quantified the cancer risks based on the inhalation pathway only. MATES V includes information on the chronic noncancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic noncancer risks from MATES II through IV measurements have been re-examined using current Office of Environmental Health Hazards Assessment (OEHHA) and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time.

The MATES V study showed that cancer risk in the SoCAB decreased to 454 in a million from 997 in a million in the MATES IV study. Overall, air toxics cancer risk in the SoCAB decreased by 54 percent since 2012 when MATES IV was conducted. MATES V showed the highest risk locations near the Los Angeles International Airport and the Ports of Long Beach and Los Angeles. Diesel particulate matter continues to be the major contributor to air toxics cancer risk (approximately 72 percent of the total cancer risk). Goods movement and transportation corridors have the highest cancer risk. Transportation sources account for 88 percent of carcinogenic air toxics emissions, and the remainder is from stationary sources, which include large industrial operations such as refineries and power plants as well as smaller businesses such as gas stations and chrome-plating facilities. (South Coast AQMD 2021a).

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases.

Residential areas are also considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

The nearest offsite sensitive receptors are the single-family residences about 1,200 feet to the south and 2,000 feet to the north in addition to the students at Sage High School about 1,500 feet north of the project site.

Thresholds of Significance

The analysis of the Project's air quality impacts follows the guidance and methodologies recommended in South Coast AQMD's *CEQA Air Quality Handbook* and the significance thresholds on South Coast AQMD's

website (South Coast AQMD 1993). CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. South Coast AQMD has established thresholds of significance for regional air quality emissions for construction activities and project operation. In addition to the daily thresholds listed above, projects are also subject to the AAQS. These are addressed through an analysis of localized CO impacts and localized significance thresholds (LSTs).

REGIONAL SIGNIFICANCE THRESHOLDS

The South Coast AQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB. Table 5, *South Coast AQMD Significance Thresholds*, lists South Coast AQMD's regional significance thresholds that are applicable for all projects uniformly regardless of size or scope. There is growing evidence that although ultrafine particulates contribute a very small portion of the overall atmospheric mass concentration, they represent a greater proportion of the health risk from PM. However, the EPA or CARB have not yet adopted AAQS to regulate ultrafine particulates; therefore, South Coast AQMD has not developed thresholds for them.

Table 5 South Coast AQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/ Volatile Organic Compounds (VOCs)	75 lbs/day	55 lbs/day
Nitrogen Oxides (NO _x)	100 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Sulfur Oxides (SO _x)	150 lbs/day	150 lbs/day
Particulates (PM ₁₀)	150 lbs/day	150 lbs/day
Particulates (PM _{2.5})	55 lbs/day	55 lbs/day

Source: South Coast AQMD 2023a.

Projects that exceed the regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Linked to increased cancer risk (PM_{2.5}, TACs)
- Aggravates respiratory disease (O₃, PM_{2.5})
- Increases bronchitis (O₃, PM_{2.5})
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O₃)
- Reduces resistance to infections and increases fatigue (O₃)
- Reduces lung growth in children (PM_{2.5})
- Contributes to heart disease and heart attacks (PM_{2.5})
- Contributes to premature death (O₃, PM_{2.5})
- Linked to lower birth weight in newborns (PM_{2.5}) (South Coast AQMD 2015a)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of PM_{2.5} is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern California scientists responsible for a landmark children's health study found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (South Coast AQMD 2015b).

South Coast AQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals exposed to elevated concentrations of air pollutants in the SoCAB and has established thresholds that would be protective of these individuals. To achieve the health-based standards established by the EPA, South Coast AQMD prepares an AQMP that details regional programs to attain the AAQS. Mass emissions thresholds shown in Table 4 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. These thresholds are based on the trigger levels for the federal New Source Review Program, which was created to ensure projects are consistent with attainment of health-based federal AAQS. Regional emissions from a single project do not trigger a regional health impact, and it is speculative to identify how many more individuals in the air basin would be affected by the health effects listed previously. Projects that do not exceed the South Coast AQMD regional significance thresholds in Table 4 would not violate any air quality standards or contribute substantially to an existing or projected air quality violation.

If projects exceed the emissions levels presented in Table 4, then those emissions would cumulatively contribute to the nonattainment status of the air basin and would contribute to elevating health effects associated with these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would contribute to reducing possible health effects related to criteria air pollutants. However, for projects that exceed the emissions in Table 4, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment, because mass emissions are not correlated with concentrations of emissions or how many additional individuals in the air basin would be affected by the health effects cited previously.

South Coast AQMD has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health to address the issue raised in *Sierra Club v. County of Fresno* (Friant Ranch, L.P.) (2018) 6 Cal.5th 502, Case No. S21978. South Coast AQMD currently does not have methodologies that would provide the City with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a Project's mass emissions.⁸ Ozone concentrations are dependent on a variety of

⁸ In April 2019, the Sacramento Metropolitan Air Quality Management District (SMAQMD) published an Interim Recommendation on implementing *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 ("Friant Ranch") in the review and analysis of Project under CEQA in Sacramento County. Consistent with the expert opinions submitted to the court in Friant Ranch by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and South Coast AQMD, the SMAQMD guidance confirms the absence of an acceptable or reliable quantitative methodology that would correlate the expected criteria air pollutant emissions of projects to likely health consequences for people from project-generated criteria air pollutant emissions. The SMAQMD guidance explains

complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National and California AAQS, and the absence of modeling tools that could provide statistically valid data and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects, it is not possible to link specific health risks to the magnitude of emissions exceeding the significance thresholds. However, if a project in the SoCAB exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until the attainment standards are met in the SoCAB.

CO HOTSPOTS

Areas of vehicle congestion have the potential to create pockets of CO called hot spots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hot spots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the SoCAB and in the state have steadily declined.

In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hotspot analysis conducted for the attainment by the South Coast AQMD for busiest intersections in Los Angeles during the peak morning and afternoon periods plan did not predict a violation of CO standards.⁹ As identified in the South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection to more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2023).

LOCALIZED SIGNIFICANCE THRESHOLDS

The South Coast AQMD developed LSTs for emissions of NO₂, CO, PM₁₀, and PM_{2.5} generated at the Project Site (offsite mobile-source emissions are not included in the LST analysis). LSTs represent the maximum emissions at a Project Site that are not expected to cause or contribute to an exceedance of the

that while it is in the process of developing a methodology to assess these impacts, lead agencies should follow the Friant Court's advice to explain in meaningful detail why this analysis is not yet feasible. Since this interim memorandum SMAQMD has provided methodology to address health impacts. However, a similar analysis is not available for projects within the South Coast AQMD region.

⁹ The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

most stringent federal or state AAQS and are shown in Table 6, *South Coast AQMD Localized Significance Thresholds*.

Table 6 South Coast AQMD Localized Significance Thresholds

Air Pollutant (Relevant AAQS)	Concentration
1-Hour CO Standard (CAAQS)	20 ppm
8-Hour CO Standard (CAAQS)	9.0 ppm
1-Hour NO ₂ Standard (CAAQS)	0.18 ppm
Annual NO ₂ Standard (CAAQS)	0.03 ppm
24-Hour PM ₁₀ Standard – Construction (South Coast AQMD) ¹	10.4 µg/m ³
24-Hour PM _{2.5} Standard – Construction (South Coast AQMD) ¹	10.4 µg/m ³
24-Hour PM ₁₀ Standard – Operation (South Coast AQMD) ¹	2.5 µg/m ³
24-Hour PM _{2.5} Standard – Operation (South Coast AQMD) ¹	2.5 µg/m ³

Source: South Coast AQMD 2023a.

ppm – parts per million; µg/m³ – micrograms per cubic meter

¹ Threshold is based on South Coast AQMD Rule 403. Since the SoCAB is in nonattainment for PM₁₀ and PM_{2.5}, the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.

To assist lead agencies, South Coast AQMD developed screening-level LSTs to back-calculate the mass amount (lbs. per day) of emissions generated onsite that would trigger the levels shown in Table 5 for projects under 5-acres. These “screening-level” LSTs tables are the localized significance thresholds for all projects of five acres and less; however, it can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required to compare concentrations of air pollutants generated by the project to the localized concentrations shown in Table 5.

In accordance with South Coast AQMD’s LST methodology, the screening-level construction LSTs are based on the acreage disturbed per day based on equipment use. The screening-level construction LSTs for the Project Site in SRA 20 are shown in Table 7, *South Coast AQMD Screening-Level Localized Significance Thresholds*, for NO_x, CO, PM₁₀, and PM_{2.5}.

Table 7 South Coast AQMD Screening-Level Localized Significance Thresholds

Acreage Disturbed	Threshold (lbs/day) ¹			
	Nitrogen Oxides (NO _x)	Carbon Monoxide (CO)	Coarse Particulates (PM ₁₀)	Fine Particulates (PM _{2.5})
≤1.00 Acre Disturbed Per Day: Project Site ¹	188	4,959	103	55
≤1.00 Acre Disturbed Per Day: Laydown & Parking Area ²	194	5,320	156	90

Source: South Coast AQMD 2008 and 2011.

¹ Screening level LSTs are based on receptors within 1,250 feet (381meters) in SRA 20 and an acreage disturbed of less than 1 acre per day.

² Screening level LSTs are based on nearest Sage High School receptors within 1,325 feet (404 meters) for NO_x and CO who would not be exposed 24 hours/day and residences located 1,890 ft (576 meters) for PM₁₀ and PM_{2.5}, who are assumed to be exposed 24 hours/day, in SRA 20.

HEALTH RISK

Whenever a project would require use of chemical compounds that have been identified in South Coast AQMD Rule 1401, placed on CARB’s air toxics list pursuant to AB 1807, or placed on the EPA’s National

Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the South Coast AQMD. Table 8, *South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds*, lists the TAC incremental risk thresholds for operation of a project. The type of land uses that typically generate substantial quantities of criteria air pollutants and TACs from operations include industrial (stationary sources) and warehousing (truck idling) land uses (CARB 2005). As park and recreational uses do not use substantial quantities of TACs, thus these thresholds are typically applied to new industrial projects only. Additionally, the purpose of this environmental evaluation is to identify the significant effects of the Project on the environment, not the significant effects of the environment on the Project (*California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478)).

Table 8 South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds

Maximum Incremental Cancer Risk	≥ 10 in 1 million
Hazard Index (project increment)	≥ 1.0
Cancer Burden in areas ≥ 1 in 1 million	> 0.5 excess cancer cases
Source: South Coast AQMD 2023a.	

Draft Operational Cumulative Health Risk Thresholds

South Coast AQMD initiated a Working Group to identify cumulative health risk thresholds for development projects in order to address community concerns of health risk impacts of new projects being developed in areas where there is a higher pollution burden. The cumulative health risk threshold methodology first utilizes a screening approach to identify whether projects can qualitatively address cumulative health risk or quantitatively address health risk:

- **Low Cancer Risk Project Types:** Residential, commercial, recreational, educational, and retail.
- **Medium Cancer Risk Project Types:** Truck yards, gas stations, small industrial projects, and linear projects.
- **High Cancer Risk Project Types.** Industrial, major transportation projects (airports, port, railyard, bus/train station), and major planning projects.

For projects with low and medium cancer risks, like the Project, a quantitative analysis is not warranted. On the other hand, for projects that result in potentially high cancer risk impacts, a quantitative is recommended. Additionally, the project-level health risk threshold of 10 in a million is adjusted based on the underlying health risk of the zip code the project is within based on South Coast AQMD's MATES V mapping. MATES V is utilized. MATES V identifies a gradient of the effects of air pollution on cancer risk in the South Coast AQMD Region, which is then used to adjust the project-level cancer risk levels as shown in Table 9, *MATES V Adjusted Cumulative Significant Cancer Risk Thresholds*.

Table 9 MATES V Adjusted Cumulative Significant Cancer Risk Thresholds

Threshold Increment	MATES V Cancer Risk	Adjusted Cumulative Cancer Risk Threshold
A	Most Stringent	≥ 1 in 1 million
B	>90th Percentile	≥ 3 in 1 million
C	90th Percentile to 50th Percentile	≥ 5 in 1 million
D	50th Percentile to 30th Percentile	≥ 7 in 1 million
E	< 30th Percentile	≥ 10 in 1 million

Source: South Coast AQMD 2023b.

South Coast AQMD has also identified that the thresholds in Table 9 should be adjusted if any of the following criteria apply:

- **Criteria #1 – Post-2018 High Volume Diesel-Fueled Mobile Sources.** If there are post-2018 high volume highways or railroad mainlines, then increase the threshold increment by 1 (e.g., from step “D” to “C”).
- **Criteria #2 – Post-2018 Projects with High Volume Diesel Fueled Trucks.** Post-2018 projects are not accounted for in MATES V. Therefore, if new warehousing projects along the truck route have been constructed, then increase the threshold increment by 1 (e.g., from D to C).
- **Criteria #3 – Sensitive Receptor Population.** If the project site is within an AB 617 community or within the 80th percentile of CES 4.0, then increase the threshold increment by 1(e.g., from D to C).

GREENHOUSE GAS EMISSIONS

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHG, to the atmosphere. Climate change is the variation of Earth’s climate over time, whether due to natural variability or as a result of human activities. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHG—water vapor,¹⁰ carbon (CO₂), methane (CH₄), and ozone (O₃)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).¹¹ The major GHG are briefly described below.

¹⁰ Water vapor (H₂O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

¹¹ Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in

- **Carbon dioxide (CO₂)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g. manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH₄)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal landfills and water treatment facilities.
- **Nitrous oxide (N₂O)** is emitted during agricultural and industrial activities as well as during combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime or persistence of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 10, *GHG Emissions and Their Relative Global Warming Potential Compared to CO₂*. The GWP is used to convert GHGs to CO₂-equivalence (CO₂e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fifth Assessment Report (AR5) GWP values for CH₄, a project that generates 10 MT of CH₄ would be equivalent to 280 MT of CO₂.¹²

Table 10 GHG Emissions and Their Relative Global Warming Potential Compared to CO₂

GHGs	Fourth Assessment Report (AR4) Global Warming Potential Relative to CO ₂ ¹	Fifth Assessment Report (AR5) Global Warming Potential Relative to CO ₂ ¹	Sixth Assessment Report (AR6) Global Warming Potential Relative to CO ₂ ¹
Carbon Dioxide (CO ₂)	1	1	1
Methane ² (CH ₄)	25	28	30
Nitrous Oxide (N ₂ O)	298	265	273

Source: IPCC 2007, 2013, and 2023.

Notes: The IPCC published updated GWP values in its Sixth Assessment Report (AR6) that reflect latest information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO₂. However, GWP values identified in AR5 are used by the 2022 Scoping Plan for long-term emissions forecasting.

¹ Based on 100-year time horizon of the GWP of the air pollutant compared to CO₂.

² The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO₂ is not included.

GHG Regulatory Setting

REGULATION OF GHG EMISSIONS ON A NATIONAL LEVEL

The US Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road

reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2017a). However, state and national GHG inventories do not yet include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

¹² The global warming potential of a GHG is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not in and of themselves impose any emission reduction requirements but allow the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (US EPA 2009).

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and SF₆—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the project's GHG emissions inventory because they constitute the majority of GHG emissions and, per South Coast AQMD guidance, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

US Mandatory Report Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO₂ per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2021 to 2035)

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon (mpg) in 2025. On March 30, 2020, the EPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026.

On December 21, 2021, under direction of Executive Order (EO) 13990 issued by President Biden, the National Highway Traffic Safety Administration repealed SAFE Vehicles Rule Part One, which had preempted state and local laws related to fuel economy standards. In addition, on March 31, 2022, the National Highway Traffic Safety Administration finalized new fuel standards in response to EO 13990. Fuel efficiency under the standards proposed will increase 8 percent annually for model years 2024 to 2025 and 10 percent annual for model year 2026. Overall, the new CAFE standards require a fleet average of 49 mpg for passenger vehicles and light trucks for model year 2026, which would be a 10 mpg increase relative to model year 2021 (NHTSA 2022).

On July 28, 2023, NHTSA proposed new CAFE standards for passenger cars and light trucks built in model years 2027-2032, and new fuel efficiency standards for heavy-duty pickup trucks and vans built in model years 2027-2035. If finalized, the proposal would require an industry fleet-wide average of approximately 58 mpg for passenger cars and light trucks in model year 2032, by increasing fuel economy by 2 percent year over year for passenger cars and by 4 percent year over year for light trucks. For heavy-duty pickup trucks and vans, the proposal would increase fuel efficiency by 10 percent year over year (NHTSA 2023).

Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles

In 2024, the EPA issued a final rule, Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles, that sets new, more protective standards to reduce harmful air pollutant emissions from light-duty and medium-duty vehicles starting with model year 2027 (USEPA 2024b). The final rule builds upon EPA's final standards for federal GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026 and leverages advances in clean car technology to help improve public health from vehicle emissions. These standards will phase in over model years 2027 through 2032. For light-duty vehicles, the standards are projected to result in an industry-wide average target for the light-duty fleet of 85 grams/mile (g/mile) of CO₂ in model year 2032, representing a nearly 50 percent reduction in projected fleet average emissions target levels relative to the existing MY 2026 standards (USEPA 2024c). The medium-duty vehicle standards are projected to result in an average target of 274 g/mile of CO₂ by MY 2032, representing a 44 percent reduction in projected fleet average emissions target levels relative to the existing MY 2026 standards (USEPA 2024c). Overall, EPA projects that cumulative CO₂ reductions as a result of the new standards are approximately 7.2 billion metric tons over the life of the program (USEPA 2024c).

REGULATION OF GHG EMISSIONS ON A STATE LEVEL

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in EO S-03-05 and EO B-30-15, EO B-55-18, Assembly Bill 32 (AB 32), Senate Bill 32 (SB 32), and SB 375.

Executive Order S-3-05

Executive Order S-3-05, signed June 1, 2005. Executive Order S-3-05 set the following GHG reduction targets for the State:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Assembly Bill 32, the Global Warming Solutions Act (2006)

AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in EO S-03-05. CARB prepared the 2008 Scoping Plan to outline a plan to achieve the GHG emissions reduction targets of AB 32.

Executive Order B-30-15

EO B-30-15, signed April 29, 2015, set a goal of reducing GHG emissions within the state to 40 percent of 1990 levels by year 2030. EO B-30-15 also directed CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in EO S-03-05. It also requires the Natural Resources

Agency to conduct triennial updates of the California adaption strategy, “Safeguarding California”, in order to ensure climate change is accounted for in state planning and investment decisions.

Senate Bill 32 and Assembly Bill 197

In September 2016, Governor Brown signed SB 32 and AB 197 into law, making the Executive Order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

Executive Order B-55-18

Executive Order B-55-18, signed September 10, 2018, set a goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure that future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning that not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions should be offset by equivalent net removals of CO₂e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Assembly Bill 1279

AB 1279, signed by Governor Newsom in September 2022, codified the carbon neutrality targets of EO B-55-18 for year 2045 and sets a new legislative target for year 2045 of 85 percent below 1990 levels for anthropogenic GHG emissions. SB 1279 also requires CARB to update the Scoping Plan to address these new targets.

2022 Climate Change Scoping Plan

CARB adopted the *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on December 15, 2022, which lays out a path to achieve carbon neutrality by 2045 or earlier and to reduce the State’s anthropogenic GHG emissions (CARB 2022a). The Scoping Plan provides updates to the previously adopted 2017 Scoping Plan and addresses the carbon neutrality goals of EO B-55-18 (discussed below) and the ambitious GHG reduction target as directed by AB 1279. Previous Scoping Plans focused on specific GHG reduction targets for our industrial, energy, and transportation sectors—to meet 1990 levels by 2020, and then the more aggressive 40 percent below that for the 2030 target. The 2022 Scoping Plan updates the target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. Carbon neutrality takes it one step further by expanding actions to capture and store carbon including through natural and working lands and mechanical technologies, while drastically reducing anthropogenic sources of carbon pollution at the same time.

The path forward was informed by the recent Sixth Assessment Report (AR6) of the IPCC and the measures would achieve 85 percent below 1990 levels by 2045 in accordance AB 1279. CARB’s 2022 Scoping Plan identifies strategies as shown in Table 11, *Priority Strategies for Local Government Climate Action Plans*, that would be most impactful at the local level for ensuring substantial process towards the State’s carbon neutrality goals.

Table 11 Priority Strategies for Local Government Climate Action Plans

Priority Area	Priority Strategies
Transportation Electrification	Convert local government fleets to zero-emission vehicles (ZEV) and provide EV charging at public sites.
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans).
VMT Reduction	Reduce or eliminate minimum parking standards.
	Implement Complete Streets policies and investments, consistent with general plan circulation element requirements.
	Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.
	Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking
	Implement parking pricing or transportation demand management pricing strategies.
	Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing allowable density of the neighborhood).
	Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert "greenfield" land to urban uses (e.g., green belts, strategic conservation easements)
Building Decarbonization	Adopt all-electric new construction reach codes for residential and commercial uses.
	Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers).
	Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances ¹¹ .
	Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing) ¹¹ .
	Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings) ¹¹ .

Source: CARB 2022a.

Based on Appendix D of the 2022 CARB Climate Change Scoping Plan, for residential and mixed-use development projects, CARB recommends first demonstrating that these land use development projects are aligned with State climate goals based on the attributes of land use development that reduce operational GHG emissions while simultaneously advancing fair housing. Attributes that accommodate growth in a manner consistent with the GHG and equity goals of SB 32 have all the following attributes:

- Transportation Electrification
 - Provide EV charging infrastructure that, at a minimum, meets the most ambitious voluntary standards in the California Green Building Standards Code at the time of project approval.
- VMT Reduction

- Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).
 - Does not result in the loss or conversion of the State's natural and working lands;
 - Consists of transit-supportive densities (minimum of 20 residential dwelling units/acre), or is in proximity to existing transit stops (within a half mile), or satisfies more detailed and stringent criteria specified in the region's Sustainable Communities Strategy (SCS);
 - Reduces parking requirements by:
 - Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or
 - Providing residential parking supply at a ratio of <1 parking space per dwelling unit; or
 - For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.
 - At least 20 percent of the units are affordable to lower-income residents;
 - Result in no net loss of existing affordable units.
- Building Decarbonization
- Use all electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking (CARB 2022a).

If the first approach to demonstrating consistency is not applicable (such as in the case of this school modernization project), the second approach to project-level alignment with state climate goals is to achieve net zero GHG emissions. The third approach to demonstrating project-level alignment with state climate goals is to align with GHG thresholds of significance, which many local air quality management (AQMDs) and air pollution control districts (APCDs) have developed or adopted (CARB 2022a).

Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPO). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target. SCAG's targets are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035 (CARB 2010). The 2020 targets are smaller than the 2035 targets because a significant portion of the built environment in 2020 is defined by decisions that have already been made. In general, the 2020 scenarios reflect that more time is needed for large land use and transportation infrastructure changes. Most of the reductions in the interim are anticipated to come from improving the efficiency of the region's transportation network. The targets would result in 3 MMTCO_{2e} of reductions by 2020 and 15 MMTCO_{2e} of reductions by 2035. Based on these reductions, the passenger vehicle target in CARB's Scoping Plan (for AB 32) would be met (CARB 2010).

2017 Update to the SB 375 Targets

CARB is required to update the targets for the MPOs every eight years. CARB adopted revised SB 375 targets for the MPOs in March 2018. The updated targets became effective in October 2018. All SCSs adopted after October 1, 2018, are subject to these new targets. CARB's updated SB 375 targets for the SCAG region were an 8 percent per capita GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent) (CARB 2018).

The targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update (for SB 32), while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of "percent per capita" reductions in GHG emissions from automobiles and light trucks relative to 2005; this excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies, such as statewide road user pricing. The proposed targets call for greater per-capita GHG emission reductions from SB 375 than are currently in place, which for 2035 translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted SCSs to achieve the SB 375 targets. CARB foresees that the additional GHG emissions reductions in 2035 may be achieved from land use changes, transportation investment, and technology strategies (CARB 2018).

SCAG's Regional Transportation Plan / Sustainable Communities Strategy

SB 375 requires each MPO to prepare a sustainable communities strategy in its regional transportation plan (RTP/SCS). For the SCAG region, the 2024-2050 RTP/SCS, Connect SoCal, was adopted on April 4, 2024, and is an update to the 2020-2045 RTP/SCS. In general, the RTP/SCS outlines a development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, would reduce VMT from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

Connect SoCal focuses on the continued efforts of the previous RTP/SCSs to integrate transportation and land use strategies in development of the SCAG region through the horizon year 2050 (SCAG 2024). Connect SoCal forecasts that the SCAG region will meet its GHG per capita reduction targets of 8 percent by 2020 and 19 percent by 2035. It also forecasts that implementation of the plan will reduce VMT per capita

in year 2050 by 6.3 percent compared to baseline conditions for that year. Connect SoCal includes a “Core Vision” that centers on maintaining and better managing the transportation network for moving people and goods, while expanding mobility choices by locating housing, jobs, and transit closer together; and increasing investments in transit and complete streets (SCAG 2024).

Transportation Sector Specific Regulations

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles. (See also the discussion on the update to the Corporate Average Fuel Economy standards at the beginning of this Section 5.5.2 under “Federal.”) In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of ZE vehicles into a single package of standards. Under California’s Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less GHG emissions and 75 percent less smog-forming emissions.

Executive Order S-01-07

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in CO_{2e} gram per unit of fuel energy sold in California. The LCFS required a reduction of 2.5 percent in the carbon intensity of California’s transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and uses market-based mechanisms to allow these providers to choose how they reduce emissions during the “fuel cycle” using the most economically feasible methods.

Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate ZE vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directed the number of ZE vehicles in California’s state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are ZE by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions to 80 percent below 1990 levels.

Executive Order N-79-20

On September 23, 2020, Governor Newsom signed Executive Order N-79-20, whose goal is that 100 percent of in-state sales of new passenger cars and trucks will be ZE by 2035. Additionally, the fleet goals for trucks are that 100 percent of drayage trucks are ZE by 2035, and 100 percent of medium- and heavy-duty vehicles in the state are ZE by 2045, where feasible. The Executive Order's goal for the State is to transition to 100 percent ZE off-road vehicles and equipment by 2035, where feasible.

Renewables Portfolio: Carbon Neutrality Regulations

Senate Bills 1078, 107, and X1-2 and Executive Order S-14-08

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

Senate Bill 350

Senate Bill 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100. Under SB 100, the RPS for public-owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Senate Bill 1020

SB 1020 was signed into law on September 16, 2022. It requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent by 2040. Additionally, SB 1020 requires all state agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2045.

Energy Efficiency Regulations

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

On August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards, which were subsequently approved by the California Building Standards Commission in December 2021. The 2022 standards went into effect on January 1, 2023, replacing the existing 2019 standards. The 2022 standards would require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers (CEC 2021).

California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.¹³ The mandatory provisions of CALGreen became effective January 1, 2011. In 2021, the CEC approved the 2022 CALGreen, which went into effect on January 1, 2023, replacing the existing 2019 standards.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as “business as usual,” they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Solid Waste Diversion Regulations

AB 939: Integrated Waste Management Act of 1989

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code §§ 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills

¹³ The green building standards became mandatory in the 2010 edition of the code.

by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

AB 1327

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

AB 1826

In October of 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings with five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed with food waste.

Water Efficiency Regulations

SBX7-7

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed “SBX7-7.” SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 required urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

AB 1881: Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including

irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

Short-Lived Climate Pollutant Reduction Strategy

Senate Bill 1383

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and CH₄. Black carbon is the light-absorbing component of fine particulate matter produced during the incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use (CARB 2017a). In-use on-road rules were expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020. South Coast AQMD is one of the air districts that requires air pollution control technologies for chain-driven broilers, which reduces particulate emissions from these charbroilers by over 80 percent (CARB 2017). Additionally, South Coast AQMD Rule 445 limits installation of new fireplaces in the South Coast Air Basin.

Existing Conditions

CALIFORNIA'S GREENHOUSE GAS SOURCES AND RELATIVE CONTRIBUTION

In 2023, the statewide GHG emissions inventory was updated for 2000 to 2021 emissions using the GWPs in IPCC's AR4 and reported that California produced 381.3 MMTCO₂e GHG emissions in 2021 (49.7 MMTCO₂e below the 2020 GHG Limit of 431 MMTCO₂e) (IPCC 2013). The growth in statewide emissions from 2020 to 2021 was likely due in large part to the increase of transportation and other economic activity that occurred in 2021 relative to 2020 as the California emerged from the COVID-19 pandemic.

California's transportation sector was the single-largest generator of GHG emissions, producing 38.2 percent of the state's total emissions. Industrial sector emissions made up 19.4 percent, and electric power generation made up 16.4 percent of the state's emissions inventory. Other major sectors of GHG emissions include residential and commercial (10.2 percent), agriculture and forestry (8.1 percent), high GWP (5.6 percent), and recycling and waste (2.2 percent) (CARB 2023).

Since the peak level in 2004, California's GHG emissions have generally followed a decreasing trend. In 2014, statewide GHG emissions dropped below the 2020 GHG Limit (AB 32 target for year 2020) and have

remained below the Limit since that time. Additionally, per capita GHG emissions have dropped from a 2001 peak of 13.8 MTCO_{2e} per person to 9.7 MTCO_{2e} per person in 2021, a 30 percent decrease.

Transportation emissions increased from 2020, likely from passenger vehicles whose emissions rebounded after COVID-19 shelter-in-place orders were lifted. Electricity emissions also increased compared to 2020; however, there has been continued growth of in-state solar generation and imported renewable electricity. High-GWP emissions have continued to increase as high-GWP gases replace ozone-depleting substances being phased out under the 1987 Montreal Protocol. Overall trends in the inventory also continue to demonstrate that the carbon intensity of California's economy (i.e., the amount of carbon pollution per million dollars of gross domestic product) is declining. From 2000 to 2021, the carbon intensity of California's economy decreased by 50.8 percent while the gross domestic product increased by 67.9 percent (CARB 2023).

Thresholds of Significance

The CEQA Guidelines recommend that a lead agency consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase (or reduce) GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;
3. The extent to which the project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions.¹⁴

PERMITTED SOURCES

South Coast AQMD adopted a threshold of 10,000 MTCO_{2e} per year for permitted/industrial sources of emissions (South Coast AQMD 2023a).

¹⁴ The Governor's Office of Planning and Research recommendations include a requirement that such a plan must be adopted through a public review process and include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable, notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

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Emissions Worksheet

Regional Construction Emissions Worksheet

Maximum Emissions per phase (tons/year)

Site Preparation												
Onsite	Off-Road Equipment Dust From Material Movement Onsite Truck Total	Summer	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
		2025										
Offsite	Worker Vendor Hauling Total		0	0	0	0	0	0	0	0	0	0
TOTAL			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Onsite	Off-Road Equipment Dust From Material Movement Onsite Truck Total	Winter	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
		2025	0.883357801	7.32638793	8.8778387	0.012768	0.438145157		0.4381452	0.403093546		0.403093546
Offsite	Worker Vendor Hauling Total		0.026455471 0.010150964 0	0.02959706 0.33718424 0	0.3631013 0.1969001 0	0 0.001504 0	0 0.001503994 0	0.09803205 0.057223936 0	0.0980321 0.0587279 0	0 0.001503994 0	0.022978556 0.015809978 0	0.022978556 0.017313971 0
TOTAL			0.000565706 0.883923508	0.01734178 7.34372971	0.0116285 8.8894672	4.03E-05 0.012808	3.65967E-05 0.438181754	2.762208715 0.308037362 3.070246077	2.7622087 0.308074 3.5084278	3.65967E-05 0.403130142	1.33564727 0.030791334 1.366438604	1.33564727 0.030827931 1.769568746
Onsite	Off-Road Equipment Dust From Material Movement Onsite Truck Total	Max	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
		2025	0.883357801	7.32638793	8.8778387	0.012768	0.438145157	0	0.4381452	0.403093546	0	0.403093546
Offsite	Worker Vendor Hauling Total		0.026455471 0.010150964 0	0.02959706 0.33718424 0	0.3631013 0.1969001 0	0 0.001504 0	0 0.001503994 0	0.09803205 0.057223936 0	0.0980321 0.0587279 0	0 0.001503994 0	0.022978556 0.015809978 0	0.022978556 0.017313971 0
TOTAL			0.000565706 0.883923508	0.01734178 7.34372971	0.0116285 8.8894672	4.03E-05 0.012808	3.65967E-05 0.438181754	2.762208715 0.308037362 3.070246077	2.7622087 0.308074 3.5084278	3.65967E-05 0.403130142	1.33564727 0.030791334 1.366438604	1.33564727 0.030827931 1.769568746
Rough Grading												
Onsite	Off-Road Equipment Dust From Material Movement Onsite truck Total	Summer	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
		2025										
Offsite	Worker Vendor Hauling Total		0	0	0	0	0	0	0	0	0	0
TOTAL			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Onsite	Off-Road Equipment Dust From Material Movement Onsite Truck Total	Winter	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
		2025	0.883357801	7.32638793	8.8778387	0.012768	0.438145157		0.4381452	0.403093546		0.403093546
Offsite	Worker Vendor Hauling Total		0.026455471 0.010150964 0	0.02959706 0.33718424 0	0.3631013 0.1969001 0	0 0.001504 0	0 0.001503994 0	0.09803205 0.057223936 0	0.0980321 0.0587279 0	0 0.001503994 0	0.022978556 0.015809978 0	0.022978556 0.017313971 0
TOTAL			0.000565706 0.883923508	0.01734178 7.34372971	0.0116285 8.8894672	4.03E-05 0.012808	3.65967E-05 0.438181754	2.762208715 0.308037362 3.070246077	2.7622087 0.308074 3.5084278	3.65967E-05 0.403130142	1.33564727 0.030791334 1.366438604	1.33564727 0.030827931 1.769568746
Onsite	Off-Road Equipment Dust From Material Movement Onsite Truck Total	Max	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
		2025	0.883357801	7.32638793	8.8778387	0.012768	0.438145157	0	0.4381452	0.403093546	0	0.403093546
Offsite	Worker Vendor Hauling Total		0.026455471 0.010150964 0	0.02959706 0.33718424 0	0.3631013 0.1969001 0	0 0.001504 0	0 0.001503994 0	0.09803205 0.057223936 0	0.0980321 0.0587279 0	0 0.001503994 0	0.022978556 0.015809978 0	0.022978556 0.017313971 0
TOTAL			0.000565706 0.883923508	0.01734178 7.34372971	0.0116285 8.8894672	4.03E-05 0.012808	3.65967E-05 0.438181754	2.762208715 0.308037362 3.070246077	2.7622087 0.308074 3.5084278	3.65967E-05 0.403130142	1.33564727 0.030791334 1.366438604	1.33564727 0.030827931 1.769568746
Fine Grading												
Onsite	Off-Road Equipment Dust From Material Movement Onsite truck Total	Summer	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
		2025										
Offsite	Worker Vendor Hauling Total		0	0	0	0	0	0	0	0	0	0
TOTAL			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Onsite	Off-Road Equipment Dust From Material Movement Onsite Truck Total	Winter	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
		2025	1.007671648	8.56891176	4.8716063	0.005081	0.545998768		0.5459988	0.502318867		0.502318867
Offsite	Worker Vendor Hauling Total		0.000565706 1.008237354	0.01734178 8.58625354	0.0116285 4.8832348	4.03E-05 0.005121	3.65967E-05 0.546035365	0.308037362 0.308037362 0.308037362	0.308074 0.308074 0.8540727	3.65967E-05 0.502355463	0.030791334 0.030791334 0.030791334	0.030827931 0.533146798
TOTAL			0.017636981 0.010150964 0.027787945	0.01973137 0.33718424 0.35691562	0.2420676 0.1969001 0.4389677	0 0.001504 0.001504	0 0.001503994 0.001503994	0.0653547 0.057223936 0.122578636	0.0653547 0.0587279 0.1240826	0 0.001503994 0.001503994	0.015319037 0.015809978 0.031129015	0.015319037 0.017313971 0.032633008
Onsite	Off-Road Equipment Dust From Material Movement Onsite Truck Total	Max	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
		2025	1.007671648	8.56891176	4.8716063	0.005081	0.545998768	0	0.5459988	0.502318867	0	0.502318867
Offsite	Worker Vendor Hauling Total		0.000565706 1.008237354	0.01734178 8.58625354	0.0116285 4.8832348	4.03E-05 0.005121	3.65967E-05 0.546035365	0.308037362 0.308037362 0.308037362	0.308074 0.308074 0.8540727	3.65967E-05 0.502355463	0.030791334 0.030791334 0.030791334	0.030827931 0.533146798
TOTAL			0.017636981 0.010150964 0.027787945	0.01973137 0.33718424 0.35691562	0.2420676 0.1969001 0.4389677	0 0.001504 0.001504	0 0.001503994 0.001503994	0.0653547 0.057223936 0.122578636	0.0653547 0.0587279 0.1240826	0 0.001503994 0.001503994	0.015319037 0.015809978 0.031129015	0.015319037 0.017313971 0.032633008

Trenching												
		Summer 2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	Off-Road Equipment		0.405502948	3.48930359	5.2659177	0.007278	0.142147684		0.1421477	0.130775869		0.130775869
	Onsite truck		0	0	0	0	0	0	0	0	0	0
	Total		0.405502948	3.48930359	5.2659177	0.007278	0.142147684	0	0.1421477	0.130775869	0	0.130775869
Offsite	Worker		0.026620818	0.0260421	0.4198153	0	0	0.09803205	0.0980321	0	0.022978556	0.022978556
	Vendor		0	0	0	0	0	0	0	0	0	0
	Hauling		0	0	0	0	0	0	0	0	0	0
TOTAL	Total		0.026620818 0.4321	0.0260421 3.5153	0.4198153 5.6857	0 0.0073	0 0.1421	0.09803205 0.0980	0.0980321 0.2402	0 0.1308	0.022978556 0.0230	0.022978556 0.1538
	Winter 2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total	
Onsite	Off-Road Equipment		0.405502948	3.48930359	5.2659177	0.007278	0.142147684		0.1421477	0.130775869		0.130775869
	Onsite Truck		0	0	0	0	0	0	0	0	0	0
	Total		0.405502948	3.48930359	5.2659177	0.007278	0.142147684	0	0.1421477	0.130775869	0	0.130775869
Offsite	Worker		0.026455471	0.02959706	0.3631013	0	0	0.09803205	0.0980321	0	0.022978556	0.022978556
	Vendor		0	0	0	0	0	0	0	0	0	0
	Hauling		0	0	0	0	0	0	0	0	0	0
TOTAL	Total		0.026455471 0.4320	0.02959706 3.5189	0.3631013 5.6290	0 0.0073	0 0.1421	0.09803205 0.0980	0.0980321 0.2402	0 0.1308	0.022978556 0.0230	0.022978556 0.1538
	Max 2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total	
Onsite	Off-Road Equipment		0.405502948	3.48930359	5.2659177	0.007278	0.142147684	0	0.1421477	0.130775869	0	0.130775869
	Onsite Truck		0	0	0	0	0	0	0	0	0	0
	Total		0.405502948	3.48930359	5.2659177	0.007278	0.142147684	0	0.1421477	0.130775869	0	0.130775869
Offsite	Worker		0.026620818	0.02959706	0.4198153	0	0	0.09803205	0.0980321	0	0.022978556	0.022978556
	Vendor		0	0	0	0	0	0	0	0	0	0
	Hauling		0	0	0	0	0	0	0	0	0	0
TOTAL	Total		0.026620818 0.4321	0.02959706 3.5189	0.4198153 5.6857	0 0.0073	0 0.1421	0.09803205 0.0980	0.0980321 0.2402	0 0.1308	0.022978556 0.0230	0.022978556 0.1538
	Pipeline Installation											
		Summer 2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	Off-Road Equipment		0.812846331	7.42281213	11.227072	0.017347	0.214961085		0.2149611	0.197764199		0.197764199
	Onsite Truck		0	0	0	0	0	0	0	0	0	0
	Total		0.812846331	7.42281213	11.227072	0.017347	0.214961085	0	0.2149611	0.197764199	0	0.197764199
Offsite	Worker		0.002376281	0.00232462	0.0374744	0	0	0.008750733	0.0087507	0	0.002051158	0.002051158
	Vendor		0.000232693	0.00865917	0.0043048	5.87E-05	5.87492E-05	0.002235288	0.002294	5.87492E-05	0.000617571	0.00067632
	Hauling		0	0	0	0	0	0	0	0	0	0
TOTAL	Total		0.002608973 0.8155	0.01098379 7.4338	0.0417792 11.2689	5.87E-05 0.0174	5.87492E-05 0.2150	0.010986021 0.0110	0.0110448 0.2260	5.87492E-05 0.1978	0.002668729 0.0027	0.002727478 0.2005
	Winter 2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total	
Onsite	Off-Road Equipment		0.16034229	1.46422595	2.2146553	0.003422	0.042403283		0.0424033	0.03901102		0.03901102
	Onsite Truck		0	0	0	0	0	0	0	0	0	0
	Total		0.16034229	1.46422595	2.2146553	0.003422	0.042403283	0	0.0424033	0.03901102	0	0.03901102
Offsite	Worker		0.000460011	0.00051824	0.0066847	0	0	0.001707105	0.0017071	0	0.000399845	0.000399845
	Vendor		4.47649E-05	0.00178673	0.0008594	1.16E-05	1.15889E-05	0.000436831	0.0004484	1.15889E-05	0.000120797	0.000132386
	Hauling		0	0	0	0	0	0	0	0	0	0
TOTAL	Total		0.000504776 0.1608	0.00230497 1.4665	0.0075441 2.2222	1.16E-05 0.0034	1.15889E-05 0.0424	0.002143936 0.0021	0.0021555 0.0446	1.15889E-05 0.0390	0.000520642 0.0005	0.000532231 0.0395
	Max 2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total	
Onsite	Off-Road Equipment		0.812846331	7.42281213	11.227072	0.017347	0.214961085	0	0.2149611	0.197764199	0	0.197764199
	Onsite Truck		0	0	0	0	0	0	0	0	0	0
	Total		0.812846331	7.42281213	11.227072	0.017347	0.214961085	0	0.2149611	0.197764199	0	0.197764199
Offsite	Worker		0.002376281	0.00232462	0.0374744	0	0	0.008750733	0.0087507	0	0.002051158	0.002051158
	Vendor		0.000232693	0.00865917	0.0043048	5.87E-05	5.87492E-05	0.002235288	0.002294	5.87492E-05	0.000617571	0.00067632
	Hauling		0	0	0	0	0	0	0	0	0	0
TOTAL	Total		0.002608973 0.8155	0.01098379 7.4338	0.0417792 11.2689	5.87E-05 0.0174	5.87492E-05 0.2150	0.010986021 0.0110	0.0110448 0.2260	5.87492E-05 0.1978	0.002668729 0.0027	0.002727478 0.2005
	Building Construction											
		Summer 2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Onsite	Off-Road Equipment		3.491009758	32.9141357	34.729258	0.067921	0.997398888		0.9973989	0.917606975		0.917606975
	Onsite Truck		0	0	0	0	0	0	0	0	0	0
	Total		3.491009758	32.9141357	34.729258	0.067921	0.997398888	0	0.9973989	0.917606975	0	0.917606975
Offsite	Worker		0.002376281	0.00232462	0.0374744	0	0	0.008750733	0.0087507	0	0.002051158	0.002051158
	Vendor		0.000232693	0.00865917	0.0043048	5.87E-05	5.87492E-05	0.002235288	0.002294	5.87492E-05	0.000617571	0.00067632
	Hauling		0	0	0	0	0	0	0	0	0	0
TOTAL	Total		0.002608973 3.4936	0.01098379 32.9251	0.0417792 34.7710	5.87E-05 0.0680	5.87492E-05 0.9975	0.010986021 0.0110	0.0110448 1.0084	5.87492E-05 0.9177	0.002668729 0.0027	0.002727478 0.9203
	Winter 2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total	
Onsite	Off-Road Equipment											
	Onsite Truck											
	Total		0	0	0	0	0	0	0	0	0	0
Offsite	Worker											
	Vendor											
	Hauling											
TOTAL	Total		0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000
	Max 2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total	
Onsite	Off-Road Equipment		3.491009758	32.9141357	34.729258	0.067921	0.997398888	0	0.9973989	0.917606975	0	0.917606975
	Onsite Truck		0	0	0	0	0	0	0	0	0	0
	Total		3.491009758	32.9141357	34.729258	0.067921	0.997398888	0	0.9973989	0.917606975	0	0.917606975
Offsite	Worker		0.002376281	0.00232462	0.0374744	0	0	0.008750733	0.0087507	0	0.002051158	0.002051158
	Vendor		0.000232693	0.00865917	0.0043048	5.87E-05	5.87492E-05	0.002235288	0.002294	5.87492E-05	0.000617571	0.00067632
	Hauling		0	0	0	0	0	0	0	0	0	0
TOTAL	Total		0.002608973 3.4936	0.01098379 32.9251	0.0417792 34.7710	5.87E-05 0.0680	5.87492E-05 0.9975	0.010986021 0.0110	0.0110448 1.0084	5.87492E-05 0.9177	0.002668729 0.0027	0.002727478 0.9203

Asphalt Paving												
Onsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0.507708951 0.006322945	4.37376366	5.3116359	0.008574	0.193886485		0.1938865	0.178375566		0.178375566
	Off-Road Equipment Paving											
	Onsite Truck		0	0	0	0	0	0	0	0	0	0
	Total		0.514031896	4.37376366	5.3116359	0.008574	0.193886485	0	0.1938865	0.178375566	0	0.178375566
Offsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0.062115242 0 0	0.06076491 0 0	0.9795689 0 0	0 0 0	0 0 0	0.22874145 0 0	0.2287415 0 0	0 0 0	0.05361663 0 0	0.05361663 0 0
	Worker Vendor Hauling											
	Total		0.062115242 0.5761	0.06076491 4.4345	0.9795689 6.2912	0 0.0086	0 0.1939	0.22874145 0.2287	0.2287415 0.4226	0 0.1784	0.05361663 0.0536	0.05361663 0.2320
Onsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0	0	0	0	0	0	0	0	0	0	0
	Off-Road Equipment Paving											
	Onsite Truck		0	0	0	0	0	0	0	0	0	0
	Total		0	0	0	0	0	0	0	0	0	0
Offsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0	0	0	0	0	0	0	0	0	0
	Worker Vendor Hauling											
	Total		0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000
Onsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0.507708951 0.006322945	4.37376366	5.3116359	0.008574	0.193886485	0	0.1938865	0.178375566	0	0.178375566
	Off-Road Equipment Paving											
	Onsite Truck		0	0	0	0	0	0	0	0	0	0
	Total		0.514031896	4.37376366	5.3116359	0.008574	0.193886485	0	0.1938865	0.178375566	0	0.178375566
Offsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0.062115242 0 0	0.06076491 0 0	0.9795689 0 0	0 0 0	0 0 0	0.22874145 0 0	0.2287415 0 0	0 0 0	0.05361663 0 0	0.05361663 0 0
	Worker Vendor Hauling											
	Total		0.062115242 0.5761	0.06076491 4.4345	0.9795689 6.2912	0 0.0086	0 0.1939	0.22874145 0.2287	0.2287415 0.4226	0 0.1784	0.05361663 0.0536	0.05361663 0.2320
Architectural Coating												
Onsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0.127960056 0.234530223	0.8822797	1.1398431	0.001726	0.027426557		0.0274266	0.025232433		0.025232433
	Off-Road Equipment Architectural Coatings											
	Onsite truck		0	0	0	0	0	0	0	0	0	0
	Total		0.36249028	0.8822797	1.1398431	0.001726	0.027426557	0	0.0274266	0.025232433	0	0.025232433
Offsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0.000950512 0 0	0.00092985 0 0	0.0149898 0 0	0 0 0	0 0 0	0.003500293 0 0	0.0035003 0 0	0 0 0	0.000820463 0 0	0.000820463 0 0
	Worker Vendor Hauling											
	Total		0.000950512 0.3634	0.00092985 0.8832	0.0149898 1.1548	0 0.0017	0 0.0274	0.003500293 0.0035	0.0035003 0.0309	0 0.0252	0.000820463 0.0008	0.000820463 0.0261
Onsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0	0	0	0	0	0	0	0	0	0	0
	Off-Road Equipment Architectural Coatings											
	Onsite truck		0	0	0	0	0	0	0	0	0	0
	Total		0	0	0	0	0	0	0	0	0	0
Offsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0	0	0	0	0	0	0	0	0	0
	Worker Vendor Hauling											
	Total		0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000
Onsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0.127960056 0.234530223	0.8822797	1.1398431	0.001726	0.027426557	0	0.0274266	0.025232433	0	0.025232433
	Off-Road Equipment Architectural Coatings											
	Onsite truck		0	0	0	0	0	0	0	0	0	0
	Total		0.36249028	0.8822797	1.1398431	0.001726	0.027426557	0	0.0274266	0.025232433	0	0.025232433
Offsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0.000950512 0 0	0.00092985 0 0	0.0149898 0 0	0 0 0	0 0 0	0.003500293 0 0	0.0035003 0 0	0 0 0	0.000820463 0 0	0.000820463 0 0
	Worker Vendor Hauling											
	Total		0.000950512 0.3634	0.00092985 0.8832	0.0149898 1.1548	0 0.0017	0 0.0274	0.003500293 0.0035	0.0035003 0.0309	0 0.0252	0.000820463 0.0008	0.000820463 0.0261
Finishing/Landscaping												
Onsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0.185373541 0	1.83956686 0	2.949448 0	0.00409 0	0.081456139 0		0.0814561 0	0.074939647 0		0.074939647 0
	Off-Road Equipment											
	Onsite Truck		0	0	0	0	0	0	0	0	0	0
	Total		0.185373541	1.83956686	2.949448	0.00409	0.081456139	0	0.0814561	0.074939647	0	0.074939647
Offsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0.017747212 0 0	0.0173614 0 0	0.2798768 0 0	0 0 0	0 0 0	0.0653547 0 0	0.0653547 0 0	0 0 0	0.015319037 0 0	0.015319037 0 0
	Worker Vendor Hauling											
	Total		0.017747212 0.2031	0.0173614 1.8569	0.2798768 3.2293	0 0.0041	0 0.0815	0.0653547 0.0654	0.0653547 0.1468	0 0.0749	0.015319037 0.0153	0.015319037 0.0903
Onsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0	0	0	0	0	0	0	0	0	0	0
	Off-Road Equipment											
	Onsite Truck		0	0	0	0	0	0	0	0	0	0
	Total		0	0	0	0	0	0	0	0	0	0
Offsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0	0	0	0	0	0	0	0	0	0
	Worker Vendor Hauling											
	Total		0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000	0 0.0000
Onsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0.185373541 0	1.83956686 0	2.949448 0	0.00409 0	0.081456139 0	0	0.0814561 0	0.074939647 0	0	0.074939647 0
	Off-Road Equipment											
	Onsite Truck		0	0	0	0	0	0	0	0	0	0
	Total		0.185373541	1.83956686	2.949448	0.00409	0.081456139	0	0.0814561	0.074939647	0	0.074939647
Offsite		2025	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
			0.017747212 0 0	0.0173614 0 0	0.2798768 0 0	0 0 0	0 0 0	0.0653547 0 0	0.0653547 0 0	0 0 0	0.015319037 0 0	0.015319037 0 0
	Worker Vendor Hauling											
	Total		0.017747212 0.2031	0.0173614 1.8569	0.2798768 3.2293	0 0.0041	0 0.0815	0.0653547 0.0654	0.0653547 0.1468	0 0.0749	0.015319037 0.0153	0.015319037 0.0903

	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Site Preparation, Rough Grading, & Fine Grading Overlap	2.8771	24.3642	24.2211	0.0352	1.4269	6.8816	8.3085	1.3131	2.8724	4.1855
Site Preparation	0.9205	7.7105	9.4495	0.0143	0.4397	3.2255	3.6652	0.4046	1.4052	1.8099
Pipeline Trenching	0.4321	3.5189	5.6857	0.0073	0.1421	0.0980	0.2402	0.1308	0.0230	0.1538
Pipeline Installation	0.8155	7.4338	11.2689	0.0174	0.2150	0.0110	0.2260	0.1978	0.0027	0.2005
Pipeline Installation, Building Construction, Paving, Architectural Coating, & Finishing/Landscaping Overlap	5.4518	47.5336	56.7153	0.0998	1.5152	0.3196	1.8348	1.3940	0.0751	1.4691
Building Construction, Paving, Architectural Coating, & Finishing Overlap	4.6363	40.0998	45.4464	0.0824	1.3002	0.3086	1.6088	1.1962	0.0724	1.2686
Finishing/Landscaping	0.2031	1.8569	3.2293	0.0041	0.0815	0.0654	0.1468	0.0749	0.0153	0.0903
Max Daily	5.4518	47.5335818	56.715251	0.099776	1.515246653	6.881620124	8.308531	1.394036319	2.872374623	4.185502352
South Coast AQMD Regional Significance Thresholds	75	100	550	150	n/a	n/a	150	n/a	n/a	55

Localized Construction Emissions Worksheet

Maximum Emissions per phase (tons/year)

Site Preparation			Summer	2025	NOx	CO	PM10 Total	PM2.5 Total
Onsite		Off-Road Equipment						
		Dust From Material Movement						
		Onsite Truck						
		Total			0	0	0	0
TOTAL					0.0000	0.0000	0.0000	0.0000
			Winter	2025	NOx	CO	PM10 Total	PM2.5 Total
Onsite		Off-Road Equipment			7.32638793	8.87783868	0.4381452	0.403093546
		Dust From Material Movement					2.7622087	1.33564727
		Onsite Truck			0.01734178	0.0116285	0.308074	0.030827931
		Total			7.34372971	8.88946718	3.5084278	1.769568746
TOTAL					7.3437	8.8895	3.5084	1.7696
			Max	2025	NOx	CO	PM10 Total	PM2.5 Total
Onsite		Off-Road Equipment			7.32638793	8.87783868	0.4381452	0.403093546
		Dust From Material Movement			0	0	2.7622087	1.33564727
		Onsite Truck			0.01734178	0.0116285	0.308074	0.030827931
		Total			7.34372971	8.88946718	3.5084278	1.769568746
TOTAL					7.3437	8.8895	3.5084	1.7696
Rough Grading								
			Summer	2025	NOx	CO	PM10 Total	PM2.5 Total
Onsite		Off-Road Equipment						
		Dust From Material Movement						
		Onsite truck						
		Total			0	0	0	0
TOTAL					0.0000	0.0000	0.0000	0.0000
			Winter	2025	NOx	CO	PM10 Total	PM2.5 Total
Onsite		Off-Road Equipment			7.32638793	8.87783868	0.4381452	0.403093546
		Dust From Material Movement					2.7622087	1.33564727
		Onsite Truck			0.01734178	0.0116285	0.308074	0.030827931
		Total			7.34372971	8.88946718	3.5084278	1.769568746
TOTAL					7.3437	8.8895	3.5084	1.7696
			Max	2025	NOx	CO	PM10 Total	PM2.5 Total
Onsite		Off-Road Equipment			7.32638793	8.87783868	0.4381452	0.403093546
		Dust From Material Movement			0	0	2.7622087	1.33564727
		Onsite Truck			0.01734178	0.0116285	0.308074	0.030827931
		Total			7.34372971	8.88946718	3.5084278	1.769568746
TOTAL					7.3437	8.8895	3.5084	1.7696
Fine Grading								
			Summer	2025	NOx	CO	PM10 Total	PM2.5 Total
Onsite		Off-Road Equipment						
		Dust From Material Movement						
		Onsite truck						
		Total			0	0	0	0
TOTAL					0.0000	0.0000	0.0000	0.0000
			Winter	2025	NOx	CO	PM10 Total	PM2.5 Total
Onsite		Off-Road Equipment			8.56891176	4.87160633	0.5459988	0.502318867
		Dust From Material Movement					0	0
		Onsite Truck			0.01734178	0.0116285	0.308074	0.030827931
		Total			8.58625354	4.88323484	0.8540727	0.533146798
TOTAL					8.5863	4.8832	0.8541	0.5331
			Max	2025	NOx	CO	PM10 Total	PM2.5 Total
Onsite		Off-Road Equipment			8.56891176	4.87160633	0.5459988	0.502318867
		Dust From Material Movement			0	0	0	0
		Onsite Truck			0.01734178	0.0116285	0.308074	0.030827931
		Total			8.58625354	4.88323484	0.8540727	0.533146798
TOTAL					8.5863	4.8832	0.8541	0.5331

Trenching							
		Summer		NOx	CO	PM10 Total	PM2.5 Total
Onsite		2025					
	Off-Road Equipment			3.48930359	5.26591766	0.1421477	0.130775869
	Onsite truck			0	0	0	0
TOTAL	Total			3.48930359	5.26591766	0.1421477	0.130775869
				3.4893	5.2659	0.1421	0.1308
		Winter		NOx	CO	PM10 Total	PM2.5 Total
Onsite		2025					
	Off-Road Equipment			3.48930359	5.26591766	0.1421477	0.130775869
	Onsite Truck			0	0	0	0
TOTAL	Total			3.48930359	5.26591766	0.1421477	0.130775869
				3.4893	5.2659	0.1421	0.1308
		Max		NOx	CO	PM10 Total	PM2.5 Total
Onsite		2025					
	Off-Road Equipment			3.48930359	5.26591766	0.1421477	0.130775869
	Onsite Truck			0	0	0	0
TOTAL	Total			3.48930359	5.26591766	0.1421477	0.130775869
				3.4893	5.2659	0.1421	0.1308
Pipeline Installation							
		Summer		NOx	CO	PM10 Total	PM2.5 Total
Onsite		2025					
	Off-Road Equipment			7.42281213	11.2270723	0.2149611	0.197764199
	Onsite Truck			0	0	0	0
TOTAL	Total			7.42281213	11.2270723	0.2149611	0.197764199
				7.4228	11.2271	0.2150	0.1978
		Winter		NOx	CO	PM10 Total	PM2.5 Total
Onsite		2025					
	Off-Road Equipment			1.46422595	2.21465535	0.0424033	0.03901102
	Onsite Truck			0	0	0	0
TOTAL	Total			1.46422595	2.21465535	0.0424033	0.03901102
				1.4642	2.2147	0.0424	0.0390
		Max		NOx	CO	PM10 Total	PM2.5 Total
Onsite		2025					
	Off-Road Equipment			7.42281213	11.2270723	0.2149611	0.197764199
	Onsite Truck			0	0	0	0
TOTAL	Total			7.42281213	11.2270723	0.2149611	0.197764199
				7.4228	11.2271	0.2150	0.1978
Building Construction							
		Summer		NOx	CO	PM10 Total	PM2.5 Total
Onsite		2025					
	Off-Road Equipment			32.9141357	34.7292577	0.9973989	0.917606975
	Onsite Truck			0	0	0	0
TOTAL	Total			32.9141357	34.7292577	0.9973989	0.917606975
				32.9141	34.7293	0.9974	0.9176
		Winter		NOx	CO	PM10 Total	PM2.5 Total
Onsite		2025					
	Off-Road Equipment						
	Onsite Truck						
TOTAL	Total			0	0	0	0
				0.0000	0.0000	0.0000	0.0000
		Max		NOx	CO	PM10 Total	PM2.5 Total
Onsite		2025					
	Off-Road Equipment			32.9141357	34.7292577	0.9973989	0.917606975
	Onsite Truck			0	0	0	0
TOTAL	Total			32.9141357	34.7292577	0.9973989	0.917606975
				32.9141	34.7293	0.9974	0.9176
Asphalt Paving							
				NOx	CO	PM10 Total	PM2.5 Total
Onsite		2025					
	Off-Road Equipment			4.37376366	5.3116359	0.1938865	0.178375566
	Paving						
	Onsite Truck			0	0	0	0
TOTAL	Total			4.37376366	5.3116359	0.1938865	0.178375566
				4.3738	5.3116	0.1939	0.1784

Onsite	Off-Road Equipment Paving Onsite Truck Total	Winter 2025	NOx	CO	PM10 Total	PM2.5 Total
			0	0	0	0
			0.0000	0.0000	0.0000	0.0000
TOTAL						
Onsite	Off-Road Equipment Paving Onsite Truck Total	Max 2025	NOx	CO	PM10 Total	PM2.5 Total
			4.37376366	5.3116359	0.1938865	0.178375566
			0	0	0	0
			0	0	0	0
TOTAL			4.37376366	5.3116359	0.1938865	0.178375566
			4.3738	5.3116	0.1939	0.1784
Architectural Coating						
Onsite	Off-Road Equipment Architectural Coatings Onsite truck Total	Summer 2025	NOx	CO	PM10 Total	PM2.5 Total
			0.8822797	1.13984314	0.0274266	0.025232433
			0	0	0	0
			0.8822797	1.13984314	0.0274266	0.025232433
TOTAL			0.8823	1.1398	0.0274	0.0252
Onsite	Off-Road Equipment Architectural Coatings Onsite truck Total	Winter 2025	NOx	CO	PM10 Total	PM2.5 Total
			0	0	0	0
			0.0000	0.0000	0.0000	0.0000
TOTAL						
Onsite	Off-Road Equipment Architectural Coatings Onsite truck Total	Max 2025	NOx	CO	PM10 Total	PM2.5 Total
			0.8822797	1.13984314	0.0274266	0.025232433
			0	0	0	0
			0	0	0	0
TOTAL			0.8822797	1.13984314	0.0274266	0.025232433
			0.8823	1.1398	0.0274	0.0252
Finishing/Landscaping						
Onsite	Off-Road Equipment Onsite Truck Total	Summer 2025	NOx	CO	PM10 Total	PM2.5 Total
			1.83956686	2.94944803	0.0814561	0.074939647
			0	0	0	0
			1.83956686	2.94944803	0.0814561	0.074939647
TOTAL			1.8396	2.9494	0.0815	0.0749
Onsite	Off-Road Equipment Onsite Truck Total	Winter 2025	NOx	CO	PM10 Total	PM2.5 Total
			0	0	0	0
			0.0000	0.0000	0.0000	0.0000
TOTAL						
Onsite	Off-Road Equipment Onsite Truck Total	Max 2025	NOx	CO	PM10 Total	PM2.5 Total
			1.83956686	2.94944803	0.0814561	0.074939647
			0	0	0	0
			1.83956686	2.94944803	0.0814561	0.074939647
TOTAL			1.8396	2.9494	0.0815	0.0749
Site Preparation, Rough Grading, & Fine Grading Overlap	<1-Acre Screening-Level LSTs Exceeds?		NOx	CO	PM10 Total	PM2.5 Total
			23.2737	22.6622	7.8709	4.0723
			188	4,959	103	55
			No	No	No	No
Site Preparation	<1-Acre Screening-Level LSTs Exceeds?		7.3437	8.8895	3.5084	1.7696
			188	4,959	103	55
			No	No	No	No
Pipeline Trenching	<1-Acre Screening-Level LSTs Exceeds?		3.4893	5.2659	0.1421	0.1308
			188	4,959	103	55
			No	No	No	No

Pipeline Installation		7.4228	11.2271	0.2150	0.1978
	<1-Acre Screening-Level LSTs	188	4,959	103	55
	Exceeds?	No	No	No	No
Pipeline Installation, Building Construction, Paving, Architectural Coating, & Finishing/Landscaping Overlap		47.4326	55.3573	1.5151	1.3939
	<1-Acre Screening-Level LSTs	188	4,959	103	55
	Exceeds?	No	No	No	No
Building Construction, Paving, Architectural Coating, & Finishing Overlap		40.0097	44.1302	1.3002	1.1962
	<1-Acre Screening-Level LSTs	188	4,959	103	55
	Exceeds?	No	No	No	No
Finishing/Landscaping		1.8396	2.9494	0.0815	0.0749
	<1-Acre Screening-Level LSTs	188	4,959	103	55
	Exceeds?	No	No	No	No
Rough Grading (Laydown Parking Area)		7.3437	8.8895	3.5084	1.7696
	<1-Acre Screening-Level LSTs	194	5,320	156	90
	Exceeds?	No	No	No	No

Regional Operational Emissions Worksheet: Total Emissions

Max Daily (Pounds Per Day)

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Stationary Equipment ¹	24.53	76.64	210.88	29.23	38.85	38.85
Land Uses	0.07	0.10	0.23	0.00	0.04	0.01
Total	25	77	211	29	39	39
Existing OCWR Flare Emissions	11	88	58	41	24	24
Net Change	14	-12	153	-12	15	15
South Coast AQMD Regional Thresholds	55	55	550	150	150	55
Exceeds Thresholds?	No	No	No	No	No	No

Annual (Tons Per Year)

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Stationary Equipment*	2.35	4.00	12.51	2.35	1.24	1.24
Total	2	4	13	2	1.24	1.24
Rule 1304 Offset Trigger Limits²	4	4	29	4	4	n/a
Exceeds Thresholds?	No	No	No	No	No	n/a

¹ SCS Engineers.

² South Coast AQMD Rule 1304(d)(2)(B)

Regional Operational Emissions Worksheet: Non-Permitted Sources

Summer

	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Mobile	0.01337282	0.08190146	0.14459799	0.00071	0.000851626	0.041019073	0.0418707	0.000809359	0.010573165	0.011382524
Area	0.0507073	0.00058377	0.06931633	4.14E-06	0.000123204		0.0001232	9.3087E-05		9.3087E-05
Energy	0.00100791	0.01832562	0.01539352	0.00011	0.001392747		0.00139275	0.001392747		0.001392747
Total	0.065	0.101	0.229	0.001	0.002	0.041	0.043	0.002	0.011	0.013

Winter

	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Mobile	0.01314835	0.08560517	0.13747401	0.000698	0.000856038	0.041019073	0.04187511	0.00081358	0.010573165	0.011386745
Area	0.03933324									
Energy	0.00100791	0.01832562	0.01539352	0.00011	0.001392747		0.00139275	0.001392747		0.001392747
Total	0.053	0.104	0.153	0.001	0.002	0.041	0.043	0.002	0.011	0.013

Max Daily

	ROG	NOx	CO	SO2	Exhaust PM10	Fugitive PM10	PM10 Total	Exhaust PM2.5	Fugitive PM2.5	PM2.5 Total
Mobile	0.013	0.086	0.145	0.001	0.001	0.041	0.042	0.001	0.011	0.011
Area	0.051	0.001	0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Energy	0.001	0.018	0.015	0.000	0.001	0.000	0.001	0.001	0.000	0.001
Total	0.065	0.105	0.229	0.001	0.002	0.041	0.043	0.002	0.011	0.013

Regional Thresholds	55	55	550	150			150			55
Exceeds Thresholds?	No	No	No	No			No			No

Regional Operational Emissions Worksheet: South Coast AQMD Permitted Sources

Equipment		Criteria Pollutant Emissions																	
		NOx			CO			PM-10/PM-2.5			SOx			VOCs			HAPs		
		lb/hr	lbs/day	tons/yr	lb/hr	lbs/day	tons/yr	lb/hr	lbs/day	tons/yr	lb/hr	lbs/day	tons/yr	lb/hr	lbs/day	tons/yr	lb/hr	lbs/day	tons/yr
Thermal Oxidizer	Main Fuel	0.73	17.44	2.60	2.42	58.14	8.65	0.229	5.49	0.92	0.459	11.01	2.01	0.484	11.62	2.12	0.56	13.43	2.45
	Supplemental Fuel	0.50	11.88	0.54	1.65	39.61	1.81	0.01	0.34	0.06	0.010	0.24	0.01	0.00	0.02	0.004	0.004	31.00	0.02
RNG Flare		1.94	46.67	0.85	4.67	112.01	2.04	1.368	32.83	0.25	0.749	17.97	0.33	0.48	11.60	0.21	2.73	20.50	3.74
Emergency Generator		0.08	0.64	0.01	0.14	1.13	0.01	0.023	0.18	0.00	0.001	0.01	0.00	0.16	1.29	0.02			
TOTAL EMISSIONS		3.25	76.64	3.996	8.88	210.88	12.515	1.63	38.85	1.236	1.22	29.23	2.347	1.13	24.53	2.352	3.29	64.94	6.21

Note: Pounds per day are based on 24 hours of operation a day.

Source: SCS Engineers

Existing Emissions: OCWR Landfill Gas Flares¹

Tons Per Year

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
2021	2.16	17.40	11.39	8.09	4.87	4.87
2022	1.83	14.83	9.75	6.83	4.02	4.02
2-Year Average	2.00	16.12	10.57	7.46	4.44	4.44

Pounds Per Year

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
2021	4,320.63	34,809.90	22,773.79	16,184.16	9,739.11	9,739.11
2022	3,659.87	29,656.72	19,507.43	13,667.87	8,031.43	8,031.43
2-Year Average	3,990	32,233	21,141	14,926	8,885	8,885

Pounds Per Day²

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
2-Year Average	10.93	88.31	57.92	40.89	24.34	24.34

¹ Based on emissions data for the four flares reported in the Annual Emission Report for the OC Waste & Recycling, Coyote, Facility ID 181426.

² Assumes 365 days per year.

Localized Significance Thresholds¹

¹ Based on information provided by SCS Engineers.

Criteria Air Pollutant	Pollutant Concentration for Maximum Flare and TOX Emissions	Unit of Measurement	Background Concentration	Unit of Measurement	Total Concentration	Unit of Measurement
Nitrogen Oxides (NO _x) - 1hr	0.0532	ppm	0.0532	ppm	0.1064	ppm
Nitrogen Oxides (NO _x) - Annual	0.0124	ppm	0.0124	ppm	0.0248	ppm
Carbon Monoxide (CO) - 1hr	2.1	ppm	2.1	ppm	4.2	ppm
Carbon Monoxide (CO) - 8hr	1.5	ppm	1.5	ppm	3	ppm
Particulate Matter (PM ₁₀) - 24 hr	1.77	ug/m3	n/a		1.77	ug/m3
Particulate Matter (PM ₁₀) - Annual	0.13	ug/m3	n/a		0.13	ug/m3
Particulate Matter (PM _{2.5}) - 24 hr	0.56	ug/m3	n/a		0.56	ug/m3

	Carbon Monoxide (CO) - 1hr	Carbon Monoxide (CO) - 8hr	Nitrogen Oxides (NO _x) - 1hr	Nitrogen Oxides (NO _x) - Annual
Pollutant Concentration for Maximum Flare and TOX Emissions	2.10	1.50	0.05	0.01
Background Concentration	2.10	1.50	0.05	0.01
Total Concentration	4.20	3.00	0.11	0.02
South Coast AQMD Threshold (State)	20	9	0.18	0.03
Exceeds?	No	No	No	No
South Coast AQMD Threshold (Federal)	35	9	n/a	0.0534
Exceeds?	No	No	n/a	No

	Particulate Matter (PM ₁₀) - 24 hr	Particulate Matter (PM ₁₀) - Annual	Particulate Matter (PM _{2.5}) - 24 hr
Pollutant Concentration for Maximum Flare and TOX Emissions	1.77	0.13	0.56
South Coast AQMD Threshold	2.50	1.00	2.50
Exceeds?	No	No	No

Pollutant Concentrations¹
¹ Provided by SCS Engineers

			Maximum Emission from Flare (lbs/hr)	Flare Modelled Emission Rate (ug/m3 per lb/hr)	Maximum Emission from TOX Main (lbs/hr)	Maximum Emission from TOX Supplemental (lbs/hr)	Total Maximum Emission from TOX (lbs/hr)	TOX Modelled Emission Rate (ug/m3 per lb/hr)	Pollutant Concentration for Maximum Flare and TOX Emissions (ug/m3)	Pollutant Concentration for Maximum Flare and TOX Emissions (ppm)									
Criteria Air Pollutants	SC	SIL									SIL	SC	Below SIL and SC?	Background Concentration	Unit	Background Concentration (ug/m3)	Total Concentration (ug/m3)	Below Threshold	
Nitrogen Oxides (NO _x) - 1hr	470	7.5	1.94	4.33	0.73	0.5	1.23	17.11	29.45	0.053		7.5	20	No	53.2	ppb	100.0490597	129.4945597	Y
Nitrogen Oxides (NO _x) - Annual	100	1	1.94	5.02E-02	0.73	0.5	1.23	0.256	0.41	0.012		1.00	1.00	Yes	12.4	ppb	23.31970564	23.73197364	Y
Carbon Monoxide (CO) - 1hr	1100	2000	4.67	4.33	2.42	1.65	4.07	17.11	89.86	2.1		2000.00	1100.00	Yes	2.1	ppm	2404.78332	2494.64212	Y
Carbon Monoxide (CO) - 8hr	500	500	4.67	1.63	2.42	1.65	4.07	4.53	26.05	1.500		500.00	500.00	Yes	1.5	ppm	1717.702371	1743.751571	Y
Sulfur Dioxide (SO ₂) - 1hr	650	7.8	0.75	4.33	0.46	0.01	0.47	17.11	11.29	0.002		7.80		No	2.2	ppb	5.762273099	17.0514731	Y
Sulfur Dioxide (SO ₂) - 3hr	1300	25	0.75	2.44	0.46	0.01	0.47	9.54	6.31	0.002		25.00		Yes	2.2		5.762273099		
Sulfur Dioxide (SO ₂) - 24 hr	109	5	0.75	0.98	0.46	0.01	0.47	1.79	1.58	0.002		5.00		Yes	2.2	ppb	5.762273099	7.338573099	Y
Sulfur Dioxide (SO ₂) - Annual	80	1	0.75	5.02E-02	0.46	0.01	0.47	0.256	0.16	0.002		1.00		Yes	2.2	ppb	5.762273099	5.920243099	Y
Particulate Matter (PM ₁₀) - 24 hr	2.50	2.50	1.37	0.98	0.23	0.01	0.24	1.79	1.77			2.50	1.00	No	115	ug/m3	115	116.7722	Y
Particulate Matter (PM ₁₀) - Annual	1.00	5.00	1.37	5.02E-02	0.23	0.01	0.24	0.256	0.13			5.00	2.50	Yes	22.9	ug/m3	22.9	23.030214	Y
Particulate Matter (PM _{2.5}) - 24 hr		2.50	1.37	0.22	0.23	0.01	0.24	1.06	0.56			2.50	1.00	Yes	36.7	ug/m3	36.7	37.2558	N
Particulate Matter (PM _{2.5}) - Annual		0.20	1.37	5.02E-02	0.23	0.01	0.24	0.256	0.13			0.20	2.50	Yes	11.44	ug/m3	11.44	11.570214	Y

SIL represents PSD Class 2 Significant Impact Level. SC represents "Significant Change in Air Quality" under the California Environmental Quality Act (CEQA).

<https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf>

Values from Central Orange County which is the closest to the landfill
Values from Central LA as other close areas didn't have a value

[aq_card_2021_final.pdf \(aqmd.gov\)](#)

Criteria Pollutant	Threshold Value	Unit	Threshold Value (ug/m3)
Nitrogen Oxides (NO ₂) - 1hr	0.1	ppm	188
Nitrogen Oxides (NO ₂) - Annual	0.053	ppm	100
Carbon Monoxide (CO) - 1hr	35	ppm	43200
Carbon Monoxide (CO) - 8hr	9	ppm	11100
Sulfur Dioxide (SO ₂) - 1hr	75	ppb	196.5
Sulfur Dioxide (SO ₂) - 24 hr	0.14	ppm	395
Sulfur Dioxide (SO ₂) - Annual	0.03	ppm	84.6
Particulate Matter (PM ₁₀) - 24 hr	150	ug/m3	150
Particulate Matter (PM _{2.5}) - 24 hr	35	ug/m3	35
Particulate Matter (PM _{2.5}) - Annual	15	ug/m3	15

GHG Emissions Worksheet

Construction Total

Year	Annual MTCO ₂ e
2025	346.2394543

Land Use Emissions

Quantification Methodology	Source	Emissions (Mtons/Yr)						Total CO ₂ e	Percent of Project Total
		Biogenic CO ₂	Non-Biogenic CO ₂	CH ₄	N ₂ O	R	CO ₂ e	MTCO ₂ e/yr	
CalEEMod	Mobile	0	12.54065724	0.000969768	0.001450164	0.014435765	13.01	13.01	<1%
CalEEMod	Area	0	0.032327744	1.3562E-06	2.77E-07		0.03	0.03	0.00%
CalEEMod	Energy- Electricity	0	7725.407511	0.4793	0.0581		7754.69	7754.69	99.61%
CalEEMod	Energy- Natural Gas	0	3.620087128	3.620087128	0.000320376		3.63	3.63	0.05%
CalEEMod	Water	0	0.722439085	0.012028832	0.000289462		1.11	1.11	0.01%
CalEEMod	Waste	0	0.176363446	0.017626893	0		0.62	0.62	0.01%
CalEEMod	Refrig.	0				0.068695616	0.07	0.07	0.00%
CalEEMod	Amortized Construction Emissions ¹						11.54	12	0.15%
	Total	0	7,742	4	0	0	7,785	7,785	100%

Permitted Equipment Emissions²

Quantification Methodology	Source	Emissions (Mtons/Yr)						Total CO ₂ e	Percent of Project Total
		Biogenic CO ₂	Non-Biogenic CO ₂	CH ₄	N ₂ O	R	CO ₂ e	MTCO ₂ e/yr	
SCS Engineers	Thermal Oxidizer - Main	6089		0.3742	0.0737	NA	6089.00	6089.00	12%
SCS Engineers	Thermal Oxidizer - Supplemental	4227		0.0797	0.0080	NA	4227.00	4227.00	8%
SCS Engineers	Enclosed RNG Flare	39861		0.7512	0.0751	NA	39861.00	39861.00	79%
SCS Engineers	Emergency Generator	27		0.0005	0.0001	NA	27.00	27.00	0%
	Total	50,204	0	1	0	NA	50,204	50,204	100%

Permitted Equipment Emissions - Regulated^{2,3}

Quantification Methodology	Source	Emissions (Mtons/Yr)						Total CO ₂ e	Percent of Project Total
		Biogenic CO ₂	Non-Biogenic CO ₂	CH ₄	N ₂ O	R	CO ₂ e	MTCO ₂ e/yr	
SCS Engineers	Thermal Oxidizer - Main			0.3742	0.0737	NA	31.31	31.31	52%
SCS Engineers	Thermal Oxidizer - Supplemental			0.0797	0.0080	NA	4.37	4.37	7%
SCS Engineers	Enclosed RNG Flare			0.0750	0.0751	NA	24.26	24.26	40%
SCS Engineers	Emergency Generator			0.0005	0.0001	NA	0.03	0.03	0%
	Total	0	0	1	0		60	60	100%

Total GHG Emissions - Land Use & Permitted Equipment 57,989 MTCO2e per year

Total GHG Emissions - Land Use & Regulated Permitted Equipment⁴ 7,845 MTCO2e per year
South Coast AQMD Threshold 10,000 MTCO2e per year
Exceeds Threshold? No

Notes:

¹ Total construction emissions are amortized over 30 years per South Coast AQMD methodology; SCAQMD. 2010, September 28. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting 15. <http://www.aqmd.gov/ceqa/handbook/GHG/2010/sept28mtg/sept29.html>.

² Based on emissions data provided by SCS Engineers.

³ Emissions of CO₂ generated from combustion of natural gas are considered biogenic and do not contribute to a net increase in atmospheric CO₂.

⁴ Only the regulated GHG emissions from the proposed permitted stationary sources are evaluated to the 10,000 MTCO₂e/yr threshold.

Global Warming Potentials (GWP)	
CO ₂	1
CH ₄	25
N ₂ O	298

Source: Intergovernmental Panel on Climate Change (IPCC). 2007. Fourth Assessment Report: Climate Change 2007. New York: Cambridge University Press. https://www.ipcc.ch/site/assets/uploads/2018/02/ar4_syr_full_report.pdf.

Assumptions Worksheet

CalEEMod Inputs- Coyote Canyon Landfill Gas Recovery Facility Project, Construction

Name: Coyote Canyon Landfill Gas Recovery Facility Project
Project Number: CNB-25
Project Location: 20662 Newport Coast Dr, Newport Beach, CA 92657
County/Air Basin: Orange County - (South Coast)
Climate Zone: Urban
Operational Year: N/A
Utility Company: SCE
Air Basin: South Coast Air Basin
Air District: South Coast Air Quality Management District
SRA: 20 - Central Orange County Coastal

Project Site Acreage	0.88	acre
Offsite Construction Laydown Area (24,132SF) Acreage:	0.55	acre
Disturbed Site Acreage	1.44	acres

Project Components ¹	SQFT ¹	Building Footprint	Acres
New Construction			
Building Area			
Building 1	520	520	0.01
Building 2 (E-House BOP)	584	584	0.01
Building 3 (E-House Process)	490	490	0.01
TOTAL	1,594	1,594	0.04

Surface Work	Stalls ¹	SQFT ¹	Acres
Parking Lot ¹	2	324	0.01
Other Asphalt Surfaces		7,245	0.17

Notes

¹ Provided by project applicant.

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet	Landscaping Square Feet
Industrial	Light Industrial	1.594	1000 sqft	0.70987	1,594	0
Parking	Parking Lot	0.324	1000 sqft	0.00744	324	0
Parking	Other Asphalt Surfaces	7.245	1000 sqft	0.16632	7,245	0
				0.88		

Architectural Coating

	Percent Painted		
	Building 1	Building 2	Building 3
Interior Painted:	100%	100%	100%
Exterior Painted:	100%	100%	100%

	Building 1	Building 2	Building 3
Interior Paint VOC content (gram/liter):	100	100	100
Exterior Paing VOC content (gram/liter):	100	100	100

Structures	Land Use Square Feet	CalEEMod Factor ²	Total Paintable Surface Area	Paintable Interior Area ¹	Paintable Exterior Area ¹
Non-Residential Structures					
Building 1	520	2.0	1,040	780	260
Building 2	584	2.0	1,168	876	292
Building 3	490	2.0	980	735	245
			3,188	2,391	797
Parking					
Parking Lot	324	6%	19	-	19
Asphalt Surfaces	7,245	6%	435	-	435
			454		454

Notes

¹ CalEEMod defaults and methodology

Construction Mitigation

South Coast AQMD Rule 403

Water Exposed Area	Frequency:	2	per day
	PM10:	61	% Reduction
	PM25:	61	% Reduction
Water Demolished Area	Frequency:	2	per day
	PM10:	36	% Reduction
	PM25:	36	% Reduction
Water Unpaved Roads	Frequency:	2	per day
	PM10:	55	% Reduction
	PM25:	55	% Reduction
Unpaved Roads	Vehicle Speed:	25	mph

South Coast AQMD Rule 1186

Clean Paved Road	9	% PM Reduction
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Construction Activities and Schedule Assumptions¹

Construction Activity	Start Date	End Date	Workdays
Site Preparation	1/6/2025	2/12/2025	28
Site Preparation Soil Haul (if applicable)	1/6/2025	2/12/2025	28
Rough Grading	1/6/2025	1/6/2025	1
Rough Grading Soil Haul (if applicable)	1/6/2025	1/6/2025	1
Fine Grading	1/6/2025	1/6/2025	1
Fine Grading Soil Haul (if applicable)	1/6/2025	1/6/2025	1
Pipeline Trenching	2/18/2025	4/14/2025	40
Pipeline Installation	4/15/2025	7/23/2025	72
Building/Facility Construction	5/13/2025	8/20/2025	72
Paving	5/13/2025	8/20/2025	72
Architectural Coating	5/13/2025	8/20/2025	72
Finishing/Landscaping	5/13/2025	9/18/2025	93

¹ Based on information provided by the project applicant.

CalEEMod Construction Off-Road Equipment Inputs

Construction Equipment Details						
Equipment ¹		# of Equipment ¹	Hrs/Day	Horsepower Rating ¹	Load Factor ²	Total 1-Way Trips Per Day
Site Preparation						
Bulldozer	Rubber Tired Dozer	1	8	130	0.4	
Grader	Grader	1	8	100	0.41	
Front End Loader	Tractor/Loader/Backhoe	1	8	150	0.37	
Worker Trips ²						8
Vendor Trips						18
Worker Shuttles ¹						4
Equipment Deliveries ¹						8
Water Trucks ³				Acres Disturbed:	1.00	6
				Onsite Travel (mi/day) ⁴	0.83	
Rough Grading						
Bulldozer	Rubber Tired Dozer	1	8	130		
Grader	Grader	1	8	100		
Front End Loader	Tractor/Loader/Backhoe	1	8	150		
Worker Trips						8
Vendor Trips						18
Worker Shuttles ¹						4
Equipment Deliveries ¹						8
Water Trucks ³				Acres Disturbed:	1	6
				Onsite Travel (mi/day) ⁴	0.83	
Fine Grading						
Bobcat	Skid Steer Loader	1	8	80	0.37	
Backhoe	Tractor/Loader/Backhoe	1	8	80	0.37	
Worker Trips ²						5
Vendor Trips						18
Worker Shuttles ¹						4
Equipment Deliveries ¹						8
Water Trucks ³				Acres Disturbed:	1	6
				Onsite Travel (mi/day) ⁴	0.83	
Pipeline Trenching						
Backhoe	Tractor/Loader/Backhoe	2	8	84	0.37	
Ditching Machine	Trencher	1	8	40	0.5	
Worker Trips ²						8
Vendor Trips						14
Worker Shuttles ¹						4
Vacuum Truck ⁵				1		2
Equipment Deliveries ¹						8
Pipeline Installation						
Side Boom Tractor	Tractor/Loader/Backhoe	1	8	84	0.37	
Coating Rig	Welder	1	8	46	0.45	
Forklift telescoping – all terrain	Rough Terrain Forklift	2	8	96	0.4	
Welding Trucks (weld pipe)	Welder	2	8	46	0.45	
Worker Trips ²						
Vendor Trips						18
Worker Shuttles ¹						4
Pipe Truck ⁵				3		6
Welding Trucks (weld pipe)				2		4
Equipment Deliveries ¹						8
Facility Construction						
Crane	Crane	1	8	270	0.29	
Backhoe	Tractor/Loader/Backhoe	1	8	80	0.37	
Welder	Welder	1	8	20	0.45	
Concrete pump	Pump	1	8	350	0.74	
Forklift	Forklift	1	8	80	0.2	
Jackhammer	Concrete/Industrial Saw	1	8	20	0.73	
Scissor Lift	Aerial Lift	4	8	46	0.31	
Forklift telescoping – all terrain	Rough Terrain Forklift	2	8	96	0.4	
Cement Trucks	Cement and Mortar Mixer	10	8	10	0.56	
Worker Trips ²						
Vendor Trips						52
Worker Shuttles ¹						4
Cement Trucks ⁵						20
Utility Tool Truck ⁵						12
Material Delivery ¹						8
Equipment Deliveries ¹						8
Hauling Trips						0

Trip Type	Trip Distance (mile)	Number of Trips	Average Trip Distance
Worker Trip Distance ¹	18.5	8	18.5
Worker Shuttle: ²	0.59	4	n/a
Equipment Delivery: ²	0.59	8	n/a
Water Truck:	10.20	6	n/a
Vendor Trip		18	3.79

Trip Type	Trip Distance (mile)	Number of Trips	Average Trip Distance
Worker Trip Distance ¹	18.5	8	18.5
Worker Shuttle: ²	0.59	4	n/a
Equipment Delivery: ²	0.59	8	n/a
Water Truck: ¹	10.20	6	n/a
Vendor Trip		18	3.79

Trip Type	Trip Distance (mile)	Number of Trips	Average Trip Distance
Worker Trip Distance ¹	18.5	5	18.5
Worker Shuttle: ²	0.59	4	n/a
Equipment Delivery: ²	0.59	8	n/a
Water Truck: ¹	10.20	6	n/a
Vendor Trip		18	3.79

Trip Type	Trip Distance (mile)	Number of Trips	Average Trip Distance
Worker Trip Distance ¹	18.5	8	18.5
Worker Shuttle: ²	0.59	4	n/a
Equipment Delivery: ²	0.59	8	n/a
Vacuum Truck ¹	10.20	2	n/a
Vendor Trip		14	1.96

<--For Materials loading and unloading at offsite and onsite areas

Trip Type	Trip Distance (mile)	Number of Trips	Average Trip Distance
Worker Trip Distance	18.5	0	18.5
Worker Shuttle: ²	0.59	4	n/a
Pipe Truck ²	0.59	6	n/a
Welding Trucks (weld pipe) ²	0.59	4	n/a
Equipment Delivery ²	0.59	8	
Vendor Trip		22	0.59

<--For Materials loading and unloading at offsite and onsite areas

Trip Type	Trip Distance (mile)	Number of Trips	Average Trip Distance
Worker Trip Distance	18.5	0	18.5
Worker Shuttle: ²	0.59	4	n/a
Cement Trucks ¹	10.20	20	n/a
Utility Tool Truck ²	0.59	12	n/a
Material Delivery ¹	10.20	8	
Equipment Delivery ²	0.59	8	
Vendor Trip		52	5.76

Paving						
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	7	84	0.37	
Cement and Mortar Mixers	Cement and Mortar Mixers	4	6	10	0.56	
Pavers	Pavers	1	7	81	0.42	
Rollers	Rollers	1	7	36	0.38	
Rough Terrain Forklift		2	8			
Worker Trips ²						18
Vendor Trips						12
Worker Shuttles ¹						4
Equipment Deliveries ¹						8
Architectural Coating						
Air Compressors	Air Compressors	1	6	37	0.45	
Worker Trips ²						2
Vendor Trips						4
Worker Shuttles ¹						4
Hauling Trips						0
Finishing/Landscaping						
Forklift	Forklift	1	8	82	0.2	
Tractor/Loader/Backhoe	Tractor/Loader/Backhoe	1	8	84	0.37	
Worker Trips ²						5
Vendor Trips						12
Worker Shuttles ¹						4
Equipment Deliveries ¹						8

Water Truck Vendor Trip Calculation

Amount of Water (gal/acre/day) ³	Water Truck Capacity (gallons) ³
10,000	4,000

Notes:

¹ Based on data provided by the project applicant.

² CalEEMod defaults.

³ Maricopa County Air Quality Department. 2005, June. Guidance for Application of Dust Control Permit. https://www.epa.gov/sites/default/files/2019-04/documents/mr_guidanceforapplicationfordustcontrolpermit.pdf

⁴ Based on 0.4125 mile per acre disturbed per watering and two times watering per day.

⁵ SCS Engineers. 2023, October 10. Project Description for Renewable Natural Gas Plant for Biofuels Coyote Canyon Biogas, LLC, Newport Beach, California.

<--For Materials loading and un

Trip Type	Trip Distance (mile)	Number of Trips	Average Trip Distance
Worker Trip Distance	18.5	18	18.5
Worker Shuttle: ²	0.59	4	n/a
Equipment Delivery ²	0.59	8	n/a
Vendor Trip		12	0.59

Trip Type	Trip Distance (mile)	Number of Trips	Average Trip Distance
Worker Trip Distance	18.5	5	18.5
Worker Shuttle: ²	0.59	4	n/a
Equipment Delivery ²	0.59	8	n/a
Vendor Trip		12	0.59

Notes

¹ Based on CalEEMod default trip distance.

² Based on measured distance of 3,113 feet between the project site and the off-site laydown area.

Construction Equipment Assumptions Worksheet

Table 2

Equipment	Approximate Number	Use	Activity
Backhoe	2	Excavation and backfilling	Trenching
Boom truck	1	Deliver and load/unload materials and equipment	All
Boom Man Lift – all terrain 60’	1	Access to elevated work areas	Building Construction
Bulldozer	1	Strip topsoil and move spoils and other materials	Site Preparation, Grading
Cement Trucks	10	Pouring foundations	Building Construction
Coating Rig	1	Apply coating to pipe welds	Building Construction
Ditching Machine	1	Dig trench	Trenching
Dump Truck	1	Haul spoils and import backfill	
Flatbed trucks, 1.5 ton	2	Haul construction equipment and materials	All
Forklift telescoping – all terrain	2	Load and unload and move materials	Building Construction, Pipeline
Mobile Crane 120 ton	1	Hoist plant equipment and structures	Building Construction, Pipeline
Motor Grader	1	Remove topsoil and grade	Site Preparation, Grading
Pickup Truck	3	Transport project personnel and light materials	All
Pipe Truck	1	Transport pipe sections	Pipeline
Radiograph truck	1	X-ray welds	Building Construction
Scissor Lift – all terrain 26’	4	Access to elevated work areas	Building Construction
Side Boom Tractor	1	Lower pipe into open trenches	Pipeline
Tractor Trailer	8	Haul materials and equipment	All
Utility Tool Truck	6	Store tools	All
Vacuum Truck	1	Remove water, mud, and other materials from excavations	Trenching
Water Truck	1	Control dust	All
Welding Trucks	2	Weld pipe	Pipeline

Source: SCS Engineers. 2023, October 10. Project Description for Renewable Natural Gas Plant for Biofuels Coyote Canyon Biogas, LLC, Newport Beach, California

Equipment	Approximate Number	Use
Site Preparation		
Bulldozer	1	Strip topsoil and move spoils and other materials
Motor Grader	1	Remove topsoil and grade
Flatbed trucks, 1.5 ton	2	Haul construction equipment and materials
Pickup Truck	3	Transport project personnel and light materials
Tractor Trailer	8	Haul materials and equipment
Utility Tool Truck	6	Store tools
Water Truck	1	Control dust
Grading		
Bulldozer	1	Strip topsoil and move spoils and other materials
Motor Grader	1	Remove topsoil and grade
Flatbed trucks, 1.5 ton	2	Haul construction equipment and materials
Pickup Truck	3	Transport project personnel and light materials
Tractor Trailer	8	Haul materials and equipment
Utility Tool Truck	6	Store tools
Water Truck	1	Control dust
Trenching		
Backhoe	2	Excavation and backfilling
Ditching Machine	1	Dig trench
Vacuum Truck	1	Remove water, mud, and other materials from excavations
Flatbed trucks, 1.5 ton	2	Haul construction equipment and materials
Pickup Truck	3	Transport project personnel and light materials
Tractor Trailer	8	Haul materials and equipment
Utility Tool Truck	6	Store tools
Water Truck	1	Control dust

Building Construction		
Boom Man Lift – all terrain 60'	1	Access to elevated work areas
Cement Trucks	10	Pouring foundations
Coating Rig	1	Apply coating to pipe welds
Forklift telescoping – all terrain	2	Load and unload and move materials
Mobile Crane 120 ton	1	Hoist plant equipment and structures
Radiograph truck	1	X-ray welds
Scissor Lift – all terrain 26'	4	Access to elevated work areas
Boom truck	1	Deliver and load/unload materials and equipment
Flatbed trucks, 1.5 ton	2	Haul construction equipment and materials
Pickup Truck	3	Transport project personnel and light materials
Tractor Trailer	8	Haul materials and equipment
Utility Tool Truck	6	Store tools
Water Truck	1	Control dust
Pipeline		
Mobile Crane 120 ton	1	Hoist plant equipment and structures
Motor Grader	1	Remove topsoil and grade
Pipe Truck	1	Transport pipe sections
Side Boom Tractor	1	Lower pipe into open trenches
Welding Trucks	2	Weld pipe
Boom truck	1	Deliver and load/unload materials and equipment
Flatbed trucks, 1.5 ton	2	Haul construction equipment and materials
Pickup Truck	3	Transport project personnel and light materials
Tractor Trailer	8	Haul materials and equipment
Utility Tool Truck	6	Store tools
Water Truck	1	Control dust

CalEEMod Inputs- Coyote Canyon Landfill Gas Recovery Facility Project, Operation

Name:	Coyote Canyon Landfill Gas Recovery Facility Project
Project Number:	CNB-25
Project Location:	20662 Newport Coast Dr, Newport Beach, CA 92657
County/Air Basin:	Orange County - (South Coast)
Climate Zone:	Urban
Operational Year:	2025
Utility Company:	Souther California Gas Company; Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	South Coast Air Quality Management District
SRA:	20 - Central Coastal Orange County

CalEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet
Industrial	Light Industrial	1.594	1000 sqft	0.71	1,594
Parking	Parking Lot	0.324	1000 sqft	0.01	324
Parking	Other Asphalt Surfaces	7.245	1000 sqft	0.17	7,245
				0.88	

Vehicle Trips

Number of Employees:	3	employees
Number of Daily Employee Roundtrips:	3	roundtrips
Number of Daily Employee Trip Ends:	6	trip ends
Number of Daily Truck Roundtrips:	1	roundtrips
Number of Daily Truck Trip Ends:	2	trip ends

Trip Type	Daily Trip Ends	Percent Proportion
Daily Passenger Vehicle Trip Ends:	6	75%
Daily Truck Trip Ends:	2	25%
Total Daily Trip Ends:	8	100%

Land Use Type	Average Daily Trips	CalEEMod Trip Rate	Saturday Trips	CalEEMod Trip Rate	Sunday Trips	CalEEMod Trip Rate
General Light Industrial	8	5.02	8	5.02	8	5.02

Water Use (CalEEMod Default)

	Indoor (gpy)	Outdoor (gpy)	Total
General Light Industrial	368,613.00	0.00	368,613.00
Total Water Use			368,613

Solid Waste (CalEEMod Defaults)

Land Use	Annual Solid Waste Amount (ton)
General Light Industrial	1.98

Electricity (Buildings)

Land Use Subtype	Total Annual Electricity Consumption (kWh/size/year)	Total Annual Natural Gas Consumption (kBTU/size/year)	Title-24 Electricity Energy Intensity (kWhr/size/year)	Title-24 Natural Gas Energy Intensity (KBTU/size/year)	Nontitle-24 Electricity Energy Intensity (kWhr/size/year)	Nontitle-24 Natural Gas Energy Intensity (KBTU/size/year)
General Light Industrial	15,290.82	68,226.29	13,043.57	25,685.01	2,247.25	42,541.28
Default Energy Use Percent Proportion	100%	100%	85%	38%	15%	62%

Adjusted Energy Inputs						
Land Use Subtype	Total Annual Electricity Consumption (kWh/year)	Total Annual Natural Gas Consumption (kBTU/year)	Title-24 Electricity Electricity (kWhr/year)	Title-24 Natural Gas (KBTU/year)*	Nontitle-24 Electricity (kWhr/year)	Nontitle-24 Natural Gas (KBTU/year)
Adjusted Energy Use - General Light Industrial ¹	32,000,000	68,226.29	27,297,044	25,685.01	4,702,951.88	42,541.28
Parking Lot (CalEEMod defaults)	283.82	0	283.82	0	0	0

Notes

¹ Electricity amounts adjusted to the anticipated electricity demand of 32,000,000 kWh/yr per the project applicant.

Architectural Coating

	Percent Painted		
	Building 1	Building 2	Building 3
Interior Painted:	100%	100%	100%
Exterior Painted:	100%	100%	100%
	Building 1	Building 2	Building 3
Interior Paint VOC content (gram/liter):	100	100	100
Exterior Paing VOC content (gram/liter):	100	100	100

Structures	Land Use Square Feet	CalEEMod Factor ²	Total Paintable Surface Area	Paintable Interior Area ¹	Paintable Exterior Area ¹
Non-Residential Structures					
Building 1	520	2.0	1,040	780	260
Building 2	584	2.0	1,168	876	292
Building 3	490	2.0	980	735	245
			3,188	2,391	797
Parking					
Parking Lot	324	6%	19	-	19
Asphalt Surfaces	7,245	6%	435	-	435
			454		454

Notes
¹ CalEEMod defaults and methodology

Changes to the CalEEMod Defaults - Fleet Mix 2025

Total ADTs: 8

Default	HHD	LDA	LDT1	LDT2	LHD1	LHD2	MCY	MDV	MH	MHD	OBUS	SBUS	UBUS	
FleetMix (Model Default)	0.551821	49.969435	4.144941	23.152655	2.737984	0.701154	2.182420	14.457737	0.377404	1.531488	0.060485	0.096622	0.035856	100
FleetMix (Model Default)	0.005518	0.499694	0.041449	0.231527	0.027380	0.007012	0.021824	0.144577	0.003774	0.015315	0.000605	0.000966	0.000359	100%
Trips	0	4	0	2	0	0	0	1	0	0	0	0	0	8
Percent	1%	97%							2%					100%
Proportion	1.000000	0.513316	0.042579	0.237838	0.028126	0.007203	0.022419	0.148519	0.179558	0.728637	0.028777	0.045970	0.017059	
Assumed Mix	25.00%	75.00%							0.00%					100.00%
adjusted with Assumed	0.250000	0.384987	0.031934	0.178378	0.021095	0.005402	0.016814	0.111389	0.000000	0.000000	0.000000	0.000000	0.000000	100%
Trips	2	3	0	1	0	0	0	1	0	0	0	0	0	8
	25%	38%	3%	18%	2%	1%	2%	11%	0%	0%	0%	0%	0%	100%
Modified	0.250000	0.384987	0.031934	0.178378	0.021095	0.005402	0.016814	0.111389	0.000000	0.000000	0.000000	0.000000	0.000000	100.0%
Trips Check	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Assumed MDV/HDT Mix	25.00%	75%							0.00%					
MDT truck adjustment (no buses or MH)		0.384987	0.031934	0.178378	0	0	0	0	0	0.000000	0	0	0	60%
Adjusted MHD Fleet Mix		0.646711	0.053644	0.299645	0	0	0	0	0	0.000000	0	0	0	0%
Assumed Truck Mix	0.250000	0.485033	0.040233	0.224734	0	0	0	0	0	0	0	0	0	100%
Trips - Final Check	2	4	0	2	0	0	0	0	0	0	0	0	0	8
Adjusted CalEEMod Inputs	25.000000000000000	48.5033212092259000	4.0233271147635000	22.4733516760106000	0	0	0	0	0	0	0	0	0	

CalEEMod Construction Model Output

CNB-25 Construction Detailed Report

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1.1. Basic Project Information

Data Field	Value
Project Name	CNB-25 Construction
Construction Start Date	1/6/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	17.2
Location	33.613231898777684, -117.82214696277009
County	Orange
City	Newport Beach
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5901
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Light Industry	1.59	1000sqft	0.71	1,594 B1-70	0.00	—	—	—

Parking Lot	0.32	1000sqft	0.01	0.00	0.00	—	—	—
Other Asphalt Surfaces	7.25	1000sqft	0.17	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.27	5.45	47.5	56.7	0.10	1.52	0.32	1.83	1.39	0.08	1.47	—	9,229	9,229	0.37	0.09	1.26	9,265
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.46	2.88	24.4	24.2	0.04	1.43	6.88	8.31	1.31	2.87	4.19	—	4,259	4,259	0.19	0.13	0.07	4,303
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.40	1.21	10.5	12.7	0.02	0.36	0.33	0.69	0.33	0.13	0.46	—	2,082	2,082	0.08	0.02	0.17	2,091
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.26	0.22	1.92	2.32	< 0.005	0.06	0.06	0.13	0.06	0.02	0.08	—	345	345	0.01	< 0.005	0.03	346

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	6.27	5.45	47.5	56.7	0.10	1.52	0.32	1.83	1.39	0.08	1.47	—	9,229	9,229	0.37	0.09	1.26	9,265
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.46	2.88	24.4	24.2	0.04	1.43	6.88	8.31	1.31	2.87	4.19	—	4,259	4,259	0.19	0.13	0.07	4,303
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.40	1.21	10.5	12.7	0.02	0.36	0.33	0.69	0.33	0.13	0.46	—	2,082	2,082	0.08	0.02	0.17	2,091
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.26	0.22	1.92	2.32	< 0.005	0.06	0.06	0.13	0.06	0.02	0.08	—	345	345	0.01	< 0.005	0.03	346

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.88	7.33	8.88	0.01	0.44	—	0.44	0.40	—	0.40	—	1,383	1,383	0.06	0.01	—	1,388

Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.31	0.31	< 0.005	0.03	0.03	—	4.47	4.47	< 0.005	< 0.005	< 0.005	4.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.56	0.68	< 0.005	0.03	—	0.03	0.03	—	0.03	—	106	106	< 0.005	< 0.005	—	106
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.34	0.34	< 0.005	< 0.005	< 0.005	0.36
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.12	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.6	17.6	< 0.005	< 0.005	—	17.6
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.36	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	94.7	94.7	< 0.005	< 0.005	0.01	95.8
Vendor	0.03	0.01	0.34	0.20	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	225	225	0.02	0.03	0.02	234
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.37	7.37	< 0.005	< 0.005	0.01	7.46
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.2	17.2	< 0.005	< 0.005	0.02	18.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.22	1.22	< 0.005	< 0.005	< 0.005	1.24
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.85	2.85	< 0.005	< 0.005	< 0.005	2.98
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.88	7.33	8.88	0.01	0.44	—	0.44	0.40	—	0.40	—	1,383	1,383	0.06	0.01	—	1,388
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.31	0.31	< 0.005	0.03	0.03	—	4.47	4.47	< 0.005	< 0.005	< 0.005	4.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005 B1-74	—	< 0.005	—	3.79	3.79	< 0.005	< 0.005	—	3.80

Dust From Material Movement:	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.63	0.63	< 0.005	< 0.005	—	0.63
Dust From Material Movement:	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.36	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	94.7	94.7	< 0.005	< 0.005	0.01	95.8
Vendor	0.03	0.01	0.34	0.20	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	225	225	0.02	0.03	0.02	234
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.64
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.04
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.11

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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3.5. Fine Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	1.01	8.57	4.87	0.01	0.55	—	0.55	0.50	—	0.50	—	552	552	0.02	< 0.005	—	554
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.31	0.31	< 0.005	0.03	0.03	—	4.47	4.47	< 0.005	< 0.005	< 0.005	4.71
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.51	1.51	< 0.005	< 0.005	—	1.52
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.25	0.25	< 0.005	< 0.005	—	0.25

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	63.2	63.2	< 0.005	< 0.005	0.01	63.9
Vendor	0.03	0.01	0.34	0.20	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	225	225	0.02	0.03	0.02	234
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.18
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.64
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.11
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Facility Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.21	3.49	32.9	34.7	0.07	1.00	—	1.00	0.92	—	0.92	—	5,864	5,864	0.24	0.05	—	5,884
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.49	6.85	0.01	0.20	—	0.20	0.18	—	0.18	—	1,157	1,157	0.05	0.01	—	1,161
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.18	1.25	< 0.005	0.04	—	0.04	0.03	—	0.03	—	191	191	0.01	< 0.005	—	192
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.89	8.89	< 0.005	< 0.005	0.03	9.02
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.33	8.33	< 0.005	< 0.005	0.02	8.71
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.69	1.69	< 0.005	< 0.005	< 0.005	1.71
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.64	1.64	< 0.005	< 0.005	< 0.005	1.72
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.28
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.27	0.27	< 0.005	< 0.005	< 0.005	0.28
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Pipeline Installation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	0.81	7.42	11.2	0.02	0.21	—	0.21	0.20	—	0.20	—	1,629	1,629	0.07	0.01	—	1,635
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.46	2.21	< 0.005	0.04	—	0.04	0.04	—	0.04	—	321	321	0.01	< 0.005	—	322
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.27	0.40	< 0.005	0.01	—	0.01	0.01 B1-79	—	0.01	—	53.2	53.2	< 0.005	< 0.005	—	53.4

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.89	8.89	< 0.005	< 0.005	0.03	9.02
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.33	8.33	< 0.005	< 0.005	0.02	8.71
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.69	1.69	< 0.005	< 0.005	< 0.005	1.71
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.64	1.64	< 0.005	< 0.005	< 0.005	1.72
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.28
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.27	0.27	< 0.005	< 0.005	< 0.005	0.28
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.86	1.05	< 0.005	0.04	—	0.04	0.04	—	0.04	—	162	162	0.01	< 0.005	—	163
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.9	26.9	< 0.005	< 0.005	—	27.0
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.98	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	232	232	< 0.005	0.01	0.88	236
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	B1-81	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.2	44.2	< 0.005	< 0.005	0.07	44.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.32	7.32	< 0.005	< 0.005	0.01	7.41
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.17	0.22	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	26.3	26.3	< 0.005	< 0.005	—	26.4
Architect ural Coatings	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.36	4.36	< 0.005	< 0.005	—	4.38
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.55	3.55	< 0.005	< 0.005	0.01	3.61
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.68	0.68	< 0.005	< 0.005	< 0.005	0.69
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.11	0.11	< 0.005	< 0.005	< 0.005	0.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Pipeline Trenching (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.41	3.49	5.27	0.01	0.14	—	0.14	0.13	—	0.13	—	788	788	0.03	0.01	—	791
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.41	3.49	5.27	0.01	0.14	—	0.14	0.13	—	0.13	—	788	788	0.03	0.01	—	791
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.58	< 0.005	0.02	—	0.02	0.01	—	0.01	—	86.4	86.4	< 0.005	< 0.005	—	86.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.3	14.3	< 0.005	< 0.005	—	14.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.42	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	99.6	99.6	< 0.005	< 0.005	0.38	101

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.36	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	94.7	94.7	< 0.005	< 0.005	0.01	95.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.5	10.5	< 0.005	< 0.005	0.02	10.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.74	1.74	< 0.005	< 0.005	< 0.005	1.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Finishing/Landscaping (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.19	1.84	2.95	< 0.005	0.08	—	0.08	0.07	—	0.07	—	443	443	0.02	< 0.005	—	444
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.47	0.75	< 0.005	0.02	—	0.02	0.02	—	0.02	—	113	113	< 0.005	< 0.005	—	113
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.7	18.7	< 0.005	< 0.005	—	18.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.28	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.4	66.4	< 0.005	< 0.005	0.25	67.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	0.03	16.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.70	2.70	< 0.005	< 0.005	< 0.005	2.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/6/2025	2/12/2025	5.00	28.0	—
Grading	Grading	1/6/2025	1/6/2025	5.00	1.00	—
Fine Grading	Grading	1/6/2025	1/6/2025	5.00	1.00	—
Facility Construction	Building Construction	5/13/2025	8/20/2025	5.00	72.0	—
Pipeline Installation	Building Construction	4/15/2025	7/23/2025	5.00	72.0	—
Paving	Paving	5/13/2025	8/20/2025	5.00	72.0	—
Architectural Coating	Architectural Coating	5/13/2025	8/20/2025	5.00	72.0	—
Pipeline Trenching	Trenching	2/18/2025	4/14/2025	5.00	40.0	—
Finishing/Landscaping	Trenching	5/13/2025	9/18/2025	5.00	93.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Graders	Diesel	Average	1.00	8.00	100	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	150	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	130	0.40
Grading	Graders	Diesel	Average	1.00	8.00	100	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	130	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	150	0.37
Fine Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	80.0	0.37
Fine Grading	Skid Steer Loaders	Diesel	Average	1.00	8.00	80.0	0.37
Facility Construction	Cranes	Diesel	Average	1.00	8.00	270	0.29
Facility Construction	Forklifts	Diesel	Average	1.00	8.00	80.0	0.20
Facility Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	80.0	0.37
Facility Construction	Welders	Diesel	Average	1.00	8.00	20.0	0.45
Facility Construction	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	20.0	0.73
Facility Construction	Aerial Lifts	Diesel	Average	4.00	8.00	46.0	0.31
Facility Construction	Rough Terrain Forklifts	Diesel	Average	2.00	8.00	96.0	0.40
Facility Construction	Cement and Mortar Mixers	Diesel	Average	10.0	8.00	10.0	0.56
Facility Construction	Pumps	Diesel	Average	1.00	8.00	350	0.74
Pipeline Installation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Pipeline Installation	Welders	Diesel	Average	1.00	8.00	46.0	0.45

Pipeline Installation	Rough Terrain Forklifts	Diesel	Average	2.00	8.00	96.0	0.40
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Pipeline Trenching	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Pipeline Trenching	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Finishing/Landscaping	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Finishing/Landscaping	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day		Miles per Trip	Vehicle Mix
Site Preparation	—	—		—	—
Site Preparation	Worker	7.50		18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	18.0		3.79	HHDT,MHDT
Site Preparation	Hauling	0.00		20.0	HHDT
Site Preparation	Onsite truck	1.00		0.83	HHDT
Grading	—	—		—	—
Grading	Worker	7.50		18.5	LDA,LDT1,LDT2
Grading	Vendor	18.0		3.79	HHDT,MHDT
Grading	Hauling	0.00		20.0	HHDT
Grading	Onsite truck	1.00	B1-91	0.83	HHDT

Facility Construction	—	—	—	—
Facility Construction	Worker	0.67	18.5	LDA,LDT1,LDT2
Facility Construction	Vendor	0.26	10.2	HHDT,MHDT
Facility Construction	Hauling	0.00	20.0	HHDT
Facility Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.27	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Fine Grading	—	—	—	—
Fine Grading	Worker	5.00	18.5	LDA,LDT1,LDT2
Fine Grading	Vendor	18.0	3.79	HHDT,MHDT
Fine Grading	Hauling	0.00	20.0	HHDT
Fine Grading	Onsite truck	1.00	0.83	HHDT
Pipeline Installation	—	—	—	—
Pipeline Installation	Worker	0.67	18.5	LDA,LDT1,LDT2
Pipeline Installation	Vendor	0.26	10.2	HHDT,MHDT
Pipeline Installation	Hauling	0.00	20.0	HHDT
Pipeline Installation	Onsite truck	—	—	HHDT
Pipeline Trenching	—	—	—	—
Pipeline Trenching	Worker	7.50	18.5	LDA,LDT1,LDT2

Pipeline Trenching	Vendor	—	10.2	HHDT,MHDT
Pipeline Trenching	Hauling	0.00	20.0	HHDT
Pipeline Trenching	Onsite truck	—	—	HHDT
Finishing/Landscaping	—	—	—	—
Finishing/Landscaping	Worker	5.00	18.5	LDA,LDT1,LDT2
Finishing/Landscaping	Vendor	—	10.2	HHDT,MHDT
Finishing/Landscaping	Hauling	0.00	20.0	HHDT
Finishing/Landscaping	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	2,391	797	454

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	28.0	0.00	—

Grading	—	—	1.00	0.00	—
Fine Grading	—	—	0.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.17

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Light Industry	0.00	0%
Parking Lot	0.01	100%
Other Asphalt Surfaces	0.17	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	8.47	annual days of extreme heat
Extreme Precipitation	4.25	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	6.38	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	58.2
AQ-PM	49.3
AQ-DPM	12.9
Drinking Water	32.3
Lead Risk Housing	1.60
Pesticides	0.00
Toxic Releases	70.7
Traffic	67.4
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	2.72
Haz Waste Facilities/Generators	37.7
Impaired Water Bodies	58.7
Solid Waste	0.00
Sensitive Population	—
Asthma	0.98
Cardio-vascular	0.40

Low Birth Weights	61.9
Socioeconomic Factor Indicators	—
Education	5.86
Housing	8.50
Linguistic	30.7
Poverty	4.17
Unemployment	11.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	95.21365328
Employed	52.13653279
Median HI	99.93583986
Education	—
Bachelor's or higher	97.52341845
High school enrollment	100
Preschool enrollment	95.7141024
Transportation	—
Auto Access	89.83703323
Active commuting	6.043885538
Social	—
2-parent households	82.90773771
Voting	75.99127422
Neighborhood	—
Alcohol availability	85.62812781

Park access	31.50263057
Retail density	21.82728089
Supermarket access	38.76555883
Tree canopy	67.52213525
Housing	—
Homeownership	89.43924034
Housing habitability	94.00744258
Low-inc homeowner severe housing cost burden	86.12857693
Low-inc renter severe housing cost burden	81.35506224
Uncrowded housing	90.74810728
Health Outcomes	—
Insured adults	87.48877197
Arthritis	39.1
Asthma ER Admissions	98.2
High Blood Pressure	22.4
Cancer (excluding skin)	11.3
Asthma	88.8
Coronary Heart Disease	61.0
Chronic Obstructive Pulmonary Disease	84.0
Diagnosed Diabetes	80.8
Life Expectancy at Birth	97.9
Cognitively Disabled	88.7
Physically Disabled	84.3
Heart Attack ER Admissions	98.7
Mental Health Not Good	96.1
Chronic Kidney Disease	73.0
Obesity	93.4

Pedestrian Injuries	42.3
Physical Health Not Good	91.4
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	45.1
Current Smoker	96.7
No Leisure Time for Physical Activity	94.0
Climate Change Exposures	—
Wildfire Risk	99.9
SLR Inundation Area	88.1
Children	69.7
Elderly	14.2
English Speaking	80.7
Foreign-born	65.3
Outdoor Workers	83.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	88.7
Traffic Density	62.4
Traffic Access	23.0
Other Indices	—
Hardship	0.2
Other Decision Support	—
2016 Voting	81.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	6.00

B1-100

Healthy Places Index Score for Project Location (b)	99.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Based on information provided by the applicant.
Construction: Construction Phases	Based on information provided by the applicant.
Construction: Off-Road Equipment	Based on information provided by the applicant.
Construction: Trips and VMT	Based on information provided by applicant and CalEEMod defaults.

CalEEMod Operation Model Output

CNB-25 Operation Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	CNB-25 Operation
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	17.2
Location	33.613231898777684, -117.82214696277009
County	Orange
City	Newport Beach
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5901
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Light Industry	1.59	1000sqft	0.71	1,594 B1-108	0.00	—	—	—

Parking Lot	0.32	1000sqft	0.01	0.00	0.00	—	—	—
Other Asphalt Surfaces	7.25	1000sqft	0.17	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.03	0.07	0.10	0.23	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	1.77	46,743	46,744	3.08	0.36	0.62	46,930
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.02	0.05	0.10	0.15	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	1.77	46,741	46,743	3.08	0.36	0.42	46,928
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.03	0.06	0.10	0.20	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	1.77	46,741	46,743	3.08	0.36	0.50	46,928
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.02	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.29	7,739	7,739	0.51	0.06	0.08	7,770

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.01	0.08	0.14	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	76.7	76.7	0.01	0.01	0.20	79.6
Area	0.01	0.05	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.29	0.29	< 0.005	< 0.005	—	0.29
Energy	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	46,662	46,662	2.90	0.35	—	46,839
Water	—	—	—	—	—	—	—	—	—	—	—	0.71	3.66	4.36	0.07	< 0.005	—	6.70
Waste	—	—	—	—	—	—	—	—	—	—	—	1.07	0.00	1.07	0.11	0.00	—	3.73
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Total	0.03	0.07	0.10	0.23	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	1.77	46,743	46,744	3.08	0.36	0.62	46,930
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.01	0.09	0.14	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	75.4	75.4	0.01	0.01	0.01	78.2
Area	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	46,662	46,662	2.90	0.35	—	46,839
Water	—	—	—	—	—	—	—	—	—	—	—	0.71	3.66	4.36	0.07	< 0.005	—	6.70
Waste	—	—	—	—	—	—	—	—	—	—	—	1.07	0.00	1.07	0.11	0.00	—	3.73
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Total	0.02	0.05	0.10	0.15	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	1.77	46,741	46,743	3.08	0.36	0.42	46,928
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.02	0.01	0.09	0.14	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	75.7	75.7	0.01	0.01	0.09	78.6
Area	0.01	0.05	< 0.005	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.20	0.20	< 0.005	< 0.005	—	0.20
Energy	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	46,662	46,662	2.90	0.35	—	46,839
Water	—	—	—	—	—	—	—	—	—	—	—	0.71	3.66	4.36	0.07	< 0.005	—	6.70
Waste	—	—	—	—	—	—	—	—	—	—	—	1.07	0.00	1.07	0.11	0.00	—	3.73
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41

Total	0.03	0.06	0.10	0.20	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	1.77	46,741	46,743	3.08	0.36	0.50	46,928
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	12.5	12.5	< 0.005	< 0.005	0.01	13.0
Area	< 0.005	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.03	0.03	< 0.005	< 0.005	—	0.03
Energy	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7,725	7,725	0.48	0.06	—	7,755
Water	—	—	—	—	—	—	—	—	—	—	—	0.12	0.61	0.72	0.01	< 0.005	—	1.11
Waste	—	—	—	—	—	—	—	—	—	—	—	0.18	0.00	0.18	0.02	0.00	—	0.62
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
Total	0.01	0.01	0.02	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.29	7,739	7,739	0.51	0.06	0.08	7,770

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.02	0.01	0.08	0.14	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	76.7	76.7	0.01	0.01	0.20	79.6
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.02	0.01	0.08	0.14	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	76.7	76.7	0.01	0.01	0.20	79.6

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.02	0.01	0.09	0.14	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	75.4	75.4	0.01	0.01	0.01	78.2
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.02	0.01	0.09	0.14	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	75.4	75.4	0.01	0.01	0.01	78.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	12.5	12.5	< 0.005	< 0.005	0.01	13.0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	12.5	12.5	< 0.005	< 0.005	0.01	13.0

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	46,640	46,640	2.89	0.35	—	46,816
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41	< 0.005	< 0.005	—	0.42
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	46,640	46,640	2.89	0.35	—	46,817
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	46,640	46,640	2.89	0.35	—	46,816
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41	< 0.005	< 0.005	—	0.42
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	46,640	46,640	2.89	0.35	—	46,817
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	7,722	7,722	0.48	0.06	—	7,751
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07	< 0.005	< 0.005	—	0.07
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	7,722	7,722	0.48	0.06	—	7,751

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.9	21.9	< 0.005	< 0.005	—	21.9
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.9	21.9	< 0.005	< 0.005	—	21.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.9	21.9	< 0.005	< 0.005	—	21.9
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.9	21.9	< 0.005	< 0.005	—	21.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.62	3.62	< 0.005	< 0.005	—	3.63
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.62	3.62	< 0.005	< 0.005	—	3.63
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4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.29	0.29	< 0.005	< 0.005	—	0.29
Total	0.01	0.05	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.29	0.29	< 0.005	< 0.005	—	0.29
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.03	0.03	< 0.005	< 0.005	—	0.03
Total	< 0.005	0.01	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.03	0.03	< 0.005	< 0.005	—	0.03

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.71	3.66	4.36	0.07	< 0.005	—	6.70
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.71	3.66	4.36	0.07	< 0.005	—	6.70
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.71	3.66	4.36	0.07	< 0.005	—	6.70
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.71	3.66	4.36	0.07	< 0.005	—	6.70
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.12	0.61	0.72	0.01	< 0.005	—	1.11
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.12	0.61	0.72	0.01	< 0.005	—	1.11

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	1.07	0.00	1.07	0.11	0.00	—	3.73

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.07	0.00	1.07	0.11	0.00	—	3.73
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	1.07	0.00	1.07	0.11	0.00	—	3.73
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.07	0.00	1.07	0.11	0.00	—	3.73
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.18	0.00	0.18	0.02	0.00	—	0.62
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.18	0.00	0.18	0.02	0.00	—	0.62

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
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General Light Industry	8.00	8.00	8.00	2,921	54.5	54.5	54.5	19,874
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	2,391	797	454

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	32,000,000	532	0.0330	0.0040	68,226
Parking Lot	284	532	0.0330	0.0040	0.00

Other Asphalt Surfaces	0.00	532	0.0330	0.0040	0.00
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5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	368,613	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	1.98	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Light Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
----------------	-----------	----------------	---------------	----------------	------------	-------------

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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5.17. User Defined

Equipment Type	Fuel Type
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5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	8.47	annual days of extreme heat
Extreme Precipitation	4.25	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	6.38	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A

Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	58.2
AQ-PM	49.3
AQ-DPM	12.9
Drinking Water	32.3
Lead Risk Housing	1.60
Pesticides	0.00
Toxic Releases	70.7
Traffic	67.4
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	2.72
Haz Waste Facilities/Generators	37.7
Impaired Water Bodies	58.7
Solid Waste	0.00
Sensitive Population	—
Asthma	0.98
Cardio-vascular	0.40
Low Birth Weights	61.9
Socioeconomic Factor Indicators	—
Education	5.86
Housing	8.50

Linguistic	30.7
Poverty	4.17
Unemployment	11.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	95.21365328
Employed	52.13653279
Median HI	99.93583986
Education	—
Bachelor's or higher	97.52341845
High school enrollment	100
Preschool enrollment	95.7141024
Transportation	—
Auto Access	89.83703323
Active commuting	6.043885538
Social	—
2-parent households	82.90773771
Voting	75.99127422
Neighborhood	—
Alcohol availability	85.62812781
Park access	31.50263057
Retail density	21.82728089
Supermarket access	38.76555883
Tree canopy	67.52213525

Housing	—
Homeownership	89.43924034
Housing habitability	94.00744258
Low-inc homeowner severe housing cost burden	86.12857693
Low-inc renter severe housing cost burden	81.35506224
Uncrowded housing	90.74810728
Health Outcomes	—
Insured adults	87.48877197
Arthritis	39.1
Asthma ER Admissions	98.2
High Blood Pressure	22.4
Cancer (excluding skin)	11.3
Asthma	88.8
Coronary Heart Disease	61.0
Chronic Obstructive Pulmonary Disease	84.0
Diagnosed Diabetes	80.8
Life Expectancy at Birth	97.9
Cognitively Disabled	88.7
Physically Disabled	84.3
Heart Attack ER Admissions	98.7
Mental Health Not Good	96.1
Chronic Kidney Disease	73.0
Obesity	93.4
Pedestrian Injuries	42.3
Physical Health Not Good	91.4
Stroke	80.6
Health Risk Behaviors	—

Binge Drinking	45.1
Current Smoker	96.7
No Leisure Time for Physical Activity	94.0
Climate Change Exposures	—
Wildfire Risk	99.9
SLR Inundation Area	88.1
Children	69.7
Elderly	14.2
English Speaking	80.7
Foreign-born	65.3
Outdoor Workers	83.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	88.7
Traffic Density	62.4
Traffic Access	23.0
Other Indices	—
Hardship	0.2
Other Decision Support	—
2016 Voting	81.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	6.00
Healthy Places Index Score for Project Location (b)	99.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Based on information provided by the applicant.
Construction: Construction Phases	Based on information provided by the applicant.
Construction: Off-Road Equipment	Based on information provided by the applicant.
Construction: Trips and VMT	Based on information provided by applicant and CalEEMod defaults.
Operations: Energy Use	Based on electricity usage information provided by Applicant.
Operations: Fleet Mix	Based on vehicle trips information provided by Applicant.
Operations: Vehicle Data	Based on vehicle trips information provided by Applicant.

LST Worksheets

Construction Localized Significance Thresholds: From Off-Site Laydown Area

		<i>NOx & CO</i>		<i>PM10 & PM2.5</i>			
SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Construction / Project Site Size (Acres)	
20	0.55	404	1325	576	1890	0.55	
Source Receptor Distance (meters)		Central Orange County Coastal	Equipment	Acres/8-hr Day		Daily hours	Equipment Used Acres
		404	Tractors	0.5			0
NOx		194	Tractors	0.5		7	3 1.3125
CO		5,320	Graders	0.5			0
PM10		155.54	Dozers	0.5			0
PM2.5		89.69	Scrapers	1			0
							Acres 1.31
		Acres	25	50	100	200	500
NOx		1	92	93	108	140	219
		1	92	93	108	140	219
			92	93	108	140	219
CO		1	647	738	1090	2096	6841
		1	647	738	1090	2096	6841
			647	738	1090	2096	6841
PM10		1	4	13	27	54	135
		1	4	13	27	54	135
			4	13	27	54	135
PM2.5		1	3	5	9	22	76
		1	3	5	9	22	76
			3	5	9	22	76
Central Orange County Coastal							
0.55 Acres							
		25	50	100	200	500	
NOx		92	93	108	140	219	
CO		647	738	1090	2096	6841	
PM10		4	13	27	54	135	
PM2.5		3	5	9	22	76	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
20	1	20	1
Distance Increment Below			
200			
Distance Increment Above			
500			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Project Site Area

		<i>NOx & CO</i>		<i>PM10 & PM2.5</i>			
SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Construction / Project Site Size (Acres)	
20	0.88	381	1250	381	1250	0.88	
Source Receptor Distance (meters)		Central Orange County Coastal	Equipment	Acres/8-hr Day		Daily hours	Equipment Used Acres
		381	Tractors	0.5			0
NOx		188	Tractors	0.5		7	3 1.3125
CO		4,959	Graders	0.5			0
PM10		102.87	Dozers	0.5			0
PM2.5		54.58	Scrapers	1			0
							Acres 1.31
		Acres	25	50	100	200	500
NOx		1	92	93	108	140	219
		1	92	93	108	140	219
			92	93	108	140	219
CO		1	647	738	1090	2096	6841
		1	647	738	1090	2096	6841
			647	738	1090	2096	6841
PM10		1	4	13	27	54	135
		1	4	13	27	54	135
			4	13	27	54	135
PM2.5		1	3	5	9	22	76
		1	3	5	9	22	76
			3	5	9	22	76
Central Orange County Coastal							
0.88 Acres							
		25	50	100	200	500	
NOx		92	93	108	140	219	
CO		647	738	1090	2096	6841	
PM10		4	13	27	54	135	
PM2.5		3	5	9	22	76	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
20	1	20	1
Distance Increment Below			
200			
Distance Increment Above			
500			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Orange County Waste & Recycling AER Data



South Coast

AQMD

Annual Emission Report

Reporting Year: **2021**

Print Date: **02/08/2022**

Facility Id: **181426**
Facility Name **OC WASTE & RECYCLING, COYOTE**
Facility Type: **Landfill - Municipal Solid Waste**

StatusUpdate

Facility ID	181426
Facility Shutdown Date	N/A
Change of Ownership Date	N/A
Change in Equipment Location Date	N/A
Emissions are zero for this year's report, or emissions reduced by 50%	N/A
Exemption Request	N/A
Use of alternative Calculation methodology	N/A
Other	N/A
Refund Request	N/A
Data is Confidential	NO



South Coast

AQMD

Annual Emission Report

Reporting Year: **2021**

Print Date: **02/08/2022**

Facility Id: **181426**

Facility Name **OC WASTE & RECYCLING, COYOTE**

Facility Type: **Landfill - Municipal Solid Waste**

External Combustion Process List Overview

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Fuel	Fuel Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES12		610997	P1	Flare	Landfill Gas (Biogas)	453.202650	mmscf	EF	lbs/ mmscf	3.220000		19.030000	8.590000	22.720000	4.670000
								Emissions	lbs	1,459.31		8,624.45	3,893.01	10,296.76	2,116.46
ES13		610997	P1	Flare	Landfill Gas (Biogas)	472.062159	mmscf	EF	lbs/ mmscf	1.820000		18.910000	8.000000	2.670000	5.090000
								Emissions	lbs	859.15		8,926.70	3,776.50	1,260.41	2,402.80
ES14		610997	P1	Flare	Landfill Gas (Biogas)	556.552035	mmscf	EF	lbs/ mmscf	2.600000		17.330000	9.910000	18.810000	7.010000
								Emissions	lbs	1,447.04		9,645.05	5,515.43	10,468.74	3,901.43
ES15		610997	P1	Flare	Landfill Gas (Biogas)	385.504494	mmscf	EF	lbs/ mmscf	1.440000		19.750000	7.780000	1.940000	3.420000
								Emissions	lbs	555.13		7,613.71	2,999.22	747.88	1,318.43

Total Emissions	lbs	4,320.63		34,809.90	16,184.16	22,773.79	9,739.11
Total Emissions	tons	2.16	0.00	17.40	8.09	11.39	4.87



South Coast

AQMD

Annual Emission Report

Reporting Year: **2021**

Print Date: **02/08/2022**

Facility Id: **181426**

Facility Name **OC WASTE & RECYCLING, COYOTE**

Facility Type: **Landfill - Municipal Solid Waste**

Internal Combustion Process List Overview

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Fuel	Fuel Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES2	D2	580871	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2 (Diesel)	0.009000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	0.34		4.22	0.00	0.92	0.30

Total Emissions	lbs	0.34		4.22	0.00	0.92	0.30
Total Emissions	tons	0.00	0.00	0.00	0.00	0.00	0.00



South Coast

AQMD

Annual Emission Report

Reporting Year: **2021**

Print Date: **02/08/2022**

Facility Id: **181426**

Facility Name **OC WASTE & RECYCLING, COYOTE**

Facility Type: **Landfill - Municipal Solid Waste**

Criteria Pollutants Permitted Emissions Summary

	VOC (tons)	SPOG (tons)	NOx (tons)	NOx RECLAIM (tons)	SOx (tons)	SOx RECLAIM (tons)	CO (tons)	PM (tons)
External Combustion	2.16	0.00	17.40	0.00	8.09	0.00	11.39	4.87
Internal Combustion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spray Coating/ Spray Booth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Use of Organics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Storage Tanks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Components	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Process Emissions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shutdown/Startup/Turnaround and Upsets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Permitted Emissions	2.16	0.00	17.40	0.00	8.09	0.00	11.39	4.87



South Coast

AQMD

Annual Emission Report

Reporting Year: **2021**

Print Date: **02/08/2022**

Facility Id: **181426**

Facility Name **OC WASTE & RECYCLING, COYOTE**

Facility Type: **Landfill - Municipal Solid Waste**

Criteria Pollutants Non-Permitted Emissions Summary

	VOC (tons)	SPOG (tons)	NOx (tons)	NOx RECLAIM (tons)	SOx (tons)	SOx RECLAIM (tons)	CO (tons)	PM (tons)
External Combustion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Internal Combustion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spray Coating/ Spray Booth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Use of Organics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Storage Tanks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Components	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Process Emissions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shutdown/Startup/Turnaround and Upsets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Non-Permitted Emissions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



South Coast

AQMD

Annual Emission Report

Reporting Year: **2021**

Print Date: **02/08/2022**

Facility Id: **181426**

Facility Name **OC WASTE & RECYCLING, COYOTE**

Facility Type: **Landfill - Municipal Solid Waste**

Toxic Air Contaminants (TAC) / Ozone Depleting Compounds (ODC) Emissions and Fees Summary

For detailed TAC Records please see
related "AER TAC Report" Excel file



South Coast

AQMD

Annual Emission Report

Reporting Year: **2022**

Print Date: **04/26/2023**

Facility Id: **181426**
Facility Name **OC WASTE & RECYCLING, COYOTE**
Facility Type: **Landfill - Municipal Solid Waste**

StatusUpdate

Facility ID	181426
Facility Shutdown Date	N/A
Change of Ownership Date	N/A
Change in Equipment Location Date	N/A
Emissions are zero for this year's report, or emissions reduced by 50%	N/A
Exemption Request	N/A
Use of alternative Calculation methodology	N/A
Other	N/A
Refund Request	N/A
Data is Confidential	NO



South Coast

AQMD

Annual Emission Report

Reporting Year:

2022

Print Date:

04/26/2023

Facility Id: **181426**

Facility Name **OC WASTE & RECYCLING, COYOTE**

Facility Type: **Landfill - Municipal Solid Waste**

External Combustion Process List Overview

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Fuel	Fuel Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES12		610997	P1	Flare	Landfill Gas (Biogas)	423.558659	mmscf	EF	lbs/ mmscf	3.220000		19.030000	8.590000	22.720000	4.670000
								Emissions	lbs	1,363.86		8,060.32	3,638.37	9,623.25	1,978.02
ES13		610997	P1	Flare	Landfill Gas (Biogas)	304.316588	mmscf	EF	lbs/ mmscf	1.820000		18.910000	8.000000	2.670000	5.090000
								Emissions	lbs	553.86		5,754.63	2,434.53	812.53	1,548.97
ES14		610997	P1	Flare	Landfill Gas (Biogas)	439.307507	mmscf	EF	lbs/ mmscf	2.600000		17.330000	9.910000	18.810000	7.010000
								Emissions	lbs	1,142.20		7,613.20	4,353.54	8,263.37	3,079.55
ES15		610997	P1	Flare	Landfill Gas (Biogas)	416.636456	mmscf	EF	lbs/ mmscf	1.440000		19.750000	7.780000	1.940000	3.420000
								Emissions	lbs	599.96		8,228.57	3,241.43	808.27	1,424.90

Total Emissions	lbs	3,659.87		29,656.72	13,667.87	19,507.43	8,031.43
Total Emissions	tons	1.83	0.00	14.83	6.83	9.75	4.02



South Coast

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Annual Emission Report

Reporting Year: **2022**

Print Date: **04/26/2023**

Facility Id: **181426**

Facility Name **OC WASTE & RECYCLING, COYOTE**

Facility Type: **Landfill - Municipal Solid Waste**

Internal Combustion Process List Overview

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Fuel	Fuel Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES2	D2	580871	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2 (Diesel)	0.069000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	2.59		32.36	0.01	7.04	2.31
ES16			P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2 (Diesel)	2.481000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	93.04		1,163.59	0.52	253.06	83.11

Total Emissions	lbs	95.63		1,195.95	0.54	260.10	85.43
Total Emissions	tons	0.05	0.00	0.60	0.00	0.13	0.04



South Coast

AQMD

Annual Emission Report

Reporting Year: **2022**

Print Date: **04/26/2023**

Facility Id: **181426**

Facility Name **OC WASTE & RECYCLING, COYOTE**

Facility Type: **Landfill - Municipal Solid Waste**

Criteria Pollutants Permitted Emissions Summary (Excluding PERP)

	VOC (tons)	SPOG (tons)	NOx (tons)	NOx RECLAIM (tons)	SOx (tons)	SOx RECLAIM (tons)	CO (tons)	PM (tons)
External Combustion	1.83	0.00	14.83	0.00	6.83	0.00	9.75	4.02
Internal Combustion	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Spray Coating/ Spray Booth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Use of Organics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Storage Tanks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Components	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Process Emissions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shutdown/Startup/Turnaround and Upsets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Permitted Emissions	1.83	0.00	14.85	0.00	6.83	0.00	9.75	4.02



South Coast

AQMD

Annual Emission Report

Reporting Year: **2022**

Print Date: **04/26/2023**

Facility Id: **181426**

Facility Name **OC WASTE & RECYCLING, COYOTE**

Facility Type: **Landfill - Municipal Solid Waste**

Criteria Pollutants Non-Permitted Emissions Summary (Excluding PERP)

	VOC (tons)	SPOG (tons)	NOx (tons)	NOx RECLAIM (tons)	SOx (tons)	SOx RECLAIM (tons)	CO (tons)	PM (tons)
External Combustion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Internal Combustion	0.05	0.00	0.58	0.00	0.00	0.00	0.13	0.04
Spray Coating/ Spray Booth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Use of Organics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Storage Tanks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Components	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Process Emissions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shutdown/Startup/Turnaround and Upsets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Non-Permitted Emissions	0.05	0.00	0.58	0.00	0.00	0.00	0.13	0.04

Appendix

Appendix B2 Air Quality Impact Analysis

Appendix

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Air Quality Impact Analysis for a Renewable Natural Gas Plant for Biofuels Coyote Canyon Biogas, LLC Newport Beach, California

Biofuels Coyote Canyon Biogas, LLC
201 Helios Way, Floor 6
Houston, TX 77079

SCS ENGINEERS

01221270.00 Task 1 | December 2023

3900 Kilroy Airport Way Suite 100
Long Beach, CA 90806-6816
562-426-9544

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1.0 EXECUTIVE SUMMARY

This document was prepared by SCS Engineers (SCS) on behalf of Biofuels Coyote Canyon Biogas, LLC (BCCB) located at the Coyote Canyon Landfill (CCL). This is model report detailing the air quality impact assessment (AQIA) required to be submitted in addition to Permit to Construct (PTC)/Permit to Operate (PTO) application. The application is for a new Renewable Natural Gas (RNG) Plant (RNG Plant).

The AQIA assessed the offsite concentrations of criteria air pollutants carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter smaller than 2.5 microns (PM_{2.5}), particulate matter smaller than 10 microns (PM₁₀) and sulfur dioxide (SO₂) that result from the combustion of landfill gas (LFG) in the proposed RNG flare and thermal oxidizer (TOX). The United States Environmental Protection Agency (EPA) regulatory model, AERMOD, was used to assess the ground level concentrations (glc) of criteria pollutants and compare those concentrations with significance thresholds. For simplicity the model was run at 1 pound per hour for each averaging time. The model results are then multiplied by the actual pound per hour emission rate, which is called the Chi over Q method (X/Q). If any significance threshold is exceeded, modeled impact will be compared to the applicable Ambient Air Quality Standards (AAQS).

The stack parameters for dispersion modeling were based on manufacturer's information for the proposed flare and TOX. SCAQMD provided five years of representative meteorological data from the John Wayne Airport for the timeframe from 2012 through 2016.

Table 1 summarizes the criteria pollutant modeling results.

Table 1. Criteria Pollutant Modeling Results Compared to SIL/SC¹

Pollutant	Avg. Time	Conc. ¹	SIL/SC ²	Under SIL/SC?
		µg/m ³	µg/m ³	Y/N
CO	1-hr	89.86	2,000/1,100	Y/Y
CO	8-hrs	26.05	500/500	Y/Y
NO ₂	Ann	0.41	1/1	Y/Y
NO ₂	1-hr	29.45	7.5/20	N/N
PM _{2.5}	Ann	0.13	0.2/2.5	Y/Y
PM _{2.5}	24-hrs ³	0.56	2.5/1.0	Y/Y
PM ₁₀	Ann	0.13	5/2.5	Y/Y
PM ₁₀	24-hrs	1.77	2.5/1.0	Y/N
SO ₂	Ann	0.16	1/None	Y/Y
SO ₂	1-hr	11.29	7.8/None	N/Y
SO ₂	3-hrs	6.31	25/None	Y/Y
SO ₂	24-hrs	1.58	5/None	Y/Y

¹ Model results are with regulatory defaults, including terrain. Annual results are for the highest individual year, 2012-2016.

² SIL represents PSD Class 2 Significant Impact Level. SC represents "Significant Change in Air Quality" under the California Environmental Quality Act (CEQA).

³ 8th Highest receptor taken as the ambient air quality standard is for the 98th percentile.

The results of dispersion modeling demonstrate that criteria pollutant impacts from the proposed flare are insignificant under SIL and SC levels with the exception of NO₂ 1-hour, PM₁₀ 24-hour and SO₂ 1-hr results. These three model results are then compared to the AAQS after including background concentrations in Table 2 below.

Table 2. Criteria Pollutant Modeling Results Compared to AAQS¹

Pollutant	Avg. Time	Modeled Conc. ¹	Background Conc.	Total Conc.	AAQS	Under Threshold?
		µg/m ³	µg/m ³	µg/m ³	µg/m ³	
NO ₂	1-hr	29.45	100.05	129.49	188	Y
PM ₁₀	24-hrs	1.77	115	116.77	150	Y
SO ₂	1-hr	11.29	5.76	17.05	196.5	Y

¹ Model results are with regulatory defaults, including terrain. Annual results are for the highest individual year, 2012-2016.

All pollutants with averaging times over SIL or SC levels are shown to be under the AAQS. Therefore, no additional modeling is needed and the proposed project is in compliance with the standards.

2.0 INTRODUCTION

BCCB is proposing to divert the current LFG, and future quantities of LFG collected, to a new RNG Plant, and as a result, put the LFG to a more valuable use. The LFG is currently being flared by the Orange County Waste & Recycling (OCWR), who owns and operates the CCL. None of the existing operations at the CCL will be under common ownership or control with the proposed RNG Plant.

The RNG Plant will convert LFG into a pipeline quality natural gas equivalent, by removing hydrogen sulfide (H_2S), VOCs, carbon dioxide (CO_2), nitrogen, (N_2), and oxygen (O_2). The RNG will be injected into the Southern California Gas Company pipeline.

The bulk of the H_2S contained in the LFG is converted into elemental sulfur. The remaining H_2S , nearly all the VOCs, CO_2 , N_2 and oxygen are removed from the LFG and routed to a TOX for destruction. The gas routed to the TOX is referred to as waste gas. The waste gas contains approximately 6-8.5 percent (%) methane (CH_4) (varies as raw gas composition changes). To ensure stable combustion of the waste gas, at a minimum of 1,500 degrees Fahrenheit ($^{\circ}\text{F}$), it is necessary to provide supplemental fuel (conventional natural gas) to the TOX.

BCCB also requests to install an enclosed RNG flare to burn off-specification RNG and waste gases from the H_2S and VOC removal systems. The pipeline receiving the RNG has a strict minimum requirement for CH_4 content and strict upper limits for the content of CO_2 , N_2 and O_2 . If these limits are exceeded, it will be necessary to divert the off spec RNG to the flare until such time as the RNG quality returns to within the acceptable limits.

This study addresses the potential exposure to criteria (AQIA) air pollutants from the RNG flare and TOX. Predicted offsite concentrations of criteria pollutants are compared with the Prevention of Significant Deterioration (PSD) Class 2 Significant Impact levels (SIL) as well as the significance change (SC) in air quality levels under the California Environmental Quality Act (CEQA). If the predicted concentration is below the SIL and SC, the impact from that pollutant at that averaging time is considered insignificant, and no further analysis is required. If the impact is significant, the monitored background concentration is added to the predicted impact and the total is compared to the California and National AAQS (whichever is more stringent). If the total is below the applicable AAQS, compliance is demonstrated.



Figure 1. Aerial View of the BCCB, CCL, and Vicinity

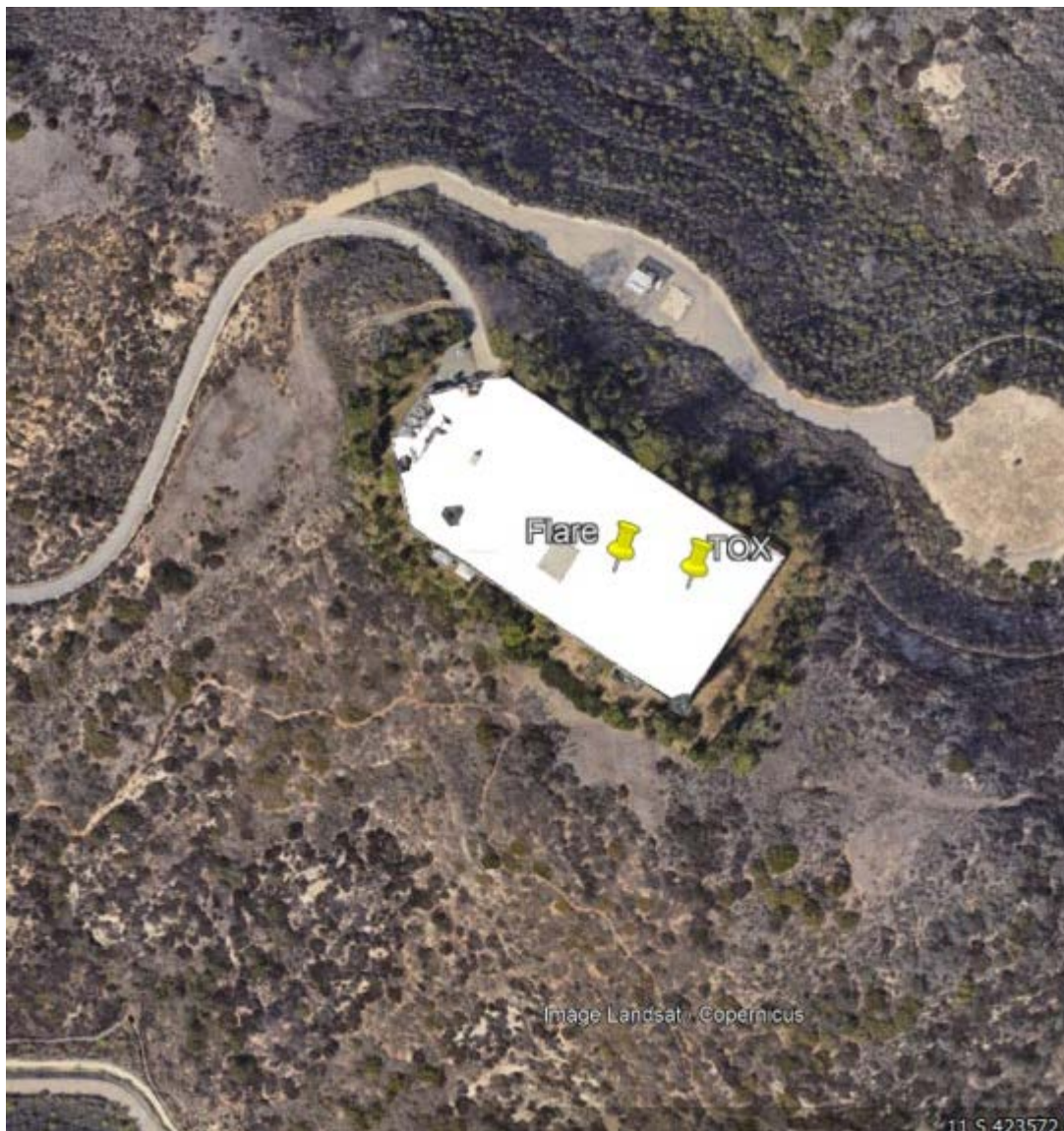


Figure 2. BCCB Boundary and Source Locations

GPS Coordinates: TOX 33.613, -117.822 RNG Flare 36.612, -117822

Source	East UTM NAD83	North UTM NAD83	Elevation
	meters	meters	feet
TOX	423,786.00	3,719,539.00	780.84
Flare	423759.91	3719546.10	780.84

¹ Site grade, feet above mean sea level (msl), per Google Earth.

3.0 CLIMATE AND PREVAILING WINDS

3.1 METEOROLOGICAL DATA

Data taken from John Wayne Airport, located about 8 kilometers (km) to the Northwest of BCCB, has five consecutive years of historic hourly meteorological data for the period January 1, 2012 through December 31, 2016. SCAQMD processed and provided this data for this analysis.

No significant intervening elevated terrain is observed between the town and the landfill. Figure 3 includes a wind rose of the meteorological dataset.

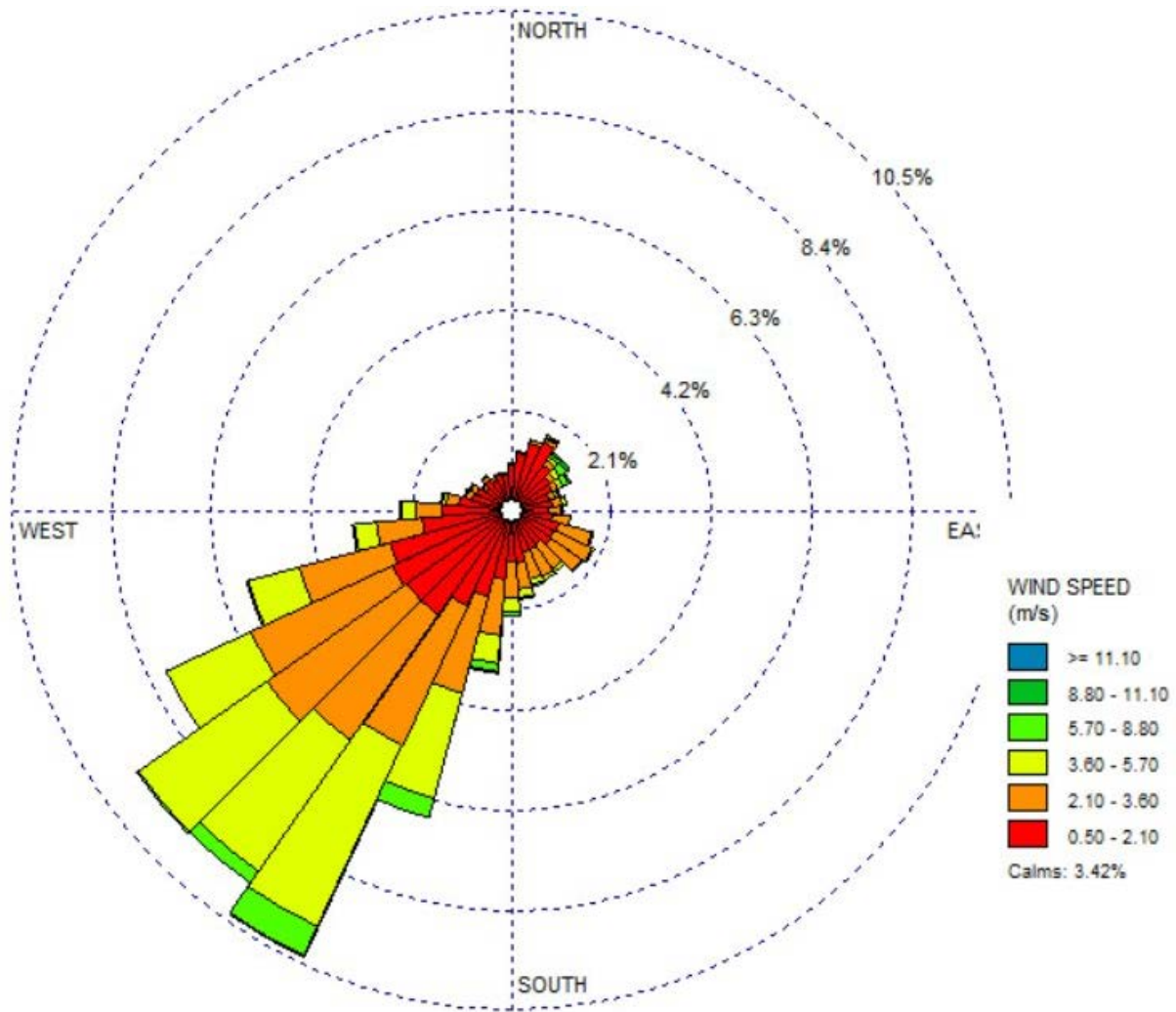


Figure 3. John Wayne Airport Met Station (KSNA) Windrose

1/1/2012 – 12/31/2016
Wind Direction "From"

4.0 ATMOSPHERIC DISPERSION MODELING

This section describes the methods that were followed to complete the air dispersion modeling element of the AQIA.

4.1 AIR DISPERSION MODEL SELECTION

The air dispersion model selected for air quality modeling analyses is AERMOD. AERMOD is a state-of-the-art model that allows for modeling of complex emission sources. The AERMOD modeling suite consists of AERMOD, the air dispersion model; AERMET, a meteorological data preprocessor, and AERMAP, a terrain data preprocessor. A primary enhancement of AERMOD over earlier models (especially ISCST3) is the more realistic handling of plume dispersion in both stable and convective conditions within the planetary boundary layer (PBL). Plumes encountering terrain more realistically move either over or around terrain features. AERMOD incorporates the PRIME building downwash algorithms developed by the Electric Power Research Institute (EPRI). To properly represent dispersion processes, the meteorological data input requirements for AERMOD are rigorous as compared to previous models such as ISCST3.

Modeling for criteria air pollutants was done for the averaging time periods for which each pollutant has a standard. Regulatory averaging time periods for criteria pollutants are shown in Table 1.

4.2 POLLUTANTS MODELED

Modeling was conducted for each criteria pollutant. Maximum permitted emission rates were input for criteria pollutants. For simplicity the model was run at 1 pound per hour for each different averaging time. The model results are then multiplied by the actual pound per hour emission rate, which is called the Chi over Q method (X/Q).

If any significance threshold is exceeded, modeled impact will be compared to the applicable Ambient Air Quality Standards (AAQS).

4.3 MODEL INPUTS

This section describes the AERMOD model inputs that were used for calculating ground level concentrations (glcs) at receptors.

4.3.1 Model Options

Modeling was done to calculate offsite concentrations of criteria pollutants. Averaging times corresponding to applicable ambient air quality standards were used for criteria pollutants. Regulatory default options were applied as shown:

- AERMOD
- No Dry Deposition
- No Wet Deposition
- No Gas Deposition
- No Particulate Deposition
- Calculation of Average Concentration Values

- Rural Dispersion Only
- Model Uses Regulatory DEFAULT Options:
 - Stack-tip Downwash
 - Accounts for Elevated Terrain Effects
 - Uses Calms Processing Routine
 - Uses Missing Data Processing Routine
 - No Exponential Decay
- Model Assumes No Flagpole Receptor Heights
- Default Dispersion Coefficients
- Default Wind Speed with Elevation Coefficients

Though SCAQMD's modeling guidelines specify using the urban option, clearly the land use in the 3-kilometer radius of the source is rural as less than 50 percent of the land within 3 km of the source is undeveloped, so the rural option was selected.

4.3.2 Release Parameters

Source release parameters are presented in Table 3. The proposed flare is modeled as a point source. All flares are enclosed flares, not utility or candlestick flares, so no flare adjustment was applied.

Table 3. Release Parameters

Source	Stack Height, feet	Stack Exit Diameter, feet	Stack Exit Temperature, °F	Stack Exhaust Velocity, feet/sec
Point Sources				
TOX	60	3.17	748	23.66
Flare	40	13	1,600	18,29

For the purpose of this analysis, the flare and TOX are assumed to operate continuously 24 hours per day, 7 days per week, and 52 weeks per year. This is conservative since it is not expected that the RNG flare will operate more than 875 hours annually.

4.3.3 Source Locations

The flare and TOX locations and base elevations are presented in Table 4.

Table 4. Flare and TOX Location and Elevation at Grade¹

Source	East UTM NAD83	North UTM NAD83	Elevation
	meters	meters	feet
TOX	423,786.00	3,719,539.00	780.84
Flare	423759.91	3719546.10	780.84

¹ Site grade, feet above mean sea level (msl), per Google Earth.

4.3.4 Building Structures and BPIP-PRIME Dimensions

The BPIP-PRIME model algorithms are generally used to calculate direction-specific structure downwash effects. The dimensions of structures within about 5 building widths of point sources can cause downwash to occur. One structure was identified at BCCB that has the potential to contribute to building downwash. This building is 18 meters West of the flare and 35 meters Southwest of the TOX, with a height of 10 feet as well as length and width of 13 meters and 10 meters, respectively.

4.3.5 Receptors

A Cartesian receptor grid was developed:

- Fine grid receptors were spaced at approximately 25-meter intervals out to 500 meters from the property line.
- Medium grid receptors were spaced at approximately 50 meters spacing out to 1000 meters from the property boundary.
- Additional medium grid receptors were spaced at 100 meters spacing to 2000 meters.

The above-described nested receptor grid resulted in 4,161 receptors.

4.4 TERRAIN DATA

Terrain hill profiles for the modeling domain were processed with the AERMAP terrain data preprocessor using the U.S. Department of Agriculture National Elevation Dataset (NED) at a grid size of one arc-second. AERMAP locates the height and location of terrain (Height Scale factor) that has the greatest influence on each receptor. Receptor terrain elevations (z coordinates) were assigned based upon the highest elevation of the four DEM nodes forming a “box” around each receptor location.

Source and building grade elevations were obtained from Google Earth and not processed via AERMAP. Site grade is at 781 feet above mean sea level (msl).

5.0 AIR QUALITY IMPACT ASSESSMENT

The project consists of a proposed flare and TOX. Maximum emissions of Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Particulate Matter (PM) less than 10 and 2.5 microns in diameter (PM₁₀ and PM_{2.5}) and SO₂ are shown in Table 5.

Table 5. Criteria Pollutant Emissions

Pollutant	Flare Emission Rate	TOX Emission Rate
	lb/hr	lb/hr
CO	4.67	4.07
NO _x	1.94	1.23
PM ₁₀	1.37	0.24
PM _{2.5}	1.37	0.24
SO ₂	0.75	0.47

Air dispersion modeling was completed to demonstrate compliance with the National and California AAQS. Pollutants currently in attainment with National AAQS are NO₂, CO, 24-hour PM₁₀ and SO₂. Per Rule 1303, Appendix A, modeling for compliance with California AAQS is not required for SO₂, although SO₂ modeling is required for comparison with the 1-hour National AAQS. Modeling is also not required for VOCs as there are no ambient air quality standards for VOC.

Modeling was conducted for CO, NO_x, PM₁₀, PM_{2.5} and SO₂. NO_x was conservatively assumed to be fully converted to Nitrogen Dioxide (NO₂). Model inputs, ambient air quality analysis methods and receptors are discussed in Section 4. Modeling was performed using the X/Q method with 1 pound per hour emissions from both the flare and TOX at each of the averaging periods addressed in the AAQS. Model results are detailed below in Table 6.

Table 6. Model Results at Each Averaging Period

Avg. Period	Flare Modeled Maximum Impact (µg/m ³ per lb/hr)	TOX Modeled Maximum Impact (µg/m ³ per lb/hr)
1-hour	4.33	17.11
3-hour	2.44	9.54
8-hour	1.63	4.53
24-hour	0.98	1.79
24-hour (8 th high for PM _{2.5} 24-hour standard)	0.22	1.06
Annual	0.050	0.256

Each lb/hr emission rate from Table 5 above can be multiplied by the model results in Table 6 to get a maximum impact concentration in $\mu\text{g}/\text{m}^3$ from each source. The maximum calculated concentrations for flare and TOX are then added together for a conservative maximum concentration to compare to the AAQS. The Pollutant Concentration excel file included with the modeling file submittal shows these calculations.

A summary of the applicable regulatory standards and significance thresholds are listed in Table 7.

Table 7. Summary of AAQS, Class II PSD Increment and Significant Change in Air Quality Concentration Values

Pollutant	Avg. Period	National AAQS ^{1,2} ($\mu\text{g}/\text{m}^3$)	California AAQS ² ($\mu\text{g}/\text{m}^3$)	Class II PSD Increment ($\mu\text{g}/\text{m}^3$)	PSD Class 2 SILs ³ ($\mu\text{g}/\text{m}^3$)	Significant Change in Air Quality Conc. ² ($\mu\text{g}/\text{m}^3$)
CO	1-hour	40,000	23,000	None	2,000	1,100
CO	8-hour	10,000	10,000	None	500	500
NO ₂	Annual	100	57 ¹	25	1	1
NO ₂	1-hour	188	339 ¹	None	7.5	20
PM ₁₀	Annual	None	20	17	1	2.5
PM ₁₀	24-hour	150	50	30	5	1.0
PM _{2.5}	Annual	12	12	4	1.2	2.5
PM _{2.5}	24-hour	35	None	9	0.2	1.0
SO ₂	Annual	79	None	20	1	None
SO ₂	1-hour	196	655	None	7.9	None
SO ₂	3-hour	1,300 ⁴	None	512	25	None
SO ₂	24-hour	367	105	91	5	None

¹ From www.epa.gov/air/criteria.html (National AAQS dated 12/20/2016) and www.arb.ca.gov/research/aaqs/aaqs2.pdf (National AAQS and California AAQS dated 5/4/2016).

² SCAQMD Rule 1303, Table A-2 (Revised 12/6/02).

³ SIL stands for Significant Impact Level.

⁴ Secondary Standard

6.0 RESULTS

This section presents the AQIA results. Both were performed in accordance with applicable regulatory guidelines.

The AQIA assessed the offsite concentrations of criteria air pollutants CO, NO₂, PM_{2.5}, PM₁₀ and SO₂ that result from the combustion of LFG in the proposed flare and TOX. The EPA regulatory model, AERMOD, was used to assess the ground-level concentration of criteria pollutants and compare those concentrations with significance thresholds and applicable AAQS.

The stack parameters for dispersion modeling were based on manufacturer's information for the proposed flare. SCAQMD provided five years of representative meteorological data from the John Wayne Airport for the timeframe from 2012 through 2016.

Table 8 summarizes the criteria pollutant modeling results.

Table 8. Criteria Pollutant Modeling Results Compared to SIL/SC¹

Pollutant	Avg. Time	Conc. ¹	SIL/SC ²	Under SIL/SC?
		µg/m ³	µg/m ³	Y/N
CO	1-hr	89.86	2,000/1,100	Y/Y
CO	8-hrs	26.05	500/500	Y/Y
NO ₂	Ann	0.41	1/1	Y/Y
NO ₂	1-hr	29.45	7.5/20	N/N
PM _{2.5}	Ann	0.13	0.2/2.5	Y/Y
PM _{2.5}	24-hrs ³	0.56	2.5/1.0	Y/Y
PM ₁₀	Ann	0.13	5/2.5	Y/Y
PM ₁₀	24-hrs	1.77	2.5/1.0	Y/N
SO ₂	Ann	0.16	1/None	Y/Y
SO ₂	1-hr	11.29	7.8/None	N/Y
SO ₂	3-hrs	6.31	25/None	Y/Y
SO ₂	24-hrs	1.58	5/None	Y/Y

¹ Model results are with regulatory defaults, including terrain. Annual results are for the highest individual year, 2012-2016.

² SIL represents PSD Class 2 Significant Impact Level. SC represents "Significant Change in Air Quality" under the California Environmental Quality Act (CEQA).

³ 8th Highest receptor taken as the ambient air quality standard is for the 98th percentile.

The results of dispersion modeling demonstrate that criteria pollutant impacts from the proposed flare are insignificant under SIL and SC levels with the exception of NO₂ 1-hour, PM₁₀ 24-hour and SO₂ 1-hr results. These three model results are then compared to the AAQS after including background concentrations in Table 9 below.

Table 9. Criteria Pollutant Modeling Results Compared to AAQS¹

Pollutant	Avg. Time	Modeled Conc. ¹	Background Conc.	Total Conc.	AAQS	Under Threshold?
		µg/m ³	µg/m ³	µg/m ³	µg/m ³	
NO ₂	1-hr	29.45	100.05	129.49	188	Y
PM ₁₀	24-hrs	1.77	115	116.77	150	Y
SO ₂	1-hr	11.29	5.76	17.05	196.5	Y

¹ Model results are with regulatory defaults, including terrain. Annual results are for the highest individual year, 2012-2016.

All pollutants with averaging times over SIL or SC levels are shown to be under the AAQS. Therefore, no additional modeling is needed and the proposed project is in compliance with the standards.

7.0 CONCLUSIONS

BCCB has demonstrated via the AQIA analysis that facility emissions of criteria pollutants comply with applicable AAQS. This AQIA followed the methodology of SCAQMD and CARB. The AQIA is being submitted in addition to the PTC/PTO application for the proposed RNG plant at CCL. This model report will be submitted in hard copy as well as electronically to the SCAQMD, along with dispersion modeling files.

8.0 REFERENCES

The following references and documents were consulted:

- CARB/California Air Pollution Control Officers Association (CAPCOA), Risk Management Guidance Document, July 2015.
- OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, February 2015.
- United States Environmental Protection Agency (EPA), User's Guide for the AMS/EPA Regulatory Model AERMOD, EPA-450/B-03-001, September 2004.
- SCAQMD Modeling Guidelines, <http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance>.
- 40 CFR Part 51, Appendix W, Guidelines on Air Quality Models (commonly referred to as U.S. EPA's Appendix W).
- South Coast AQMD Risk Assessment Procedures for Rules 1401 and 212.

Appendix

Appendix B3 Permit to Construct/Permit to Operate

Appendix

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Permit to Construct/Permit to Operate for a Renewable Natural Gas Plant for Biofuels Coyote Canyon Biogas, LLC Newport Beach, California

Biofuels Coyote Canyon Biogas, LLC
201 Helios Way, Floor 6
Houston, TX 77079

SCS ENGINEERS

01221270.00 Task 1 | December 11, 2023

3900 Kilroy Airport Way, Suite 100
Long Beach, CA 90806
562-426-9544

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1.0 INTRODUCTION

1.1 OVERVIEW

This document was prepared by SCS Engineers (SCS) on behalf of Biofuels Coyote Canyon Biogas, LLC (BCCB) located at the Coyote Canyon Landfill (CCL). This is an application for a Permit to Construct (PTC)/Permit to Operate (PTO) for the new construction and operation of the proposed BCCB facility. The application is for a new Renewable Natural Gas (RNG) Plant (RNG Plant). This information is formatted in accordance with the South Coast Air Quality Management District (SCAQMD) PTC/PTO permit information requirements.

1.2 PROJECT LOCATION

The proposed RNG Plant will be located at the CCL. CCL is located at 20661 Newport Coast Drive in Newport Beach, California. The CCL site location is shown in Figure 1. A map showing the location of the proposed RNG Plant at the CCL site can be found in Appendix A. The RNG Plant will be under separate ownership and control from the CCL.

1.3 BACKGROUND INFORMATION

1.3.1 Applicant Name and Address

Biofuels Coyote Canyon, LLC
201 Helios Way, Floor 6
Houston, TX 77079

1.3.2 Facility Address

Biofuels Coyote Canyon Biogas, LLC
20661 Newport Coast Drive
Newport Beach, CA 92660

1.3.3 Nature of Business

Renewable Natural Gas Plant

1.3.4 Person to Contact Regarding Application

Mr. Nevin Edwards
Air Permitting Manager
Biofuels San Bernardino Biogas, LLC
201 Helios Way, Floor 6
Houston, Texas 77079
(724) 776-8388

Ms. Gabrielle Stephens
Project Director
SCS Engineers
4683 Chabot Drive, Suite 200
Pleasanton, California 94588
(562) 355-6510

1.3.5 Type of Entitlement

PTC/PTO

1.3.6 Operation Schedule

24 hours per day

7 days per week

52 weeks per year

With scheduled shutdowns for maintenance

1.3.7 Status of Application

This is a new application for a RNG Plant that includes a hydrogen sulfide (H₂S) treatment system, volatile organic compound (VOC) removal system, gas treatment system, thermal oxidizer (TOX), an enclosed RNG flare, and various related equipment.

1.3.8 Facility Status

New

1.3.9 Compliance Certification

“BCCB certifies that all facilities owned or operated by BCCB are in compliance or on approved schedule for compliance with applicable federal, state, and local emission limits and standards.”

Certified by: _____

Signature: _____

Date: _____

A copy of the completed SCAQMD permit application forms for the RNG Plant is provided as an appendix to this report.

2.0 PROJECT DESCRIPTION

2.1 REASON FOR PERMITTING ACTION

BCCB is proposing to divert the current landfill gas (LFG), and future quantities of LFG collected, to a new RNG Plant, and as a result, put the LFG to a more valuable use. The LFG is currently being flared by the Orange County Waste & Recycling (OCWR), who owns and operates the CCL. None of the existing operations at the CCL will be under common ownership or control with the proposed RNG Plant.

The RNG Plant will convert LFG into a pipeline quality natural gas equivalent, by removing H₂S, VOCs, carbon dioxide (CO₂), nitrogen, (N₂), and oxygen (O₂). A process flow diagram (PFD) detailing the processes employed in the RNG Plant can be found in Appendix A. The RNG will be injected into the Southern California Gas Company pipeline.

The bulk of the H₂S contained in the LFG is converted into elemental sulfur. The remaining H₂S, nearly all the VOCs, CO₂, N₂ and oxygen are removed from the LFG and routed to a TOX for destruction. The gas routed to the TOX is referred to as waste gas. The waste gas contains approximately 6 – 8.5 percent (%) methane (CH₄) (varies as raw gas composition changes). To ensure stable combustion of the waste gas, at a minimum of 1,500 degrees Fahrenheit (°F), it is necessary to provide supplemental fuel (conventional natural gas) to the TOX.

BCCB also requests to install an enclosed RNG flare to burn off-specification RNG and waste gases from the H₂S and VOC removal systems. The pipeline receiving the RNG has a strict minimum requirement for CH₄ content and strict upper limits for the content of CO₂, N₂ and O₂. If these limits are exceeded, it will be necessary to divert the RNG to the flare until such time as the RNG quality returns to within the acceptable limits.

3.0 DESCRIPTION OF PROPOSED EQUIPMENT

3.1 RNG PLANT

3.1.1 Bulk Hydrogen Sulfide Removal

The H₂S treatment system will be located within the RNG Plant as shown in the Figures attached. After compression to around 30 pounds per square inch gauge (PSIG), the LFG will enter the H₂S treatment system. The bulk of the H₂S contained in the LFG will be removed via a non-regenerative H₂S removal media contained within a vessel. When the media is spent, it will be replaced, and the spent media will be appropriately managed (e.g. landfilled). The concentration of the H₂S leaving the vessel is conservatively estimated to be 25 parts per million by volume (ppmv) or less.

The dry media system for sulfur removal will employ a non-regenerative granular sulfur removal media, such as Norit Darco BG1 activated carbon, Guild Associates BSR-050, or equivalent. The treatment system is a pass-through, closed-loop system, and there are no sources of air emission from the H₂S removal process. The inlet and outlet piping of the treatment vessel will include manual pressure measurement sample ports, visually read temperature gauges, and locations to sample for H₂S concentration and other parameters, as necessary.

3.1.1.1 Equipment Specifications for H₂S Treatment System

Below are some specific details regarding the H₂S Treatment System:

Type:	Non-Regenerative
Media:	Granular Sulfur Removal Media (e.g., Norit Darco BG1 activated carbon, Guild BSR-050, or equivalent)
Vessels:	Steel
Fluid:	LFG
Size:	8' DIA x 15' S/S
Amount:	20,000 pounds (lbs) Media
Outlet:	< 25 ppmv inlet H ₂ S
Changeout:	24 month changeout (or upon breakthrough)

3.1.2 VOC Removal

The VOC Removal system will be located within the RNG Plant as shown in Figures attached. After first stage compression and H₂S removal, the LFG is now considered process gas. The process gas is further compressed to around 200 PSIG, then enters the VOC removal system. The VOC removal process is mainly comprised of gas chilling followed by a regenerative temperature swing adsorption (TSA) system. Gas chilling condenses water as well as some VOCs. The TSA system provides residual water and VOC removal (90+ % removal). When the TSA system is regenerated, the VOCs in the TSA regeneration gas will flow to the enclosed flare and TOX systems. This TSA regeneration gas will also contain a portion of the H₂S not removed by the upstream H₂S treatment system. Polishing for additional removal of the remaining VOCs (and H₂S) is accomplished by non-regenerative media. The regenerative TSA media is designed for years of operation while the non-regenerative media is designed for annual replacement.

The TSA unit is regenerated using the membrane reject CO₂ stream plus the nitrogen rejection unit waste gas with the resulting effluent sent to the TOX.

3.1.2.1 Carbon Dioxide Removal

The CO₂ removal system will be located within the RNG Plant as shown in Figures attached. After second stage compression, H₂S, VOC, and water removal, the CO₂ is removed from the process gas using a two-stage membrane unit. The first stage membrane unit produces a low pressure permeate stream that is rich in CO₂ and is heated using waste heat from the TOX. The stage 1 permeate, which contains about 82% CO₂, 6% CH₄, and similar levels of N₂ and O₂, is used to regenerate the TSA system.

The stage 1 retentate stream (process gas enriched in CH₄) enters the second stage membrane unit. The second stage membrane unit also produces a low pressure permeate stream that is rich in CO₂ and CH₄ (up to 50%). To recover the CH₄, the stage 2 permeate is compressed and recycled internally to the membrane process (initially passing through a non-regenerable polisher bed).

3.1.2.2 Nitrogen Removal

The N₂ removal system will be located within the RNG Plant as shown in Figures attached. After the CO₂ removal process, the process gas is now considered intermediate or low heating value product gas. It contains CH₄, N₂, and O₂ with small amounts of CO₂ (<1%) and little to no VOCs or H₂S. Due to the presence of elevated concentrations of N₂ and O₂, it cannot yet be considered pipeline quality natural gas. Accordingly, the gas will enter a Pressure-Swing Adsorption (PSA) process that is used to

separate the N₂ and O₂ from the CH₄. As the CH₄/(N₂+O₂) separation is not 100% efficient, the N₂ reject gas stream from the PSA system routed to TOX will contain CH₄. The CH₄ reduces the supplemental natural gas requirement of the TOX.

3.2 THERMAL OXIDIZER

3.2.1 Thermal Oxidizer

The TOX system will be located within the RNG Plant as shown in Appendix A. The entire system is designed to process up to 1,837 SCFM of dry waste gas. The maximum allowable total process heat release during operation is 12.11 million British Thermal Units per hour at the higher heating value (MMBtu/hr at HHV). The expected waste gas process heat release during normal operating conditions is 9.88 MMBtu/hr (HHV). The TOX system will operate 24 hours per day, 7 days per week, and 52 weeks per year, except during periods of scheduled and unscheduled maintenance. The design throughput of the TOX system is 86,515 MMBtu (HHV) per rolling 12-month period.

3.2.2 Equipment Specifications for Thermal Oxidizer

Equipment specifications are included in Appendix B. Below are some specific details regarding the TOX system:

Quantity:	One (1)
Type:	Thermal Recuperative Oxidizer (TRO)
Manufacturer:	Conifer Systems
Model:	TRO-65-60-051
Capacity (operating):	9.88 MMBtu/hr (HHV)
Annual Throughput:	86,515 MMBtu/yr (HHV)
Stack Height:	60-feet above grade
Stack Diameter:	42 inches (") I.D.; 50" O.D.
Waste Gas Stream Flow (maximum):	1,837 SCFM (membrane waste gas/TSA regen + NRU waste gas)
Operating Temp (minimum):	1,500 °F
Natural Gas Usage (maximum):	7,500 scfh @ 10 psig (startup)
Natural Gas Usage (operating):	1,875 scfh @ 10 psig (design)
Estimated Power Consumption	70 kW at full capacity

Tables 8 and 9 (attached) shows the calculated Potential to Emit (PTE) for toxics and criteria pollutants for the TOX.

3.3 ENCLOSED RNG FLARE

3.3.1 Enclosed RNG Flare

The enclosed RNG flare will be located within the RNG Plant as shown in Appendix A. There are several points in the system where off-specification process gas will be routed to the flare during RNG plant startup or transitional operation. The process gas flow delivered to the flare will be measured and totalized on an annual basis. It is anticipated that the process gas will be off-specification no more than 600 hours per year; however, BCCB requests that a conservative 875 hours per year of operation of the enclosed RNG flare be permitted.

3.3.2 Equipment Specifications for Enclosed RNG Flare

Equipment specifications are included in Appendix B. Below are some specific details regarding the flare:

Quantity:	One (1)
Type:	Enclosed Flare System with combustion air blower
Manufacturer:	John Zink Hamworthy Combustion®
Model:	ZULE® Biogas Flare (Ultra Low Emissions)
Size (stack):	13' diameter x 40' height
Capacity (rated):	77.8 MMBtu/hr (HHV)
Equivalent Operating Capacity:	77.8 MMBtu/hr (HHV) (875 operating hours/year)
Throughput (annual):	68,060 MMBtu/yr (HHV), 66.6 MMSCF
Process Gas Flow (maximum):	3,000 SCFM(d)
Combustion Air Blower Capacity:	20,000 SCFM

Table 10 (attached) shows the calculated PTE for toxics and criteria pollutants for the flare system.

3.4 CONDENSATE STORAGE TANK

3.4.1 Aboveground Condensate Storage Tank

LFG supplied to the RNG Project contains water and any cooling below the gas/water dew point in the upgrading process will result in the formation of condensate; with the bulk of the condensate removed after the gas chilling step. Condensate will be collected from various points in the process and sent to two 15,000-gallon aboveground containment tanks that will collect and store condensate. The condensate will be periodically emptied via vac truck, and the condensate will be transported and disposed offsite at a permitted facility. The tanks normal vent will be routed to the Newterra TIGG granular activated carbon.

3.4.2 Equipment Specifications for Condensate Tank

Equipment specifications are included in Appendix B. Below are some specific details regarding the condensate tank:

Quantity:	Two (2) Aboveground Storage Tank
Size:	15,000 gallons
Type:	Vertical Double Wall
Fluid:	RNG Condensate
Removal Frequency:	Approximately every 7 days, or as needed

The condensate tanks are closed-loop, self-contained systems. Collected liquids will be disposed of at a permitted offsite facility. No emissions are expected with the proposed storage tanks.

4.0 EXPECTED EMISSIONS

4.1 AIR POLLUTION EMISSIONS

Tables 8 through 10 attached provide estimates of the PTE pollutant emissions that may be expected from the proposed TOX and enclosed RNG flare. Please note that the LFG treatment system is a closed-loop, pass-through system; therefore, there will be no pollutant emissions from the treatment process, except for the combustion devices.

4.1.1 Criteria Pollutants

Criteria pollutant emissions from the RNG Plant will be generated during combustion, which includes VOCs, NO_x, Sulfur Dioxide (SO₂), CO, particulate matter (PM) less than 10 microns (PM₁₀), and PM_{2.5}. Criteria pollutants are from manufacturer's guarantees and/or SCAQMD rule limits.

Table 1. Thermal Oxidizer Emission Factors

Criteria Pollutant	Proposed Emission Factor	Data Source
NO _x	0.06 lbs/MMBtu (HHV)	Manufacturer's Guarantee
CO	0.20 lbs/MMBtu (HHV)	Manufacturer's Guarantee
SO ₂	25 ppmv as H ₂ S (inlet)	Maximum Expected
PM ₁₀ /PM _{2.5}	0.017 lb/MMBtu	AP-42 Table 2.4-5
NMOCs/VOCs	98% Destruction Efficiency or less than 20 ppmv (as hexane)*	Manufacturer's Guarantee

*Emissions estimate conservative based on a destruction efficiency of 98% yet manufacturer has guaranteed up to 99% destruction.

Table 2. Enclosed RNG Flare Emission Factors

Criteria Pollutant	Rule 1118.1 Other Flare Gas	Proposed Emission Factor*	Data Source
NO _x	0.06 lb/MMBtu (HHV)	0.025 lb/MMBtu (HHV)	Manufacturer's Guarantee
CO	N/A	0.06 lb/MMBtu (HHV)	Manufacturer's Guarantee
SO ₂	N/A	25 ppmv as H ₂ S (inlet)	Maximum Expected
PM ₁₀ /PM _{2.5}	N/A	7.6 lb/MMscf	AP-42 Table 1.4-2
VOCs	N/A	98% Destruction Efficiency or 0.38 lb/MMBTU (HHV)	Manufacturer's Guarantee

Tables 8 through 10 (attached) provides emission estimates of the RNG Plant. Table 11 (attached) provides a summary of the proposed facility-wide emissions.

4.1.2 Toxic Emissions

Toxic pollutant emissions from the TOX and enclosed flare include the toxic air contaminants (TACs) shown in Tables 8 through 10 (attached).

5.0 REGULATORY ANALYSIS

5.1 PROHIBITORY RULES

5.1.1 Rule 401 (Visible Emissions)

No visible emissions are expected from the proposed RNG Plant with the proper operation of the equipment.

5.1.2 Rule 402 (Nuisance)

No nuisance complaints are expected from the proposed RNG Plant with the proper operation of the equipment.

5.1.3 Rule 403 (Fugitive Dust)

No significant fugitive dust emissions are anticipated from the proposed RNG Plant that would cause a violation of Rule 403.

5.1.4 Rule 404 (Particulate Matter – Concentration)

Particulate matter emissions from the proposed RNG Plant are not expected to exceed the threshold concentrations set forth in Table 404(a).

5.1.5 Rule 405 (Solid Particulate Matter – Weight)

Solid particulate matter emissions from the proposed RNG Plant are not expected to exceed the threshold process weights set forth in Table 405(a).

5.1.6 Rule 407 (Liquid and Gaseous Air Contaminants)

CO and SO_x emissions are not expected to exceed 2,000 ppmv and 500 ppmv, respectively from the proposed RNG Plant.

5.1.7 Rule 409 (Combustion Contaminants)

Combustion contaminants exceeding 0.23 grams per cubic meter of gas calculated to 12% of CO₂ is not expected to discharge from the proposed RNG Plant.

5.1.8 Rule 429 (Start-Up and Shut Down Exemption Provisions)

No significant emissions or changes in emissions during start-up and shutdown are expected from the proposed RNG Plant.

5.1.9 Rule 430 (Breakdown Provisions)

Adherence to applicable breakdown provision requirements is expected with proper operation of the proposed RNG Plant.

5.1.10 Rule 431.1 (Sulfur Content of Gaseous Fuels)

The CCL is currently in compliance with Rule 431.1, and the installation of the proposed RNG Plant will not change the SO₂ emissions for the entire landfill; therefore, CCL will remain in compliance. In

addition, the RNG Plant is installing a sulfur treatment system which would further ensure that compliance with the rule is maintained.

5.1.11 Rule 466 (Pumps and Compressors)

The proposed RNG Plant will maintain compliance with Rule 466 as required through a program of inspection and monitoring for VOC leaks from pumps and compressors within the proposed system.

5.1.12 Rule 474 (Fuel Burning Equipment – Oxides of Nitrogen)

The proposed RNG Plant will not emit oxides of nitrogen (measured as nitrogen dioxide) in excess of thresholds set forth in Rule 474.

5.2 SOURCE SPECIFIC REQUIREMENTS

5.2.1 Rule 1118.1 (Control of Emissions from Non-Refinery Flares)

The proposed enclosed RNG flare will meet the emission standards per Table 1 of Rule 1118.1. The flare meets the NOx emission limit of 0.025 lb/MMBtu (HHV) under the “other flare gas” category.

5.2.2 Rule 1147 (NOx Reductions from Miscellaneous Sources)

The proposed TOX will meet the NOx requirements under Rule 1147 of 60 ppm or 0.073 lb/MMBtu.

5.2.3 Rule 1150.1 (Active Landfills)

The proposed RNG Plant will not affect the operation of the existing gas collection or landfill flare systems at CCL. However, landfill flare emissions will be reduced once the RNG Plant is operating. The landfill operator, OCWR, will continue to maintain compliance with Rule 1150.1 for the landfill. The RNG Plant will provide the same level of control for NMOCs as required under Rule 1150.1, although the plant itself is not subject to the rule.

5.2.4 Rule 1173 (Fugitive Emissions of VOCs)

The proposed RNG Plant will maintain compliance with Rule 1173 as required through a program of inspection and monitoring for fugitive emissions of VOCs within the proposed system.

5.3 REGULATION XIII – NEW SOURCE REVIEW

Since the RNG Plant will have emissions of VOC, NOx, CO, PM₁₀, PM_{2.5}, and SO₂, it will be subject to the SCAQMD’s New Source Review (NSR) for criteria pollutants under Regulation 13.

The requirements under NSR include the following:

- Best Available Control Technology (BACT)
- Emission Offsets
- Sensitive Zone Requirements
- Facility Compliance
- Major Polluting Facilities
- Air Impact Assessment and Modeling

5.3.1 Best Available Control Technology

5.3.1.1 Thermal Oxidizer

After review of SCAQMD and other District BACT determinations, there is not an established BACT level for a TOX handling waste gas from an RNG Plant; however, we are aware of multiple TOX permitted at the limits noted below for NO_x, CO, and NMOCs/VOCs. Therefore, the TOX meets the BACT levels per the manufacturer guarantees in Appendix B.

- NO_x: 0.06 lb/MMBtu (HHV)
- CO: 0.20 lb/MMBtu (HHV)
- SO₂: 25 ppmv as H₂S (inlet)
- PM₁₀/PM_{2.5}: 17 lb/MMSCF as CH₄
- NMOCs/VOCs: 98% destruction efficiency

Note: The manufacturer destruction efficiency is guaranteed to be 99% yet the emission calculations were completed with a destruction efficiency of 98%.

The above BACT emission values were applied in calculating the PTE estimates for the TOX found in **Tables 8 and 9**.

5.3.1.2 Enclosed RNG Flare

The flare meets the BACT level of SCAQMD's Rule 1118.1 for NO_x under the other flare category [0.06 lb/MMBtu (HHV)]. After review of SCAQMD and other District BACT determinations, there is not an established BACT level for this equipment for the other criteria pollutants. The SCAQMD only had BACT determinations for digester gas-fired flares, landfill gas-fired flare, and process gas flare from oil and gas operations. Therefore, the flare meets the BACT levels per the manufacturer guarantees in Appendix B.

- NO_x: 0.025 lb/MMBtu (HHV)
- CO: 0.06 lb/MMBtu (HHV)
- SO₂: 25 ppmv as H₂S (inlet)
- PM₁₀/PM_{2.5}: 7.6 lb/MMSCF
- VOCs: 98% destruction efficiency

The above BACT emission values were applied in calculating the PTE estimates for the flare system found in **Table 10**.

5.3.2 Emission Offsets

In accordance with SCAQMD Rule 1303 (b)(2)– Emission Offsets, the project source estimated emissions were compared to the offset trigger levels specified in Rule 1304(d)(2)(B), Table A.

Rule 1304(d)(1)(A) notes the following: “Any new facility that has a potential to emit less than the amounts in Table A shall be exempt from Rule 1303(b)(2)”.

Rule 1304 Table A has the following thresholds:

- NO_x : 4 tons per year (tpy)
- CO: 29 tpy
- PM₁₀: 4 tpy
- SO_x: 4 tpy

- VOC: 4 tpy

The PTE as shown in **Table 12** (attached) are all lower than the Table A values; therefore, offsets are not triggered.

5.3.3 Sensitive Zone Requirements

The proposed RNG Plant will not be purchasing emission reduction credits (ERCs) in lieu of offsets; therefore, the sensitive zone requirements do not apply.

5.3.4 Facility Compliance

As stated in Section 1.3.9 above, the proposed RNG Plant will comply with all applicable rules and regulations of the SCAQMD.

5.3.5 Minor Facility

Based on the emission estimates in Section 4 above and **Table 12** (attached), the RNG Plant will be a “minor facility” under SCAQMD regulations.

5.3.6 Air Impact Analysis and Modeling

In accordance with Rule 1303, Table A-1, a detailed modeling is required for facilities that will have combustion sources greater than 40 million BTUs/hr and/or are above any allowable emission rates listed. The enclosed RNG Flare is over 40 MMBTU/hr in capacity therefore modeling is required. A modeling report will be submitted under separate cover to the SCAQMD.

5.3.7 New Source Review for Toxic Air Contaminants – Rule 1401

Since several TACs will be emitted from the proposed RNG Plant, it is subject to the requirements of SCAQMD Rule 1401. The TACs are identified in Table 3 below:

Table 3. List of TACs

Pollutant	Source(s)
1,1,1-Trichloroethane (methyl chloroform)	TOX
1,1,2,2-Tetrachloroethane	TOX
1,1-Dichloroethane (ethylidene dichloride)	TOX
1,1-Dichloroethene (vinylidene chloride)	TOX
1,2-Dichloroethane (ethylene dichloride)	TOX
1,2-Dichloropropane (propylene dichloride)	TOX
2-Propanol (isopropyl alcohol)	TOX
Acrylonitrile	TOX
Benzene	TOX, Enclosed RNG Flare
Benz(a)anthracene	Enclosed RNG Flare
Benzo(a)pyrene	Enclosed RNG Flare
Benzo(b)fluoranthene	Enclosed RNG Flare
Benzo(g,h,i)perylene	Enclosed RNG Flare
Benzo(k)fluoranthene	Enclosed RNG Flare
Carbon disulfide	TOX

Pollutant	Source(s)
Carbon tetrachloride	TOX
Carbonyl sulfide	TOX
Chlorobenzene	TOX
Chloroethane (ethyl chloride)	TOX
Chloroform	TOX
Chlorodifluoromethane	TOX
Chrysene	Enclosed RNG Flare
Dibenzo(a,h)anthracene	Enclosed RNG Flare
Dichlorobenzene (1,4-Dichlorobenzene)	TOX
Dichlorodifluoromethane	TOX
Dichloromethane (Methylene Chloride)	TOX
Ethyl benzene	TOX
Ethylene dibromide (1,2-Dibromoethane)	TOX
Fluorotrichloromethane	TOX
Hexane	TOX, Enclosed RNG Flare
Hydrochloric acid	TOX
Hydrogen Sulfide	TOX
Indeno(1,2,3-cd)pyrene	Enclosed RNG Flare
Mercury (total)	TOX, Enclosed RNG Flare
Methyl ethyl ketone	TOX
Perchloroethylene (tetrachloroethylene)	TOX
Toluene	TOX, Enclosed RNG Flare
Trichloroethylene (trichloroethene)	TOX
Vinyl chloride	TOX
Xylenes	TOX
PAH	TOX
Naphthalene	TOX, Enclosed RNG Flare
Formaldehyde	TOX, Enclosed RNG Flare
Arsenic	Enclosed RNG Flare
Beryllium	Enclosed RNG Flare
Cadmium	Enclosed RNG Flare
Chromium	Enclosed RNG Flare
Cobalt	Enclosed RNG Flare
Copper	Enclosed RNG Flare
Manganese	Enclosed RNG Flare
Nickel	Enclosed RNG Flare
Selenium	Enclosed RNG Flare
Vanadium	Enclosed RNG Flare
Zinc	Enclosed RNG Flare
2-Methylnaphthalene	Enclosed RNG Flare

Pollutant	Source(s)
3-Methylchloanthrene	Enclosed RNG Flare
7,12-Dimethylben(a)anthracene	Enclosed RNG Flare
Acenaphthene	Enclosed RNG Flare
Acenaphthylene	Enclosed RNG Flare
Anthracene	Enclosed RNG Flare
Bromodichloromethane	Enclosed RNG Flare
Butane	Enclosed RNG Flare
Ethane	Enclosed RNG Flare
Fluoranthene	Enclosed RNG Flare
Fluorene	Enclosed RNG Flare
Barium	Enclosed RNG Flare
Pentane	Enclosed RNG Flare
Phenanthrene	Enclosed RNG Flare
Propane	Enclosed RNG Flare
Pyrene	Enclosed RNG Flare
Molybdenum	Enclosed RNG Flare

Rule 1401 specifies that “the cumulative impact of emissions from the new, relocated, or modified permit unit and all other permit units located within a radius of 100 meters owned or operated by the applicant for which applications were submitted on or after June 1, 1990 will not result in a maximum individual cancer risk (MICR) greater than ten in one million (1×10^{-5}) at any receptor location where T-BACT is applied or one in one million where T-BACT is not applied.” In addition, the cancer burden (i.e., the increase in cancer cases in the population exposed to a MICR exceeding one in one million) shall not exceed 0.5.

Health risk was evaluated using the SCAQMD Rule 1401 health risk calculation tool version 1.03 (RiskTool), except where the RiskTool could not demonstrate that health risk was less than the limits in Rule 1401. Table 4 below shows a summary of results, attached **Table 13** includes further details of the results. RiskTool outputs are attached in Appendix C. The RiskTool was generated for each of the two sources individually with both under two operating scenarios, one with main waste gas and one with the supplemental fuel for the TOX, and one with the off-specification RNG and one with waste gases for the enclosed RNG flare; and risk results for all were combined for analysis. The Tier 3 AERSCREEN model was used for all sources, as the risk did not pass Tier 1 and 2. The cancer burden was not needed to be calculated for the sources with such a low cancer risk.

Table 4. Risk Summary

Source	Tier	Acute HI	Chronic HI	Residential Cancer Risk	Commercial Cancer Risk
Thermal Oxidizer	3	3.85E-03	1.13E-02	2.41E-07	1.74E-08
Thermal Oxidizer – Supplemental Fuel	3	4.95E-05	2.24E-03	8.33E-09	4.28E-10
Enclosed RNG Flare	3	2.19E-04	6.58E-03	4.74E-08	1.63E-09
Enclosed RNG Flare (Part 2)	3	3.00E-03	1.15E-02	1.69E-07	9.75E-09
Total		7.12E-03	3.16E-02	4.66E-07	2.92E-08

5.3.8 Other Regulatory Requirements

The proposed RNG facility, as a treatment facility for the LFG generated from CCL, is not subject to Regulation IX (New Source Performance Standards [NSPS]) (40 Code of Federal Regulations [CFR] Part 60 Subpart XXX) and National Emission Standards for Hazardous Air Pollutants (NESHAPS) (40 CFR Part 63 Subpart AAAAA); yet, the facility will be required to maintain a treatment system monitoring plan with the treatment of LFG. Upon issuance of the PTC/PTO, the facility will develop the site specific treatment system monitoring plan and adhere to the recordkeeping and reporting requirements in accordance with NSPS and NESHAP.

6.0 GREENHOUSE GAS TAILORING RULE

6.1 GHG EMISSIONS ESTIMATE

This application includes greenhouse gas (GHG) emission calculations to determine whether Prevention of Significant Deterioration (PSD) and/or Title V permit requirements from the Tailoring Rule might apply to the Project, if any. Natural gas-derived emissions of CO₂ from RNG are considered biogenic, meaning they come from a biofuel and do not contribute to a net increase in atmospheric CO₂.

Biogenic CO₂ should not be counted as part of the regulated GHG emissions from the RNG sources. Methane (CH₄) and nitrous oxide (N₂O) are combustion byproducts and are GHGs. Even when resulting from the combustion of a biofuel, methane and nitrous oxide are considered anthropogenic. The new GHG sources at the facility are the natural gas equipment, including the TOX and enclosed RNG flare. GHG emission factors are shown below.

Table 5. GHG Emission Factors

Fuel	Emission Factors (kilograms/MMBtu)		
	Carbon Dioxide	Methane	Nitrous Oxide
Natural Gas	53.06	1.0E-03	1.0E-04
Landfill Gas	52.07	3.2E-03	6.3E-04

Current and proposed GHG sources and their non-fugitive anthropogenic GHG emissions are provided below. Fugitive emissions of GHGs are not counted under the Clean Air Act (CAA) for GHG sources. The facility will not have fugitive emissions. Not all GHG have equal impact on the climate,

so emissions of methane and N₂O have been converted into CO₂ equivalent (CO₂e) using a global warming potential factor of 25 for CH₄ and 298 for N₂O.

Table 6. Project Total GHG Emissions

Sources		Thermal Oxidizer	Thermal Oxidizer Supplemental	Enclosed RNG Flare
Activity Rate		12.11 MMBtu/hr	8.25 MMBtu/hr	77.8 MMBtu/hr
Emissions (metric tons)	CO ₂	6,089	4,227	39,861
	CH ₄	0.37	0.08	0.75
	N ₂ O	0.07	0.008	0.075
Total GHG Emissions (metric ton CO ₂ e)		50,254		
Total (short ton CO ₂ e)		55,395		

Table 7. Regulated GHG Emissions

Sources		Thermal Oxidizer	Thermal Oxidizer Supplemental	Enclosed RNG Flare
Activity Rate		12.11 MMBtu/hr	8.25 MMBtu/hr	77.8 MMBtu/hr
Emissions (metric tons)	CH ₄	0.37	0.08	0.08
	N ₂ O	0.07	0.008	0.075
Total GHG Emissions (metric ton CO ₂ e)		60		
Total (short ton CO ₂ e)		66		

The facility's GHGs from the project are estimated at 66 tpy of CO₂e, well below Title V and PSD thresholds. Note that a facility cannot trigger federal Title V or PSD for GHGs alone. Since the facility is not subject to Title V, no other requirements for GHGs should apply to this application.

7.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) INFORMATION

A California Environmental Quality Act (CEQA) review is required for new major constructions that have not already undergone an Environmental Impact Analysis pursuant to CEQA regulations.

Presently, the proposed facility is under a CEQA review with the lead agency of the City of Newport facilitating the CEQA review. Additional updates on the CEQA status can be provided upon request. BCCB is seeking a negative declaration (ND) or a mitigated negative declaration (MND) which will be determined by the City of Newport upon final review of the Environmental Impact Report (EIR).

CEQA Form 400-CEQA is provided and attached with the application forms.

8.0 PERMIT PROCESSING FEES AND FORMS

The permit processing fees for the RNG Plant was calculated based upon Rule 301 Fees, and are enclosed:

Landfill Gas, Treatment Permit Processing (H ₂ S Treatment, Schedule E)	\$5,587.92
Expedited Processing Fee	\$2,793.96
Afterburner, Direct Flame (TOX, Schedule D)	\$7,712.27
Expedited Processing Fee	\$3,856.14
Flare, Other (Enclosed RNG Flare, Schedule C)	\$8,866.78
Expedited Processing Fee	\$4,433.39
Storage Tank, Other	\$2,216.65
Storage Tank, Other (1 Identical)	\$1,108.33
Expedited Processing Fee	\$1,662.50
Total	\$38,237.94

The appropriate fees for this application are enclosed per the Rule 301 dated December 8, 2023. BCCB understands that any additional fees will be invoiced at a later date.

The following application forms are enclosed with the application and can be found in Appendix D.

H₂S Treatment System:

- Application Form for Permit or Plan Approval - Form 400-A
- California Environmental Quality Act Applicability - Form 400-CEQA
- Gaseous Emission Control Form Adsorber – Form 400-E-2b

Enclosed RNG Flare:

- Application Form for Permit or Plan Approval - Form 400-A
- California Environmental Quality Act Applicability - Form 400-CEQA
- Gaseous Emissions Control Form Flare – Form 400-E-2c
- Plot Plan and Stack Information Form – Form 400-PS

Thermal Oxidizer:

- Application Form for Permit or Plan Approval - Form 400-A
- California Environmental Quality Act Applicability - Form 400-CEQA
- Gaseous Emissions Control Form Afterburner/Oxidizer – Form 400-E-2a
- Plot Plan and Stack Information Form – Form 400-PS

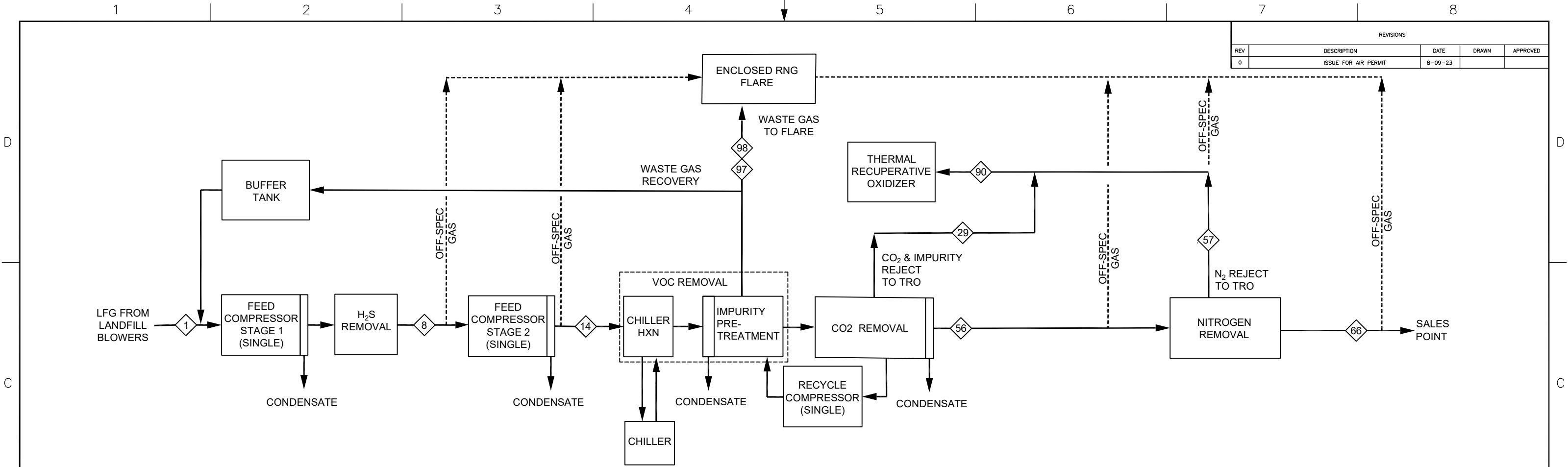
Condensate Tank 1:

- Application Form for Permit or Plan Approval - Form 400-A
- California Environmental Quality Act Applicability - Form 400-CEQA
- Plot Plan and Stack Information Form – Form 400-PS
- Storage Tank – Form 400-E-18

Condensate Tank 2:

- Application Form for Permit or Plan Approval - Form 400-A
- California Environmental Quality Act Applicability - Form 400-CEQA
- Plot Plan and Stack Information Form – Form 400-PS
- Storage Tank – Form 400-E-18

Figures



LANDFILL GAS (LFG) FEED CONDITIONS	MAIN LFG FEED GAS	STREAM BALANCES REF COND: 14.696 PSIA, 60 DEG F		MAIN LFG FEED TO FEED COMP	MAIN LFG FEED H2S REMOVAL	MAIN LFG FEED POST-COMPRESSION	CO2 REJECT GAS TO TRO	LOW BTU GAS TO N2 REMOVAL	NRU REJECT GAS TO TRO	PRODUCT GAS TO SALES POINT	WASTE GAS TO TRO	WASTE GAS TO FLARE (INTERMITTENT)	WASTE GAS TO FLARE (INTERMITTENT)
STREAM NUMBER:	< 1 >	STREAM NUMBER:	< 1 >	< 8 >	< 14 >	< 29 >	< 56 >	< 57 >	< 66 >	< 90 >	< 97 >	< 98 >	< 98 >
GAS COMPOSITION	<i>VOL% (dry)</i>	VOLUME FLOW	SCFM (wet / dry)	3175 / 3000	3191 / 3015	3042 / 3015	1290 / 1286	1729 / 1729	551 / 551	1178 / 1178	1841 / 1837	201 / 201	1285 / 1284
CH4	42.69	MASS FLOW	LB/HR (wet / dry)	14118 / 13619	14187 / 13688	13762 / 13687	8318 / 8308	5379 / 5379	2290 / 2290	3089 / 3089	10608 / 10597	911 / 911	5831 / 5829
CO2	35.35	PRESSURE	PSIA	15.7	37.7	223.2	17.7	115.2	17.7	103.7	17.7	14.7	14.8
N2	18.89	TEMPERATURE	DEG F	100.0	137.1	125.0	250.0	97.0	100.0	105.0	212.6	37.9	89.0
O2	3.00	MOLECULAR WEIGHT	LB/LBMOL	28.1 / 28.7	28.1 / 28.7	28.6 / 28.7	40.8 / 40.9	19.7 / 19.7	26.3 / 26.3	16.6 / 16.6	36.4 / 36.5	28.7 / 28.7	28.7 / 28.7
H2O	SAT @ 90 F	GAS COMPOSITION: (TOTAL SULFUR AS H2S, VOC AS HEXANE)	<i>VOL% (wet / dry)</i>	<i>VOL% (wet / dry)</i>	<i>VOL% (wet / dry)</i>	<i>VOL% (wet / dry)</i>	<i>VOL% (wet / dry)</i>	<i>VOL% (wet / dry)</i>	<i>VOL% (wet / dry)</i>	<i>VOL% (wet / dry)</i>	<i>VOL% (wet / dry)</i>	<i>VOL% (wet / dry)</i>	<i>VOL% (wet / dry)</i>
	<i>PPMV (dry)</i>		CH4	40.34 / 42.69	40.35 / 42.70	42.33 / 42.70	5.48 / 5.50	70.37 / 70.37	15.44 / 15.44	96.09 / 96.09	8.47 / 8.48	42.68 / 42.70	42.68 / 42.70
TOTAL S (H2S+OTHER S)	28		CO2	33.40 / 35.35	33.41 / 35.35	35.04 / 35.34	82.19 / 82.42	0.32 / 0.32	0.00 / 0.00	0.47 / 0.47	57.58 / 57.69	35.32 / 35.34	35.32 / 35.34
VOC (AS HEXANE)	600		N2	17.85 / 18.89	17.86 / 18.89	18.73 / 18.90	6.02 / 6.03	28.46 / 28.46	82.11 / 82.11	3.34 / 3.34	28.81 / 28.86	18.89 / 18.90	18.88 / 18.90
SITE CONDITIONS:			O2	2.83 / 3.00	2.84 / 3.00	2.97 / 3.00	5.88 / 5.90	0.84 / 0.84	2.44 / 2.44	0.09 / 0.09	4.85 / 4.86	3.00 / 3.00	3.00 / 3.00
ELEVATION, FEET	50		H2O	5.52 / -	5.49 / -	0.87 / -	0.28 / -	0.00 / -	0.00 / -	0.00 / -	0.20 / -	0.06 / -	0.06 / -
AMBIENT PRESSURE, PSIA	14.67			<i>PPMV (wet / dry)</i>	<i>PPMV (wet / dry)</i>	<i>PPMV (wet / dry)</i>	<i>PPMV (wet / dry)</i>	<i>PPMV (wet / dry)</i>	<i>PPMV (wet / dry)</i>	<i>PPMV (wet / dry)</i>	<i>PPMV (wet / dry)</i>	<i>PPMV (wet / dry)</i>	<i>PPMV (wet / dry)</i>
MIN. AMBIENT, DEG F	34		TOTAL S	26.5 / 28.0	7.9 / 8.4	8.3 / 8.4	35.6 / 35.7	4.9 / 4.9	0.0 / 0.0	7.1 / 7.1	25.0 / 25.0	8.4 / 8.4	25.0 / 25.0
MAX. AMBIENT, DEG F	100		VOC	566.9 / 600.0	567.1 / 600.1	594.5 / 599.8	1397.7 / 1401.7	10.5 / 10.5	0.0 / 0.0	15.4 / 15.4	979.1 / 981.0	599.2 / 599.5	599.2 / 599.5

CONDENSATE SUMMARY	OILY	OIL FREE	TOTAL
CONDENSATE, GAL/DAY	1445	0	1445



UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES		PROJECT NO.		BIOFUELS COYOTE CANYON BIOGAS LLC NEWPORT BEACH, CA	
TOLERANCES		APPROVALS	DATE	TITLE	
DECIMALS .X= ±.1	ANGLES ±0.30°	DRAWN P.KLOMKAEW	9-26-22	COYOTE CANYON BIOMETHANE FACILITY	
.XX= ±.02	FRACTIONS ±1/32	CHECKED S.CHAFIN	9-26-22	SIZE DWG. NO.	
.XXX= ±.010		ENGINEERED		D	1
DO NOT SCALE DRAWING		APPROVED		SCALE	WEIGHT
				SHEET 1	OF 1

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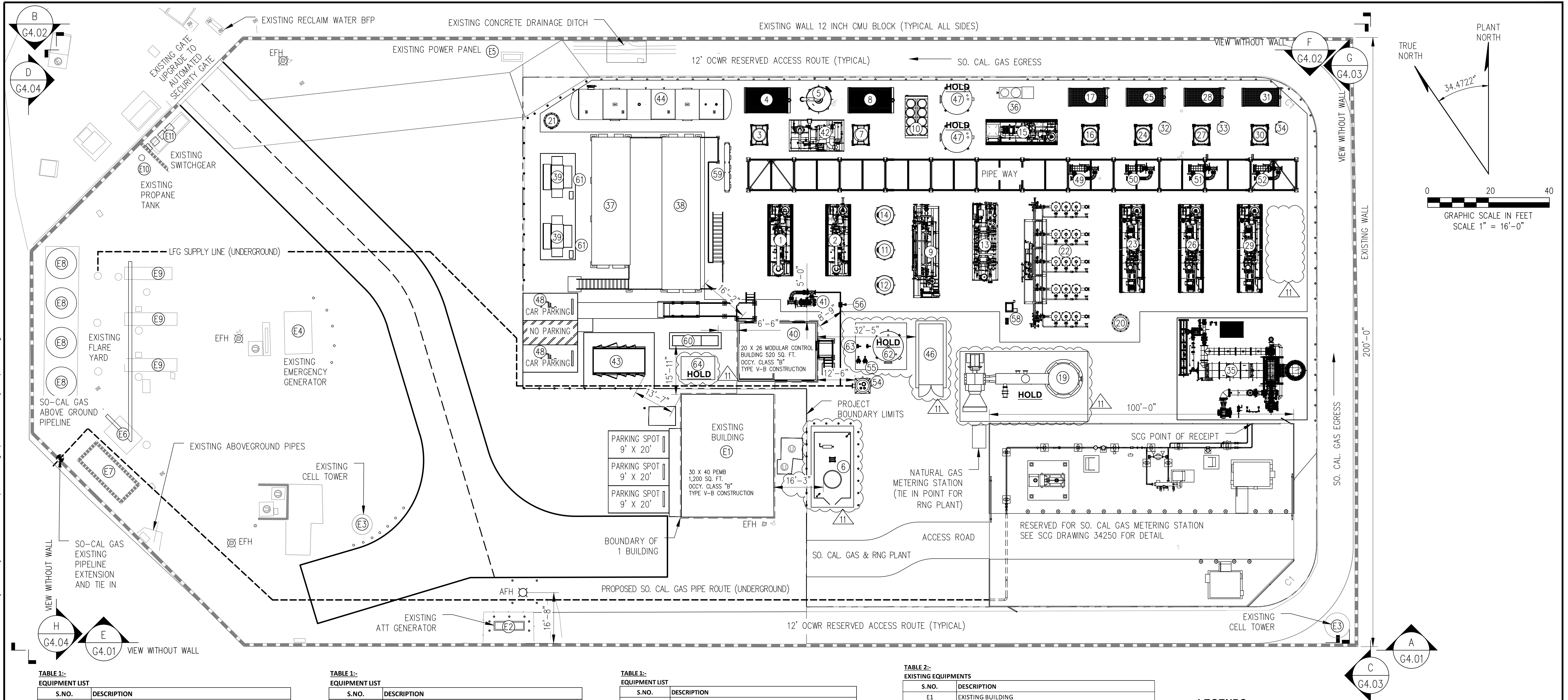


TABLE 1:-
EQUIPMENT LIST

S.NO.	DESCRIPTION
1	TYPE #1 FEED COMPRESSOR
2	TYPE #2 FEED COMPRESSOR
3	TYPE #1 COMPRESSOR FEED OIL COOLER
4	TYPE #1 COMPRESSOR FEED AFTERCOOLER
5	H2S REMOVAL VESSEL
6	LN2 PAD
7	TYPE #2 FEED COMPRESSOR OIL COOLER
8	TYPE #2 FEED COMPRESSOR AFTERCOOLER
9	TSA PRE-TREATMENT SKID
10	CHILLER
11	TSA ADSORBER VESSEL A (6' DIA.)
12	TSA ADSORBER VESSEL B (6' DIA.)
13	MEMBRANE SKID
14	VOC POLISHING VESSEL
15	TYPE #1 RECYCLE COMPRESSOR
16	TYPE #1 RECYCLE COMPRESSOR OIL COOLER
17	TYPE #1 RECYCLE COMPRESSOR AFTERCOOLER
18A	DEOXO SKID
18B	DEOXO DRYER
18C	DEOXO AFTERCOOLER
19	OFF-SPECIFICATION GAS FLARE

TABLE 1:-
EQUIPMENT LIST

S.NO.	DESCRIPTION
20	NRU BUFFER VESSEL
21	COMPRESSED AIR RECEIVER
22	NRU W/ADSORBERS
23	#1 NRU VAC. RINSE SKID
24	#1 NRU VAC. RINSE OIL COOLER
25	#1 NRU VAC. RINSE AFTERCOOLER
26	#2 NRU VAC. RINSE SKID
27	#2 NRU VAC RINSE OIL COOLER
28	#2 NRU VAC. RINSE AFTERCOOLER
29	#3 NRU VAC. RINSE SKID
30	#3 NRU VAC. RINSE OIL COOLER
31	#3 NRU VAC. RINSE AFTERCOOLER
32	#1 NRU DRYER VESSEL
33	#2 NRU DRYER VESSEL
34	#3 NRU DRYER VESSEL
35	THERMAL OXIDIZER
36	OILY WATER SEPARATOR
37	POWER DISTRIBUTION E-HOUSE
38	POWER DISTRIBUTION E-HOUSE BOP
39	TRANSFORMERS
40	OPERATOR/CONTROL SHELTER

TABLE 1:-
EQUIPMENT LIST

S.NO.	DESCRIPTION
41	STAGE #1 INLET PARTICULATE FILTER
42	H2S SKID
43	UTILITY INTERTIE SWITCHGEAR
44	TSA BLOWDOWN TANK 30,000 Gal
45	H2S GUARD BED
46	20 FEET STORAGE CONTAINER
47	CONDENSATE TANK (A & B)
48	PARKING AREA
49	NRU RINSE COMPRESSOR INLET FILTER A
50	NRU VACUUM COMPRESSOR INLET FILTER A
51	NRU RINSE COMPRESSOR INLET FILTER B
52	NRU VACUUM COMPRESSOR INLET FILTER B
53	HEAT EXCHANGER (FUTURE)
54	LFG SUMP
55	SUMP CONDENSATE PUMP
56	FLOW METER
57	CONDENSATE TANK PUMP (A & B)
58	GAS CHROMATOGRAPH
59	3rd NRU PANEL
60	EMERGENCY GENERATOR
61	NEUTRAL GROUNDING RESISTORS
62	UTILITY WATER TANK
63	UTILITY WATER PUMP
64	UNDERGROUND SEPTIC TANK

TABLE 2:-
EXISTING EQUIPMENTS

S.NO.	DESCRIPTION
E1	EXISTING BUILDING
E2	EXISTING ATT GENERATOR
E3	EXISTING CELL TOWER
E4	EXISTING EMERGENCY GENERATOR
E5	EXISTING POWER PANEL
E6	EXISTING PAD
E7	EXISTING TANK
E8	EXISTING FLARE
E9	EXISTING BLOWERS PAD
E10	EXISTING PROPANE TANK
E11	EXISTING SWITCHGEAR

AREA JUSTIFICATION FOR CONTROL BUILDING				TYPE CONSTRUCTION	OC CY CLASS	MAX. ALLOW. AREA
ID #	DESCRIPTION	WIDTH	LENGTH			
40	NEW MODULAR CONTROL BUILDING	26	20	V-B	B	9,000
E1	EXISTING PEMB BUILDING	30	40	V-B	B	9,000
TOTAL						1,880 100% <-----is less than-----< 9,000

NOTES:
1 TREAT BUILDING 40 & E1 AS ONE BUILDING PER SEC. 503.1.2

HOLD:- PENDING VENDOR INFO.

LEGENDS

EFH-EXISTING FIRE HYDRANT RETAINED	EFH
AFH-ADDED FIRE HYDRANT	AFH
GAS LINES	---
PROJECT BOUNDARY LIMITS	---
SO. CAL. GAS METERING STATION LIMITS	---

TOPOGRAPHY NOTE:
BASED ON TOPO FURNISHED BY D.WOOLLEY & ASSOCIATES
DATE: 07-28-2022.

CONFIDENTIAL

ISSUED FOR BID

REV	DATE	DESCRIPTION	DRN BY	CHK BY	APRV BY
8	06/15/2023	ISSUED FOR 60% DESIGN REVIEW (REVISED)	SS	TP	AG
9	07/06/2023	ISSUED FOR 60% DESIGN REVIEW (REVISED)	SS	TP	AG
10	08/16/2023	ISSUED FOR 60% DESIGN REVIEW (REVISED)	SS	TP	AG
11	10/03/2023	ISSUED FOR BID	SS	TP	AG

OWNER:



4444 WESTHEIMER ROAD, SUITE G450
HOUSTON, TX 77027
Ph: (346) 708-8272

ENGINEER:



2321 E. 28TH STREET, SUITE 400
SIGNAL HILL, CA 90755, Ph: (562) 726-3565
EMAIL: INFO@BIOGASENG.COM

SITE PLAN




COYOTE CANYON LANDFILL
RNG PROJECT
20662 NEWPORT COAST DRIVE
NEWPORT BEACH, CA 92657

DRAWING NO.
G2.00

Site Map

Planned Stack Locations
Biofuels Coyote Canyon Biogas

Legend

-  Facility Line
-  Planned Flare Location
-  Planned TOx Location



Tables

TABLE 8
POTENTIAL TO EMIT EMISSION SOURCE ESTIMATES FOR THERMAL OXIDIZER
COYOTE CANYON RNG FACILITY
NEWPORT BEACH, CALIFORNIA

CAS Number	Compounds	HAP? (Yes/No)	Molecular Weight (lb/lbmol)	Concentration of Compounds Found In Gas to Thermal Oxidizer (ppmv)(b)	Uncontrolled Emissions from Thermal Oxidizer (tons/yr)(c)	Destruction Efficiency (%) (d)	Maximum Emissions from Thermal Oxidizer (lbs/hr)	Maximum Emissions from Thermal Oxidizer (lbs/day)	Maximum Emissions from Thermal Oxidizer (lbs/yr)	Maximum Emissions from Thermal Oxidizer (tons/yr)
Hazardous Air Pollutants (HAPs)(a)										
71-55-6	1,1,1-Trichloroethane (methyl chloroform)**	Yes	133.41	2.81E-02	7.67E-03	98.0%	3.50E-05	8.41E-04	3.07E-01	1.53E-04
79-34-5	1,1,2,2-Tetrachloroethane	Yes	167.85	2.02E-04	6.95E-05	98.0%	3.17E-07	7.62E-06	2.78E-03	1.39E-06
75-34-3	1,1-Dichloroethane (ethylidene dichloride)**	Yes	98.97	3.93E-02	7.97E-03	98.0%	3.64E-05	8.73E-04	3.19E-01	1.59E-04
75-35-4	1,1-Dichloroethene (vinylidene chloride)**	Yes	96.94	2.81E-02	5.58E-03	98.0%	2.55E-05	6.11E-04	2.23E-01	1.12E-04
107-06-2	1,2-Dichloroethane (ethylene dichloride)**	Yes	98.96	2.81E-02	5.69E-03	98.0%	2.60E-05	6.24E-04	2.28E-01	1.14E-04
78-87-5	1,2-Dichloropropane (propylene dichloride)	Yes	112.99	1.91E-04	4.42E-05	98.0%	2.02E-07	4.84E-06	1.77E-03	8.84E-07
67-63-0	2-Propanol (isopropyl alcohol)	No	60.11	9.86	1.21	98.0%	5.54E-03	1.33E-01	4.85E+01	2.43E-02
107-13-1	Acrylonitrile	Yes	53.06	4.05E-02	4.39E-03	98.0%	2.01E-05	4.82E-04	1.76E-01	8.79E-05
71-43-2	Benzene**	Yes	78.11	5.96E-01	0.10	98.0%	4.35E-04	1.04E-02	3.81E+00	1.90E-03
75-25-2	Bromodichloromethane*	No	163.83	2.25E-04	7.54E-05	98.0%	3.44E-07	8.26E-06	3.02E-03	1.51E-06
75-15-0	Carbon disulfide*	Yes	76.13	1.42E-02	2.21E-03	98.0%	1.01E-05	2.42E-04	8.83E-02	4.41E-05
56-23-5	Carbon tetrachloride**	Yes	153.84	2.81E-02	8.85E-03	98.0%	4.04E-05	9.70E-04	3.54E-01	1.77E-04
463-58-1	Carbonyl sulfide	Yes	60.07	2.06E-01	2.53E-02	98.0%	1.15E-04	2.77E-03	1.01E+00	5.06E-04
108-90-7	Chlorobenzene**	Yes	112.56	3.20E-02	7.38E-03	98.0%	3.37E-05	8.09E-04	2.95E-01	1.48E-04
75-00-3	Chloroethane (ethyl chloride)*	Yes	64.52	2.45E-02	3.24E-03	98.0%	1.48E-05	3.55E-04	1.29E-01	6.47E-05
67-66-3	Chloroform**	Yes	119.39	2.81E-02	6.87E-03	98.0%	3.14E-05	7.53E-04	2.75E-01	1.37E-04
75-45-6	Chlorodifluoromethane	No	86.47	3.99E-01	7.06E-02	98.0%	3.22E-04	7.74E-03	2.83E+00	1.41E-03
74-87-3	Chloromethane (methyl chloride)*	Yes	50.49	3.42E-02	3.53E-03	98.0%	1.61E-05	3.87E-04	1.41E-01	7.06E-05
106-46-7	Dichlorobenzene (1,4-Dichlorobenzene)**	Yes	147.00	2.81E-02	8.46E-03	98.0%	3.86E-05	9.27E-04	3.38E-01	1.69E-04
75-43-4	Dichlorodifluoromethane*	No	120.91	2.60E-01	0.06	98.0%	2.93E-04	7.04E-03	2.57E+00	1.29E-03
75-71-8	Dichlorofluoromethane	No	102.92	3.99E-01	8.41E-02	98.0%	3.84E-04	9.21E-03	3.36E+00	1.68E-03
75-09-2	Dichloromethane (Methylene Chloride)**	Yes	84.94	2.81E-02	4.89E-03	98.0%	2.23E-05	5.35E-04	1.95E-01	9.77E-05
64-17-5	Ethanol*	No	46.08	22.42	2.12	98.0%	9.66E-03	2.32E-01	8.46E+01	4.23E-02
100-41-4	Ethylbenzene*	Yes	106.16	4.67	1.01	98.0%	4.63E-03	1.11E-01	4.06E+01	2.03E-02
106-93-4	Ethylene dibromide (1,2-Dibromoethane)**	Yes	187.88	2.81E-02	1.08E-02	98.0%	4.93E-05	1.18E-03	4.32E-01	2.16E-04
75-69-4	Fluorotrichloromethane	No	137.40	3.67E-01	1.03E-01	98.0%	4.72E-04	1.13E-02	4.13E+00	2.07E-03
110-54-3	Hexane*	Yes	86.18	3.05E-01	0.05	98.0%	2.45E-04	5.89E-03	2.15E+00	1.07E-03
7647-01-0	Hydrochloric acid (e)	Yes	36.50	42.00	3.14	0.0%	4.43E-01	1.06E+01	3.88E+03	1.94E+00
2148878	Hydrogen Sulfide (h)	No	34.081	25.00	1.74	98.0%	7.97E-03	1.91E-01	6.98E+01	3.49E-02
7439-97-6	Mercury (total) (f)	Yes	200.61	2.92E-04	1.20E-04	0.0%	2.74E-05	6.57E-04	2.40E-01	1.20E-04
78-93-3	Methyl ethyl ketone	No	72.11	11.86	1.75	98.0%	8.00E-03	1.92E-01	7.01E+01	3.50E-02
108-10-1	Methyl isobutyl ketone*	Yes	100.16	1.35	2.77E-01	98.0%	1.26E-03	3.03E-02	1.11E+01	5.53E-03
127-18-4	Perchloroethylene (tetrachloroethylene)	Yes	165.83	3.90E-02	1.32E-02	98.0%	6.05E-05	1.45E-03	5.30E-01	2.65E-04
108-88-3	Toluene**	Yes	92.13	1.37	0.26	98.0%	1.18E-03	2.83E-02	1.03E+01	5.17E-03
79-01-6	Trichloroethylene (trichloroethene)**	Yes	131.40	2.81E-02	7.56E-03	98.0%	3.45E-05	8.28E-04	3.02E-01	1.51E-04
75-01-4	Vinyl chloride*	Yes	62.50	4.27E-02	5.46E-03	98.0%	2.50E-05	5.99E-04	2.19E-01	1.09E-04
1330-20-7	Xylenes**	Yes	106.16	1.31	0.29	98.0%	1.30E-03	3.13E-02	1.14E+01	5.72E-03
Various	PAH (i)	Yes	--	--	--	--	2.23E-05	5.36E-04	1.96E-01	9.78E-05
91-20-3	Naphthalene (i)	Yes	128.17	--	--	--	3.17E-05	7.60E-04	2.78E-01	1.39E-04
50-00-0	Formaldehyde (i)	Yes	30.03	--	--	--	1.07E-01	2.57E+00	9.37E+02	4.68E-01
Totals: TACs							0.59	14.22	5,188.80	2.59
Totals: HAPs							0.56	13.43	4,902.93	2.45
Single HAP							0.44	10.63	3,880.67	1.94

Criteria Air Pollutants	Molecular Weight (lb/lbmol)	Inlet Concentration of Compound (ppmv)(b)	Uncontrolled Pollutant Flow Rate from Thermal Oxidizer (tons/yr)	Destruction Efficiency (%) (d)	Maximum Emissions from Thermal Oxidizer (lbs/hr)	Maximum Emissions from Thermal Oxidizer (lbs/day)	Maximum Emissions from Thermal Oxidizer (lbs/yr)	Maximum Emissions from Thermal Oxidizer (tons/yr)
Total Non-Methane Organics (NMOCs) as Hexane at 3% O2	86.18	981.0	106.02	98.0%	0.48	11.62	4,240.84	2.12
Volatile Organic Compounds (VOCs)(g)	86.18	981.0	106.02	98.0%	0.48	11.62	4,240.84	2.12

Criteria Air Pollutants	Molecular Weight (lb/lbmol)	Concentration of Compound (ppmv)	Emission Factor (lb/MMscf as methane)	Emission Factor (lb/MMBtu HHV)	Maximum Emissions from Thermal Oxidizer (lbs/hr)	Maximum Emissions from Thermal Oxidizer (lbs/day)	Maximum Emissions from Thermal Oxidizer (lbs/yr)	Maximum Emissions from Thermal Oxidizer (tons/yr)
Nitrogen Oxides (NO _x)	--	--		0.06	0.73	17.44	5,190.93	2.60
Carbon Monoxide (CO)	--	--		0.20	2.42	58.14	17,303.10	8.65
Sulfur Oxides (SO _x)(h)	64.06	25		--	0.46	11.01	4,017.11	2.01
Particulate Matter (PM ₁₀ /PM _{2.5})(j)	--	--	17	--	0.23	5.49	1,836.81	0.92

Notes:

- (a) Gas entering facility from Coyote Canyon Landfill. List of hazardous air pollutants was from Title III Clean Air Act Amendments, 1990, and include compounds found in landfill gas, as determined from a list in AP-42 Tables 2.4-1 ("Default Concentrations for Landfill Gas Constituents, 11/98").
- (b) Initial concentrations based on "Waste Industry Air Coalition (WIAC) Comparison of Recent Landfill Gas Analyses.
Site-specific data collected from the May 18, 2023 labs adjusted to 42.7% methane, indicated with "***". TGNMO estimated from engineering analysis concentrated up. If ND, detection limit was used.
- (c) Based on concentrations in Column D and an estimated maximum gas flow of 3,000 scfm (concentrated up).
- (d) The destruction efficiency of VOCs is 99% per the Manufacturer's Guarantee, however, 98% is conservatively assumed.
- (e) Concentration of HCl is based on AP-42 Section 2.4.4.2.
- (f) Concentration of Mercury based on the EPA AP-42 Section 2.4 Table 2.4-1 (11/98).
- (g) VOCs assumed to equal NMOCs.
- (h) SOx emissions are based on the H₂S ppmv into the product gas at 25 ppmv after sulfur treatment. Then, 100% of the H₂S is converted to SO₂.
- (i) Based on correspondence between South Coast Air Quality Management District and Orange County Integrated Waste Management Department dated May 18, 2007. SCAQMD confirmed the specific use of emissions factors for formaldehyde, PAH, and naphthalene.

PAH(i)		Naphthalene(i)		Formaldehyde(i)	
0.0001240	lb/mmscf	0.000176	lb/mmscf	0.594000	lb/mmscf

(j) Particulate emissions are cited as 17 lbs/1,000,000 scf of methane on AP-42 Table 2.4-5.

Variables:

MODEL INPUT VARIABLES:		
Methane Content into RNG Facility	42.7	vol%
Max Gas Stream into RNG Facility (dry)	3,000	SCFM(d)
Waste Gas Flow Rate to Thermal Oxidizer (operating)	1,837	SCFM(d)
Waste Gas Throughput to the Thermal Oxidizer (operating)	965.77	MMSCF/yr
Waste Gas Methane Content to Thermal Oxidizer (operating)	8.48	vol%(d)
Waste Gas Methane Content to Thermal Oxidizer (maximum)	12.20	vol%
Thermal Oxidizer Process Heat Release (operating)	9.88	MMBTU/hr (HHV)
Thermal Oxidizer Process Heat Release (maximum)	12.11	MMBTU/hr (HHV)
Thermal Oxidizer Process Heat Release (operating, annual)	86,515	MMBTU/yr (HHV)

Criteria pollutant emission factors used for thermal oxidizer:		
<u>Pollutant</u>	<u>Emission Factor</u>	<u>Data Source</u>
NMOCs/VOCs	99% Destruction Efficiency or 20 ppmv hexane (d)	Manufacturer's Guarantee
NO _x	0.06 lb/MMBtu (HHV)	SCAQMD Rule 1147/Manufacturer's Guarantee
CO	0.2 lb/MMBtu (HHV)	Manufacturer's Guarantee
SO ₂	25 ppmv as H ₂ S	Maximum Expected
PM ₁₀ /PM _{2.5}	17 lb/MMSCF as methane	AP-42 Table 2.4-5

CONVERSIONS

ton conversion	2000 lbs
lb conversion	453.6 g
hour conversion	60 min
day conversion	24 hrs
12 months	365 days
mol conversion	24.04 L @ STP
cf conversion	28.32 L
mmbtu conversion	1,000,000 btu

TABLE 9
POTENTIAL TO EMIT ESTIMATES FOR THERMAL OXIDIZER - NATURAL GAS SUPPLEMENTAL FUEL
COYOTE CANYON RNG FACILITY
NEWPORT BEACH, CALIFORNIA

CAS Number	Compounds	HAP? (Yes/No)	Emission Factor (lb/MMscf)	Maximum Emissions from Thermal Oxidizer (lbs/hr)	Maximum Emissions from Thermal Oxidizer (lbs/day)	Maximum Emissions from Thermal Oxidizer (lbs/yr)	Maximum Emissions from Thermal Oxidizer (tons/yr)
Toxic Air Contaminants (a)							
91-57-6	2-Methylnaphthalene	No	2.40E-05	4.50E-08	1.08E-06	3.94E-04	1.97E-07
54-49-5	3-Methylchloanthrene	No	1.80E-06	3.38E-09	8.10E-08	2.96E-05	1.48E-08
	7,12-Dimethylben(a)anthracene	No	1.60E-05	3.00E-08	7.20E-07	2.63E-04	1.31E-07
83-32-9	Acenaphthene	No	1.80E-06	3.38E-09	8.10E-08	2.96E-05	1.48E-08
203-96-8	Acenaphthylene	No	1.80E-06	3.38E-09	8.10E-08	2.96E-05	1.48E-08
120-12-7	Anthracene	No	2.40E-06	4.50E-09	1.08E-07	3.94E-05	1.97E-08
56-55-3	Benz(a)anthracene	No	1.80E-06	3.38E-09	8.10E-08	2.96E-05	1.48E-08
71-43-2	Benzene	Yes	2.10E-03	3.94E-06	9.45E-05	3.45E-02	1.72E-05
50-32-8	Benzo(a)pyrene	No	1.20E-06	2.25E-09	5.40E-08	1.97E-05	9.86E-09
205-99-2	Benzo(b)fluoranthene	No	1.80E-06	3.38E-09	8.10E-08	2.96E-05	1.48E-08
191-24-2	Benzo(g,h,i)perylene	No	1.20E-06	2.25E-09	5.40E-08	1.97E-05	9.86E-09
207-08-9	Benzo(k)fluoranthene	No	1.80E-06	3.38E-09	8.10E-08	2.96E-05	1.48E-08
106-97-8	Butane	No	2.10E+00	3.94E-03	9.45E-02	3.45E+01	1.72E-02
218-01-9	Chrysene	No	1.80E-06	3.38E-09	8.10E-08	2.96E-05	1.48E-08
53-70-3	Dibenzo(a,h)anthracene	No	1.20E-06	2.25E-09	5.40E-08	1.97E-05	9.86E-09
25321-22-6	Dichlorobenzene	Yes	1.20E-03	2.25E-06	5.40E-05	1.97E-02	9.86E-06
74-84-0	Ethane	No	3.10E+00	5.81E-03	1.40E-01	5.09E+01	2.55E-02
206-44-0	Fluoranthene	No	3.00E-06	5.63E-09	1.35E-07	4.93E-05	2.46E-08
86-73-7	Fluorene	No	2.80E-06	5.25E-09	1.26E-07	4.60E-05	2.30E-08
50-00-0	Formaldehyde	Yes	7.50E-02	1.41E-04	3.38E-03	1.23E+00	6.16E-04
110-54-3	Hexane	Yes	1.80E+00	3.38E-03	8.10E-02	2.96E+01	1.48E-02
193-39-5	Indeno(1,2,3-cd)pyrene	No	1.80E-06	3.38E-09	8.10E-08	2.96E-05	1.48E-08
91-20-3	Naphthalene	Yes	6.10E-04	1.14E-06	2.75E-05	1.00E-02	5.01E-06
109-66-0	Pentane	No	2.60E+00	4.88E-03	1.17E-01	4.27E+01	2.14E-02
85-01-8	Phenanthrene	No	1.70E-05	3.19E-08	7.65E-07	2.79E-04	1.40E-07
74-98-6	Propane	No	1.60E+00	3.00E-03	7.20E-02	2.63E+01	1.31E-02
129-00-0	Pyrene	No	5.00E-06	9.38E-09	2.25E-07	8.21E-05	4.11E-08
108-88-3	Toluene	Yes	3.40E-03	6.38E-06	1.53E-04	5.58E-02	2.79E-05
7440-38-2	Arsenic	Yes	2.00E-04	3.75E-07	9.00E-06	3.29E-03	1.64E-06
7440-39-3	Barium	No	4.40E-03	8.25E-06	1.98E-04	7.23E-02	3.61E-05
7440-41-7	Beryllium	Yes	1.20E-05	2.25E-08	5.40E-07	1.97E-04	9.86E-08
7440-43-9	Cadmium	Yes	1.10E-03	2.06E-06	4.95E-05	1.81E-02	9.03E-06
7440-47-3	Chromium	Yes	1.40E-03	2.63E-06	6.30E-05	2.30E-02	1.15E-05
7440-48-4	Cobalt	Yes	8.40E-05	1.58E-07	3.78E-06	1.38E-03	6.90E-07
7440-50-8	Copper	No	8.50E-04	1.59E-06	3.83E-05	1.40E-02	6.98E-06
7439-95-5	Manganese	Yes	3.80E-04	7.13E-07	1.71E-05	6.24E-03	3.12E-06
7439-98-7	Molybdenum	No	1.10E-03	2.06E-06	4.95E-05	1.81E-02	9.03E-06
7440-02-0	Nickel	Yes	2.10E-03	3.94E-06	9.45E-05	3.45E-02	1.72E-05
782-49-2	Selenium	Yes	2.40E-05	4.50E-08	1.08E-06	3.94E-04	1.97E-07
7440-62-2	Vanadium	No	2.30E-03	4.31E-06	1.04E-04	3.78E-02	1.89E-05
7440-66-6	Zinc	No	2.90E-02	5.44E-05	1.31E-03	4.76E-01	2.38E-04
Totals: TACs				0.02	0.51	186.02	0.09
Totals: HAPs				0.004	0.08	31.00	0.02
Single HAP				0.005	0.12	42.71	0.01

	Molecular Weight (lb/lbmol)	Inlet Concentration of Compound (ppmv)(b)	Uncontrolled Pollutant Flow Rate from Thermal Oxidizer (tons/yr)	Thermal Oxidizer Destruction Efficiency (%) (d)	Maximum Emissions from Thermal Oxidizer (lbs/hr)	Maximum Emissions from Thermal Oxidizer (lbs/day)	Maximum Emissions from Thermal Oxidizer (lbs/yr)	Maximum Emissions from Thermal Oxidizer (tons/yr)
Criteria Air Pollutants								
Volatile Organic Compounds (VOCs)	86.18	100.0	0.184	98.0%	0.00	0.020	7.35	0.004

	Molecular Weight (lb/lbmol)	Concentration of Compound (ppmv)	Emission Factor (lb/MMBtu HHV)	Emission Factor (lb/MMSCF)	Maximum Emissions from Thermal Oxidizer (lbs/hr)	Maximum Emissions from Thermal Oxidizer (lbs/day)	Maximum Emissions from Thermal Oxidizer (lbs/yr)	Maximum Emissions from Thermal Oxidizer (tons/yr)
Criteria Air Pollutants								
Nitrogen Oxides (NO _x)	--	--	0.06		0.50	11.88	1,084.43	0.54
Carbon Monoxide (CO)	--	--	0.20		1.65	39.61	3,614.78	1.81
Sulfur Oxides (SO _x)(c)	64.06	8	--		0.010	0.24	87.45	0.011
Particulate Matter (PM ₁₀ /PM _{2.5})	--	--	--	7.6	0.01	0.34	124.83	0.06

TABLE 9
POTENTIAL TO EMIT ESTIMATES FOR THERMAL OXIDIZER - NATURAL GAS SUPPLEMENTAL FUEL
COYOTE CANYON RNG FACILITY
NEWPORT BEACH, CALIFORNIA

- Notes:**
- (a) List of toxic air contaminants and emission factors from AP-42, Tables 1.4-3 and 1.4-4 (Emission Factors from Natural Gas Combustion).
 - (b) Inlet concentration based on engineering estimate for worst-case emissions.
 - (c) SOx emissions are based on the low sulfur natural gas content of 0.5 grain per 100 scf (8 ppm).
 - (d) The destruction efficiency of VOCs is 99% per the Manufacturer's Guarantee, however, 98% is conservatively assumed.
 - (e) Hourly BTU capacity per the maximum rated capacity at 7,500 SCFH, annual BTU capacity based on estimated typical usage at 1,875 SCFH per manufacturer specifications.

Variables:

MODEL INPUT VARIABLES:		Units
Heating Value Basis (?)	1100	BTU/SCF (HHV)
Natural Gas Flow Rate to Thermal Oxidizer (operating) (e)	1,875	SCFH
Natural Gas Burner Capacity (operating)	2.06	MMBTU/HR (HHV)
Natural Gas Throughput to Thermal Oxidizer (operating)	16.43	MMSCF/yr
Natural Gas Burner Capacity (operating)	18,074	MMBTU/yr (HHV)
Natural Gas Flow Rate to Thermal Oxidizer (maximum)	7,500	SCFH
Natural Gas Burner Capacity (maximum)	8.25	MMBTU/HR (HHV)

Criteria pollutant emission factors used for thermal oxidizer:		
Pollutant	Emission Factor	Data Source
VOCs	99% destruction efficiency	Manufacturer's Guarantee
NO _x	0.06 lb/MMBTU (HHV)	Manufacturer's Guarantee
CO	0.20 lb/MMBTU (HHV)	Manufacturer's Guarantee
SO ₂	8 ppmv as H ₂ S	Maximum Expected
PM ₁₀ /PM _{2.5}	7.6 lb/MMscf	AP-42 Table 1.4-2 (PM total)

CONVERSIONS

ton conversion	2000 lbs
lb conversion	453.6 g
hour conversion	60 min
day conversion	24 hrs
12 months	365 days
mol conversion	24.04 L @ STP
cf conversion	28.32 L
mmbtu conversion	1,000,000 btu

TABLE 10
POTENTIAL TO EMIT EMISSION SOURCE ESTIMATES FOR ENCLOSED RNG FLARE
COYOTE CANYON RNG FACILITY
NEWPORT BEACH, CALIFORNIA

CAS Number	Compounds	HAP? (Yes/No)	Emission Factor (lb/MMscf)	Maximum Emissions from Flare (lbs/hr)	Maximum Emissions from Flare (lbs/day)	Maximum Emissions from Flare (lbs/yr)	Maximum Emissions from Flare (tons/yr)
Hazardous Air Pollutants (HAPs)(a)							
91-57-6	2-Methylnaphthalene	No	2.40E-05	1.82E-07	4.38E-06	1.60E-03	7.99E-07
54-49-5	3-Methylchloanthrene	No	1.80E-06	1.37E-08	3.28E-07	1.20E-04	5.99E-08
	7,12-Dimethylben(a)anthracene	No	1.60E-05	1.22E-07	2.92E-06	1.06E-03	5.32E-07
83-32-9	Acenaphthene	No	1.80E-06	1.37E-08	3.28E-07	1.20E-04	5.99E-08
203-96-8	Acenaphthylene	No	1.80E-06	1.37E-08	3.28E-07	1.20E-04	5.99E-08
120-12-7	Anthracene	No	2.40E-06	1.82E-08	4.38E-07	1.60E-04	7.99E-08
56-55-3	Benz(a)anthracene	No	1.80E-06	1.37E-08	3.28E-07	1.20E-04	5.99E-08
71-43-2	Benzene	Yes	2.10E-03	1.60E-05	3.83E-04	1.40E-01	6.99E-05
50-32-8	Benzo(a)pyrene	No	1.20E-06	9.12E-09	2.19E-07	7.99E-05	3.99E-08
205-99-2	Benzo(b)fluoranthene	No	1.80E-06	1.37E-08	3.28E-07	1.20E-04	5.99E-08
191-24-2	Benzo(g,h,i)perylene	No	1.20E-06	9.12E-09	2.19E-07	7.99E-05	3.99E-08
207-08-9	Benzo(k)fluoranthene	No	1.80E-06	1.37E-08	3.28E-07	1.20E-04	5.99E-08
106-97-8	Butane	No	2.10E+00	1.60E-02	3.83E-01	1.40E+02	6.99E-02
218-01-9	Chrysene	No	1.80E-06	1.37E-08	3.28E-07	1.20E-04	5.99E-08
53-70-3	Dibenzo(a,h)anthracene	No	1.20E-06	9.12E-09	2.19E-07	7.99E-05	3.99E-08
25321-22-6	Dichlorobenzene	Yes	1.20E-03	9.12E-06	2.19E-04	7.99E-02	3.99E-05
74-84-0	Ethane	No	3.10E+00	2.36E-02	5.65E-01	2.06E+02	1.03E-01
206-44-0	Fluoranthene	No	3.00E-06	2.28E-08	5.47E-07	2.00E-04	9.98E-08
86-73-7	Fluorene	No	2.80E-06	2.13E-08	5.11E-07	1.86E-04	9.32E-08
50-00-0	Formaldehyde	Yes	7.50E-02	5.70E-04	1.37E-02	4.99E+00	2.50E-03
110-54-3	Hexane	Yes	1.80E+00	1.37E-02	3.28E-01	1.20E+02	5.99E-02
193-39-5	Indeno(1,2,3-cd)pyrene	No	1.80E-06	1.37E-08	3.28E-07	1.20E-04	5.99E-08
91-20-3	Naphthalene	Yes	6.10E-04	4.63E-06	1.11E-04	4.06E-02	2.03E-05
109-66-0	Pentane	No	2.60E+00	1.98E-02	4.74E-01	1.73E+02	8.65E-02
85-01-8	Phenanthrene	No	1.70E-05	1.29E-07	3.10E-06	1.13E-03	5.66E-07
74-98-6	Propane	No	1.60E+00	1.22E-02	2.92E-01	1.06E+02	5.32E-02
129-00-0	Pyrene	No	5.00E-06	3.80E-08	9.12E-07	3.33E-04	1.66E-07
108-88-3	Toluene	Yes	3.40E-03	2.58E-05	6.20E-04	2.26E-01	1.13E-04
7440-38-2	Arsenic	Yes	2.00E-04	1.52E-06	3.65E-05	1.33E-02	6.66E-06
7440-39-3	Barium	No	4.40E-03	3.34E-05	8.02E-04	2.93E-01	1.46E-04
7440-41-7	Beryllium	Yes	1.20E-05	9.12E-08	2.19E-06	7.99E-04	3.99E-07
7440-43-9	Cadmium	Yes	1.10E-03	8.36E-06	2.01E-04	7.32E-02	3.66E-05
7440-47-3	Chromium	Yes	1.40E-03	1.06E-05	2.55E-04	9.32E-02	4.66E-05
7440-48-4	Cobalt	Yes	8.40E-05	6.38E-07	1.53E-05	5.59E-03	2.80E-06
7440-50-8	Copper	No	8.50E-04	6.46E-06	1.55E-04	5.66E-02	2.83E-05
7439-95-5	Manganese	Yes	3.80E-04	2.89E-06	6.93E-05	2.53E-02	1.26E-05
7439-97-6	Mercury	Yes	2.60E-04	1.98E-06	4.74E-05	1.73E-02	8.65E-06
7439-98-7	Molybdenum	No	1.10E-03	8.36E-06	2.01E-04	7.32E-02	3.66E-05
7440-02-0	Nickel	Yes	2.10E-03	1.60E-05	3.83E-04	1.40E-01	6.99E-05
782-49-2	Selenium	Yes	2.40E-05	1.82E-07	4.38E-06	1.60E-03	7.99E-07
7440-62-2	Vanadium	No	2.30E-03	1.75E-05	4.19E-04	1.53E-01	7.65E-05
7440-66-6	Zinc	No	2.90E-02	2.20E-04	5.29E-03	1.93E+00	9.65E-04

CAS Number	Compounds	HAP? (Yes/No)	Molecular Weight (lb/lbmol)	Concentration of Compounds Found In Gas to RNG Flare (ppmv)(b)	Uncontrolled Emissions from RNG Flare (tons/yr)(c)	Destruction Efficiency (%) (d)	Maximum Emissions from RNG Flare (lbs/hr)	Maximum Emissions from RNG Flare (lbs/day)	Maximum Emissions from RNG Flare (lbs/yr)	Maximum Emissions from RNG Flare (tons/yr)
Hazardous Air Pollutants (HAPs)(a)										
71-55-6	1,1,1-Trichloroethane (methyl chloroform)**	Yes	133.41	2.81E-02	7.67E-03	98.0%	3.50E-05	8.41E-04	3.07E-01	1.53E-04
79-34-5	1,1,2,2-Tetrachloroethane	Yes	167.85	2.02E-04	6.95E-05	98.0%	3.17E-07	7.62E-06	2.78E-03	1.39E-06
75-34-3	1,1-Dichloroethane (ethylidene dichloride)**	Yes	98.97	3.93E-02	7.97E-03	98.0%	3.64E-05	8.73E-04	3.19E-01	1.59E-04
75-35-4	1,1-Dichloroethene (vinylidene chloride)**	Yes	96.94	2.81E-02	5.58E-03	98.0%	2.55E-05	6.11E-04	2.23E-01	1.12E-04
107-06-2	1,2-Dichloroethane (ethylene dichloride)**	Yes	98.96	2.81E-02	5.69E-03	98.0%	2.60E-05	6.24E-04	2.28E-01	1.14E-04
78-87-5	1,2-Dichloropropane (propylene dichloride)	Yes	112.99	1.91E-04	4.42E-05	98.0%	2.02E-07	4.84E-06	1.77E-03	8.84E-07
67-63-0	2-Propanol (isopropyl alcohol)	No	60.11	9.86	1.21E+00	98.0%	5.54E-03	1.33E-01	4.85E+01	2.43E-02
107-13-1	Acrylonitrile	Yes	53.06	4.05E-02	4.39E-03	98.0%	2.01E-05	4.82E-04	1.76E-01	8.79E-05
71-43-2	Benzene**	Yes	78.11	5.96E-01	9.52E-02	98.0%	4.35E-04	1.04E-02	3.81E+00	1.90E-03
75-25-2	Bromodichloromethane*	No	163.83	2.25E-04	7.54E-05	98.0%	3.44E-07	8.26E-06	3.02E-03	1.51E-06
75-15-0	Carbon disulfide*	Yes	76.13	1.42E-02	2.21E-03	98.0%	1.01E-05	2.42E-04	8.83E-02	4.41E-05
56-23-5	Carbon tetrachloride**	Yes	153.84	2.81E-02	8.85E-03	98.0%	4.04E-05	9.70E-04	3.54E-01	1.77E-04
463-58-1	Carbonyl sulfide	Yes	60.07	0.21	2.53E-02	98.0%	1.15E-04	2.77E-03	1.01E+00	5.06E-04
108-90-7	Chlorobenzene**	Yes	112.56	0.03	7.38E-03	98.0%	3.37E-05	8.09E-04	2.95E-01	1.48E-04
75-00-3	Chloroethane (ethyl chloride)*	Yes	64.52	2.45E-02	3.24E-03	98.0%	1.48E-05	3.55E-04	1.29E-01	6.47E-05
67-66-3	Chloroform**	Yes	119.39	2.81E-02	6.87E-03	98.0%	3.14E-05	7.53E-04	2.75E-01	1.37E-04
75-45-6	Chlorodifluoromethane	No	86.47	0.40	7.06E-02	98.0%	3.22E-04	7.74E-03	2.83E+00	1.41E-03
74-87-3	Chloromethane (methyl chloride)*	Yes	50.49	0.03	3.53E-03	98.0%	1.61E-05	3.87E-04	1.41E-01	7.06E-05
106-46-7	Dichlorobenzene (1,4-Dichlorobenzene)**	Yes	147.00	0.03	8.46E-03	98.0%	3.86E-05	9.27E-04	3.38E-01	1.69E-04
75-43-4	Dichlorodifluoromethane*	No	120.91	0.26	6.43E-02	98.0%	2.93E-04	7.04E-03	2.57E+00	1.29E-03
75-71-8	Dichlorofluoromethane	No	102.92	0.40	8.41E-02	98.0%	3.84E-04	9.21E-03	3.36E+00	1.68E-03
75-09-2	Dichloromethane (Methylene Chloride)**	Yes	84.94	2.81E-02	4.89E-03	98.0%	2.23E-05	5.35E-04	1.95E-01	9.77E-05
64-17-5	Ethanol*	No	46.08	2.24E+01	2.12E+00	98.0%	9.66E-03	2.32E-01	8.46E+01	4.23E-02
100-41-4	Ethylbenzene*	Yes	106.16	4.67E+00	1.01E+00	98.0%	4.63E-03	1.11E-01	4.06E+01	2.03E-02
106-93-4	Ethylene dibromide (1,2-Dibromoethane)**	Yes	187.88	2.81E-02	1.08E-02	98.0%	4.93E-05	1.18E-03	4.32E-01	2.16E-04
75-69-4	Fluorotrichloromethane	No	137.40	0.37	1.03E-01	98.0%	4.72E-04	1.13E-02	4.13E+00	2.07E-03
110-54-3	Hexane*	Yes	86.18	0.30	5.37E-02	98.0%	2.45E-04	5.89E-03	2.15E+00	1.07E-03
7647-01-0	Hydrochloric acid (e)	Yes	36.50	42.00	3.14E+00	0.0%	7.23E-01	1.74E+01	6.34E+03	3.17E+00
2148878	Hydrogen Sulfide(f)	No	34.081	25.00	1.74E+00	98.0%	7.97E-03	1.91E-01	6.98E+01	3.49E-02
7439-97-6	Mercury (total) (g)	Yes	200.61	2.92E-04	1.20E-04	0.0%	2.74E-05	6.57E-04	2.40E-01	1.20E-04
78-93-3	Methyl ethyl ketone	No	72.11	11.86	1.75E+00	98.0%	8.00E-03	1.92E-01	7.01E+01	3.50E-02
108-10-1	Methyl isobutyl ketone*	Yes	100.16	1.35	2.77E-01	98.0%	1.26E-03	3.03E-02	1.11E+01	5.53E-03
127-18-4	Perchloroethylene (tetrachloroethylene)	Yes	165.83	0.04	1.32E-02	98.0%	6.05E-05	1.45E-03	5.30E-01	2.65E-04
108-88-3	Toluene**	Yes	92.13	1.37	2.59E-01	98.0%	1.18E-03	2.83E-02	1.03E+01	5.17E-03
79-01-6	Trichloroethylene (trichloroethene)**	Yes	131.40	0.03	7.56E-03	98.0%	3.45E-05	8.28E-04	3.02E-01	1.51E-04
75-01-4	Vinyl chloride*	Yes	62.50	0.04	5.46E-03	98.0%	2.50E-05	5.99E-04	2.19E-01	1.09E-04
1330-20-7	Xylenes**	Yes	106.16	1.31	2.86E-01	98.0%	1.30E-03	3.13E-02	1.14E+01	5.72E-03
Various	PAH (i)	Yes	--	--	--	--	2.23E-05	5.36E-04	1.96E-01	9.78E-05
91-20-3	Naphthalene (i)	Yes	128.17	--	--	--	3.17E-05	7.60E-04	2.78E-01	1.39E-04
50-00-0	Formaldehyde (i)	Yes	30.03	--	--	--	1.07E-01	2.57E+00	9.37E+02	4.68E-01
Totals: TACs							0.96	23.01	8397.86	4.20
Totals: HAPs							2.73	20.50	7483.48	3.74
Single HAP							1.80	17.36	6335.90	3.17

	Molecular Weight (lb/lbmol)	Inlet Concentration of Compound (ppmv)(b)	Uncontrolled Pollutant Flow Rate to Flare (tons/yr)	Flare Destruction Efficiency (%) (k)	Maximum Emissions from Flare (lbs/hr)	Maximum Emissions from Flare (lbs/day)	Maximum Emissions from Flare (lbs/yr)	Maximum Emissions from Flare (tons/yr)
Criteria Air Pollutants								
Non-Methane Organic Compounds (NMOCs)	86.18	600.0	10.57	98.0%	0.483	11.60	422.99	0.21
Volatile Organic Compounds (VOCs)	86.18	600.0	10.57	98.0%	0.483	11.60	422.99	0.21

	Molecular Weight (lb/lbmol)	Concentration of Compound (ppmv)	Emission Factor (lb/MMBtu HHV)	Emission Factor (lb/MMscf)	Maximum Emissions from Flare (lbs/hr)	Maximum Emissions from Flare (lbs/day)	Maximum Emissions from Flare (lbs/yr)	Maximum Emissions from Flare (tons/yr)
Criteria Air Pollutants								
Nitrogen Oxides (NO _x)	--	--	0.025		1.94	46.67	1,701.49	0.85
Carbon Monoxide (CO)	--	--	0.06		4.67	112.01	4,083.57	2.04
Sulfur Oxides (SO _x)(d)	64.06	25	--		0.75	17.97	655.12	0.33
Particulate Matter (PM ₁₀ /PM _{2.5})	--	--	--	7.6	1.37	32.83	505.85	0.25

Notes:

- (a) Gas entering facility from Coyote Canyon Landfill. List of hazardous air pollutants was from emission factors for natural gas combustion from AP-42, Tables 1.4-3 and 1.4-4 (Emission Factors from Natural Gas Combustion) and theTitle III Clean Air Act Amendments, 1990, and include compounds found in landfill gas, as Natural Gas Combustion) and theTitle III Clean Air Act Amendments, 1990, and include compounds found in landfill gas, as determined from a list in AP-42 Tables 2.4-1("Default Concentrations for Landfill Gas Constituents, 11/98").
- (b) Initial concentrations based on "Waste Industry Air Coalition (WIAC) Comparison of Recent Landfill Gas Analyses with Historic AP-42 Values," and site-specific data collection from a May 18, 2023 AccuLabs Analysis at Coyote Canyon Landfill adjusted to 41.68% methane, indicated with "***". If ND, detection limite was used. Site-specific data collected from the May 18, 2023 labs adjusted to 42.7% methane, indicated with "***". TGNMO estimated from engineering analysis concentrated up.
- (c) Inlet concentration based on engineering estimate for worst-case emissions.
- (d) SOx emissions are conservatively based on 25 ppmv H₂S in the maximum waste gas flow to the flare. 100% conversion of H₂S to SO₂ is assumed to occur at the flare. BTU/SCF (HHV).
- (e) Concentration of HCl is based on AP-42 Section 2.4.4.2.
- (f) Concentration maximum expected.
- (g) Concentration of Mercury based on the EPA AP-42 Section 2.4 Table 2.4-1 (11/98).
- (h) Flaring operations are estimated at 875 hours per annum, totalized across eight anticipated flaring modes. Select flaring modes may potentially require fuel gas assist (i.e., utility gas).
- (i) Based on correspondence between South Coast Air Quality Management District and Orange County Integrated Waste Management Department dated May 18, 2007. SCAQMD confirmed the specific use of
- | PAH(k) | | Naphthalene(k) | | Formaldehyde(k) | |
|-----------|----------|----------------|----------|-----------------|----------|
| 0.0001240 | lb/mmscf | 0.000176 | lb/mmscf | 0.594000 | lb/mmscf |
- (j) Flare maximum waste gas heat release (i.e., rated capacity) is 77.8 MMBTU/hr (HHV). Across the eight anticipated flaring modes, the design heat release ranges from 6.0-77.8 MMBTU/hr (HHV).
- (k) Destruction efficiency of VOCs based on Manufacturer's Guarantee.

Variables:

MODEL INPUT VARIABLES:		
Heating Value (d)	1012	BTU/SCF (HHV)
Maximum Hours of Operation (h)	875	hrs/yr
Methane Content into RNG Facility	42.7	vol%
Waste Gas Flow Rate to Flare (maximum)	3000	SCFM(d)
Waste Gas Flow Rate to Flare (maximum)	180000	SCFH(d)
Waste Gas Throughput to the Flare (operating)	66.6	MMSCF/yr
Flare Waste Gas Heat Release (maximum) (j)	77.8	MMBtu/hr (HHV)
Flare Waste Gas Heat Release (operating, annual) (h)	68060	MMBtu/yr (HHV)

Criteria pollutant emission factors used for the flare:		
Pollutant	Emission Factor	Data Source
NMOCs/VOCs	98% Destruction Efficiency (k)	Manufacturer's Guarantee
NO _x	0.025 lb/MMBtu (HHV)	Manufacturer's Guarantee
CO	0.06 lb/MMBtu (HHV)	Manufacturer's Guarantee
SO ₂	25 ppmv as H ₂ S	Maximum Expected
PM ₁₀ /PM _{2.5}	7.6 lb/MMSCF	AP-42 Table 1.4-2 (PM total)

CONVERSIONS

ton conversion	2000 lbs
lb conversion	453.6 g
hour conversion	60 min
day conversion	24 hrs
12 months	365 days
mol conversion	24.04 L @ STP
cf conversion	28.32 L
mmbtu conversion	1,000,000 btu

TABLE 11
PROPOSED POTENTIAL TO EMIT EMISSIONS SUMMARY
COYOTE CANYON RNG FACILITY
NEWPORT BEACH, CALIFORNIA

Equipment		Criteria Pollutant Emissions																	
		NOx			CO			PM-10/PM-2.5			SOx			VOCs			HAPs		
		lb/hr	lbs/day	tons/yr	lb/hr	lbs/day	tons/yr	lb/hr	lbs/day	tons/yr	lb/hr	lbs/day	tons/yr	lb/hr	lbs/day	tons/yr	lb/hr	lbs/day	tons/yr
Thermal Oxidizer	Main Fuel	0.73	17.44	2.60	2.42	58.14	8.65	0.229	5.49	0.92	0.459	11.01	2.01	0.484	11.62	2.12	0.56	13.43	2.45
	Supplemental Fuel	0.50	11.88	0.54	1.65	39.61	1.81	0.01	0.34	0.06	0.010	0.24	0.01	0.00	0.02	0.004	0.004	31.00	0.02
RNG Flare		1.94	46.67	0.85	4.67	112.01	2.04	1.368	32.83	0.25	0.749	17.97	0.33	0.48	11.60	0.21	2.73	20.50	3.74
TOTAL EMISSIONS		3.17	75.99	3.99	8.74	209.76	12.50	1.61	38.66	1.23	1.22	29.21	2.35	0.97	23.24	2.34	3.29	64.94	6.21

Note: Pounds per day are based on 24 hours of operation a day.

TABLE 12
NEW SOURCE REVIEW THRESHOLD EMISSION LEVELS
COYOTE CANYON RNG FACILITY
NEWPORT BEACH, CALIFORNIA

Pollutant	Proposed RNG Facility Emissions	Major Source Threshold ¹	Major Source?	Offset Trigger Levels ²	Offsets Required?	Offsets Required to Purchase	Proposed Source		BACT Threshold ⁴	Trigger BACT?
							TOX	RNG Flare		
	tons/yr	tons/yr		tons/yr		Ratio 1:1.2	lb/day	lb/day	lb/day	TOX/Flare
Nitrogen Oxides (NO _x)	3.99	10.00	No	4.00	No	NA	29.32	46.67	1.00	Yes/Yes
Carbon Monoxide (CO)	12.50	50.00	No	29.00	No	NA	97.75	112.01	1.00	Yes/Yes
Sulfur Dioxide (SO ₂)	2.35	70.00	No	4.00	No	NA	11.25	17.97	1.00	Yes/Yes
Volatile Organic Compounds (VOCs)	2.34	10.00	No	4.00	No	NA	11.64	11.60	1.00	Yes/Yes
Particulate Matter (PM ₁₀)	1.23	70.00	No	4.00	No	NA	5.83	32.83	1.00	Yes/Yes
Total Hazardous Air Pollutants (HAPs)	6.21	25.00	No	N/A	N/A	NA	N/A	N/A	N/A	N/A
Single HAP	1.94	10.00	No	N/A	N/A	NA	N/A	N/A	N/A	N/A

Notes:

¹ Major source thresholds were taken from SCAQMD Rule 1302(s)

² Offset trigger levels were taken from SCAQMD Rule 1304(d)(2)

³ Offset evaluation performed in accordance with SCAQMD Rule 1303 (b)(2)

⁴ BACT threshold taken from SCAQMD BACT policy

Appendix A

Facility Plans

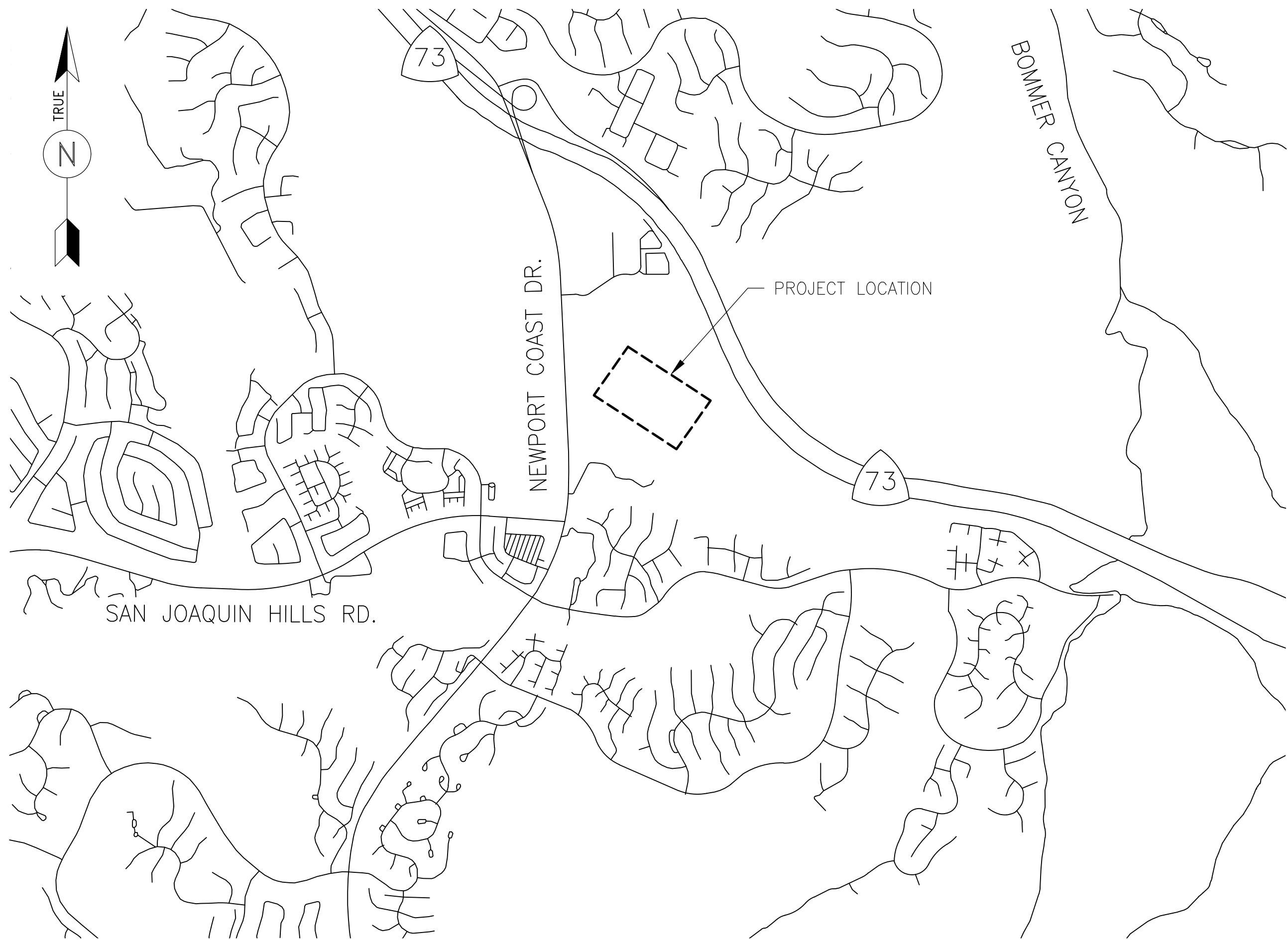
POINT OF RECEIPT
BIOME RULE 45
BIOFUELS COYOTE CANYON
WOA 89395

CONSTRUCTION DRAWING LIST

DRAWING NO.	DESCRIPTION
34250-1001-D-PIP	DRAWING LIST

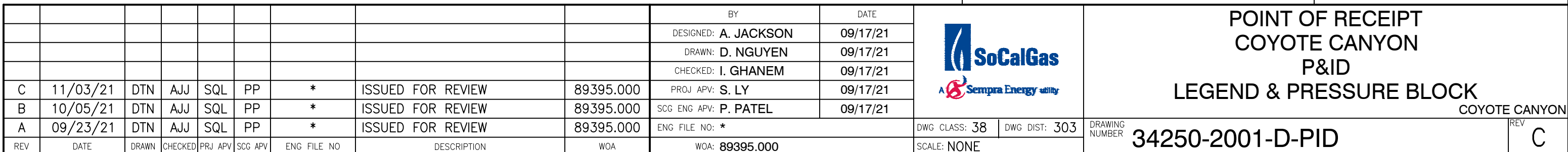
P. & ID	
34250-2001-D-PID	P&ID

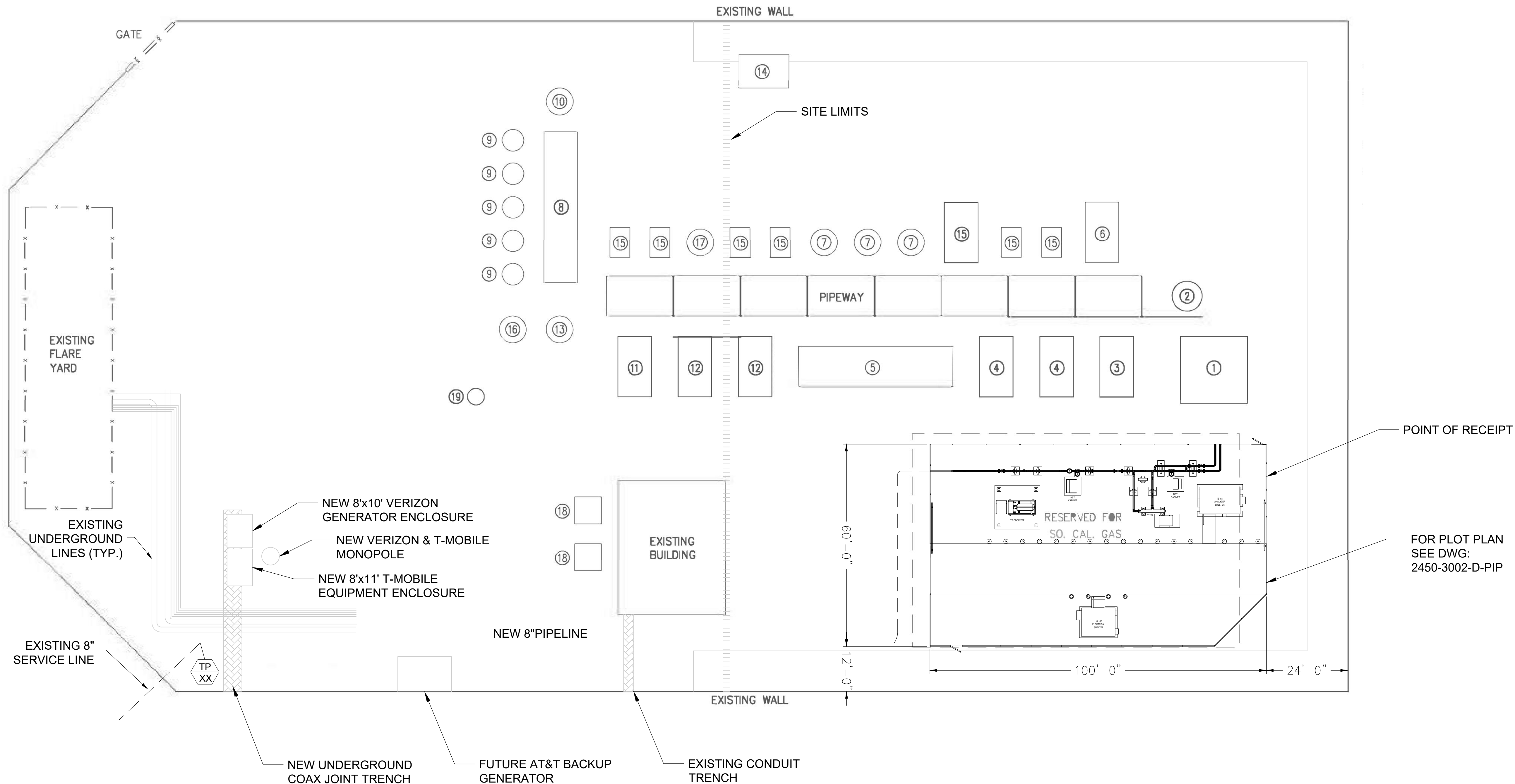
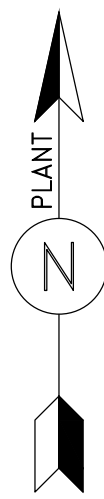
PIPING	
34250-3001-D-PIP	SITE PLAN
34250-3002-D-PIP	PLOT PLAN



ISSUED FOR REVIEW
30% REVIEW

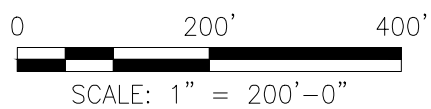
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GENERAL NOTES:

WHERE MSA OR REGULATOR STATIONS ARE EXPOSED TO VEHICULAR TRAFFIC, INSTALL REQUIRED GUARD POSTS PER GAS STANDARD 185.0008 AND STANDARD DRAWING 0413-D.STD TO PREVENT DAMAGE.

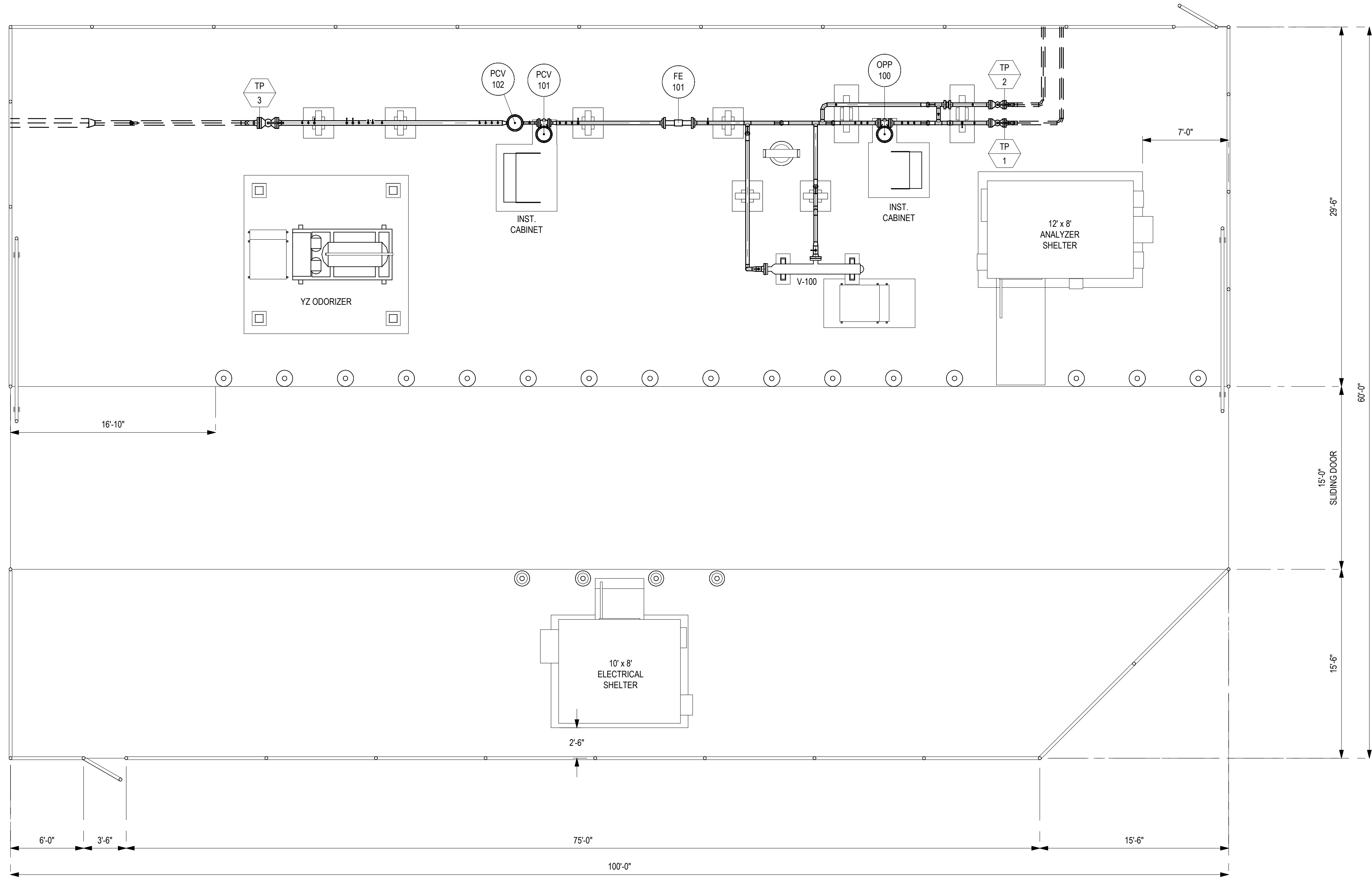


B3-38

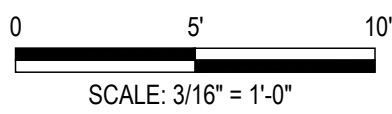
								BY		DATE		20662 NEWPORT BEACH DRIVE		NEWPORT BEACH	
								DESIGNED:	G. CASILLAS	09/16/21					
								DRAWN:	G. CASILLAS	09/16/21					
								CHECKED:	B. KIKAWA	09/23/21					
								PROJ. APV:	P. DISOMMA	09/23/21					
B	10/15/21	GKC	BDK	PD	SQL	*	ISSUED FOR 30% REVIEW	89395	SOC ENG APV: S. LY		09/23/21	DWG CLASS:	DWG DIST:	DRAWING NUMBER	REV
A	09/23/21	GKC	BDK	PD	SQL	*	ISSUED FOR 10% REVIEW	89395	ENG FILE NO: *			SCALE: 1"=200'		34250-3001-D-PIP	B
REV	DATE	DRAWN	CHECKED	PRJ APV	SOC APV	ENG FILE NO	DESCRIPTION	WCA	WCA: 89395.000						

ISSUED FOR REVIEW
30% REVIEW


POINT OF RECEIPT
BIOME RULE 45 - COYOTE CANYON
SITE PLAN



NOTES:
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET AND INCHES.



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Appendix B

Equipment Specifications/Standards

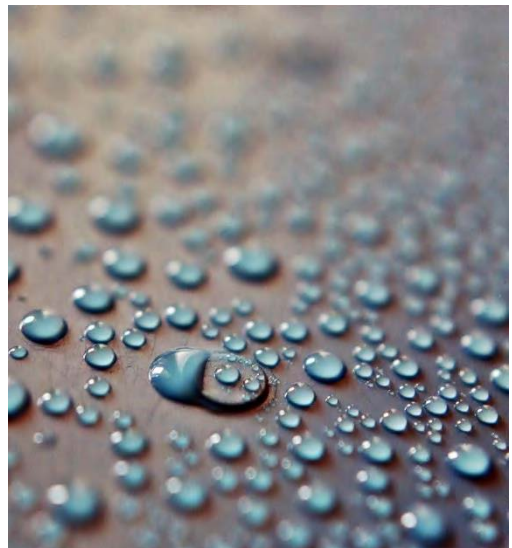
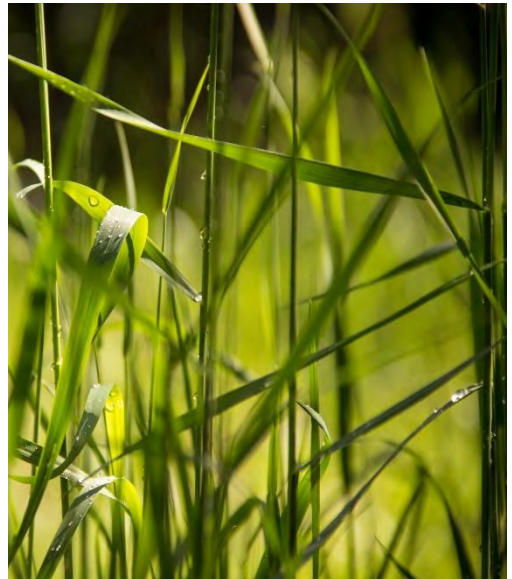
Thermal Oxidizer



A Conifer Custom Solution Utilizing
A Thermal Recuperative Oxidizer (TRO) System
For the Abatement of Waste Gas
From an Archaea LFG to RNG Plant
To be Located in: California (Coyote Canyon)

6515 Willowbrook Park
Houston, Texas 77066
832.476.9024

www.conifersystems.com





Customer | **Steve Chafin**
Address | **500 Technology Drive, Upper Floor**
Canonsburg, PA 1531
Company | **Archaea Holdings, LLC**
Telephone | **+1 (832) 381-4040**
E-Mail | **steve.chafin@petroexergy.com**
Date | **September 29th, 2023**
Proposal Number | **2249-21 Rev.6**
Proposed Solution | **TRO w/ External Heat Recovery**



V1 TRO Example – Actual may Vary

Your Application Engineer

James Smith
Sr. Application Engineer
jsmith@conifersystems.com
832.370.0358

Your Sales Representative

Cary Allen
Technical Director
callen@conifersystems.com
832.374.5089

Confidential Information

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SECTION 1: EXECUTIVE SUMMARY

1.1 Theory of Operation

Thermal Recuperative Oxidizer (TRO)

The method of reduction of Volatile Organic Compounds in a Thermal Oxidizer revolves around thermal destruction. The chemical process is quite simple; the process air stream temperature is raised to a point that the chemical bonds that hold the volatile organic molecules together are broken. The VOCs in the process air stream are converted to combinations of carbon dioxide and water vapor by the high temperature of the combustion chamber. This exothermic process also releases a substantial amount of additional heat. For gas streams with low levels of oxygen, dilution with additional air may be required to ensure that enough oxygen is present for complete oxidation of the pollutants. Additionally, more air may be added during periods of high VOC loading to protect from overheating of the internal system components. However, this excess heat does have the benefit of reducing demand on the burner.

In a recuperative system heat from the exhaust gas is typically recovered and applied to the incoming air stream as a way to reduce fuel consumption. Heat may also be recovered for external use depending on plant requirements.



Thermal Recuperative Oxidizer – Actual may Vary



Application Specific Details

- This oxidizer is intended for use in Archaea's standard V1 3,200 SCFM size RNG plant.
- The oxidizer in this application uses two heat exchangers. The primary heat exchanger is used to pre-heat the incoming dilution air in order to minimize fuel consumption. The secondary heat exchanger recovers heat from the oxidizer exhaust for external use. In this case, incoming process gas from the CO₂ separation membrane (by others) is heated to a target temperature and sent to the TSA unit (by others) to heat the media. A set of high temperature rated control dampers shall be used to bypass gas around the hot side of the heat exchangers as a means of controlling the temperature. During a TSA cooling cycle the secondary heat exchanger may be bypassed immediately to eliminate any time lost to cooling the heat exchanger. During a heating cycle it may take up to 20 minutes for the gas to fully come back up to temperature before it's ready to send to the TSA. During this time the gas may be circulated back to the inlet of the oxidizer as long as it is cooled prior to reaching the flame arrestor. This would allow at least a portion, if not all, of the warm-up time to take place while the TSA is depressurizing. The gas coming from the TSA during a depressurization cycle, or at the start of the heating cycle should not be sent to the oxidizer as this would increase the total methane load over maximum design capacity of the system.
- After going through the TSA the gas is expected increase in VOC and water vapor content up to the amount specified in section 3.1. No other changes in composition are expected. It is recommended that additional filtration (not included here) be installed upstream of the oxidizer if the additional water vapor and organic compounds have the potential to condense before reaching the oxidizer as this may lead to plugging of the flame arrestor. See section 3.1 for more design clarifications.
- When the gas is first passed through the TSA a volume will be displaced that contains a higher concentration of methane (>50% by volume). The oxidizer is not designed to process this high concentration "slug". The gas should be momentarily directed to a separate flare, oxidizer, or other piece of equipment until methane concentration returns to normal.
- The minimal amount of oxygen present prevents the waste gas stream from becoming combustible. Conifer has provided a standard flame arrestor on the unit for flashback protection. However, this may not be sufficient to prevent ignition within the process line upstream of the arrestor if higher levels of oxygen are present. The process gas should always be delivered as oxygen deficient when the methane concentration is near the flammable limits. If greater oxygen content is possible (typically >6% by volume) then design of the feed equipment to the oxidizer may need to change. Customer bears full responsibility for the process conditions shown in section 3.1 as well as any changes which could impact equipment performance or safety.
- To help deal with any potential silica buildup due to the combustion of any siloxanes or other silicone bound compounds the heat exchanger has been designed with an in-line tube arrangement to make cleanout easier. The tube bank is also slightly oversized to account for a certain amount of additional resistance to heat transfer due to fouling. However, these are just basic precautionary measures. No silica forming compounds have been specified so no guarantee has been made regarding performance degradation of any part of the system due to fouling. Alternate heat exchanger designs are available if higher amounts of silica forming compounds are expected.



1.2 Proposal Overview

This proposal details the supply of one (1) Thermal Recuperative Oxidizer with installation supervision and commissioning services included. The 5,100 SCFM system shall be capable of treating up to 1,700 SCFM total waste gas combined with up to 3,400 SCFM of dilution air for oxygen addition. Additional cooling air may be added downstream of the combustion zone for temperature control. The fresh air source shall be ambient air provided through the Conifer supplied dilution and cooling air fans.

The system is assumed to be ground mounted, outdoors, and operated in a Class I Div. II electrical area. All electronic instruments on the oxidizer shall be rated for the classified area. Control panel enclosure is purged with appropriate conduit seal-offs for operation in the classified area when the doors are closed. All burner mounted components shall rated for the classified area. For clarity the burner itself cannot be “classified” due to its inherent function. Burners are not UL approved.

In the first revision, Rev.1 of the proposal, the standard unit was slightly modified to better suit different design conditions. Modifications include:

- Increased the NRU waste gas line size from 4” to 6”.
- Increased the oxidizer inlet line size from 10” to 12”. This includes a larger flame arrestor.
- Estimated gas consumption and exhaust stack exit conditions have been updated based on the new design conditions.
- Pricing has been updated.

In the previous revision, Rev.2 of the proposal, process conditions have been updated as per new information from Archaea. These conditions are reiterated in section 3.1 of the proposal. No changes to the equipment are necessary. Pricing has also been updated based on current vendor quotes for major components.

In the previous revision, Rev.3 of the proposal, Conifer has made the following changes:

- The emissions guarantee for NO_x and CO has been updated. See section 3.4 for more information.
- Additional information has also been provided in section 4.1 on the total combustion chamber volume.
- Pricing, technical specifications, and the preliminary general arrangement drawing have been updated to include the Low-NO_x burner in the base bid.

In the previous revision, Rev. 4 of the proposal, process conditions have been updated as per new information from Archaea. These conditions are reiterated in section 3.1 of the proposal. Components changed in Rev.1 have been reverted back to standard size. Pricing has also been updated based on current projected cost of standard V1 TRO systems.

In this revision, Rev.5 of the proposal, process conditions have been updated based on Revision C of the process specification dated 7/21/23. Process conditions are reiterated in section 2.1 of this proposal. Conifer confirms that the system as designed is suitable for these conditions. Pricing and schedule have also been removed for this technical proposal.



In this revision, Rev.6 of the proposal, process conditions have been updated based on revision D of the process specification dated 9/27/23. Process heat release has also been stated on a higher heating value (HHV) and lower heating value (LHV) basis. No changes to the equipment have been made.



SECTION 2: DESIGN CONSIDERATIONS

2.1 Process Data

Stream #1	
Application:	Membrane Waste Gas / TSA Regen
Maximum process volume:	Up to 1,289.6 SCFM (w) / 1286.0 SCFM (d)
Process Gas Inlet Temperature:	Up to 300°F (<i>return from heating</i>)
Process Gas Inlet Pressure:	~2.5 psig at heat exchanger inlet <0.5 psig at oxidizer inlet 15 psig max. allowable at start-up
Process Volume Turndown Requirement:	~4:1
*Expected VOC Heat Release:	LHV Basis: 4,337,477 BTU/hr HHV Basis: 4,762,898 BTU/hr
**Process Gas Composition at max. Condition:	
- Nitrogen, N ₂	6.02% Vol. or 343.73 lb/hr
- Oxygen, O ₂	5.88% Vol. or 383.91 lb/hr
- Water Vapor, H ₂ O	0.28% Vol. or 10.29 lb/hr
- Carbon Dioxide, CO ₂	82.19% Vol. or 7,375.72 lb/hr
- Methane, CH ₄	5.48% Vol. or 179.35 lb/hr
- Other Non-Corrosive VOCs (<i>as Hexane, C₆H₁₄</i>)	0.14% or 24.56 lb/hr
- ***Hydrogen Sulfide, H ₂ S	<0.01% or 0.29 lb/hr
- Total	100.00% Vol. or 8,317.84 lb/hr

Stream #2	
Application:	NRU Waste Gas
Maximum process volume:	Up to 551.4 SCFM (d)
Process Gas Inlet Temperature:	Up to 100°F
Process Gas Inlet Pressure:	<0.5 psig at oxidizer inlet 15 psig max. allowable at start-up
Process Volume Turndown Requirement:	~4:1
*Expected VOC Heat Release:	LHV Basis: 4,642,929 BTU/hr HHV Basis: 5,113,298 BTU/hr
**Process Gas Composition at max. Condition:	
- Nitrogen, N ₂	82.11% Vol. or 2,005.47 lb/hr
- Oxygen, O ₂	2.44% Vol. or 68.18 lb/hr
- Water Vapor, H ₂ O	0.00% Vol. or 0.00 lb/hr
- Carbon Dioxide, CO ₂	<0.01% Vol. or 0.18 lb/hr
- Methane, CH ₄	15.44% Vol. or 216.02 lb/hr
- Other Non-Corrosive VOCs (<i>as Hexane, C₆H₁₄</i>)	0.00% or 0.00 lb/hr
- ***Hydrogen Sulfide, H ₂ S	0.00% or 0.00 lb/hr
- Total	100.00% Vol. or 2,289.79 lb/hr

*The VOC/HAP load shown represents the expected operating conditions based on information provided by Archaea. For design purposes the oxidizer shall be capable of operating with a combined methane load of 12.2% by vol. in 1,685 SCFM of total waste gas at the system inlet, or ~511.50 lb/hr of total methane. This represents a maximum heat load under any condition of about 10,997,250



BTU/hr on a LHV basis or about 12,111,509 BTU/hr on a HHV basis. LHV is defined as the HHV minus the heat of vaporization of any water vapor formed in combustion.*

The process stream composition is limited to the constituents in the above table and does not contain any particulate, acids, halogenated, or additional corrosive compounds. All compounds to be oxidized are expected to have auto-ignition temperatures of approximately 1,000°F or less.

Any SO_x compounds formed as a result of hydrogen sulfide oxidation or silica particulate formed as a result of siloxane combustion will not be removed by this equipment alone. Conifer can provide additional post-combustion treatment solutions for the removal of these compounds if required.

2.2 Operating Conditions

Minimum Operating Temperature:	1,500°F
Maximum Operating Temperature:	1,800°F
Target Internal Heat Transfer Effectiveness:	~65% (for dilution air pre-heating)
Target External Heat Transfer Effectiveness:	~60% (for TSA heating)
Equipment Location:	Outdoors
Control Panel Location	Outdoors (on the oxidizer skid)
Site Location Elevation:	~50 ft ASL
Electrical Area Classification:	Class I Div. II
Wind Load Design:	100 MPH
Seismic Design:	Category II Site Class C S _s = 1.282 S ₁ = 0.456
Noise Requirement:	<85 dBa @ 5ft from rotating equipment

2.3 Utilities

Natural Gas Requirement (Installed Burner Maximum Capacity):	7,500 SCFH @ 10 psig pressure LHV = ~1,000 btu/SCF
Estimated Natural Gas Usage: At full volume, maximum operating temperature, and Specified VOC Load	<1,875 SCFH (varies with inlet methane content)
Electrical Supply Voltage:	480V / 60Hz / 3 Phase
Estimated Electrical Power Consumption:	~70 kW at maximum capacity
Compressed Air Supply:	80 psig @ -20°F dewpoint
Estimated Compressed Air Usage:	10 CFM peak; <5 CFM average
Oxygen Analyzer Additional Utilities	Power – 120 V / 60 Hz / 1 Ph (from control panel) Calibration Gas – 5 SCFH @ 20 psig, 0.4% and 8% O ₂ , Balance N ₂ (from canisters, during calibration only) Reference Air – 2 SCFH @ 20 psig (from instrument air, continuous)



2.4 Emissions Guarantee

Methane and Volatile Organic Compound (VOC) Destruction Removal Efficiency (DRE):
99% or less than 20 ppm_v as hexane

Stack NO_x Emissions:
<0.06 lb/MMBTU (HHV basis) or <10 ppm_v as NO₂

Stack Carbon Monoxide Emissions:
<0.20 lb/MMBTUH (HHV basis) or <50 ppm_v

EPA Method 25A, 7E, & 10 and/or mutually agreed upon test method(s) will be used to determine/validate VOC, NO_x, & CO destruction performance respectively.

Emission factors for NO_x and CO are applicable as long as the following provisions are recognized:

1. There are no NO_x compounds present in the waste gas prior to combustion.
2. There are no combustible nitrogen bearing compounds present in the waste gas.
3. There is no CO present in the waste gas prior to combustion.
4. There is no combustible particulate present in the waste gas.

2.5 Performance Guarantee provisions

- The unit is installed (if applicable), operated and maintained by Buyer in accordance with Conifer instructions. This includes replacing of consumable or maintenance components by Buyer, as required.
- Buyer agrees to operate the system within the system design data as specified in this proposal.
- The performance guarantees apply only during normal operation, not during any maintenance procedures.
- All functional tests are arranged and paid for by Buyer. Conifer must be notified in writing 14 days prior to the tests for scheduling purposes.
- Conifer reserves the right to adjust the burner chamber operating temperature and any other settings as required to meet the guarantees.
- If Conifer fails to meet the Performance Guarantee, Conifer must be given reasonable time to investigate and take corrective action within the scope of this contract.



SECTION 3: EQUIPMENT SPECIFICATIONS

This proposal is based on preliminary engineering intended to achieve the performance goals. Conifer Systems reserves the right to alter component selections during project engineering.

3.1 5,000 SCFM Thermal Recuperative Oxidizer – Low NOx Specification

General Requirement	Conifer Provision
Fans & Blowers	
<i>Dilution Air Fan</i>	
Fan Manufacturer	New York Blower or equal
Approximate Volume @ Design Conditions	3,400 SCFM
Expected Motor Size	15 HP
Motor Type	TEFC Premium Efficiency
Fan Materials of Construction	Carbon Steel Housing and Fan Wheel Base & Pedestal are Carbon Steel
Safety Pressure Switch	Dwyer 1950 Series or equal
Motor Starter	Allen Bradley or equal Located in the Control Panel
Flow Control	Pneumatic Modulating Damper
Other Features	Inlet Screen Outlet Flex Joint Housing Access Door & Drain
<i>Cooling Air Fan</i>	
Fan Manufacturer	New York Blower or equal
Approximate Volume @ Design Conditions	9,500 SCFM
Expected Motor Size	40 HP
Motor Type	TEFC Premium Efficiency
Fan Materials of Construction	Carbon Steel Housing and Fan Wheel Base & Pedestal are Carbon Steel
Safety Pressure Switch	Dwyer 1950 Series or equal
Motor Starter	Allen Bradley or equal Located in the Control Panel
Flow Control	Pneumatic Modulating Dampers Two (2) total
Other Features	Inlet Screen Outlet Flex Joint Housing Access Door & Drain



Fans & Blowers (continued)	
Combustion Air Fan	
Fan Manufacturer	New York Blower or equal
Approximate Volume @ Design Conditions	2,150 SCFM
Expected Motor Size	25 HP
Motor Type	TEFC Premium Efficiency
Fan Materials of Construction	Carbon Steel Housing and Fan Wheel Base & Pedestal are Carbon Steel
Safety Pressure Switch	Dwyer 1950 Series or equal
Motor Starter	Allen Bradley or equal Located in the Control Panel
Flow Control	Pneumatic Modulating Damper
Other Features	Wire Mesh Inlet Filter Housing Access Door & Drain

Burner, Gas Train, & Combustion System	
Burner	Fives 4225 or Conifer approved equal
Quantity of Burners	One (1)
Maximum Rated Capacity of Each Burner	7,500,000 BTU/hr
Flame Monitoring	Self-Scheck UV Scanner
Gas Train Design Standard	NFPA 86
Expected Gas Line Size	3" NPT Sch. 40
Manual Shut-off Valves	Apollo or equal
Y-Strainer	Mueller or equal
Gas Pressure Regulator	Sensus or equal
Low and High Gas Pressure Switches	United Electric or equal
Fuel Gas Safety Shut-Off Valves	Maxon or equal
Pressure Gauges	Miljocco or equal
Gas Control Valve	Maxon or equal
Pilot Shut-Off Valves	Maxon or equal

Combustion Chamber	
Shell Material	Minimum 1/4" thick Carbon Steel
Internal Insulation (Shop Installed)	Ceramic Fiber Modules
Combustion Chamber Access Door	30" x 30" minimum opening size Davit Arm Assisted
Burner Site Port	2" Dia. Pyrex Glass with Air Purge
Temperature Elements	Duplex Type "K" Thermocouple Pyromation or equal
Residence Time (<i>volumetric basis</i>)	~0.5 Seconds @ 1,800°F and maximum flow rate
Total Combustion Chamber Volume (<i>mixing zone & combustion zone</i>)	~277 ft ³



Exhaust Stack	
Stack Discharge Height	60ft above grade
Stack Diameter	38" I.D. / 46" O.D.
Materials of Construction	Carbon Steel Shell Internally Insulated with Ceramic Fiber
Test Ports	Two (2) 3" NPT Threaded Pipe Nipples Set at 90° Apart
Stack Test Platform	Not Included
Other Features	Free Standing (no guy wires) Drain at Stack Base

Controls	
Control Panel Type	NEMA 4X – Outdoor Rated with Weather Hood & A/C Purged for Class I Div. II
Operator Interface	Allen Bradley PanelView or equal
Control Panel Standard	UL508a
Programmable Logic Controller (PLC)	Allen Bradley CompactLogix or equal
Burner Management System (BMS)	Siemens or equal
Communications Connection	Ethernet Switch
Voltage Main Control	480 VAC / 3 phase / 60 Hz 120 VAC / 1 phase / 60 Hz (via Conifer supplied transformer)

Process Valves	
<i>Membrane Gas Process Isolation Valve</i>	
Type / Size	Wafer Style Butterfly / 8"Ø Two (2) Total
Materials of Construction	Carbon Steel Body Stainless Steel Disk PTFE Seat
Actuator Type / Manufacturer	Spring Return Pneumatic / Fail Closed One (1) On-Off & One (1) Modulating Max-Air or equal
<i>TSA Return Process Isolation Valve</i>	
Type / Size	Wafer Style Butterfly / 10"Ø One (1) Total
Materials of Construction	Carbon Steel Body Stainless Steel Disk PTFE Seat
Actuator Type / Manufacturer	Spring Return Pneumatic / Fail Closed On-Off Max-Air or equal



Process Valves (continued)	
NRU Gas Process Isolation Valve	
Type / Size	Wafer Style Butterfly / 4"Ø Two (2) Total
Materials of Construction	Carbon Steel Body Stainless Steel Disk PTFE Seat
Actuator Type / Manufacturer	Spring Return Pneumatic / Fail Closed One (1) On-Off & One (1) Modulating Max-Air or equal

Primary Heat Exchanger – Dilution Air Pre-Heat	
Heat Exchanger Type	Crossflow Shell-and-Tube In-line Tube Bank
Materials of Construction	Carbon Steel Housing Internally Insulated with Ceramic Fiber 304 Stainless Steel Internals
Internal Expansion Joint	Included
Cold Side Inlet Design Conditions	Flow Rate: 2,200 SCFM Temperature: 70°F
Hot Side Inlet Design Conditions	Flow Rate: 7,210 SCFM Temperature: 1,200°F
Cold Side Outlet Temperature	805°F (clean, no bypass)
Hot Side Outlet Temperature	1,015°F (clean, no bypass)
Maximum Expected Heat Transfer Rate	~1,789,000 BTU/hr
Maximum Expected Heat Transfer Effectiveness	~65%
Expected Cold Side Pressure Drop	~2.0" w.c. (at design flow rate)
Expected Hot Side Pressure Drop	~3.0" w.c. (at design flow rate)
Maximum Design Differential Pressure from Cold Side to Hot Side	1.0 psig (PSV not included or required)
Cold Side Bypass	None
Hot Side Bypass	Rectangular Louver Dampers Refractory Lined with 330 Stainless Steel Metal Internals



Secondary Heat Exchanger – TSA Heater	
Heat Exchanger Type	Crossflow Shell-and-Tube In-line Tube Bank
Materials of Construction	Carbon Steel Housing Internally Insulated with Ceramic Fiber 304 Stainless Steel Internals
Internal Expansion Joint	Included
Cold Side Inlet Design Conditions	Flow Rate: 1,260 SCFM Temperature: 65°F
Hot Side Inlet Design Conditions	Flow Rate: 9,410 SCFM Temperature: 800°F
Cold Side Outlet Temperature	543°F (clean, no bypass)
Hot Side Outlet Temperature	722°F (clean, no bypass)
Maximum Expected Heat Transfer Rate	~919,000 BTU/hr
Maximum Expected Heat Transfer Effectiveness	~65%
Expected Cold Side Pressure Drop	~1.0" w.c. (at design flow rate)
Expected Hot Side Pressure Drop	~3.0" w.c. (at design flow rate)
Maximum Design Differential Pressure from Cold Side to Hot Side	5.0 psig (PSV included)
Cold Side Bypass	Wafer Style Butterfly Valves
Hot Side Bypass	Rectangular Louver Dampers Refractory Lined with 330 Stainless Steel Metal Internals

Miscellaneous	
Flame Arrestor	10" Flanged Connection Carbon Steel Housing Stainless Steel Element Protego or equal
Oxygen Analyzer	Rosemount or equal
Area Lighting	Not Included
Factory Mounting	Pre-piped and Pre-wired to maximum extent practical for shipping

Estimated Size	
Approximate Equipment Footprint	34ft X 42ft Note: Footprint dimensions may be altered to fit available space. Includes all fans and exhaust stack
Approximate Equipment Total Dry Weight	40,000 lbs

Enclosed RNG Flare

ZULE® Ultra Low Emissions Flare

Firm Technical Proposal

Prepared for:

**Nick Bauer
of
Archaea Energy**

**For:
Coyote Canyon Landfill;
Newport Beach, California**

**Date:
October 6, 2023**

John Zink reference number: 202203-268235REV11

Prepared by: Ben Pernu
Applications Engineer, Biogas Systems
(918) 234-2718
Ben.Pernu@kes.global



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EXECUTIVE SUMMARY

Scope:..... John Zink ZULE® Ultra-Low Emission Flare
(technical information and scope of supply follow)

Price:

Customer Submittal Schedule:..... 12 weeks after purchase order acceptance

Customer Approval Schedule:..... 2 weeks after receipt of submittals

Fabrication Schedule: 30 weeks after receiving approved submittal

INTRODUCTION

To satisfy your landfill gas flare requirements per your recent request, John Zink Company is pleased to offer a firm quote for our **ZULE® Ultra-Low Emissions Flare System**.

For over 80 years, the John Zink brand has ensured quality, innovative technology, and worldwide service in the combustion industry. John Zink has supplied **over 800 flare systems** for the biogas industry, giving us unparalleled expertise. Each flare system is made in our own 330,000 square foot manufacturing facility; and **we possess the resources to care for your flare at every stage of life:** from installation and startup of new flares, to repair and retrofits of existing flares. Our national network of sales representatives and field technicians means you will always have someone available to assist you in any issues that may arise with your flare, and our portable rental units and spare parts inventory can ensure continued compliance and quick turnaround in case of flare shutdown.

John Zink offers a range of features and options as listed in this proposal. Our intent is to supply the safest, most reliable and economical system available that will also allow you to customize your system to meet your specific needs. After reviewing the proposal, please let us know if there are any additional options you would like to pursue.

We look forward to working with you on this project, and if you require any additional information please do not hesitate to contact me at (918) 234-2718 or our local sales representative, Robert Erdmann, at 1-800-8-LOWNOX.

Change Log – REV5

- Page 4: Changed title of Stream 2 (Mode 2A) to match RFP verbiage;
 - Changed flow data and title of Stream 2 (Mode 2B) to match RFP data and verbiage.
 - Changed for data of Stream 5 (Mode 4A) to match RFP data.
- Page 5: Deleted VOCP blowdown and purge streams
 - Changed Stream 8 to Stream 6 for Modes 3, 5 and 6.
 - Amended enrichment gas requirements for new natural gas heating value (96.09% methane, 874 BTU/SCF)
- Page 7: Replaced provided OIP to reflect new John Zink standard
- Page 9: Replaced provided flow meters to reflect RFP verbiage.

Change Log – REV6

- Page 4: Added second stage permeate stream.
- Page 6: Corrected pilot operation from continuous to intermittent.
- Page 9: Replaced previously quoted hydrocarbon analyzer with continuously operating gas analyzer to provide methane and oxygen levels for air blower control.
- Page 12: Adjusted price due to material cost increases and scope changes.

Change Log – REV7

- Page 4: Increased fuel gas flow on permeate stream for consistent minimum flowrate across streams.
- Page 10: Removed one thermal mass flow meter from JZ project scope. Added a pressure transmitter with a low pressure shutdown to the pilot gas spool. Added clarifications regarding signals that will be sent to the John Zink control panel from end user provided monitoring equipment, an ultrasonic flow meter and a pressure transmitter.
- Page 13: Price adjustment to reflect removal of flow meter from project scope.

Change Log – REV8

- Page 9: Reduced diameter of flame arrester and block valve from 12 to 10 inches.
- Page 13: Price adjustment to reflect size reduction of page 9 components.

Change Log – REV9

- Page 4: Revised flow data for Stream 2C – second stage permeate gas.

Change Log – REV10

- Page 5: Revised flow data for Stream 4A – TSA purge gas; added mode 7, off-spec process gas.
- Page 6: Added language reflecting the addition of a second pilot
- Page 7: Revised stack diameter and ignition panel quantity, added language for flanged stack
- Page 10: Added extra 100 ft of thermocouple wire due to addition of second pilot

DESIGN CRITERIA

NOTE: One stream to the flare at a time. Stream selection and pressure regulation by others.

Flare Gas Stream 1

Type: Mode 1 - process gas
Staging: both stages
Composition: 42.7% CH₄ +/- 1% (design)
balance CO₂, air, inerts, less than 5% O₂
Higher Heating Value: 432 BTU/SCF (design)
Lower Heating Value: 389 BTU/SCF (design)
Temperature: 135.3 °F
Flow Rate: 3,000 SCFM (design normalized at 42.7% CH₄)
Minimum: 1,100 SCFM (design normalized at 42.7% CH₄)
Heat Release (HHV): 77.8 MMBTU/hr (design at 42.7% CH₄)
Heat Release (LHV): 69.9 MMBTU/hr (design at 42.7% CH₄)

NOTE: Hydrogen sulfide concentrations greater than 3,000 ppm may require special materials with potential commercial impact.

Flare Gas Stream 2

Type: Mode 2A - process gas
Staging: both stages
Composition: 42.7% CH₄ +/- 1% (design)
balance CO₂, air, inerts, less than 5% O₂
Higher Heating Value: 432 BTU/SCF (design)
Lower Heating Value: 389 BTU/SCF (design)
Temperature: 108.4 °F
Flow Rate: 3,000 SCFM (design normalized at 42.7% CH₄)
Minimum: 1,100 SCFM (design normalized at 42.7% CH₄)
Heat Release (HHV): 77.8 MMBTU/hr (design at 42.7% CH₄)
Heat Release (LHV): 69.9 MMBTU/hr (design at 42.7% CH₄)

Flare Gas Stream 3

Type: Mode 2B - membrane gas
Staging: both stages
Composition: 70.4% CH₄ +/- 1% (design)
balance CO₂, air, inerts, less than 5% O₂
Higher Heating Value: 712 BTU/SCF (design)
Lower Heating Value: 641 BTU/SCF (design)
Temperature: 89.0 °F
Flow Rate: 1,729 SCFM (design normalized at 70.4% CH₄)
Minimum: 650 SCFM (design normalized at 70.4% CH₄)
Heat Release (HHV): 73.9 MMBTU/hr (design at 70.4% CH₄)
Heat Release (LHV): 66.5 MMBTU/hr (design at 70.4% CH₄)

Type:	Mode 2C – second stage permeate gas
Staging:	First stage only
Composition:	28.6% CH ₄ +/- 1% (design) balance CO ₂ , air, inerts, up to 10% O₂
Higher Heating Value:	289 BTU/SCF (design)
Lower Heating Value:	260 BTU/SCF (design)
Temperature:	89.0 °F
Flow Rate:	300 SCFM (design normalized at 28.6% CH ₄) 100 SCFM (minimum at 28.6% CH ₄)
Initial Heat Release (HHV):	5.2 MMBTU/hr (design at 28.6% CH ₄)
Initial Heat Release (LHV):	4.7 MMBTU/hr (design at 28.6% CH ₄)
Fuel Gas Requirements:	70 SCFM (maximum at 100 SCFM waste gas)
Combined Heat Release (HHV):	6.0 MMBTU/hr (design)
Combined Heat Release (LHV):	5.4 MMBTU/hr (design)

Type:	Mode 4 - TSA blowdown
Staging:	First stage only
Composition:.....	42.7% CH ₄ +/- 1% (design)
	balance CO ₂ , air, inerts, less than 5% O ₂
Higher Heating Value:	432 BTU/SCF (design)
Lower Heating Value:	389 BTU/SCF (design)
Temperature:	37.9°F
Flow Rate:	419 SCFM decaying to 40 SCFM
Initial Heat Release (HHV):	10.9 MMBTU/hr (design at 42.7% CH ₄)
Initial Heat Release (LHV):	9.8 MMBTU/hr (design at 42.7% CH ₄)
Fuel Gas Requirements:	90 SCFM (maximum at 40 SCFM waste gas)
Combined Heat Release (HHV):	6.5 MMBTU/hr (design)
Combined Heat Release (LHV):	5.8 MMBTU/hr (design)

Type:	Mode 4A – TSA purge
Staging:	First stage only
Composition:	42.7% CH ₄ (design); 42.7% to 8.4% CH ₄ (range) balance CO ₂ , air, inerts, less than 5% O ₂
Higher Heating Value:	432 BTU/SCF (design)
Lower Heating Value:	389 BTU/SCF (design)
Temperature:	89.0 °F
Flow Rate:	1,284 SCFM +/- 1% (design at 42.7% CH ₄)
Initial Heat Release (HHV):	33.3 MMBTU/hr (design at 42.7% CH ₄)
Initial Heat Release (LHV):	29.9 MMBTU/hr (design at 42.7% CH ₄)
Fuel Gas Requirements:	290 SCFM at 8.4% CH ₄ waste gas
Combined Heat Release (HHV):	24.2 MMBTU/hr (design)
Combined Heat Release (LHV):	21.7 MMBTU/hr (design)

NOTE: *Low methane concentrations may require auxilliary fuel to initiate combustion and maintain temperature.*

Flare Gas Stream 7

Type:	Modes 3, 5 and 6: off-spec product gas
Staging:	both stages
Composition:	96.1% CH ₄ +/- 1% (design) balance CO ₂ , air, inerts, less than 1% O ₂
Higher Heating Value:	973 BTU/SCF (design)
Lower Heating Value:	875 BTU/SCF (design)
Temperature:	97.9°F
Flow Rate:	1,178 SCFM (design normalized at 96.1% CH ₄)
Minimum:	500 SCFM (design normalized at 96.1% CH ₄)
Heat Release (HHV):	68.8 MMBTU/hr (design at 96.1% CH ₄)
Heat Release (LHV):	61.8 MMBTU/hr (design at 96.1% CH ₄)

Flare Gas Stream 8

Type:	Mode 7: off-spec process gas
Staging:	First stage only
Composition:	15.4% CH ₄ +/- 1% (design) balance CO ₂ , air, inerts, less than 1% O ₂
Higher Heating Value:	156 BTU/SCF (design)
Lower Heating Value:	140 BTU/SCF (design)
Temperature:	97.9°F
Flow Rate:	551 SCFM (design normalized at 15.4% CH ₄)
Heat Release (HHV):	5.2 MMBTU/hr (design at 15.4% CH ₄)
Heat Release (LHV):	4.6 MMBTU/hr (design at 15.4% CH ₄)
Fuel Gas Requirements:	74 SCFM
Combined Heat Release (HHV):	9.6 MMBTU/hr (design)
Combined Heat Release (LHV):	8.7 MMBTU/hr (design)

Mechanical

Design Wind Speed (ASCE 7-10; EXP C): 110 mph
Design Seismic (CBC 1613): Zone 4
Ambient Temperature: 29 °F to 94 °F
Ambient Pressure: 14.3 psia
Elevation: 750 feet above sea level
Electrical Area Classification: Class 1 Div 2 Group D (flare)
..... Unclassified (panel and air blower)

NOTE: Heat tracing and insulating (by others) recommended to protect against freezing.

Process

Smokeless Capacity: 100%
Operating Temperature:..... 1400 °F to 1800 °F (2000 °F shutdown)
Retention Time: 0.7 seconds at 1800 °F (minimum)
Required Flame Arrester Inlet Pressure:..... 15 inches of H₂O (design)

NOTE: Low methane concentrations may require auxiliary fuel to initiate combustion and maintain temperature.

Utilities

Pilot Gas (intermittent):.....	22 SCFH of propane at 7-10 psig (or) 50 SCFH of natural gas at 10-15 psig per pilot
Compressed Air (or Nitrogen):	80 PSIG (regulated, clean and dry)
Electricity:.....	480 V, 3 phase, 60 Hz for motor control; transformer provided for 120 V, single phase for control system components
Auxiliary Fuel:.....	enrichment gas required as described above

EQUIPMENT DETAILS

FLARE

Quantity:	one (1); flanged into two sections for field assembly
Material:	carbon steel stack
Nominal Diameter:	13 ft.
Nominal Height:	40 ft.
Interior Protection:	
Insulation:	one (1) 1 in. thick 8 lb density ceramic fiber blanket insulation, backed by one (1) 1 in. thick 6 lb density ceramic fiber blanket insulation, each rated 2200 °F minimum; stainless steel rain cap to protect refractory
Insulation Anchoring:	Inconel 601 pins and keepers
Surface Preparation:	SSPC-SP-6 sandblast;
Primer:	Sherwin Williams Heat Flex 1200, 5 - 6 mils DFT (two coats)
Rigidizer	KAOWOOL spray-on rigidizer to protect the insulation.
External Coating:	
Surface Preparation:	SSPC-SP-6 sandblast;
Primer:	inorganic rich zinc primer, 2 - 4 mils DFT (one coat)
Automatic dampers:	four (4) (One hinged for easy interior access)
Damper actuators:	explosion proof
Manifold Construction:	carbon steel
Inlet Diameter:	12 in.
Flare Tips:	four (4), each with one type K thermocouple
Flare Tip Construction:	Portions 304 and 310 stainless; ceramic burner can
Burner Staging:	two stages
Second Stage Cooling Fan:	¾ HP, 700 CFM (shipped loose for field installation)
Stack Thermocouple Connections:	three (3), each with one type K thermocouple
Sample Ports:	four (4)
Sight Ports:	two (2)
Pilot Ignition (Qty 2):	electronic spark ignitors; NEMA 7 ignition panels
Flame Scanner:	one (1) Honeywell UV scanner (or equal)
Purge Blower:	continuous purge provided by combustion air blower and cooling fan
Structural Anchoring:	AISC continuous base plate
Ladder:	one (1) 40 ft. ladder including fall protection with one (1) harness.
Lifting Lugs:	two (2)
Premix chamber:	included with static mixer assembly and manway

SHIPPED LOOSE EQUIPMENT

Combustion Air Blower:

Quantity: one (1)
Flowrate:..... 20,000 SCFM
Inlet Suction:..... -5 inches of H₂O
Outlet Pressure: 15 inches of H₂O
Motor Power: 75 HP
Motor Control: NEMA 3R variable frequency drive
(see below for additional details)
Motor Enclosure: TEFC (NEMA)
Outlet Attachments:..... flexible expansion joint
Manufacturer: Chicago Blower (or equal)
Accessories:
 Inlet Venturi Style Flow Meter: one (1) included, Aeroacoustics (or equal)
 Inlet Rainhood & Filter: one (1) included
 Silencer: one (1) included
 Pressure Gauge: one (1) included

Combustion Air Blower VFD:

Quantity: one (1)
Enclosure: NEMA 3R
Motor Power:..... 75 HP
Power Input: 480V, 3ph, 60hz
Drive Manufacturer: FUJI

Automatic Ignition and Control Station:

Panel Rack: one (1); including the following:
Power transformer:..... 480V to 120V
Control Panel:
 Quantity one (1)
 Certification..... Underwriters Laboratory
 Enclosure weatherproof
 PLC Allen Bradley CompactLogix
 Communication via Ethernet/IP
 signals:..... remote start/stop (discrete signal)
 flare status (discrete signal)
 waste gas flow in SCFM (analog signal)
 fuel gas flow in SCFM (analog signal)
 flare temperature in degrees F (analog signal)
Operator Touchscreen..... 12" Tru-View (or equal) Color Operator Interface Panel
Flame Scanner Relay one (1) UV flame scanner control relay
Control Panel Weatherhood:..... included with LED panel light
Emergency Stop Button one (1)

Flame Arrester:

Quantity: one (1)
Diameter: 10 in.
Style: eccentric
Housing material: aluminum
Internals material: stainless steel
Internals monitoring: one (1) Dwyer differential pressure gauge
..... one (1) type K thermocouple
Manufacturer: Enardo (or equal)

Second Stage Duct Block Valve:

Quantity: one (1)
Diameter: 36 in.
Style: lug
Actuator: piston with spring return, fail closed
Body material: carbon steel
Disk: 316 stainless steel
Seat: PTFE
Manufacturer: Apollo (or equal)

Automatic Block Valve:

Quantity: three (3); one for waste gas, two for stage cooling fan
Diameter: one (1) 10 in.; two (2) 6 in.
Style: lug
Actuator: pneumatic, fail closed
Body material: carbon steel
Disk: 316 stainless steel
Seat: PTFE
Manufacturer: Xomox (or equal)

Pressure Control Valve:

Quantity: one (1)
Diameter: 10 in.
Style: lug
Actuator: pneumatic, fail closed
Body material: carbon steel
Disk: 316 stainless steel
Seat: PTFE
Manufacturer: Apollo (or equal)

Rack Mounted Gas Analyzer:

Quantity: one (1), for air blower control
Measurement: CH₄ and O₂
Sample Pump: included
Autocalibration Package: included
Manufacturer: QED Environmental (or equal)

Flow Meter:

Quantity: one (1) for fuel gas
(ultrasonic flow meter to be provided by end user to provide 4-20 signals for flowrate in SCFM as well as molecular weight of waste gas stream)
Type: thermal mass
Probe material: 316 stainless steel, Teflon coated
Manufacturer: Endress and Hauser (or equal)

Ancillary Equipment:

Pressure Transmitter: two (2), one for mixing chamber monitoring (high pressure shutdown), one for pilot gas monitoring (low pressure shutdown)
(additional pressure transmitter for inlet pipe monitoring to be provided by end user; will provide interlock, preventing flare startup if piping pressure is too high)
Pilot Gas Spool: one (1) including, 1/2" piping, solenoid valve, pressure regulator with carbon steel body, four manual valves, pressure gauge, two strainers, manual globe valve
Fuel Gas Spool: one (1) including modulating flow control valve, automated ball valve, two manual valves, pressure regulator with carbon steel body, pressure gauge, strainer
Thermocouple Wire: 900 ft.
Ignition Wire: 25 ft.

PERFORMANCE

Expected Flare Pre-Mix Emission Range – Waste Gas Streams 1, 2, 3, 4, 6, 7 (Design Flow)

Operating Temperature	1600 °F	1800 °F
Smokeless Capacity	100%	100%
Methane Destruction Efficiency	99%	99%
NO _x , lb / MMBTU ⁽¹⁾	0.025	0.025
CO, lb / MMBTU ⁽²⁾	0.06	0.05
VOC Destruction Efficiency ⁽³⁾	98%	98%

⁽¹⁾ Excludes NO_x from fixed nitrogen.

⁽²⁾ Excludes CO contribution present in the gas.

⁽³⁾ VOC Emissions of 0.038 lb/MMBTU is achievable based on a maximum inlet VOC concentration of 5,000 ppm as methane.

NOTE: *Expected emissions are based on field tests of operating units and the higher heating value (HHV) of the gas. Destruction efficiency, NO_x, and CO emissions shown are valid for combustion of specified gas only. Expected emissions are not guaranteed unless expressly stated elsewhere in this proposal.*

Expected Flare Pre-Mix Emission Range – Waste Gas Streams 5, 8 (Design Flow)

Operating Temperature	1600 °F	1800 °F
Smokeless Capacity	100%	100%
Methane Destruction Efficiency	99%	99%
NO _x , lb / MMBTU ⁽¹⁾	0.06	0.08
CO, lb / MMBTU ⁽²⁾	0.15	0.2
VOC Destruction Efficiency ⁽³⁾	98%	98%

⁽¹⁾ Excludes NO_x from fixed nitrogen.

⁽²⁾ Excludes CO contribution present in the gas.

⁽³⁾ VOC Emissions of 0.038 lb/MMBTU is achievable based on a maximum inlet VOC concentration of 5,000 ppm as methane.

NOTE: *Expected emissions are based on field tests of operating units and the higher heating value (HHV) of the gas. Destruction efficiency, NO_x, and CO emissions shown are valid for combustion of specified gas only. Expected emissions are not guaranteed unless expressly stated elsewhere in this proposal.*

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EXECUTIVE SUMMARY

Scope:..... John Zink ZULE® Ultra-Low Emission Flare
(technical information and scope of supply follow)

Price:

Customer Submittal Schedule:..... 12 weeks after purchase order acceptance

Customer Approval Schedule:..... 2 weeks after receipt of submittals

Fabrication Schedule: 30 weeks after receiving approved submittal

INTRODUCTION

To satisfy your landfill gas flare requirements per your recent request, John Zink Company is pleased to offer a firm quote for our **ZULE® Ultra-Low Emissions Flare System**.

For over 80 years, the John Zink brand has ensured quality, innovative technology, and worldwide service in the combustion industry. John Zink has supplied **over 800 flare systems** for the biogas industry, giving us unparalleled expertise. Each flare system is made in our own 330,000 square foot manufacturing facility; and **we possess the resources to care for your flare at every stage of life:** from installation and startup of new flares, to repair and retrofits of existing flares. Our national network of sales representatives and field technicians means you will always have someone available to assist you in any issues that may arise with your flare, and our portable rental units and spare parts inventory can ensure continued compliance and quick turnaround in case of flare shutdown.

John Zink offers a range of features and options as listed in this proposal. Our intent is to supply the safest, most reliable and economical system available that will also allow you to customize your system to meet your specific needs. After reviewing the proposal, please let us know if there are any additional options you would like to pursue.

We look forward to working with you on this project, and if you require any additional information please do not hesitate to contact me at (918) 234-2718 or our local sales representative, Robert Erdmann, at 1-800-8-LOWNOX.

Change Log – REV5

- Page 4: Changed title of Stream 2 (Mode 2A) to match RFP verbiage;
 - Changed flow data and title of Stream 2 (Mode 2B) to match RFP data and verbiage.
 - Changed for data of Stream 5 (Mode 4A) to match RFP data.
- Page 5: Deleted VOCP blowdown and purge streams
 - Changed Stream 8 to Stream 6 for Modes 3, 5 and 6.
 - Amended enrichment gas requirements for new natural gas heating value (96.09% methane, 874 BTU/SCF)
- Page 7: Replaced provided OIP to reflect new John Zink standard
- Page 9: Replaced provided flow meters to reflect RFP verbiage.

Change Log – REV6

- Page 4: Added second stage permeate stream.
- Page 6: Corrected pilot operation from continuous to intermittent.
- Page 9: Replaced previously quoted hydrocarbon analyzer with continuously operating gas analyzer to provide methane and oxygen levels for air blower control.
- Page 12: Adjusted price due to material cost increases and scope changes.

Change Log – REV7

- Page 4: Increased fuel gas flow on permeate stream for consistent minimum flowrate across streams.
- Page 10: Removed one thermal mass flow meter from JZ project scope. Added a pressure transmitter with a low pressure shutdown to the pilot gas spool. Added clarifications regarding signals that will be sent to the John Zink control panel from end user provided monitoring equipment, an ultrasonic flow meter and a pressure transmitter.
- Page 13: Price adjustment to reflect removal of flow meter from project scope.

Change Log – REV8

- Page 9: Reduced diameter of flame arrester and block valve from 12 to 10 inches.
- Page 13: Price adjustment to reflect size reduction of page 9 components.

Change Log – REV9

- Page 4: Revised flow data for Stream 2C – second stage permeate gas.

Change Log – REV10

- Page 5: Revised flow data for Stream 4A – TSA purge gas; added mode 7, off-spec process gas.
- Page 6: Added language reflecting the addition of a second pilot
- Page 7: Revised stack diameter and ignition panel quantity, added language for flanged stack
- Page 10: Added extra 100 ft of thermocouple wire due to addition of second pilot

DESIGN CRITERIA

NOTE: One stream to the flare at a time. Stream selection and pressure regulation by others.

Flare Gas Stream 1

Type: Mode 1 - process gas
Staging: both stages
Composition: 42.7% CH₄ +/- 1% (design)
balance CO₂, air, inerts, less than 5% O₂
Higher Heating Value: 432 BTU/SCF (design)
Lower Heating Value: 389 BTU/SCF (design)
Temperature: 135.3 °F
Flow Rate: 3,000 SCFM (design normalized at 42.7% CH₄)
Minimum: 1,100 SCFM (design normalized at 42.7% CH₄)
Heat Release (HHV): 77.8 MMBTU/hr (design at 42.7% CH₄)
Heat Release (LHV): 69.9 MMBTU/hr (design at 42.7% CH₄)

NOTE: Hydrogen sulfide concentrations greater than 3,000 ppm may require special materials with potential commercial impact.

Flare Gas Stream 2

Type: Mode 2A - process gas
Staging: both stages
Composition: 42.7% CH₄ +/- 1% (design)
balance CO₂, air, inerts, less than 5% O₂
Higher Heating Value: 432 BTU/SCF (design)
Lower Heating Value: 389 BTU/SCF (design)
Temperature: 108.4 °F
Flow Rate: 3,000 SCFM (design normalized at 42.7% CH₄)
Minimum: 1,100 SCFM (design normalized at 42.7% CH₄)
Heat Release (HHV): 77.8 MMBTU/hr (design at 42.7% CH₄)
Heat Release (LHV): 69.9 MMBTU/hr (design at 42.7% CH₄)

Flare Gas Stream 3

Type: Mode 2B - membrane gas
Staging: both stages
Composition: 70.4% CH₄ +/- 1% (design)
balance CO₂, air, inerts, less than 5% O₂
Higher Heating Value: 712 BTU/SCF (design)
Lower Heating Value: 641 BTU/SCF (design)
Temperature: 89.0 °F
Flow Rate: 1,729 SCFM (design normalized at 70.4% CH₄)
Minimum: 650 SCFM (design normalized at 70.4% CH₄)
Heat Release (HHV): 73.9 MMBTU/hr (design at 70.4% CH₄)
Heat Release (LHV): 66.5 MMBTU/hr (design at 70.4% CH₄)

Flare Gas Stream 4

Type:	Mode 2C – second stage permeate gas
Staging:	First stage only
Composition:	28.6% CH ₄ +/- 1% (design) balance CO ₂ , air, inerts, up to 10% O₂
Higher Heating Value:	289 BTU/SCF (design)
Lower Heating Value:	260 BTU/SCF (design)
Temperature:	89.0 °F
Flow Rate:	300 SCFM (design normalized at 28.6% CH ₄) 100 SCFM (minimum at 28.6% CH ₄)
Initial Heat Release (HHV):	5.2 MMBTU/hr (design at 28.6% CH ₄)
Initial Heat Release (LHV):	4.7 MMBTU/hr (design at 28.6% CH ₄)
Fuel Gas Requirements:	70 SCFM (maximum at 100 SCFM waste gas)
Combined Heat Release (HHV):	6.0 MMBTU/hr (design)
Combined Heat Release (LHV):	5.4 MMBTU/hr (design)

Flare Gas Stream 5

Type:	Mode 4 - TSA blowdown
Staging:	First stage only
Composition:.....	42.7% CH ₄ +/- 1% (design) balance CO ₂ , air, inerts, less than 5% O ₂
Higher Heating Value:	432 BTU/SCF (design)
Lower Heating Value:	389 BTU/SCF (design)
Temperature:	37.9°F
Flow Rate:	419 SCFM decaying to 40 SCFM
Initial Heat Release (HHV):	10.9 MMBTU/hr (design at 42.7% CH ₄)
Initial Heat Release (LHV):	9.8 MMBTU/hr (design at 42.7% CH ₄)
Fuel Gas Requirements:	90 SCFM (maximum at 40 SCFM waste gas)
Combined Heat Release (HHV):	6.5 MMBTU/hr (design)
Combined Heat Release (LHV):	5.8 MMBTU/hr (design)

Flare Gas Stream 6

Type:	Mode 4A – TSA purge
Staging:	First stage only
Composition:	42.7% CH ₄ (design); 42.7% to 8.4% CH ₄ (range) balance CO ₂ , air, inerts, less than 5% O ₂
Higher Heating Value:	432 BTU/SCF (design)
Lower Heating Value:	389 BTU/SCF (design)
Temperature:	89.0 °F
Flow Rate:	1,284 SCFM +/- 1% (design at 42.7% CH ₄)
Initial Heat Release (HHV):	33.3 MMBTU/hr (design at 42.7% CH ₄)
Initial Heat Release (LHV):	29.9 MMBTU/hr (design at 42.7% CH ₄)
Fuel Gas Requirements:	290 SCFM at 8.4% CH ₄ waste gas
Combined Heat Release (HHV):	24.2 MMBTU/hr (design)
Combined Heat Release (LHV):	21.7 MMBTU/hr (design)

NOTE: *Low methane concentrations may require auxilliary fuel to initiate combustion and maintain temperature.*

Flare Gas Stream 7

Type: Modes 3, 5 and 6: off-spec product gas
Staging: both stages
Composition: 96.1% CH₄ +/- 1% (design)
balance CO₂, air, inerts, less than 1% O₂
Higher Heating Value: 973 BTU/SCF (design)
Lower Heating Value: 875 BTU/SCF (design)
Temperature: 97.9 °F
Flow Rate: 1,178 SCFM (design normalized at 96.1% CH₄)
Minimum: 500 SCFM (design normalized at 96.1% CH₄)
Heat Release (HHV): 68.8 MMBTU/hr (design at 96.1% CH₄)
Heat Release (LHV): 61.8 MMBTU/hr (design at 96.1% CH₄)

Flare Gas Stream 8

Type: Mode 7: off-spec process gas
Staging: First stage only
Composition: 15.4% CH₄ +/- 1% (design)
balance CO₂, air, inerts, less than 1% O₂
Higher Heating Value: 156 BTU/SCF (design)
Lower Heating Value: 140 BTU/SCF (design)
Temperature: 97.9 °F
Flow Rate: 551 SCFM (design normalized at 15.4% CH₄)
Heat Release (HHV): 5.2 MMBTU/hr (design at 15.4% CH₄)
Heat Release (LHV): 4.6 MMBTU/hr (design at 15.4% CH₄)
Fuel Gas Requirements: 74 SCFM
Combined Heat Release (HHV): 9.6 MMBTU/hr (design)
Combined Heat Release (LHV): 8.7 MMBTU/hr (design)

Mechanical

Design Wind Speed (ASCE 7-10; EXP C): 110 mph
Design Seismic (CBC 1613): Zone 4
Ambient Temperature: 29 °F to 94 °F
Ambient Pressure: 14.3 psia
Elevation: 750 feet above sea level
Electrical Area Classification: Class 1 Div 2 Group D (flare)
Unclassified (panel and air blower)

NOTE: Heat tracing and insulating (by others) recommended to protect against freezing.

Process

Smokeless Capacity: 100%
Operating Temperature: 1400 °F to 1800 °F (2000 °F shutdown)
Retention Time: 0.7 seconds at 1800 °F (minimum)
Required Flame Arrester Inlet Pressure: 15 inches of H₂O (design)

NOTE: Low methane concentrations may require auxiliary fuel to initiate combustion and maintain temperature.

Utilities

Pilot Gas (intermittent): 22 SCFH of propane at 7-10 psig (or)
50 SCFH of natural gas at 10-15 psig per pilot
Compressed Air (or Nitrogen): 80 PSIG (regulated, clean and dry)
Electricity: 480 V, 3 phase, 60 Hz for motor control;
transformer provided for 120 V, single phase
for control system components
Auxiliary Fuel: enrichment gas required as described above

EQUIPMENT DETAILS

FLARE

Quantity:	one (1); flanged into two sections for field assembly
Material:	carbon steel stack
Nominal Diameter:	13 ft.
Nominal Height:	40 ft.
Interior Protection:	
Insulation:	one (1) 1 in. thick 8 lb density ceramic fiber blanket insulation, backed by one (1) 1 in. thick 6 lb density ceramic fiber blanket insulation, each rated 2200 °F minimum; stainless steel rain cap to protect refractory
Insulation Anchoring:	Inconel 601 pins and keepers
Surface Preparation:	SSPC-SP-6 sandblast;
Primer:	Sherwin Williams Heat Flex 1200, 5 - 6 mils DFT (two coats)
Rigidizer	KAOWOOL spray-on rigidizer to protect the insulation.
External Coating:	
Surface Preparation:	SSPC-SP-6 sandblast;
Primer:	inorganic rich zinc primer, 2 - 4 mils DFT (one coat)
Automatic dampers:	four (4) (One hinged for easy interior access)
Damper actuators:	explosion proof
Manifold Construction:	carbon steel
Inlet Diameter:	12 in.
Flare Tips:	four (4), each with one type K thermocouple
Flare Tip Construction:	Portions 304 and 310 stainless; ceramic burner can
Burner Staging:	two stages
Second Stage Cooling Fan:	¾ HP, 700 CFM (shipped loose for field installation)
Stack Thermocouple Connections:	three (3), each with one type K thermocouple
Sample Ports:	four (4)
Sight Ports:	two (2)
Pilot Ignition (Qty 2):	electronic spark ignitors; NEMA 7 ignition panels
Flame Scanner:	one (1) Honeywell UV scanner (or equal)
Purge Blower:	continuous purge provided by combustion air blower and cooling fan
Structural Anchoring:	AISC continuous base plate
Ladder:	one (1) 40 ft. ladder including fall protection with one (1) harness.
Lifting Lugs:	two (2)
Premix chamber:	included with static mixer assembly and manway

SHIPPED LOOSE EQUIPMENT

Combustion Air Blower:

Quantity: one (1)
Flowrate:..... 20,000 SCFM
Inlet Suction:..... -5 inches of H₂O
Outlet Pressure: 15 inches of H₂O
Motor Power: 75 HP
Motor Control: NEMA 3R variable frequency drive
(see below for additional details)
Motor Enclosure: TEFC (NEMA)
Outlet Attachments:..... flexible expansion joint
Manufacturer: Chicago Blower (or equal)
Accessories:
 Inlet Venturi Style Flow Meter: one (1) included, Aeroacoustics (or equal)
 Inlet Rainhood & Filter: one (1) included
 Silencer: one (1) included
 Pressure Gauge: one (1) included

Combustion Air Blower VFD:

Quantity: one (1)
Enclosure: NEMA 3R
Motor Power:..... 75 HP
Power Input: 480V, 3ph, 60hz
Drive Manufacturer: FUJI

Automatic Ignition and Control Station:

Panel Rack: one (1); including the following:
Power transformer:..... 480V to 120V
Control Panel:
 Quantity..... one (1)
 Certification..... Underwriters Laboratory
 Enclosure weatherproof
 PLC Allen Bradley CompactLogix
 Communication via Ethernet/IP
 signals:..... remote start/stop (discrete signal)
 flare status (discrete signal)
 waste gas flow in SCFM (analog signal)
 fuel gas flow in SCFM (analog signal)
 flare temperature in degrees F (analog signal)
Operator Touchscreen..... 12" Tru-View (or equal) Color Operator Interface Panel
Flame Scanner Relay one (1) UV flame scanner control relay
Control Panel Weatherhood:..... included with LED panel light
Emergency Stop Button one (1)

Flame Arrester:

Quantity: one (1)
Diameter: 10 in.
Style: eccentric
Housing material: aluminum
Internals material: stainless steel
Internals monitoring: one (1) Dwyer differential pressure gauge
..... one (1) type K thermocouple
Manufacturer: Enardo (or equal)

Second Stage Duct Block Valve:

Quantity: one (1)
Diameter: 36 in.
Style: lug
Actuator: piston with spring return, fail closed
Body material: carbon steel
Disk: 316 stainless steel
Seat: PTFE
Manufacturer: Apollo (or equal)

Automatic Block Valve:

Quantity: three (3); one for waste gas, two for stage cooling fan
Diameter: one (1) 10 in.; two (2) 6 in.
Style: lug
Actuator: pneumatic, fail closed
Body material: carbon steel
Disk: 316 stainless steel
Seat: PTFE
Manufacturer: Xomox (or equal)

Pressure Control Valve:

Quantity: one (1)
Diameter: 10 in.
Style: lug
Actuator: pneumatic, fail closed
Body material: carbon steel
Disk: 316 stainless steel
Seat: PTFE
Manufacturer: Apollo (or equal)

Rack Mounted Gas Analyzer:

Quantity: one (1), for air blower control
Measurement: CH₄ and O₂
Sample Pump: included
Autocalibration Package: included
Manufacturer: QED Environmental (or equal)

Flow Meter:

Quantity: one (1) for fuel gas
(ultrasonic flow meter to be provided by end user to provide 4-20 signals for flowrate in SCFM as well as molecular weight of waste gas stream)
Type: thermal mass
Probe material: 316 stainless steel, Teflon coated
Manufacturer: Endress and Hauser (or equal)

Ancillary Equipment:

Pressure Transmitter: two (2), one for mixing chamber monitoring (high pressure shutdown), one for pilot gas monitoring (low pressure shutdown)
(additional pressure transmitter for inlet pipe monitoring to be provided by end user; will provide interlock, preventing flare startup if piping pressure is too high)
Pilot Gas Spool: one (1) including, 1/2" piping, solenoid valve, pressure regulator with carbon steel body, four manual valves, pressure gauge, two strainers, manual globe valve
Fuel Gas Spool: one (1) including modulating flow control valve, automated ball valve, two manual valves, pressure regulator with carbon steel body, pressure gauge, strainer
Thermocouple Wire: 900 ft.
Ignition Wire: 25 ft.

PERFORMANCE

Expected Flare Pre-Mix Emission Range – Waste Gas Streams 1, 2, 3, 4, 6, 7 (Design Flow)

Operating Temperature	1600 °F	1800 °F
Smokeless Capacity	100%	100%
Methane Destruction Efficiency	99%	99%
NO _x , lb / MMBTU ⁽¹⁾	0.025	0.025
CO, lb / MMBTU ⁽²⁾	0.06	0.05
VOC Destruction Efficiency ⁽³⁾	98%	98%

⁽¹⁾ Excludes NO_x from fixed nitrogen.

⁽²⁾ Excludes CO contribution present in the gas.

⁽³⁾ VOC Emissions of 0.038 lb/MMBTU is achievable based on a maximum inlet VOC concentration of 5,000 ppm as methane.

NOTE: *Expected emissions are based on field tests of operating units and the higher heating value (HHV) of the gas. Destruction efficiency, NO_x, and CO emissions shown are valid for combustion of specified gas only. Expected emissions are not guaranteed unless expressly stated elsewhere in this proposal.*

Expected Flare Pre-Mix Emission Range – Waste Gas Streams 5, 8 (Design Flow)

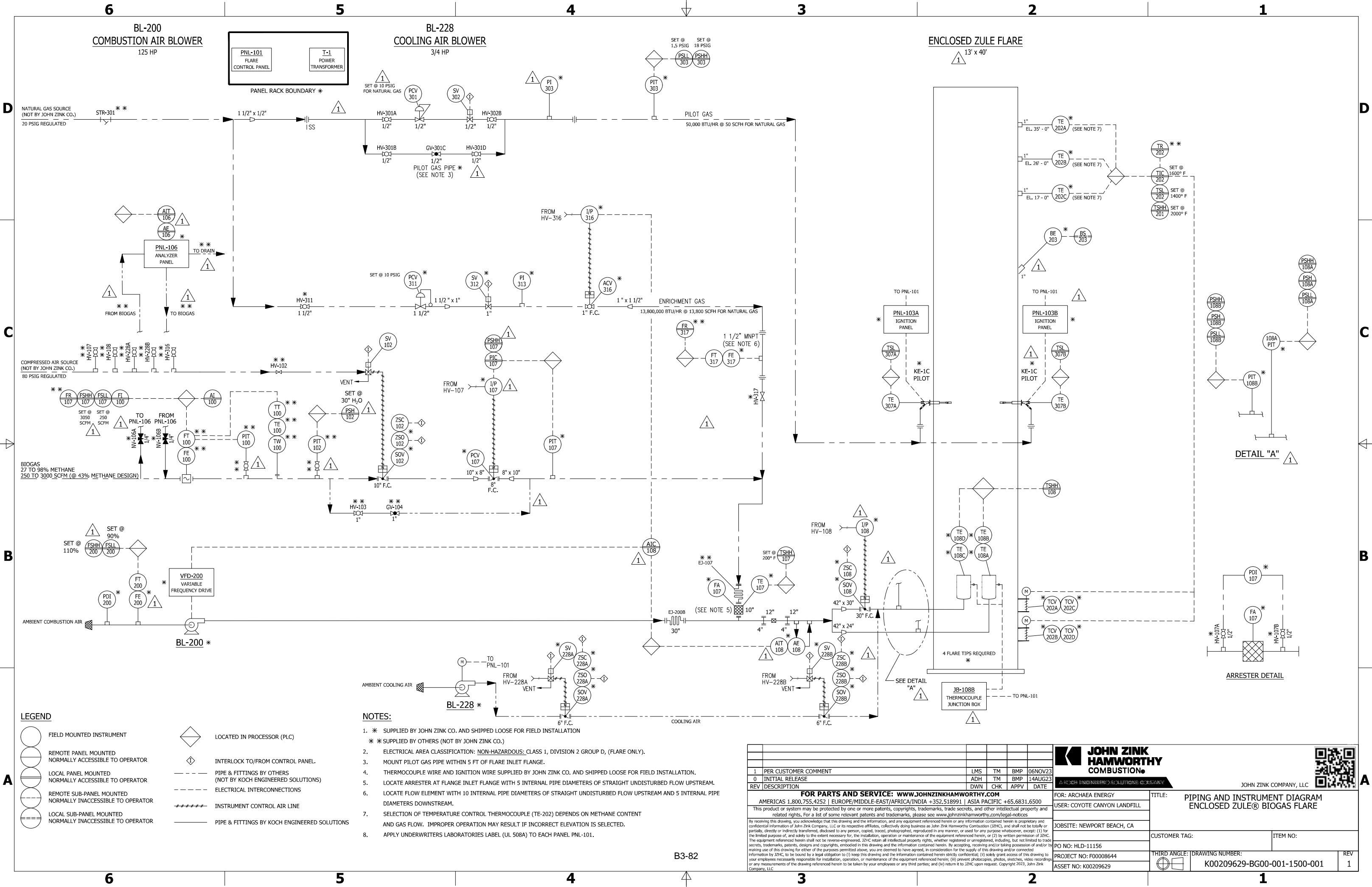
Operating Temperature	1600 °F	1800 °F
Smokeless Capacity	100%	100%
Methane Destruction Efficiency	99%	99%
NO _x , lb / MMBTU ⁽¹⁾	0.06	0.08
CO, lb / MMBTU ⁽²⁾	0.15	0.2
VOC Destruction Efficiency ⁽³⁾	98%	98%

⁽¹⁾ Excludes NO_x from fixed nitrogen.

⁽²⁾ Excludes CO contribution present in the gas.

⁽³⁾ VOC Emissions of 0.038 lb/MMBTU is achievable based on a maximum inlet VOC concentration of 5,000 ppm as methane.

NOTE: *Expected emissions are based on field tests of operating units and the higher heating value (HHV) of the gas. Destruction efficiency, NO_x, and CO emissions shown are valid for combustion of specified gas only. Expected emissions are not guaranteed unless expressly stated elsewhere in this proposal.*






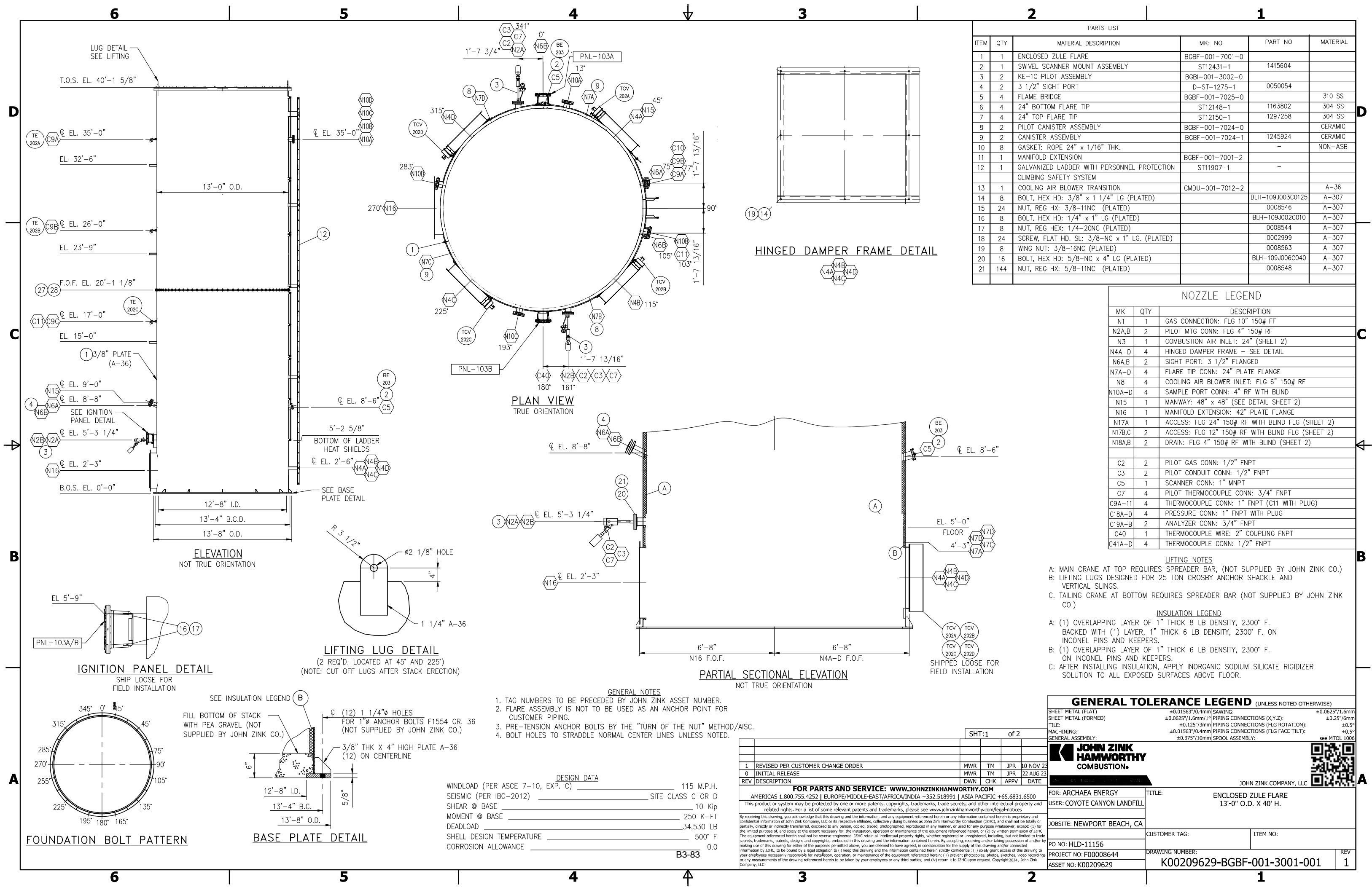
LEGEND

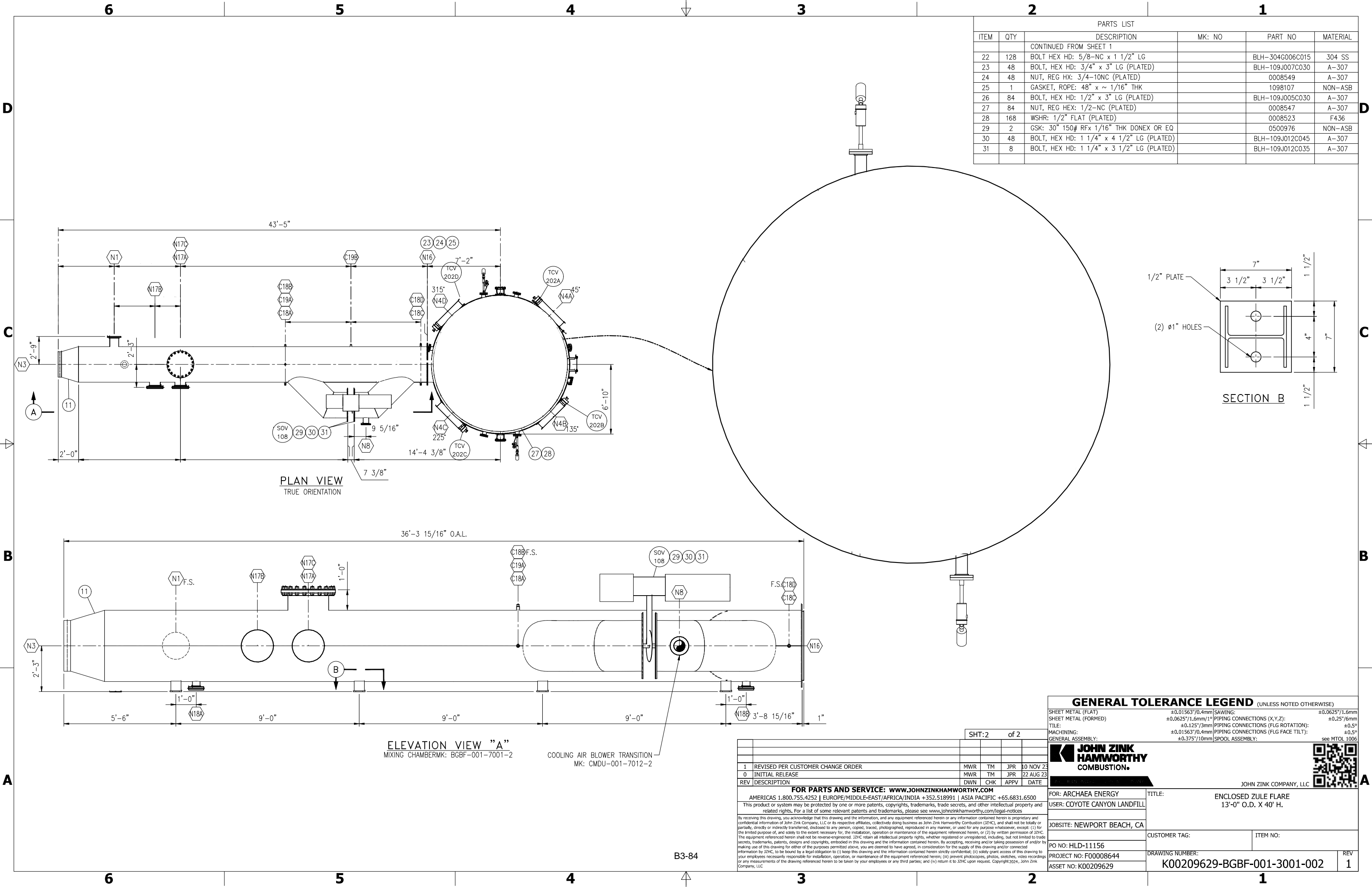
- | | | | |
|--|---|--|---|
| | FIELD MOUNTED INSTRUMENT | | LOCATED IN PROCESSOR (PLC) |
| | REMOTE PANEL MOUNTED
NORMALLY ACCESSIBLE TO OPERATOR | | INTERLOCK TO/FROM CONTROL PANEL |
| | LOCAL PANEL MOUNTED
NORMALLY ACCESSIBLE TO OPERATOR | | PIPE & FITTINGS BY OTHERS
(NOT BY KOCH ENGINEERED SOLUTIONS) |
| | REMOTE SUB-PANEL MOUNTED
NORMALLY INACCESSIBLE TO OPERATOR | | ELECTRICAL INTERCONNECTIONS |
| | LOCAL SUB-PANEL MOUNTED
NORMALLY INACCESSIBLE TO OPERATOR | | INSTRUMENT CONTROL AIR LINE |
| | | | PIPE & FITTINGS BY KOCH ENGINEERED SOLUTIONS |

NOTES:

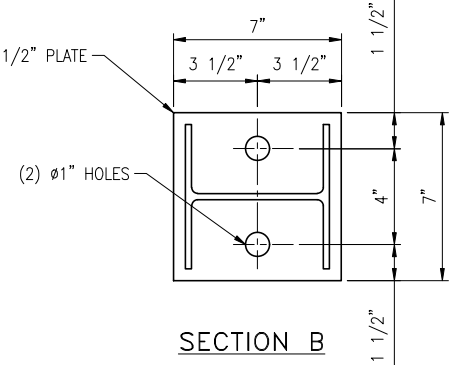
- * SUPPLIED BY JOHN ZINK CO. AND SHIPPED LOOSE FOR FIELD INSTALLATION
* SUPPLIED BY OTHERS (NOT BY JOHN ZINK CO.)
- ELECTRICAL AREA CLASSIFICATION: **NON-HAZARDOUS: CLASS 1, DIVISION 2 GROUP D, (FLARE ONLY).**
- MOUNT PILOT GAS PIPE WITHIN 5 FT OF FLARE INLET FLANGE.
- THERMOCOUPLE WIRE AND IGNITION WIRE SUPPLIED BY JOHN ZINK CO. AND SHIPPED LOOSE FOR FIELD INSTALLATION.
- LOCATE ARRESTER AT FLANGE INLET FLANGE WITH 5 INTERNAL PIPE DIAMETERS OF STRAIGHT UNDISTURBED FLOW UPSTREAM.
- LOCATE FLOW ELEMENT WITH 10 INTERNAL PIPE DIAMETERS OF STRAIGHT UNDISTURBED FLOW UPSTREAM AND 5 INTERNAL PIPE DIAMETERS DOWNSTREAM.
- SELECTION OF TEMPERATURE CONTROL THERMOCOUPLE (TE-202) DEPENDS ON METHANE CONTENT AND GAS FLOW. IMPROPER OPERATION MAY RESULT IF INCORRECT ELEVATION IS SELECTED.
- APPLY UNDERWRITERS LABORATORIES LABEL (UL 508A) TO EACH PANEL PNL-101.

				 JOHN ZINK HAMWORTHY COMBUSTION®								
				A ROUGH ENGINEERING SOLUTIONS COMPANY				JOHN ZINK COMPANY, LLC				
1	PER CUSTOMER COMMENT			LMS	TM	BMP	06NOV23					
0	INITIAL RELEASE			ADH	TM	BMP	14AUG23					
REV	DESCRIPTION			DWN	CHK	APPV	DATE					
FOR PARTS AND SERVICE: WWW.JOHNZINKHAMWORTHY.COM												
AMERICAS 1.800.755.4252 EUROPE/MIDDLE-EAST/AFRICA +352.518991 ASIA PACIFIC +65.6831.6500												
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FOR: ARCHAEA ENERGY							TITLE: PIPING AND INSTRUMENT DIAGRAM ENCLOSED ZULE® BIOGAS FLARE					
USER: COYOTE CANYON LANDFILL												
JOBSITE: NEWPORT BEACH, CA												
CUSTOMER TAG:							ITEM NO:					
PO NO: HLD-11156												
PROJECT NO: F00008644							THIRD ANGLE: DRAWING NUMBER:			REV		
ASSET NO: K00209629										K00209629-BG00-001-1500-001		
										1		







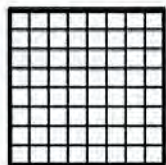
PARTS LIST					
ITEM	QTY	DESCRIPTION	MK: NO	PART NO	MATERIAL
CONTINUED FROM SHEET 1					
22	128	BOLT HEX HD: 5/8-NC x 1 1/2" LG		BLH-304G006C015	304 SS
23	48	BOLT, HEX HD: 3/4" x 3" LG (PLATED)		BLH-109J007C030	A-307
24	48	NUT, REG HX: 3/4-10NC (PLATED)		0008549	A-307
25	1	GASKET, ROPE: 48" x ~ 1/16" THK		1098107	NON-ASB
26	84	BOLT, HEX HD: 1/2" x 3" LG (PLATED)		BLH-109J005C030	A-307
27	84	NUT, REG HEX: 1/2-NC (PLATED)		0008547	A-307
28	168	WSHR: 1/2" FLAT (PLATED)		0008523	F436
29	2	GSK: 30" 150# RFx 1/16" THK DONEX OR EQ		0500976	NON-ASB
30	48	BOLT, HEX HD: 1 1/4" x 4 1/2" LG (PLATED)		BLH-109J012C045	A-307
31	8	BOLT, HEX HD: 1 1/4" x 3 1/2" LG (PLATED)		BLH-109J012C035	A-307



		SHT: 2		of 2	
1	REVISED PER CUSTOMER CHANGE ORDER	MWR	TM	JPR	10 NOV 23
0	INITIAL RELEASE	MWR	TM	JPR	22 AUG 23
REV	DESCRIPTION	DWN	CHK	APPV	DATE
FOR PARTS AND SERVICE: WWW.JOHNZINKHAMWORTHY.COM					
AMERICAS 1.800.755.4252 EUROPE/MIDDLE-EAST/AFRICA/INDIA +352.518991 ASIA PACIFIC +65.6831.6500					
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By receiving this drawing, you acknowledge that this drawing and the information, and any equipment referenced herein or any information contained herein is proprietary and confidential information of John Zink Company, LLC or its respective affiliates, collectively doing business as John Zink Hamworthy Combustion (JZHC), and shall not be totally or partially, directly or indirectly transferred, disclosed to any person, copied, traced, photographed, reproduced in any manner, or used for any purpose whatsoever, except: (1) for the limited purpose of, and solely to the extent necessary for, the installation, operation or maintenance of the equipment referenced herein, or (2) by written permission of JZHC. The equipment referenced herein shall not be reverse-engineered. JZHC retain all intellectual property rights, whether registered or unregistered, including, but not limited to trade secrets, trademarks, patents, designs and copyrights, embodied in this drawing and the information contained herein. By accepting, receiving and/or taking possession of and/or by making use of this drawing for either of the purposes permitted above, you are deemed to have agreed, in consideration for the supply of this drawing and/or connected information by JZHC, to be bound by a legal obligation to (i) keep this drawing and the information contained herein strictly confidential; (ii) solely grant access of this drawing to your employees necessarily responsible for installation, operation, or maintenance of the equipment referenced herein; (iii) prevent photocopies, photos, sketches, video recordings or any measurements of the drawing referenced herein to be taken by your employees or any third parties; and (iv) return it to JZHC upon request. Copyright©2024, John Zink Company, LLC					

GENERAL TOLERANCE LEGEND (UNLESS NOTED OTHERWISE)			
SHEET METAL (FLAT)	±0.01563"/0.4mm	SAWING:	±0.0625"/1.6mm
SHEET METAL (FORMED)	±0.0625"/1.6mm/1°	PIPING CONNECTIONS (X,Y,Z):	±0.25"/6mm
TITLE:	±0.125"/3mm	PIPING CONNECTIONS (FLG ROTATION):	±0.5°
MACHINING:	±0.01563"/0.4mm	PIPING CONNECTIONS (FLG FACE TILT):	±0.5°
GENERAL ASSEMBLY:	±0.375"/10mm	SPOOL ASSEMBLY:	see MTOL 1006
			
			
JOHN ZINK COMPANY, LLC			
FOR: ARCHAEA ENERGY		TITLE: ENCLOSED ZULE FLARE	
USER: COYOTE CANYON LANDFILL		13'-0" O.D. X 40' H.	
JOBSITE: NEWPORT BEACH, CA		CUSTOMER TAG:	
PO NO: HLD-11156		ITEM NO:	
PROJECT NO: F00008644		DRAWING NUMBER:	
ASSET NO: K00209629		K00209629-BGBF-001-3001-002	
			REV 1

H₂S Scrubber



Guild
Associates, Inc.

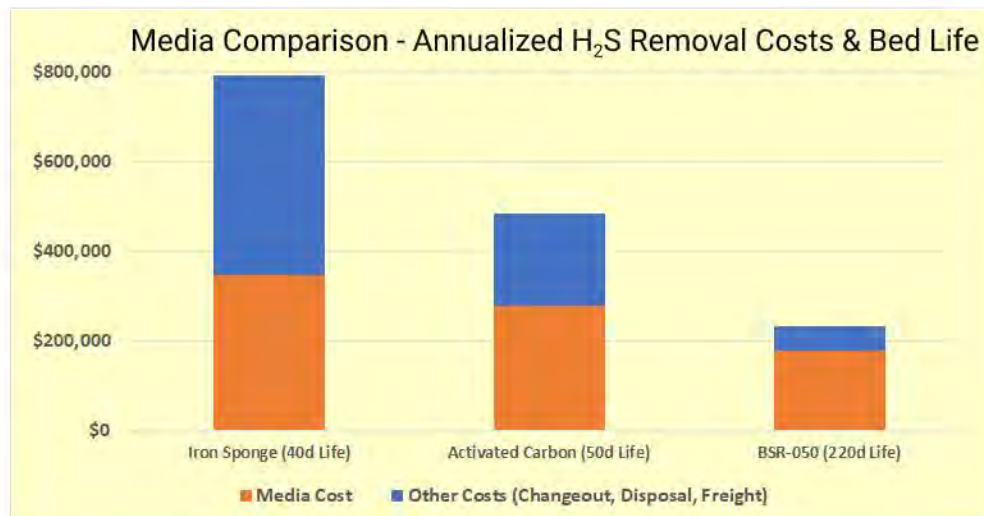
BSR-050 Hydrogen Sulfide Removal Media

The lowest overall cost dry media for the treatment of landfill gas

BSR-050® from Guild Associates is a high-capacity granular media for the removal of hydrogen sulfide from landfill gas. Engineered for direct replacement of Iron Sponge and Activated Carbon in systems with lead-lag vessel configuration, BSR-050 is field-proven to treat landfill gas for power generation or Renewable Natural Gas (RNG).

INDUSTRY LEADING PERFORMANCE

- Highest H₂S removal capacity in the industry
 - Up to 1.4 lb/lb media, equivalent to 36 lb/cuft
 - Delivers longest bed life of any granular media
- Non-bricking formulation
 - Minimizes downtime and labor in media changeouts
- Lowest total cost of H₂S removal.
 - See Media Comparison below



CASE STUDY

A landfill in Houston, Texas, producing RNG employs a lead-lag system to remove 800-1,000 ppm H₂S from landfill gas. The landfill replaced 110,000 lbs of Iron Sponge with 33,000 lbs of BSR-050 and increased the gas flow from 5,600 to 6,500 scfm by treating gas from high-sulfur cells that were previously flared. The changeout interval lengthened from 3 to 15 weeks, operational expenses dropped by 80% and revenue increased.

BSR-050 is available in 1,000-lb Super Sacks for installation by crane into vessels. Removal can typically be accomplished by vacuum truck with no risk of additional labor to remove agglomerated pieces. Contact Guild Associates for an assessment of your application and potential for BSR-050 to minimize your H₂S removal costs:



About Guild Associates

Guild Associates is a manufacturer of biogas processing equipment and BSR-050 Hydrogen Sulfide Removal Media. Guild Associates manufactures the patented BSR-050 media at a facility in Delaware OH.

Contact us for more information:

5750 Shier-Rings Rd
Dublin OH, 43016
614-798-8215
H2S@guildassociates.com
www.guildassociates.com



BSR-20; BSR-50; BSR-60

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/22/2016

Revision 1.0: 09/18/2017

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : BSR-20; BSR-50; BSR-60

Product form : Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Filtration media

1.3. Details of the supplier of the safety data sheet

Guild Associates Inc.
5750 Shier-Rings Road
Dublin, OH 43016
1-614-798-8215

1.4. Emergency telephone number

CHEMTREC : 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified.

2.2. Label elements

GHS-US labeling

No labelling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%
Contains no hazardous ingredients at levels requiring disclosure by the OSHA Hazard Communication Standard (29 CFR 1910.1200). Non-hazardous constituents provided voluntarily, below.		100
Zinc Oxide	1314-13-2	20 - 60
Iron Hydroxide Oxide	20344-49-4	20 - 60
Silicon Dioxide	7631-86-9	5 - 30
Water (absorbed)	7732-18-5	<15

*In accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200), the specific chemical identity or exact weight % has been withheld as a trade secret

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.
- First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a comfortable position for breathing.
- First-aid measures after skin contact : IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes.
- First-aid measures after eye contact : IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
- First-aid measures after ingestion : IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use
- Symptoms/injuries after inhalation : May cause respiratory irritation.

BSR-20; BSR-50; BSR-60

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Symptoms/injuries after skin contact	: May cause skin irritation.
Symptoms/injuries after eye contact	: Direct contact with the eyes is likely to be irritating.
Symptoms/injuries after ingestion	: May cause gastrointestinal irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Foam. Sand. Dry chemical powder.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Not flammable.
Explosion hazard	: Product is not explosive.
Reactivity	: No dangerous reactions known under normal conditions of use.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Wear Protective equipment as described in Section 8.
Emergency procedures	: Evacuate unnecessary personnel. Keep upwind.

6.1.2. For emergency responders

Protective equipment : For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up	: Wear suitable protective clothing. Take up liquid spill into inert absorbent material, e.g: sand, earth, vermiculite. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Handle in accordance with good industrial hygiene and safety procedures. Wear recommended personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking, applying cosmetics, or smoking and when leaving work. Avoid dust formation.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store in a dry, cool and well-ventilated place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available.

8.2. Exposure controls

Appropriate engineering controls	: Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Ensure adequate ventilation, especially in confined areas.
Personal protective equipment	: Safety glasses. Gloves. Insufficient ventilation: wear respiratory protection.



Hand protection : Use gloves appropriate to the work environment.

BSR-20; BSR-50; BSR-60

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Eye protection	: Use eye protection suitable to the environment. Avoid direct contact with eyes.
Skin and body protection	: Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.
Respiratory protection	: Use NIOSH-approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Granular material. Beads.
Color	: Reddish-yellow.
Odor	: None.
Odor Threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: Does not self-ignite.
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not an explosive solid.
Oxidizing properties	: Not an oxidizing solid
Explosion limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Cobalt oxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified

BSR-20; BSR-50; BSR-60

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Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May cause respiratory irritation.
Symptoms/injuries after skin contact	: May cause skin irritation.
Symptoms/injuries after eye contact	: Direct contact with the eyes is likely to be irritating.
Symptoms/injuries after ingestion	: May cause gastrointestinal irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No data available.

12.2. Persistence and degradability

BSR-20; BSR-50; BSR-60

Persistence and degradability	No data available.
-------------------------------	--------------------

12.3. Bioaccumulative potential

BSR-20; BSR-50; BSR-60

Bioaccumulative potential	No data available.
---------------------------	--------------------

12.4. Mobility in soil

BSR-20; BSR-50; BSR-60

Ecology - soil	No data available.
----------------	--------------------

12.5. Other adverse effects

Other information : No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with DOT

Not hazardous for transport

Additional information

Other information : No supplementary information available.

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

BSR-20; BSR-50; BSR-60

All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory or are exempt

SARA Section 311/312 Hazard Classes	None
-------------------------------------	------

15.2. International regulations

No additional information available.

15.3. US State regulations

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

BSR-20; BSR-50; BSR-60

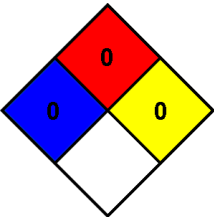
Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Zinc Oxide (1314-13-2)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
Silica, amorphous (7631-86-9)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Indication of changes	: Revision 1.0: : 09/18/2017
Other information	: Author: LMG.
NFPA health hazard	: 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	: 0 - Materials that will not burn.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating	
Health	: 0
Flammability	: 0
Physical	: 0
Personal Protection	:

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

Condensate Tanks

NOTE: ALL RIGHTS RESERVED. THIS DRAWING MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF HIGHLAND TANK®. HIGHLAND TANK® SHALL BE RESPONSIBLE ONLY FOR ITEMS INDICATED ON THIS FABRICATION DRAWING UNLESS OTHERWISE NOTED. CUSTOMER IS RESPONSIBLE FOR VERIFYING CORRECTNESS OF SIZE AND LOCATION OF FITTINGS, ACCESSORIES, AND COATINGS SHOWN ON THIS DRAWING.

TOUCH UP OF FINISHED PAINT IS REQUIRED BY INSTALLATION CONTRACTOR. TOUCH UP PAINT SHIPPED WITH TANK.

SHIPPING LUGS AS NEEDED

SHIP LOOSE

(2) FLAT FLANGED EMERGENCY VENTS 8 OZ.

NOTES

- SEE PLAN VIEW FOR TRUE ORIENTATION AND LOCATION OF FITTING
- LIFTING LUGS FOR UNLOADING UNIT & STANDING UNIT UPRIGHT TO BE PLACED AS NEEDED BY FABRICATION SHOP
- A 3x3x¼" STEEL GROUNDING LUG WITH A ⅝"Ø HOLE IN CENTER TO BE PLACED ON SHELL AT BOTTOM OF TANK IN LINE WITH LIFTING LUGS

DESIGN DATA

CAPACITY – 15,000 GALLON

TYPE – VERTICAL DOUBLE WALL

NO. REQ. – ONE

OPERATING PRESSURE – ATMOSPHERIC

SPECIFIC GRAVITY = 1.0

TANK MATERIAL – MILD CARBON STEEL

THICKNESS–TOP – 1/4" SHALLOW SLOPE

THICKNESS–INNER– SHELL: 1/4" BOTTOM: 1/4"

THICKNESS–OUTER– SHELL: 7 GA BOTTOM: 1/4"

CONSTRUCTION – INNER–LAP WELD INTERIOR & EXTERIOR SEAMS, OUTER– LAP WELD EXTERIOR ONLY

TANK TEST – INNER: 2 PSIG, OUTER:– 2 PSIG & FULL VACUUM

INT. FINISH – SP10 BLAST, CHEMLINER 4000 EPOXY (6–10 MILS PER COAT/12–20 TOTAL DFT

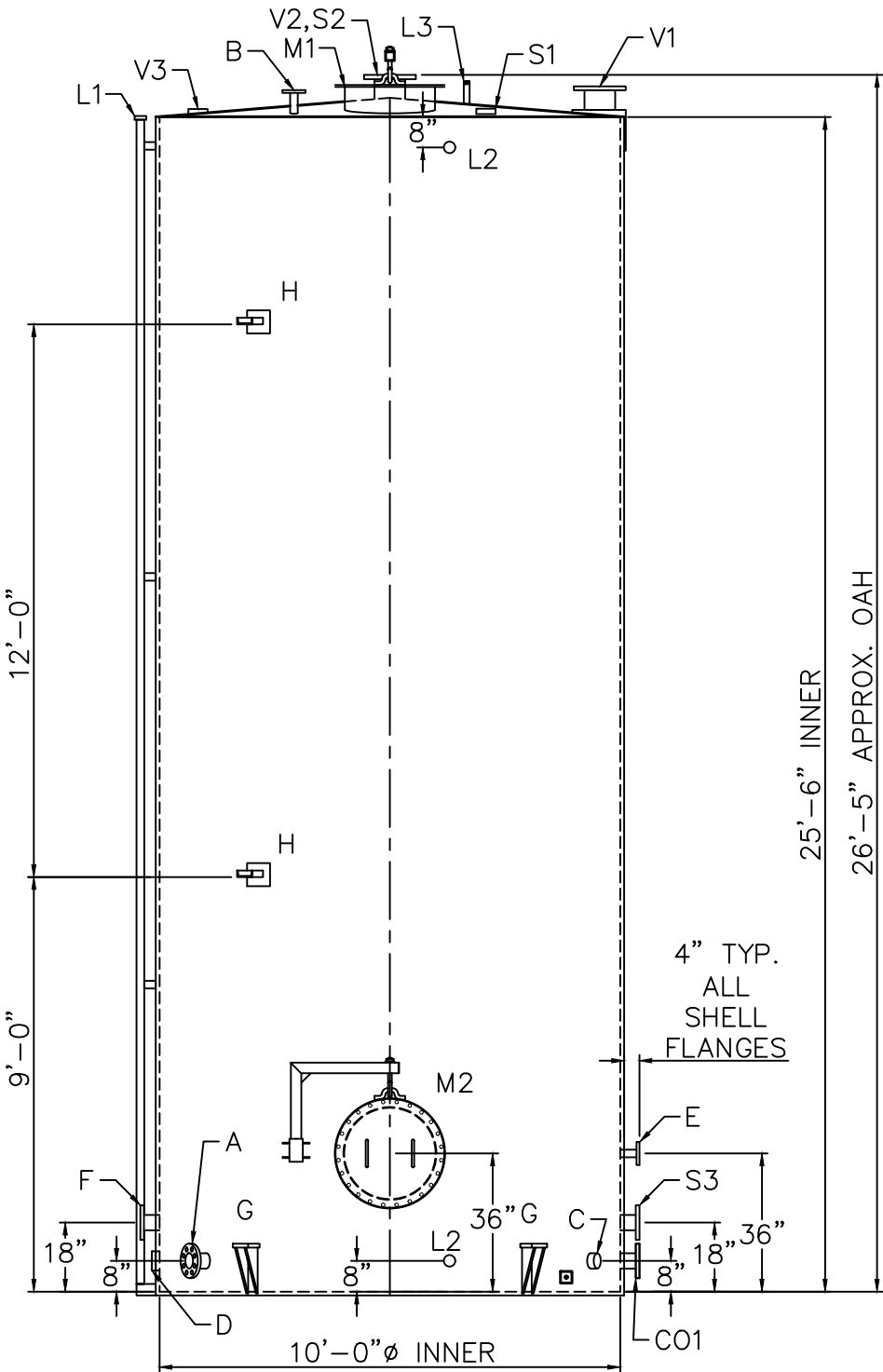
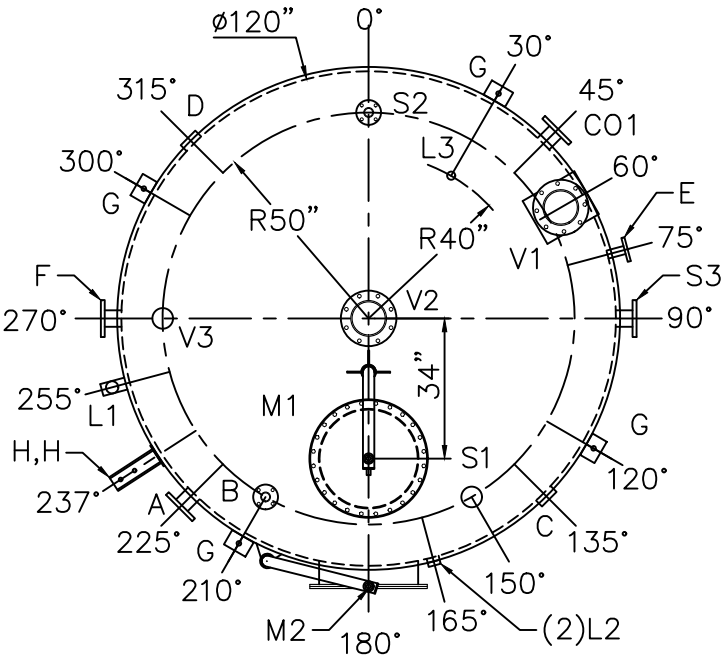
EXT. FINISH – SP6 BLAST, FINISH URETHANE WHITE

LABEL – UL 142

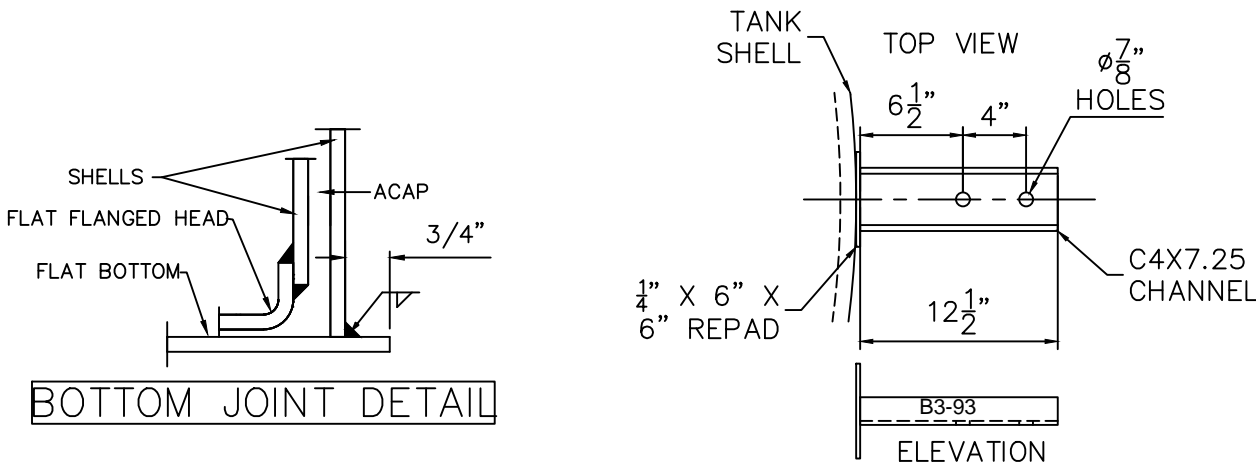
LEGEND

M1	24" x ¼" PLATE TIGHT BOLT MANWAY W/ FIBERFLEX GRADE A GASKET & DAVIT
V1	8" FFSO 150# FLANGE THROUGH OUTER SHELL ONLY, MARK WITH SPECIAL WARNING LABEL – INTERSTITIAL EMERGENCY VENT USE ONLY
M2	24" CLOSE BOLT MANWAY W/ ⅛" THK NEO CORK GASKET, ⅝" FLANGE, ¼" NECK, ⅞" COVER INCLUDES DAVIT
L1	2" INTERSTITIAL MONITOR PIPE
V2	8" 150# FFSO FLANGE – PRIMARY EMERGENCY VENT
A	4" 150# RFSO FLANGE (OUTLET)
CO1	4" 150# RFSO FLANGE (CLEAN OUT)
B	2" 150# RFSO FLANGE (FILL)
V3	4" FNPT FITTING (VENT)
C	4" FNPT FITTING (TRUCK HAULING)
S1	4" FNPT FITTING (SPARE)
D	4" FNPT FITTING (OUTLET)
L2	2" FNPT FITTING (SIGHT GLASS)
E	2" 150# RFSO FLANGE (SAMPLING)
F	4" 150# RFSO FLANGE (OUTLET)
S2	2" 150# RFSO FLANGE (SPARE)
S3	4" 150# RFSO FLANGE (SPARE)
L3	1.5" PIPE STUB, 6" HIGH (TOE) MNPT
G	HOLD DOWN LUG PER DETAIL AVLUGB
H	VERTICAL CLIP PER DETAIL

DRAWING 1 OF 2
SHEET–1 TANK DETAILS
SHEET–2 DAVIT, HOLD DOWN LUG DETAILS



ELEVATION VIEW



Highland Tank

UNLESS NOTED, TOLERANCES ARE +/- 1"

15,000 GAL 120"Ø DW VERTICAL

QUOTE NO: 544212
SCALE: 1/4"=1'-0" DATE: 8/16/23 DWG. BY: 002 DWG. NO: 124756-1
CHK'D BY:

NIXTOX Steel Drum Adsorbers

Modular Activated Carbon Vapor Phase Adsorbers

These economical deep bed activated carbon adsorption units may be used as refillable or disposable adsorbers.

Rain shields are available and condensate drains are standard. The activated carbon units are constructed of carbon steel and provided with a double epoxy/phenolic lining. All adsorption units feature specially constructed vapor distributors to permit full adsorbent utilization and peak removal efficiency.

Custom distributors for high temperature applications are available upon request.

NIXTOX Features

- Nominal design flow may be conservative.
- Desired contact time may allow higher or lower flow rates.
- Dry virgin activated or reactivated carbon provided as standard adsorbent.
- Adsorbent fill is based on a bed density of 27 lb/ft³.
- Adsorbent fill can differ based on variable bed density and alternate adsorbents.
- Pressure drops are based on a dense packed bed of activated carbon.

Modular Activated Carbon Vapor Phase Adsorber Drums				
Model #	Max Temp (°F)	Max Press (PSIG)	Diameter/Height (in)	Standard Fill (lbs)
N-100	200	6	24.5/37.75	200


About Newterra

Newterra offers a broad portfolio of reliable, trouble-free technologies and outsourcing support for global municipal and industrial customers across diverse applications, including drinking water, industrial process water, wastewater, stormwater and remediation.



Product Features

- May be used as refillable or disposable adsorbers
- Constructed of carbon steel and provided
- Double epoxy/phenolic lining



Appendix C

Risk Assessment Information

TABLE 13
RISK RESULTS
COYOTE CANYON RNG FACILITY
NEWPORT BEACH, CALIFORNIA

	Thermal Oxidizer Main Ops	Thermal Oxidizer Supplement	Flare	Flare_pt2
Feet				
Commercial	1722.44	1722.44	1804.46	1804.46
Residential	1492.78	1492.78	1394.36	1394.36

ft/m
0.3048

Meters				
Commercial	525	525	550	550
Residential	455	455	425	425

MICR				
Commercial	1.74E-08	4.28E-10	1.63E-09	9.75E-09
Residential	2.41E-07	8.33E-09	4.74E-08	1.69E-07


Hazard Index				
Acute HI	3.85E-03	4.95E-05	2.19E-04	3.00E-03
Chronic HI	1.13E-02	2.24E-03	6.58E-03	1.15E-02
Chronic 8-hr HI	2.07E-03	4.94E-05	1.60E-04	1.48E-03

Total	PASS?
2.92E-08	YES
4.66E-07	YES
7.12E-03	YES
3.16E-02	YES
3.76E-03	YES

Acute				
Alimentary system (liver) - AL	3.19E-08	0.00E+00	2.30E-08	0.00E+00
Bones and teeth - BN				
Cardiovascular system - CV	2.39E-09	2.81E-06	8.22E-06	0.00E+00
Developmental - DEV	9.29E-05	4.24E-06	3.01E-05	4.94E-05
Endocrine system - END				
Eye	3.23E-03	4.05E-06	1.37E-05	2.47E-03
Hematopoietic system - HEM	2.41E-05	2.18E-07	1.81E-05	0.00E+00
Immune system - IMM	2.41E-05	2.97E-05	1.04E-04	0.00E+00
Kidney - KID				
Nervous system - NS	6.89E-05	4.03E-06	1.20E-05	4.94E-05
Reproductive system - REP	9.29E-05	4.24E-06	3.01E-05	4.94E-05
Respiratory system - RESP	3.20E-04	2.39E-07	2.80E-06	3.73E-04
Skin	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Chronic				
Alimentary system (liver) - AL	8.47E-07	4.80E-07	1.58E-06	4.36E-07
Bones and teeth - BN	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cardiovascular system - CV	8.33E-09	3.29E-04	9.61E-04	0.00E+00
Developmental - DEV	5.37E-04	3.80E-04	1.11E-03	3.87E-04
Endocrine system - END	3.46E-07	0.00E+00	0.00E+00	2.50E-07
Eye	2.87E-07	0.00E+00	0.00E+00	2.07E-07
Hematopoietic system - HEM	2.17E-05	4.22E-05	1.39E-04	0.00E+00
Immune system - IMM	0.00E+00	4.80E-07	1.40E-06	0.00E+00
Kidney - KID	5.27E-04	3.98E-05	1.17E-04	3.80E-04
Nervous system - NS	5.28E-04	3.38E-04	9.89E-04	3.81E-04
Reproductive system - REP	5.37E-04	3.80E-04	1.11E-03	3.87E-04
Respiratory system - RESP	9.13E-03	4.04E-04	1.18E-03	9.95E-03
Skin	0.00E+00	3.29E-04	9.61E-04	0.00E+00

Chronic 8-hr				
Alimentary system (liver) - AL	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bones and teeth - BN	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cardiovascular system - CV	0.00E+00	3.73E-06	1.09E-05	0.00E+00
Developmental - DEV	6.82E-05	4.95E-06	1.45E-05	4.92E-05
Endocrine system - END	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Eye	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hematopoietic system - HEM	2.17E-05	1.96E-07	1.62E-05	0.00E+00
Immune system - IMM	0.00E+00	9.80E-06	2.87E-05	0.00E+00
Kidney - KID	6.82E-05	1.21E-06	3.55E-06	4.92E-05
Nervous system - NS	6.82E-05	4.95E-06	1.45E-05	4.92E-05
Reproductive system - REP	6.82E-05	4.95E-06	1.45E-05	4.92E-05
Respiratory system - RESP	1.77E-03	1.59E-05	4.64E-05	1.28E-03
Skin	0.00E+00	3.73E-06	1.09E-05	0.00E+00



Appendix D

Permit Application Forms

Thermal Oxidizer



South Coast Air Quality Management District

Form 400-A**Application Form for Permit or Plan Approval**

List only one piece of equipment or process per form.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

1. Facility Name (Business Name of Operator to Appear on the Permit): Biofuels Coyote Canyon Biogas, LLC	2. Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): _____
3. Owner's Business Name (If different from Business Name of Operator): _____	

Section B - Equipment Location Address

4. Equipment Location Is: ☒ **Fixed Location** ☐ **Various Location**
(For equipment operated at various locations, provide address of initial site.)

20661 Newport Coast Drive
Street Address

Newport Beach, CA **92657**
City Zip

Nevin Edwards **Air Permitting Manager**
Contact Name Title

(724) 766-8388
Phone #

Ext. Fax #

E-Mail: **nedwards@archaea.energy**

Section C - Permit Mailing Address

5. Permit and Correspondence Information:
☐ Check here if same as equipment location address

201 Helios Way, Floor 6
Address

Houston, TX **77079**
City State Zip

Derek Kramer **Chief Operating Officer**
Contact Name Title

(380) 900-2739
Phone #

Ext. Fax #

E-Mail: **dkramer@archaea.energy**

Section D - Application Type

6. The Facility Is: ☒ **Not In RECLAIM or Title V** ☐ **In RECLAIM** ☐ **In Title V** ☐ **In RECLAIM & Title V Programs**

7. Reason for Submitting Application (Select only ONE):

7a. New Equipment or Process Application: <input checked="" type="radio"/> New Construction (Permit to Construct) <input type="radio"/> Equipment On-Site But Not Constructed or Operational <input type="radio"/> Equipment Operating Without A Permit * <input type="radio"/> Compliance Plan <input type="radio"/> Registration/Certification <input type="radio"/> Streamlined Standard Permit	7c. Equipment or Process with an Existing/Previous Application or Permit: <input type="radio"/> Administrative Change <input type="radio"/> Alteration/Modification <input type="radio"/> Alteration/Modification without Prior Approval * <input type="radio"/> Change of Condition <input type="radio"/> Change of Condition without Prior Approval * <input type="radio"/> Change of Location <input type="radio"/> Change of Location without Prior Approval * <input type="radio"/> Equipment Operating with an Expired/Inactive Permit * <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">Existing or Previous Permit/Application If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number: _____</div>
---	--

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

7b. Facility Permits:
☐ Title V Application or Amendment (Refer to Title V Matrix)
☐ RECLAIM Facility Permit Amendment

8a. Estimated Start Date of Construction (mm/dd/yyyy): _____	8b. Estimated End Date of Construction (mm/dd/yyyy): _____	8c. Estimated Start Date of Operation (mm/dd/yyyy): _____
--	--	---

9. Description of Equipment or Reason for Compliance Plan (list applicable rule): Thermal Oxidizer	10. For identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each equipment / process) _____
11. Are you a Small Business as per AQMD's Rule 102 definition? (10 employees or less and total gross receipts are \$500,000 or less OR a not-for-profit training center) <input checked="" type="radio"/> No <input type="radio"/> Yes	12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment? <input checked="" type="radio"/> No <input type="radio"/> Yes If Yes, provide NOV/NC#: _____

Section E - Facility Business Information

13. What type of business is being conducted at this equipment location? Renewable Natural Gas Plant	14. What is your business primary NAICS Code? (North American Industrial Classification System) 221119
15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? <input checked="" type="radio"/> No <input type="radio"/> Yes	16. Are there any schools (K-12) within 1000 feet of the facility property line? <input checked="" type="radio"/> No <input type="radio"/> Yes

Section F - Authorization/Signature*I hereby certify that all information contained herein and information submitted with this application are true and correct.*

17. Signature of Responsible Official: _____	18. Title of Responsible Official: Chief Operating Officer	19. I wish to review the permit prior to issuance. (This may cause a delay in the application process.) <input type="radio"/> No <input checked="" type="radio"/> Yes
20. Print Name: Derek Kramer	21. Date: _____	22. Do you claim confidentiality of data? (If Yes, see instructions.) <input checked="" type="radio"/> No <input type="radio"/> Yes

23. Check List: <input checked="" type="checkbox"/> Authorized Signature/Date <input checked="" type="checkbox"/> Form 400-CEQA <input checked="" type="checkbox"/> Supplemental Form(s) (ie., Form 400-E-xx) <input checked="" type="checkbox"/> Fees Enclosed									
AQMD USE ONLY	APPLICATION TRACKING #	CHECK #	AMOUNT RECEIVED \$	PAYMENT TRACKING #	VALIDATION				
DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE	TEAM	ENGINEER	REASON/ACTION TAKEN



The SCAQMD is required by state law, the California Environmental Quality Act (CEQA), to review discretionary permit project applications for potential air quality and other environmental impacts. This form is a screening tool to assist the SCAQMD in clarifying whether or not the project ¹ has the potential to generate significant adverse environmental impacts that might require preparation of a CEQA document [CEQA Guidelines § 15060(a)]. Form 400-CEQA and the instructions for guidance on completing this form are available at <http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms> or <http://www.aqmd.gov/home/permits/permit-application-forms>. For each Form 400-A application, also complete and submit one Form 400-CEQA. If submitting multiple Form 400-A applications for the same project at the same time, only one Form 400-CEQA is necessary for the entire project. If you need assistance completing this form, contact Permit Services at (909) 396-3385.

Section A – Facility Information**1. Facility Name** (Business Name of Operator to Appear on the Permit):

Biofuels Coyote Canyon Biogas, LLC

2. SCAQMD Facility ID:**3. Project Description:**

Thermal Oxidizer

Section B – Review For Exemption From Further CEQA Action

Check "Yes" or "No" as applicable. If "Yes" is checked for any question in Section B, skip Section C and proceed to page 2 and complete Section D – Signatures.

	Yes	No	Is this application for:
1.	<input type="radio"/>	<input checked="" type="radio"/>	A request for a change of operator only (without equipment or process change modifications)?
2.	<input type="radio"/>	<input checked="" type="radio"/>	A functionally identical permit unit replacement with no increase in equipment unit rating or emissions?
3.	<input type="radio"/>	<input checked="" type="radio"/>	A change of daily VOC permit limit to a monthly VOC permit limit?
4.	<input type="radio"/>	<input checked="" type="radio"/>	Equipment damaged as a result of a disaster during state of emergency?
5.	<input type="radio"/>	<input checked="" type="radio"/>	A Title V (e.g., SCAQMD Regulation XXX) permit renewal without equipment or process change modifications?
6.	<input type="radio"/>	<input checked="" type="radio"/>	A Title V administrative permit revision?
7.	<input type="radio"/>	<input checked="" type="radio"/>	The conversion of an existing permit into an initial Title V permit?

Section C – Review of Impacts Which May Trigger Further CEQA Review

Check "Yes" or "No" as applicable. To avoid delays in processing your application(s), explain all "Yes" responses on a separate sheet and attach it to this form.

	Yes	No	
1.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project specifically evaluated in a previously certified or adopted CEQA document? If "Yes" is checked, attach a copy of the signed Notice of Determination to this form.
2.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project specifically exempted from CEQA by another entity (e.g., city or agency)? If "Yes" is checked, attach a copy of the signed Notice of Exemption or other documentation from the entity to this form.
3.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project part of a larger project? If "Yes" is checked, attach a separate sheet to briefly describe the larger project.
4.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project increase the QUANTITY of hazardous materials stored aboveground onsite or transported by mobile vehicle to or from the site by greater than or equal to the amounts associated with each compound listed on Form 400-CEQA, Table 1 - Regulated Substances List and Threshold Quantities for Accidental Release Prevention [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms]? If "Yes" is checked, attach a separate sheet to identify each hazardous material and corresponding quantity to be transported, stored, or used.
5.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project emit any air toxic listed on Form 400-CEQA, Table 2 - Other Air Toxics and Their Screening Levels [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms] ² ? If "Yes" is checked, attach a separate sheet to identify each air toxic and corresponding quantity to be emitted.
6.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project require any demolition, excavation, and/or grading construction activities that encompass an area exceeding 20,000 square feet?

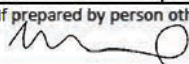
¹ A "project" means the whole of an action which has a potential for resulting in physical change to the environment, including construction activities, clearing or grading of land, improvements to existing structures, and activities or equipment involving the issuance of a permit. For example, a project might include installation of a new, or modification of an existing internal combustion engine, dry cleaning facility, boiler, gas turbine, spray coating booth, solvent cleaning tank, etc.

² Form 400-CEQA, Table 2 – Other Air Toxics and Their Screening Levels, contains a list of air toxics that either do not have a cancer potency (CP) or reference exposure level (REL) approved by the Office of Environmental Health Hazards Assessment (OEHA) or have a combination of OEHA-approved and non-approved CPs or RELs.

Section C – Review of Impacts Which May Trigger Further CEQA (concluded)			
	Yes	No	
7.	<input checked="" type="radio"/>	<input type="radio"/>	Will the project utilize a boiler, engine, or other combustion equipment that uses fuel (e.g., gasoline, diesel, natural gas, liquefied petroleum gas (LPG), or landfill gas)? If "Yes" is checked, then the applicant will need to calculate the amount of GHGs from fuel use via on the Greenhouse Gas (GHG) online estimator [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms], and attaching the printout or by conducting hand calculations and providing the documentation. Refer to the Instructions for Form 400-CEQA for guidance.
8.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project utilize other types of equipment not addressed in Question 7 that require the use of, or will generate, any chemicals listed on Form 400-CEQA, Table 3 - Greenhouse Gases [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms]? If "Yes" is checked, attach a separate sheet to identify each equipment unit, the chemical name(s), and the quantity of each chemical identified.
9.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project include the open outdoor storage of dry bulk solid materials that could generate dust? If "Yes" is checked, include a plot plan with the application package.
10.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in or make worse noticeable off-site odors from activities that may not be subject to SCAQMD permit requirements? For example, landfills, materials recovery/recycling facilities (MRF), and compost materials or other types of greenwaste (e.g., lawn clippings, tree trimmings, etc.) have the potential to generate odor complaints subject to SCAQMD Rule 402 – Nuisance.
11.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project cause an increase of emissions from marine vessels, trains and/or airplanes?
12.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project increase demand for potable water at the facility by more than 262,820 gallons per day? The following examples identify some, but not all, types of projects that may result in a "Yes" answer to this question: 1) a project that generates steam; 2) a project that uses water as part of operating air pollution control equipment; 3) a project that requires water as part of the production process; 4) a project that requires a new, or the expansion of an existing, sewage treatment facility, new water lines, sewage lines, sewage hook-ups etc.; 5) a project where the water demand exceeds the capacity of the local water purveyor to supply sufficient water for the project; 6) a project that requires new or the expansion of existing, water supply and conveyance facilities; and, 7) a project that requires water to hydrotest pipelines, storage tanks etc. for structural integrity.
13.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create an increase in the mass inflow of effluents to a public wastewater treatment facility that would require a new, or revision to an existing, National Pollutant Discharge Elimination System (NPDES) or other related permit at the facility?
14.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in the need for more than 350 new employees?
15.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in an increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round-trips per day?
16.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in an increase in customer traffic by more than 700 visits per day?
17.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in temporary or permanent noise or vibration in excess of what is allowed by the applicable local noise ordinance?
18.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create a permanent need for new or additional solid waste disposal? Check "No" if the projected potential amount of solid waste to be generated by the project is less than five tons per day.
19.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create a permanent need for new or additional hazardous waste disposal? Check "No" if the projected potential amount of hazardous wastes to be generated by the project is less than 42 cubic yards per day (or equivalent in pounds).
20.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project include equipment that after installation or modification will change the visual character of the site and its surroundings or block views?
21.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project have equipment that will create a new source of external lighting that will be visible at the property line?

Section D – SIGNATURES

I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. I UNDERSTAND THAT THIS FORM IS A SCREENING TOOL AND THAT THE SCAQMD RESERVES THE RIGHT TO CONSIDER OTHER PERTINENT INFORMATION IN DETERMINING CEQA APPLICABILITY.

1. Signature of Responsible Official of Firm:		2. Title of Responsible Official of Firm: Chief Operating Officer	
3. Print Name of Responsible Official of Firm: Derek Kramer		4. Date Signed:	
5. Phone # of Responsible Official of Firm: (380) 900-2739	6. Fax # of Responsible Official of Firm:	7. Email of Responsible Official of Firm: dkramer@archaea.energy	
8. Signature of Preparer, (if prepared by person other than responsible official of firm): 		9. Title of Preparer: Project Manager	
10. Print Name of Preparer: Maria Bowen		11. Date Signed: 12/14/2023	
12. Phone # of Preparer: (619) 455-9518	13. Fax # of Preparer: (562) 492-9292	14. Email of Preparer: mbowen@scsengineers.com	

THIS CONCLUDES FORM 400-CEQA. INCLUDE THIS FORM AND ANY ATTACHMENTS WITH FORM 400-A.



South Coast Air Quality Management District

Form 400-E-2a**Gaseous Emission Control Form
Afterburner/Oxidizer**South Coast
AQMD

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (909) 396-3385
www.aqmd.gov**Section A - Operator Information**

Facility Name (Business Name of Operator That Appears On Permit):

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD):

Biofuels Coyote Canyon Biogas, LLC

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site):

20661 Newport Coast Drive, Newport Beach, California, 92657

☒ Fixed Location ☐ Various Locations**Section B - Equipment Description**

Equipment	Manufacturer: Conifer Systems	Model No.: TRO-65-60-051
Type	<input type="radio"/> Catalytic Oxidizer <input type="radio"/> Recuperative Oxidizer w/ Heat Exchanger (Catalytic) <input type="radio"/> Thermal (direct fired) Oxidizer <input checked="" type="radio"/> Recuperative Oxidizer w/ Heat Exchanger (Thermal) <input type="radio"/> Regenerative Thermal Oxidizer (RTO) - Number of Chambers: _____ Is a concentrator for VOC part of the design? <input checked="" type="radio"/> No <input type="radio"/> Yes If Yes, also complete 400-E-2b. For <u>Regenerative Oxidizer</u> , choose type of media: <input type="radio"/> Ceramic Saddles <input type="radio"/> Monolith <input type="radio"/> Other _____ For <u>Recuperative Oxidizer</u> , choose type of heat exchanger: <input checked="" type="radio"/> Shell and Tube <input type="radio"/> Plate <input type="radio"/> Other _____	
For Catalytic Oxidizer	Catalyst Manufacturer: _____ Type of Catalyst: <input type="radio"/> Low Temperature Catalyst <input type="radio"/> Commercial Noble Metal <input type="radio"/> Other _____ Estimated Catalyst Life: _____ years Catalyst Cleaning Frequency: _____ months Method of Cleaning: _____ Does the process emit any of the following potential catalyst masking agent or deactivators? <input type="radio"/> No <input type="radio"/> Yes If Yes, check the type(s): <input type="checkbox"/> Halogens <input type="checkbox"/> Heavy Metals <input type="checkbox"/> Silicones <input type="checkbox"/> Sulfur Compounds <input type="checkbox"/> Particulate Matter <input type="checkbox"/> PCBTf <input type="checkbox"/> Phosphorous Compounds <input type="checkbox"/> Other _____	
Type of Burners and Fuel	<input checked="" type="checkbox"/> Natural Gas Fired <input type="checkbox"/> Other: _____ Rating: 7,500,000 BTU/hr No. of Burners: 1 Rating: 7,500,000 BTU/hr per burner Rating: _____ BTU/hr Manufacturer: Siemens or equal Model: Fives 4225 or Conifer Manufacturer's Emission Guarantee for Burners: Emission guarantees are uncorrected values. NOx: 10 ppm @ _____ %O ₂ CO: 50 ppm @ _____ %O ₂ Combustion Air Blower: Flow Rate: 3400 SCFM Horsepower: 15 HP	
Design Criteria	Retention time at normal operating temperature: 1 secs @ 1800 °F Combustion Chamber Volume: 277 cubic feet (ft ³) Design Gas Flow: 2150 SCFM	
Pre-Treatment Device	Is a pre-treatment device present? <input type="radio"/> Yes <input checked="" type="radio"/> No If Yes, indicate type: <input type="checkbox"/> Cyclone <input type="checkbox"/> Precooler <input type="checkbox"/> Preheater <input type="checkbox"/> Knock-Out Chamber <input type="checkbox"/> Baghouse <input type="checkbox"/> Inline Filters (Pressure drop of clean filters: _____ in. H ₂ O) <input type="checkbox"/> Other: _____ Dimensions of pre-treatment device: W _____ in. x L _____ in. x H _____ in. or Diameter _____ in. x H _____ in.	

Form 400-E-2a**Gaseous Emission Control Form
Afterburner/Oxidizer**

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section B - Equipment Description (cont.)

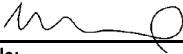
Auxiliary Fuel Data (e.g. gas injection, duct burner)	Auxiliary fuel available? <input type="radio"/> No <input checked="" type="radio"/> Yes If Yes, indicate type: <u>Natural Gas</u>			
	Fuel Usage: <input checked="" type="radio"/> Cubic Feet Per Hour (ft ³ /hr) <input type="radio"/> Gallons/Hour (gal/hr)	Maximum	Minimum	Average
		7500	1875	1875
Exhaust Blower	Rating: <u>25</u> HP Flow Capacity: <u>2150</u> SCFM Draft: <input type="radio"/> Forced <input type="radio"/> Induced			

Section C - Process Stream Characteristics

Brief Description of Process	Please attach a process flow diagram and engineering drawing of the process and the control system configuration. In the space provided, indicate what equipment is vented to the control equipment. The waste gas which is processed through the VOC Removal and CO2 Removal is routed to the TOX.		
Emission Data	Air Contaminant	Concentration (ppmv)	Destruction Efficiency (%)
	VOCs	20	99.00
Instrumentation	Describe instrumentation for measuring temperature, pressure drop and other operating parameter (attach description, if necessary): See attached for system sequence.		
Bakeout or Burnout Process	Is bakeout a feature of the process? <input type="radio"/> Yes <input checked="" type="radio"/> No		
Operating Conditions		Maximum	Minimum
	Operating Temperature (°F):	1800	1500
	Exit Gas Temperature (°F):		748
Operating Schedule	Normal: <u>24</u> hours/day <u>7</u> days/week <u>52</u> weeks/yr		
	Maximum: <u>24</u> hours/day <u>7</u> days/week <u>52</u> weeks/yr		

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info	Signature: 	Date: <u>12/14/2023</u>	Name: <u>Maria Bowen</u>
	Title: _____	Company Name: _____	Phone #: <u>(619) 455-9518</u> Fax #: <u>(562) 492-9292</u>
	<u>Project Manager</u>	<u>SCS Engineers</u>	Email: <u>mbowen@scsengineers.com</u>
Contact Info	Name: <u>Nevin Edwards</u>	Phone #: <u>(724) 766-8388</u>	Fax #: _____
	Title: _____	Company Name: _____	Email: _____
	<u>Air Permitting Mgr</u>	<u>BCCB, LLC</u>	<u>nedwards@archaea.energy</u>

THIS IS A PUBLIC DOCUMENTPursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.Check here if you claim that this form or its attachments contain confidential trade secret information. ☐



South Coast Air Quality Management District

Form 400-PS**Plot Plan And Stack Information Form**

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Form 400A and Form 400-CEQA.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (909) 396-3385
www.aqmd.gov**Section A - Operator Information**

Facility Name (Business Name of Operator To Appear On The Permit):

Biofuels Coyote Canyon Biogas, LLC

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD):

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site):

20661 Newport Coast Drive, Newport Beach, California, 92657

☒ Fixed Location ☐ Various Locations**Section B - Location Data****Plot Plan**

Please attach a site map for the project with distances and scales. Identify and locate the proposed equipment on the map. A copy of the appropriate Thomas Brothers page, a web-based map, or a sketch that shows the major streets and location of the equipment is acceptable.

Location of Schools NearbyIs the facility located within a 1/4 mile radius (1,320 feet) of the outer boundary of a school? ☐ Yes ☒ No
If yes, please provide name(s) of school(s) below:

School Name: _____ School Name: _____

School Address: _____ School Address: _____

Distance from stack or equipment vent to the outer boundary of the school: _____ feet Distance from stack or equipment vent to the outer boundary of the school: _____ feet

CA Health & Safety Code 42301.9: "School" means any public or private school used for purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in private homes.

Population Density☒ Urban ☐ Rural (<50% of land within 3 km radius accounted for by urban land use categories, i.e., multi-family dwelling or industrial.)**Zoning Classification**☒ Mixed Use Residential Commercial Zone (M-U) ☐ Service and Professional Zone (C-S) ☐ Medium Commercial (C-3)
☐ Heavy Commercial (C-4) ☐ Commercial Manufacturing (C-M)**Section C - Emission Release Parameters - Stacks, Vents****Stack Data**Stack Height: 60.00 feet (above ground level) What is the height of the closest building nearest the stack? 10 feetStack Inside Diameter: 38.00 inches Stack Flow: 11,205 acfm Stack Temperature: 1,600 °FRain Cap Present: ☐ Yes ☒ No Stack Orientation: ☒ Vertical ☐ Horizontal

If the stack height is less than 2.5 times the closest building height (H), please provide information on any building within 5xH distance from the stack (attach additional sheet if necessary):

Building #/Name: _____ Building #/Name: _____

Building Height: _____ feet (above ground level) Building Height: _____ feet (above ground level)

Building Width: _____ feet Building Width: _____ feet

Building Length: _____ feet Building Length: _____ feet

Receptor Distance From Equipment Stack or Roof Vents/OpeningsDistance to nearest residence or sensitive receptor*: 1,369 feetDistance to nearest business: 1,870 feet**Building Information**Are the emissions released from vents and/or openings from a building? ☐ Yes ☒ No

If yes, please provide:

Building #/Name: _____ Building Width: _____ feet

Building Height: _____ feet (above ground level) Building Length: _____ feet

*AQMD Rule 1470 defines SENSITIVE RECEPTOR as meaning any residence including private homes, condominiums, apartments, and living quarters, schools as defined under paragraph (b)(57), preschools, daycare centers and health facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care hospitals, hospices, prisons, and dormitories or similar live-in housing.

Form 400-PS

Plot Plan And Stack Information Form


This form must be accompanied by a completed Application for a Permit to Construct/Operate - Form 400A and Form 400-CEQA.


Section D - Authorization/Signature			
I hereby certify that all information contained herein and information submitted with this application is true and correct.			
Signature of Preparer: 		Title of Preparer: Project Manager	
		Preparer's Phone #: (619) 455-9518	
		Preparer's Email: mbowen@scsengineers.com	
Contact Person: Nevin Edwards		Contact's Phone#: (724) 766-8388	Date Signed: 12/14/2023
Contact's Email: nedwards@archaea.energy		Contact's Fax#:	
<p style="text-align: center;">THIS IS A PUBLIC DOCUMENT</p> <p>Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim <u>at the time of submittal</u> to the District.</p> <p>Check here if you claim that this form or its attachments contain confidential trade secret information. <input type="checkbox"/></p>			


Receptor Map


TOx Sensitive Receptor Distances
Biofuels Coyote Canyon Biogas


Legend

 Facility Line

 Planned TOx Location

 TOx to Nearest Residence - 1,369 ft

 TOx to Non-Residential - 1,870 ft

 TOx to School - 1,814 ft (0.34 miles)



Enclosed RNG Flare



South Coast Air Quality Management District

Form 400-A**Application Form for Permit or Plan Approval**

List only one piece of equipment or process per form.

Mail To:

SCAQMD

P.O. Box 4944

Diamond Bar, CA 91765-0944

Tel: (909) 396-3385

www.aqmd.gov

Section A - Operator Information**1. Facility Name** (Business Name of Operator to Appear on the Permit):

Biofuels Coyote Canyon Biogas, LLC

2. Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD):**3. Owner's Business Name** (If different from Business Name of Operator):**Section B - Equipment Location Address****4. Equipment Location Is:** ☒ Fixed Location ☐ Various Location
(For equipment operated at various locations, provide address of initial site.)

20661 Newport Coast Drive

Street Address

Newport Beach, CA 92657

City

Zip

Nevin Edwards Air Permitting Manager

Contact Name

Title

(724) 766-8388

Phone #

Ext.

Fax #

E-Mail: nedwards@archaea.energy

Section C - Permit Mailing Address**5. Permit and Correspondence Information:**☐ Check here if same as equipment location address

201 Helios Way, Floor 6

Address

Houston, TX 77079

City

State

Zip

Derek Kramer Chief Operating Officer

Contact Name

Title

(380) 900-2739

Phone #

Ext.

Fax #

E-Mail: dkramer@archaea.energy

Section D - Application Type**6. The Facility Is:** ☒ Not In RECLAIM or Title V ☐ In RECLAIM ☐ In Title V ☐ In RECLAIM & Title V Programs**7. Reason for Submitting Application** (Select only ONE):**7a. New Equipment or Process Application:**

- ☒ New Construction (Permit to Construct)
☐ Equipment On-Site But Not Constructed or Operational
☐ Equipment Operating Without A Permit *
☐ Compliance Plan
☐ Registration/Certification
☐ Streamlined Standard Permit

7b. Facility Permits:

- ☐ Title V Application or Amendment (Refer to Title V Matrix)
☐ RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:

- ☐ Administrative Change
☐ Alteration/Modification
☐ Alteration/Modification without Prior Approval *
☐ Change of Condition
☐ Change of Condition without Prior Approval *
☐ Change of Location
☐ Change of Location without Prior Approval *
☐ Equipment Operating with an Expired/Inactive Permit *

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

Existing or Previous Permit/Application

If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

8a. Estimated Start Date of Construction (mm/dd/yyyy):**8b. Estimated End Date of Construction** (mm/dd/yyyy):**8c. Estimated Start Date of Operation** (mm/dd/yyyy):**9. Description of Equipment or Reason for Compliance Plan** (list applicable rule):

Enclosed Renewable Natural Gas Flare

10. For identical equipment, how many additional applications are being submitted with this application?
(Form 400-A required for each equipment / process)**11. Are you a Small Business as per AQMD's Rule 102 definition?**

(10 employees or less and total gross receipts are \$500,000 or less OR a not-for-profit training center)

☒ No ☐ Yes**12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment?**
If Yes, provide NOV/NC#:☒ No ☐ Yes**Section E - Facility Business Information****13. What type of business is being conducted at this equipment location?**

Renewable Natural Gas Plant

14. What is your business primary NAICS Code?

(North American Industrial Classification System)

221117

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator?☒ No ☐ Yes**16. Are there any schools (K-12) within 1000 feet of the facility property line?**☒ No ☐ Yes**Section F - Authorization/Signature**

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. Signature of Responsible Official:**18. Title of Responsible Official:**

Chief Operating Officer

19. I wish to review the permit prior to issuance.

(This may cause a delay in the application process.)

☐ No☒ Yes**20. Print Name:**

Derek Kramer

21. Date:**22. Do you claim confidentiality of data?** (If Yes, see instructions.)☒ No ☐ Yes**23. Check List:**☒ Authorized Signature/Date☒ Form 400-CEQA☒ Supplemental Form(s) (ie., Form 400-E-xx)☒ Fees Enclosed

AQMD USE ONLY		APPLICATION TRACKING #		CHECK #		AMOUNT RECEIVED		PAYMENT TRACKING #		VALIDATION	
DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE		TEAM	ENGINEER	REASON/ACTION TAKEN	



The SCAQMD is required by state law, the California Environmental Quality Act (CEQA), to review discretionary permit project applications for potential air quality and other environmental impacts. This form is a screening tool to assist the SCAQMD in clarifying whether or not the project ¹ has the potential to generate significant adverse environmental impacts that might require preparation of a CEQA document [CEQA Guidelines § 15060(a)]. Form 400-CEQA and the instructions for guidance on completing this form are available at <http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms> or <http://www.aqmd.gov/home/permits/permit-application-forms>. For each Form 400-A application, also complete and submit one Form 400-CEQA. If submitting multiple Form 400-A applications for the same project at the same time, only one Form 400-CEQA is necessary for the entire project. If you need assistance completing this form, contact Permit Services at (909) 396-3385.

Section A – Facility Information**1. Facility Name** (Business Name of Operator to Appear on the Permit):

Biofuels Coyote Canyon Biogas, LLC

2. SCAQMD Facility ID:**3. Project Description:**

Enclosed Renewable Natural Gas Flare

Section B – Review For Exemption From Further CEQA Action

Check "Yes" or "No" as applicable. If "Yes" is checked for any question in Section B, skip Section C and proceed to page 2 and complete Section D – Signatures.

	Yes	No	Is this application for:
1.	<input type="radio"/>	<input checked="" type="radio"/>	A request for a change of operator only (without equipment or process change modifications)?
2.	<input type="radio"/>	<input checked="" type="radio"/>	A functionally identical permit unit replacement with no increase in equipment unit rating or emissions?
3.	<input type="radio"/>	<input checked="" type="radio"/>	A change of daily VOC permit limit to a monthly VOC permit limit?
4.	<input type="radio"/>	<input checked="" type="radio"/>	Equipment damaged as a result of a disaster during state of emergency?
5.	<input type="radio"/>	<input checked="" type="radio"/>	A Title V (e.g., SCAQMD Regulation XXX) permit renewal without equipment or process change modifications?
6.	<input type="radio"/>	<input checked="" type="radio"/>	A Title V administrative permit revision?
7.	<input type="radio"/>	<input checked="" type="radio"/>	The conversion of an existing permit into an initial Title V permit?

Section C – Review of Impacts Which May Trigger Further CEQA Review

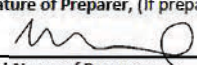
Check "Yes" or "No" as applicable. To avoid delays in processing your application(s), explain all "Yes" responses on a separate sheet and attach it to this form.

	Yes	No	
1.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project specifically evaluated in a previously certified or adopted CEQA document? If "Yes" is checked, attach a copy of the signed Notice of Determination to this form.
2.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project specifically exempted from CEQA by another entity (e.g., city or agency)? If "Yes" is checked, attach a copy of the signed Notice of Exemption or other documentation from the entity to this form.
3.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project part of a larger project? If "Yes" is checked, attach a separate sheet to briefly describe the larger project.
4.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project increase the QUANTITY of hazardous materials stored aboveground onsite or transported by mobile vehicle to or from the site by greater than or equal to the amounts associated with each compound listed on Form 400-CEQA, Table 1 - Regulated Substances List and Threshold Quantities for Accidental Release Prevention http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms ? If "Yes" is checked, attach a separate sheet to identify each hazardous material and corresponding quantity to be transported, stored, or used.
5.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project emit any air toxic listed on Form 400-CEQA, Table 2 - Other Air Toxics and Their Screening Levels http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms ² ? If "Yes" is checked, attach a separate sheet to identify each air toxic and corresponding quantity to be emitted.
6.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project require any demolition, excavation, and/or grading construction activities that encompass an area exceeding 20,000 square feet?

¹ A "project" means the whole of an action which has a potential for resulting in physical change to the environment, including construction activities, clearing or grading of land, improvements to existing structures, and activities or equipment involving the issuance of a permit. For example, a project might include installation of a new, or modification of an existing internal combustion engine, dry cleaning facility, boiler, gas turbine, spray coating booth, solvent cleaning tank, etc.

² Form 400-CEQA, Table 2 – Other Air Toxics and Their Screening Levels, contains a list of air toxics that either do not have a cancer potency (CP) or reference exposure level (REL) approved by the Office of Environmental Health Hazards Assessment (OEHA) or have a combination of OEHA-approved and non-approved CPs or RELs.

Section C – Review of Impacts Which May Trigger Further CEQA (concluded)			
	Yes	No	
7.	<input checked="" type="radio"/>	<input type="radio"/>	Will the project utilize a boiler, engine, or other combustion equipment that uses fuel (e.g., gasoline, diesel, natural gas, liquefied petroleum gas (LPG), or landfill gas)? If "Yes" is checked, then the applicant will need to calculate the amount of GHGs from fuel use via on the Greenhouse Gas (GHG) online estimator [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms], and attaching the printout or by conducting hand calculations and providing the documentation. Refer to the Instructions for Form 400-CEQA for guidance.
8.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project utilize other types of equipment not addressed in Question 7 that require the use of, or will generate, any chemicals listed on Form 400-CEQA, Table 3 - Greenhouse Gases [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms]? If "Yes" is checked, attach a separate sheet to identify each equipment unit, the chemical name(s), and the quantity of each chemical identified.
9.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project include the open outdoor storage of dry bulk solid materials that could generate dust? If "Yes" is checked, include a plot plan with the application package.
10.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in or make worse noticeable off-site odors from activities that may not be subject to SCAQMD permit requirements? For example, landfills, materials recovery/recycling facilities (MRF), and compost materials or other types of greenwaste (e.g., lawn clippings, tree trimmings, etc.) have the potential to generate odor complaints subject to SCAQMD Rule 402 – Nuisance.
11.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project cause an increase of emissions from marine vessels, trains and/or airplanes?
12.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project increase demand for potable water at the facility by more than 262,820 gallons per day? The following examples identify some, but not all, types of projects that may result in a "Yes" answer to this question: 1) a project that generates steam; 2) a project that uses water as part of operating air pollution control equipment; 3) a project that requires water as part of the production process; 4) a project that requires a new, or the expansion of an existing, sewage treatment facility, new water lines, sewage lines, sewage hook-ups etc.; 5) a project where the water demand exceeds the capacity of the local water purveyor to supply sufficient water for the project; 6) a project that requires new or the expansion of existing, water supply and conveyance facilities; and, 7) a project that requires water to hydrotest pipelines, storage tanks etc. for structural integrity.
13.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create an increase in the mass inflow of effluents to a public wastewater treatment facility that would require a new, or revision to an existing, National Pollutant Discharge Elimination System (NPDES) or other related permit at the facility?
14.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in the need for more than 350 new employees?
15.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in an increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round-trips per day?
16.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in an increase in customer traffic by more than 700 visits per day?
17.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in temporary or permanent noise or vibration in excess of what is allowed by the applicable local noise ordinance?
18.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create a permanent need for new or additional solid waste disposal? Check "No" if the projected potential amount of solid waste to be generated by the project is less than five tons per day.
19.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create a permanent need for new or additional hazardous waste disposal? Check "No" if the projected potential amount of hazardous wastes to be generated by the project is less than 42 cubic yards per day (or equivalent in pounds).
20.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project include equipment that after installation or modification will change the visual character of the site and its surroundings or block views?
21.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project have equipment that will create a new source of external lighting that will be visible at the property line?

Section D – SIGNATURES			
I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. I UNDERSTAND THAT THIS FORM IS A SCREENING TOOL AND THAT THE SCAQMD RESERVES THE RIGHT TO CONSIDER OTHER PERTINENT INFORMATION IN DETERMINING CEQA APPLICABILITY.			
1. Signature of Responsible Official of Firm:		2. Title of Responsible Official of Firm: Chief Operating Officer	
3. Print Name of Responsible Official of Firm: Derek Kramer		4. Date Signed:	
5. Phone # of Responsible Official of Firm: (380) 900-2739	6. Fax # of Responsible Official of Firm:	7. Email of Responsible Official of Firm: dkramer@archaea.energy	
8. Signature of Preparer, (if prepared by person other than responsible official of firm): 		9. Title of Preparer: Project Manager	
10. Print Name of Preparer: Maria Bowen		11. Date Signed: 12/14/2023	
12. Phone # of Preparer: (619) 455-9518	13. Fax # of Preparer:	14. Email of Preparer: mbowen@scsengineers.com	

THIS CONCLUDES FORM 400-CEQA. INCLUDE THIS FORM AND ANY ATTACHMENTS WITH FORM 400-A.



South Coast Air Quality Management District

Form 400-E-2c**Gaseous Emission Control Form
Flare**

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (909) 396-3385
www.aqmd.gov**Section A - Operator Information**

Facility Name (Business Name of Operator That Appears On Permit):

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD):

Biofuels Coyote Canyon Biogas, LLC

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site):

☒ Fixed Location ☐ Various Locations**Section B - Equipment Description**

Equipment	Manufacturer: John Zink or equivalent	Model No.: ZULE												
Type	<input type="radio"/> Elevated <input checked="" type="radio"/> Ground Level <input type="radio"/> Pit	How is Flare Assisted? <input type="radio"/> Air Assisted <input type="radio"/> Steam Assisted <input checked="" type="radio"/> Non-Assisted												
Operation (See Rule 1118 for definition)	<input type="radio"/> Clean Service Flare <input type="radio"/> Emergency Service Flare <input checked="" type="radio"/> General Service Flare													
Dimension	Flare Height: 40 ft. Flare Tip Inside Diameter: 10 ft.													
Design Criteria for Waste Gas Stream	<table border="1"><tr><td>Retention Time at Normal Operating Temperature: 1 secs at 1800 °F</td><td>Maximum</td><td>Minimum</td></tr><tr><td>Combustion Chamber Volume: 4367 cubic feet</td><td>Velocity At Tip: (feet per second) 1170</td><td></td></tr><tr><td>Design Waste Stream Flow: 3000 scfm</td><td>Flow Rate: (scfm) 3000</td><td></td></tr><tr><td>Btu: 77,800,000</td><td></td><td></td></tr></table>		Retention Time at Normal Operating Temperature: 1 secs at 1800 °F	Maximum	Minimum	Combustion Chamber Volume: 4367 cubic feet	Velocity At Tip: (feet per second) 1170		Design Waste Stream Flow: 3000 scfm	Flow Rate: (scfm) 3000		Btu: 77,800,000		
Retention Time at Normal Operating Temperature: 1 secs at 1800 °F	Maximum	Minimum												
Combustion Chamber Volume: 4367 cubic feet	Velocity At Tip: (feet per second) 1170													
Design Waste Stream Flow: 3000 scfm	Flow Rate: (scfm) 3000													
Btu: 77,800,000														
For Steam Injection	<table border="1"><tr><td></td><td>Maximum</td><td>Minimum</td></tr><tr><td>Steam Pressure (psig):</td><td></td><td></td></tr></table> <p>Design Basis for Steam Injected: lb steam/lb Hydrocarbons</p> <p>Total Steam Flow Rate: pounds/hour Number of Jets:</p> <p>Temperature: °F Diameter of Jets: inches Velocity: feet per second</p>			Maximum	Minimum	Steam Pressure (psig):								
	Maximum	Minimum												
Steam Pressure (psig):														
For Water Injection	<p>Number of Water Jets: Diameter of Water Jets: inches</p> <table border="1"><tr><td></td><td>Maximum</td><td>Minimum</td></tr><tr><td>Water Pressure (psig):</td><td></td><td></td></tr><tr><td>Total Water Flow Rate (gpm):</td><td></td><td></td></tr></table>			Maximum	Minimum	Water Pressure (psig):			Total Water Flow Rate (gpm):					
	Maximum	Minimum												
Water Pressure (psig):														
Total Water Flow Rate (gpm):														
Auxiliary Fuel Data (e.g. gas injection, duct burner)	<p>Auxiliary fuel available? <input checked="" type="radio"/> No <input type="radio"/> Yes If Yes, indicate type:</p> <p>Number of Pilots: Fuel Rate per pilot (at 70 °F & 14.7 psia): SCFM</p> <p>Fuel Usage: <input type="radio"/> Cubic Feet Per Hour (ft³/hr) <input type="radio"/> Gallons/Hour (gal/hr)</p> <table border="1"><tr><td>Maximum</td><td>Minimum</td><td>Average</td></tr><tr><td></td><td></td><td></td></tr></table>		Maximum	Minimum	Average									
Maximum	Minimum	Average												

Form 400-E-2c**Gaseous Emission Control Form
Flare**


This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section C - Waste Gas Stream Characteristics

Brief Description of Process	Describe equipment vented to this Flare. Also describe the type of ignition system and its method of operation. Provide an explanation of the control system for steam flow and rate and other operating variables. Please supply an assembly drawing, dimensioned to scale, to show clearly the operation of the flare system. Show interior dimensions and features of the equipment necessary to calculate its performance.				
	The RNG plant's product gas will be low VOC after having been treated by the membrane CO2 removal process pressure swing adsorption (PSA) system and activated carbon. It will also at all times be virtually HAPs and H2S free. Details can be found in the attached application.				
Waste Gas Stream		Flow Rate (at 70 °F & 14.7 psia) (scfm)			
	Material	Maximum	Minimum	Average	BTU Rating
	Off-Spec Natural Gas	3000	74		77,800,000
Instrumentation	Describe instrumentation for measuring temperature, pressure drop and other operating parameter (attach description, if necessary):				
	The flare will be equipped with pressure transmitters and thermocouples, as well as a flow meter. The flow and temperature will be recorded continuously. See attached application for details.				
Operating Schedule	Normal:	2 hours/day	7 days/week	52 weeks/yr	The flare will not operate at maximum operating scenario concurrently.
	Maximum:	24 hours/day	7 days/week	52 weeks/yr	

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info	Signature: 	Date: 12/14/2023	Name: Maria Bowen
	Title: Manager Project	Company Name: SCS Engineers	Phone #: (619) 455-9518 Fax #: (562) 492-9292
Contact Info	Name: Nevin Edwards	Phone #: (724) 766-8388	Fax #:
	Title: Air Permitting Mgr.	Company Name: Archaea Energy	Email: nedwards@archaea.energy

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.

Check here if you claim that this form or its attachments contain confidential trade secret information. ☐



South Coast Air Quality Management District

Form 400-PS**Plot Plan And Stack Information Form**

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Form 400A and Form 400-CEQA.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (909) 396-3385
www.aqmd.gov**Section A - Operator Information****Facility Name** (Business Name of Operator To Appear On The Permit):**Valid AQMD Facility ID** (Available On Permit Or Invoice Issued By AQMD):

Biofuels Coyote Canyon Biogas, LLC

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site):

20661 Newport Coast Drive, Newport Beach, California, 92657

☒ **Fixed Location** ☐ **Various Locations****Section B - Location Data**

Plot Plan	Please attach a site map for the project with distances and scales. Identify and locate the proposed equipment on the map. A copy of the appropriate Thomas Brothers page, a web-based map, or a sketch that shows the major streets and location of the equipment is acceptable.
Location of Schools Nearby	<p>Is the facility located within a 1/4 mile radius (1,320 feet) of the outer boundary of a school? <input type="radio"/> Yes <input checked="" type="radio"/> No</p> <p>If yes, please provide name(s) of school(s) below:</p> <p>School Name: _____ School Name: _____</p> <p>School Address: _____ School Address: _____</p> <p>Distance from stack or equipment vent to the outer boundary of the school: _____ feet Distance from stack or equipment vent to the outer boundary of the school: _____ feet</p> <p>CA Health & Safety Code 42301.9: "School" means any public or private school used for purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in private homes.</p>
Population Density	<input checked="" type="radio"/> Urban <input type="radio"/> Rural (<50% of land within 3 km radius accounted for by urban land use categories, i.e., multi-family dwelling or industrial.)
Zoning Classification	<input checked="" type="radio"/> Mixed Use Residential Commercial Zone (M-U) <input type="radio"/> Service and Professional Zone (C-S) <input type="radio"/> Medium Commercial (C-3) <input type="radio"/> Heavy Commercial (C-4) <input type="radio"/> Commercial Manufacturing (C-M)

Section C - Emission Release Parameters - Stacks, Vents


Stack Data	<p>Stack Height: 40.00 feet (above ground level) What is the height of the closest building nearest the stack? 10 feet</p> <p>Stack Inside Diameter: 12.00 inches Stack Flow: 24,992 acfm Stack Temperature: 1,600 °F</p> <p>Rain Cap Present: <input checked="" type="radio"/> Yes <input type="radio"/> No Stack Orientation: <input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal</p> <p>If the stack height is less than 2.5 times the closest building height (H), please provide information on any building within 5xH distance from the stack (attach additional sheet if necessary):</p> <p>Building #/Name: _____ Building #/Name: _____</p> <p>Building Height: _____ feet (above ground level) Building Height: _____ feet (above ground level)</p> <p>Building Width: _____ feet Building Width: _____ feet</p> <p>Building Length: _____ feet Building Length: _____ feet</p>
Receptor Distance From Equipment Stack or Roof Vents/Openings	<p>Distance to nearest residence or sensitive receptor*: 1,394 feet</p> <p>Distance to nearest business: 1,804 feet</p>
Building Information	<p>Are the emissions released from vents and/or openings from a building? <input type="radio"/> Yes <input checked="" type="radio"/> No</p> <p>If yes, please provide:</p> <p>Building #/Name: _____ Building Width: _____ feet</p> <p>Building Height: _____ feet (above ground level) Building Length: _____ feet</p>

*AQMD Rule 1470 defines SENSITIVE RECEPTOR as meaning any residence including private homes, condominiums, apartments, and living quarters, schools as defined under paragraph (b)(57), preschools, daycare centers and health facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care hospitals, hospices, prisons, and dormitories or similar live-in housing.

Form 400-PS

Plot Plan And Stack Information Form

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Form 400A and Form 400-CEQA.

Section D - Authorization/Signature			
I hereby certify that all information contained herein and information submitted with this application is true and correct.			
Signature of Preparer: 	Title of Preparer: Project Manager	Preparer's Phone #: (619) 455-9518 Preparer's Email: mbowen@scsengineers.com	
Contact Person: Nevin Edwards	Contact's Phone#: (726) 766-8388	Date Signed: 12/14/2023	
Contact's Email: nedwards@archaea.energy	Contact's Fax#:		

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.

Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

Receptor Map

Flare Sensitive Receptor Distances
Biofuels Coyote Canyon Biogas

Legend

- Facility Line
- Flare to Nearest Residence - 1,377 ft
- Flare to Non-Residential - 1,848 ft
- Flare to School - 1,794 ft (0.34 miles)
- Planned Flare Location



H₂S Scrubber System



South Coast Air Quality Management District

Form 400-A**Application Form for Permit or Plan Approval**

List only one piece of equipment or process per form.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (909) 396-3385
www.aqmd.gov**Section A - Operator Information**

1. Facility Name (Business Name of Operator to Appear on the Permit):

Biofuels Coyote Canyon Biogas, LLC

2. Valid AQMD Facility ID (Available On
Permit Or Invoice Issued By AQMD):

3. Owner's Business Name (If different from Business Name of Operator):

Section B - Equipment Location Address4. Equipment Location Is: ☒ Fixed Location ☐ Various Location
(For equipment operated at various locations, provide address of initial site.)

20661 Newport Coast Drive

Street Address

Newport Beach, CA 92657

City Zip

Nevin Edwards Air Permitting Manager

Contact Name

Title

(724) 766-8388

Phone #

Ext.

Fax #

E-Mail: nedwards@archaea.energy

Section C - Permit Mailing Address

5. Permit and Correspondence Information:

☐ Check here if same as equipment location address

201 Helios Way, Floor 6

Address

Houston, TX 77079

City State Zip

Derek Kramer Air Permitting Manager

Contact Name

Title

(380) 900-2739

Phone #

Ext.

Fax #

E-Mail: dkramer@archaea.energy

Section D - Application Type6. The Facility Is: ☒ Not In RECLAIM or Title V ☐ In RECLAIM ☐ In Title V ☐ In RECLAIM & Title V Programs

7. Reason for Submitting Application (Select only ONE):

7a. New Equipment or Process Application:

- ☒ New Construction (Permit to Construct)
☐ Equipment On-Site But Not Constructed or Operational
☐ Equipment Operating Without A Permit *
☐ Compliance Plan
☐ Registration/Certification
☐ Streamlined Standard Permit

7b. Facility Permits:

- ☐ Title V Application or Amendment (Refer to Title V Matrix)
☐ RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:

- ☐ Administrative Change
☐ Alteration/Modification
☐ Alteration/Modification without Prior Approval *
☐ Change of Condition
☐ Change of Condition without Prior Approval *
☐ Change of Location
☐ Change of Location without Prior Approval *
☐ Equipment Operating with an Expired/Inactive Permit *

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

**Existing or Previous
Permit/Application**If you checked any of the items in
7c., you MUST provide an existing
Permit or Application Number:

8a. Estimated Start Date of Construction (mm/dd/yyyy):

8b. Estimated End Date of Construction (mm/dd/yyyy):

8c. Estimated Start Date of Operation (mm/dd/yyyy):

9. Description of Equipment or Reason for Compliance Plan (list applicable rule):

Hydrogen Sulfide Treatment System

10. For identical equipment, how many additional
applications are being submitted with this application?
(Form 400-A required for each equipment / process)

11. Are you a Small Business as per AQMD's Rule 102 definition?

(10 employees or less and total gross receipts are
\$500,000 or less OR a not-for-profit training center)☒ No ☐ Yes12. Has a Notice of Violation (NOV) or a Notice to
Comply (NC) been issued for this equipment?
If Yes, provide NOV/NC#:☒ No ☐ Yes**Section E - Facility Business Information**

13. What type of business is being conducted at this equipment location?

Renewable Natural Gas Plant

14. What is your business primary NAICS Code?

(North American Industrial Classification System)

221117

15. Are there other facilities in the SCAQMD
jurisdiction operated by the same operator?☒ No ☐ Yes16. Are there any schools (K-12) within
1000 feet of the facility property line?☒ No ☐ Yes**Section F - Authorization/Signature**

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. Signature of Responsible Official:

18. Title of Responsible Official:

Chief Operating Officer

19. I wish to review the permit prior to issuance.

(This may cause a delay in the
application process.)☐ No
☒ Yes

20. Print Name:

Derek Kramer

21. Date:

22. Do you claim confidentiality of
data? (If Yes, see instructions.)☒ No ☐ Yes

23. Check List:

☒ Authorized Signature/Date☒ Form 400-CEQA☒ Supplemental Form(s) (ie., Form 400-E-xx)☒ Fees Enclosed

AQMD USE ONLY		APPLICATION TRACKING #		CHECK #		AMOUNT RECEIVED		PAYMENT TRACKING #		VALIDATION	
DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE		TEAM	ENGINEER	REASON/ACTION TAKEN	



The SCAQMD is required by state law, the California Environmental Quality Act (CEQA), to review discretionary permit project applications for potential air quality and other environmental impacts. This form is a screening tool to assist the SCAQMD in clarifying whether or not the project ¹ has the potential to generate significant adverse environmental impacts that might require preparation of a CEQA document [CEQA Guidelines § 15060(a)]. Form 400-CEQA and the instructions for guidance on completing this form are available at <http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms> or <http://www.aqmd.gov/home/permits/permit-application-forms>. For each Form 400-A application, also complete and submit one Form 400-CEQA. If submitting multiple Form 400-A applications for the same project at the same time, only one Form 400-CEQA is necessary for the entire project. If you need assistance completing this form, contact Permit Services at (909) 396-3385.

Section A – Facility Information**1. Facility Name** (Business Name of Operator to Appear on the Permit):

Biofuels Coyote Canyon Biogas, LLC

2. SCAQMD Facility ID:**3. Project Description:**

Hydrogen Sulfide Treatment System and associated equipment

Section B – Review For Exemption From Further CEQA Action

Check "Yes" or "No" as applicable. If "Yes" is checked for any question in Section B, skip Section C and proceed to page 2 and complete Section D – Signatures.

	Yes	No	Is this application for:
1.	<input type="radio"/>	<input checked="" type="radio"/>	A request for a change of operator only (without equipment or process change modifications)?
2.	<input type="radio"/>	<input checked="" type="radio"/>	A functionally identical permit unit replacement with no increase in equipment unit rating or emissions?
3.	<input type="radio"/>	<input checked="" type="radio"/>	A change of daily VOC permit limit to a monthly VOC permit limit?
4.	<input type="radio"/>	<input checked="" type="radio"/>	Equipment damaged as a result of a disaster during state of emergency?
5.	<input type="radio"/>	<input checked="" type="radio"/>	A Title V (e.g., SCAQMD Regulation XXX) permit renewal without equipment or process change modifications?
6.	<input type="radio"/>	<input checked="" type="radio"/>	A Title V administrative permit revision?
7.	<input type="radio"/>	<input checked="" type="radio"/>	The conversion of an existing permit into an initial Title V permit?

Section C – Review of Impacts Which May Trigger Further CEQA Review

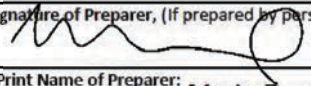
Check "Yes" or "No" as applicable. To avoid delays in processing your application(s), explain all "Yes" responses on a separate sheet and attach it to this form.

	Yes	No	
1.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project specifically evaluated in a previously certified or adopted CEQA document? If "Yes" is checked, attach a copy of the signed Notice of Determination to this form.
2.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project specifically exempted from CEQA by another entity (e.g., city or agency)? If "Yes" is checked, attach a copy of the signed Notice of Exemption or other documentation from the entity to this form.
3.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project part of a larger project? If "Yes" is checked, attach a separate sheet to briefly describe the larger project.
4.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project increase the QUANTITY of hazardous materials stored aboveground onsite or transported by mobile vehicle to or from the site by greater than or equal to the amounts associated with each compound listed on Form 400-CEQA, Table 1 - Regulated Substances List and Threshold Quantities for Accidental Release Prevention [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms]? If "Yes" is checked, attach a separate sheet to identify each hazardous material and corresponding quantity to be transported, stored, or used.
5.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project emit any air toxic listed on Form 400-CEQA, Table 2 - Other Air Toxics and Their Screening Levels [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms] ² ? If "Yes" is checked, attach a separate sheet to identify each air toxic and corresponding quantity to be emitted.
6.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project require any demolition, excavation, and/or grading construction activities that encompass an area exceeding 20,000 square feet?

¹ A "project" means the whole of an action which has a potential for resulting in physical change to the environment, including construction activities, clearing or grading of land, improvements to existing structures, and activities or equipment involving the issuance of a permit. For example, a project might include installation of a new, or modification of an existing internal combustion engine, dry cleaning facility, boiler, gas turbine, spray coating booth, solvent cleaning tank, etc.

² Form 400-CEQA, Table 2 – Other Air Toxics and Their Screening Levels, contains a list of air toxics that either do not have a cancer potency (CP) or reference exposure level (REL) approved by the Office of Environmental Health Hazards Assessment (OEHA) or have a combination of OEHA-approved and non-approved CPs or RELs.

Section C – Review of Impacts Which May Trigger Further CEQA (concluded)			
	Yes	No	
7.	<input checked="" type="radio"/>	<input type="radio"/>	Will the project utilize a boiler, engine, or other combustion equipment that uses fuel (e.g., gasoline, diesel, natural gas, liquefied petroleum gas (LPG), or landfill gas)? If "Yes" is checked, then the applicant will need to calculate the amount of GHGs from fuel use via on the Greenhouse Gas (GHG) online estimator [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms], and attaching the printout or by conducting hand calculations and providing the documentation. Refer to the Instructions for Form 400-CEQA for guidance.
8.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project utilize other types of equipment not addressed in Question 7 that require the use of, or will generate, any chemicals listed on Form 400-CEQA, Table 3 - Greenhouse Gases [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms]? If "Yes" is checked, attach a separate sheet to identify each equipment unit, the chemical name(s), and the quantity of each chemical identified.
9.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project include the open outdoor storage of dry bulk solid materials that could generate dust? If "Yes" is checked, include a plot plan with the application package.
10.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in or make worse noticeable off-site odors from activities that may not be subject to SCAQMD permit requirements? For example, landfills, materials recovery/recycling facilities (MRF), and compost materials or other types of greenwaste (e.g., lawn clippings, tree trimmings, etc.) have the potential to generate odor complaints subject to SCAQMD Rule 402 – Nuisance.
11.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project cause an increase of emissions from marine vessels, trains and/or airplanes?
12.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project increase demand for potable water at the facility by more than 262,820 gallons per day? The following examples identify some, but not all, types of projects that may result in a "Yes" answer to this question: 1) a project that generates steam; 2) a project that uses water as part of operating air pollution control equipment; 3) a project that requires water as part of the production process; 4) a project that requires a new, or the expansion of an existing, sewage treatment facility, new water lines, sewage lines, sewage hook-ups etc.; 5) a project where the water demand exceeds the capacity of the local water purveyor to supply sufficient water for the project; 6) a project that requires new or the expansion of existing, water supply and conveyance facilities; and, 7) a project that requires water to hydrotest pipelines, storage tanks etc. for structural integrity.
13.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create an increase in the mass inflow of effluents to a public wastewater treatment facility that would require a new, or revision to an existing, National Pollutant Discharge Elimination System (NPDES) or other related permit at the facility?
14.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in the need for more than 350 new employees?
15.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in an increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round-trips per day?
16.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in an increase in customer traffic by more than 700 visits per day?
17.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in temporary or permanent noise or vibration in excess of what is allowed by the applicable local noise ordinance?
18.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create a permanent need for new or additional solid waste disposal? Check "No" if the projected potential amount of solid waste to be generated by the project is less than five tons per day.
19.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create a permanent need for new or additional hazardous waste disposal? Check "No" if the projected potential amount of hazardous wastes to be generated by the project is less than 42 cubic yards per day (or equivalent in pounds).
20.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project include equipment that after installation or modification will change the visual character of the site and its surroundings or block views?
21.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project have equipment that will create a new source of external lighting that will be visible at the property line?

Section D – SIGNATURES			
I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. I UNDERSTAND THAT THIS FORM IS A SCREENING TOOL AND THAT THE SCAQMD RESERVES THE RIGHT TO CONSIDER OTHER PERTINENT INFORMATION IN DETERMINING CEQA APPLICABILITY.			
1. Signature of Responsible Official of Firm:		2. Title of Responsible Official of Firm: Chief Operating Officer	
3. Print Name of Responsible Official of Firm: Derek Kramer		4. Date Signed:	
5. Phone # of Responsible Official of Firm: (380) 900-2739	6. Fax # of Responsible Official of Firm:	7. Email of Responsible Official of Firm: dkramer@archaea.energy	
8. Signature of Preparer, (if prepared by person other than responsible official of firm): 		9. Title of Preparer: Project Manager	
10. Print Name of Preparer: Maria Bowen		11. Date Signed: 12/14/2023	
12. Phone # of Preparer: (619) 455-9518	13. Fax # of Preparer:	14. Email of Preparer: mbowen@scsengineers.com	

THIS CONCLUDES FORM 400-CEQA. INCLUDE THIS FORM AND ANY ATTACHMENTS WITH FORM 400-A.



South Coast Air Quality Management District

Form 400-E-2b**Gaseous Emission Control Form
Adsorber (Carbon, Others)**

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (909) 396-3385
www.aqmd.gov**Section A - Operator Information**

Facility Name (Business Name of Operator That Appears On Permit):

Biofuels Coyote Canyon Biogas, LLC

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD):

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site):

20661 Newport Coast Drive, Newport Beach, California, 92657

☒ Fixed Location ☐ Various Locations**Section B - Equipment Description**

Equipment	Manufacturer: Guild Associates, Inc.	Model No.:
Type	<input type="radio"/> Fixed Regenerative Beds <input type="radio"/> Traveling Bed Adsorbers/Rotary Concentrators <input checked="" type="radio"/> Disposable/Rechargeable Canisters <input type="radio"/> Fluidized Adsorbers Number of beds: <u>1</u> Capacity of each bed: <u>20000</u> pounds of adsorbent Arrangement, if 2 or more beds: <input type="radio"/> In Series <input type="radio"/> In Parallel	
Adsorbent Material	<input checked="" type="radio"/> Granulated Activated Carbon <input type="radio"/> Synthetic Adsorbent Trade name: _____ <input type="radio"/> Zeolite, Molecular Sieve <input type="radio"/> Others: _____ Adsorbent Capacity: <u>1.4</u> (pound of vapor/pound of adsorbent) Depth of Adsorbent in Bed: _____ ft. _____ in.	
Adsorbent Vessel Dimensions	Diameter: <u>8</u> ft _____ in. Width: _____ ft _____ in. Height: <u>15</u> ft _____ in. Or Length: _____ ft _____ in. Height: _____ ft _____ in.	

Section C - Gas Stream Characteristics

Brief Description Of Process	Please supply an assembly drawing, dimensioned to scale, to show clearly the operation of the adsorber including all equipment vented. Describe equipment vented to this adsorber and procedure in disposing of spent adsorbent. <div>See attached PFD.</div>		
Gas Stream	Inlet Flow Rate: <u>3000</u> SCFM Temperature: <u>100</u> °F Pressure: <u>15.7</u> psia Does gas stream contain Rule 1401 toxic air contaminants? <input checked="" type="radio"/> No <input type="radio"/> Yes If Yes, list below: Are Ketones or Aldehydes present? <input checked="" type="radio"/> No <input type="radio"/> Yes Relative humidity: _____ % Cycle time for adsorption: _____ hours Lower explosive limit of mixture: _____ ppmv or _____ % volume		

Form 400-E-2b**Gaseous Emission Control Form
Adsorber (Carbon, Others)**

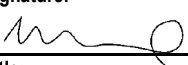
This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section C - Gas Stream Characteristics (cont.)

Regeneration	Is the adsorbent material regenerated on-site? <input type="radio"/> Yes <input checked="" type="radio"/> No
	On-site Regeneration by:
	<input type="radio"/> Steam <input type="radio"/> Air <input type="radio"/> Inert gas <input type="radio"/> Process gas <input type="radio"/> Other _____
	Cycle time for regeneration: _____ hours
Instrumentation	Describe regeneration procedure and how emissions are controlled during regeneration. If Ketones or Aldehydes are present in the inlet stream, what is the procedure to prevent adsorbent bed fires (Attach description, if necessary).
Operating Schedule	Describe instrumentation for measuring temperature, pressure drop, VOC monitoring, audible alarms, and other operating parameters.
	 The inlet piping of each treatment vessel will include manual pressure measurement sample ports, visually-read temperature gauges, and locations to sample for hydrogen sulfide concentration and other parameters, as necessary. The outlet piping of each treatment vessel will include manual pressure measurement sample ports, visually-read temperature gauges, and locations to sample for hydrogen sulfide concentration and other parameters, as necessary.
Operating Schedule	Normal: <u>24</u> hours/day <u>7</u> days/week <u>52</u> weeks/yr
	Maximum: <u>24</u> hours/day <u>7</u> days/week <u>52</u> weeks/yr

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info	Signature: 	Date: <u>12/14/2023</u>	Name: <u>Maria Bowen</u>
	Title: _____	Company Name: _____	Phone #: <u>(619) 455-9518</u> Fax #: <u>(562) 492-9292</u>
	<u>Manager Project</u>	<u>SCS Engineers</u>	Email: <u>mbowen@scsengineers.com</u>
Contact Info	Name: <u>Nevin Edwards</u>	Phone #: <u>(724) 766-8388</u> Fax #: _____	
	Title: _____	Company Name: _____	Email: _____
	<u>Air Permitting Mgr</u>	<u>Archaea Energy</u>	<u>nedwards@archaea.energy</u>

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

Condensate Tanks



South Coast Air Quality Management District

Form 400-A**Application Form for Permit or Plan Approval**

List only one piece of equipment or process per form.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information**1. Facility Name** (Business Name of Operator to Appear on the Permit):

Biofuels Coyote Canyon Biogas, LLC

2. Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD):**3. Owner's Business Name** (If different from Business Name of Operator):**Section B - Equipment Location Address****4. Equipment Location Is:** ☒ **Fixed Location** ☐ **Various Location**
(For equipment operated at various locations, provide address of initial site.)

20661 Newport Coast Drive

Street Address

Newport Beach, CA 92377

City Zip

Nevin Edwards Air Permitting Manager

Contact Name

Title

(724) 766-8388

Phone #

Ext.

Fax #

E-Mail: nedwards@archaea.energy

Section C - Permit Mailing Address**5. Permit and Correspondence Information:**☐ Check here if same as equipment location address

201 Helios Way, Floor 6

Address

Houston, TX 77079

City State Zip

Derek Kramer Chief Operating Officer

Contact Name

Title

(380) 900-2739

Phone #

Ext.

Fax #

E-Mail: dkramer@archaea.energy

Section D - Application Type**6. The Facility Is:** ☒ **Not In RECLAIM or Title V** ☐ **In RECLAIM** ☐ **In Title V** ☐ **In RECLAIM & Title V Programs****7. Reason for Submitting Application** (Select only ONE):**7a. New Equipment or Process Application:**

- ☒ New Construction (Permit to Construct)
☐ Equipment On-Site But Not Constructed or Operational
☐ Equipment Operating Without A Permit *
☐ Compliance Plan
☐ Registration/Certification
☐ Streamlined Standard Permit

7b. Facility Permits:

- ☐ Title V Application or Amendment (Refer to Title V Matrix)
☐ RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:

- ☐ Administrative Change
☐ Alteration/Modification
☐ Alteration/Modification without Prior Approval *
☐ Change of Condition
☐ Change of Condition without Prior Approval *
☐ Change of Location
☐ Change of Location without Prior Approval *
☐ Equipment Operating with an Expired/Inactive Permit *

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

Existing or Previous Permit/Application

If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

8a. Estimated Start Date of Construction (mm/dd/yyyy):**8b. Estimated End Date of Construction** (mm/dd/yyyy):**8c. Estimated Start Date of Operation** (mm/dd/yyyy):**9. Description of Equipment or Reason for Compliance Plan** (list applicable rule):

Condensate Storage Tank 1 (a)

10. For identical equipment, how many additional applications are being submitted with this application?
(Form 400-A required for each equipment / process)**11. Are you a Small Business as per AQMD's Rule 102 definition?**

(10 employees or less and total gross receipts are \$500,000 or less OR a not-for-profit training center)

☒ No ☐ Yes**12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment?**
If Yes, provide NOV/NC#:☒ No ☐ Yes**Section E - Facility Business Information****13. What type of business is being conducted at this equipment location?**

Renewable Natural Gas Plant

14. What is your business primary NAICS Code?

(North American Industrial Classification System)

221210

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator?☒ No ☐ Yes**16. Are there any schools (K-12) within 1000 feet of the facility property line?**☒ No ☐ Yes**Section F - Authorization/Signature**

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. Signature of Responsible Official:**18. Title of Responsible Official:**

Chief Operating Officer

19. I wish to review the permit prior to issuance.

(This may cause a delay in the application process.)

☐ No
☒ Yes**20. Print Name:**

Derek Kramer

21. Date:**22. Do you claim confidentiality of data?** (If Yes, see instructions.)☒ No ☐ Yes**23. Check List:**☒ **Authorized Signature/Date**☒ **Form 400-CEQA**☒ **Supplemental Form(s) (ie., Form 400-E-xx)**☒ **Fees Enclosed**

AQMD USE ONLY		APPLICATION TRACKING #		CHECK #		AMOUNT RECEIVED		PAYMENT TRACKING #		VALIDATION	
DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE		TEAM	ENGINEER	REASON/ACTION TAKEN	



The SCAQMD is required by state law, the California Environmental Quality Act (CEQA), to review discretionary permit project applications for potential air quality and other environmental impacts. This form is a screening tool to assist the SCAQMD in clarifying whether or not the project ¹ has the potential to generate significant adverse environmental impacts that might require preparation of a CEQA document [CEQA Guidelines § 15060(a)]. Form 400-CEQA and the instructions for guidance on completing this form are available at <http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms> or <http://www.aqmd.gov/home/permits/permit-application-forms>. For each Form 400-A application, also complete and submit one Form 400-CEQA. If submitting multiple Form 400-A applications for the same project at the same time, only one Form 400-CEQA is necessary for the entire project. If you need assistance completing this form, contact Permit Services at (909) 396-3385.

Section A – Facility Information**1. Facility Name** (Business Name of Operator to Appear on the Permit):

Biofuels Coyote Canyon Biogas, LLC

2. SCAQMD Facility ID:**3. Project Description:**

Underground Condensate Storage Tank 1

Section B – Review For Exemption From Further CEQA Action

Check "Yes" or "No" as applicable. If "Yes" is checked for any question in Section B, skip Section C and proceed to page 2 and complete Section D - Signatures.

	Yes	No	Is this application for:
1.	<input type="radio"/>	<input checked="" type="radio"/>	A request for a change of operator only (without equipment or process change modifications)?
2.	<input type="radio"/>	<input checked="" type="radio"/>	A functionally identical permit unit replacement with no increase in equipment unit rating or emissions?
3.	<input type="radio"/>	<input checked="" type="radio"/>	A change of daily VOC permit limit to a monthly VOC permit limit?
4.	<input type="radio"/>	<input checked="" type="radio"/>	Equipment damaged as a result of a disaster during state of emergency?
5.	<input type="radio"/>	<input checked="" type="radio"/>	A Title V (e.g., SCAQMD Regulation XXX) permit renewal without equipment or process change modifications?
6.	<input type="radio"/>	<input checked="" type="radio"/>	A Title V administrative permit revision?
7.	<input type="radio"/>	<input checked="" type="radio"/>	The conversion of an existing permit into an initial Title V permit?

Section C – Review of Impacts Which May Trigger Further CEQA Review

Check "Yes" or "No" as applicable. To avoid delays in processing your application(s), explain all "Yes" responses on a separate sheet and attach it to this form.

	Yes	No	
1.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project specifically evaluated in a previously certified or adopted CEQA document? If "Yes" is checked, attach a copy of the signed Notice of Determination to this form.
2.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project specifically exempted from CEQA by another entity (e.g., city or agency)? If "Yes" is checked, attach a copy of the signed Notice of Exemption or other documentation from the entity to this form.
3.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project part of a larger project? If "Yes" is checked, attach a separate sheet to briefly describe the larger project.
4.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project increase the QUANTITY of hazardous materials stored aboveground onsite or transported by mobile vehicle to or from the site by greater than or equal to the amounts associated with each compound listed on Form 400-CEQA, Table 1 - Regulated Substances List and Threshold Quantities for Accidental Release Prevention [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms]? If "Yes" is checked, attach a separate sheet to identify each hazardous material and corresponding quantity to be transported, stored, or used.
5.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project emit any air toxic listed on Form 400-CEQA, Table 2 - Other Air Toxics and Their Screening Levels [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms]? ² If "Yes" is checked, attach a separate sheet to identify each air toxic and corresponding quantity to be emitted.
6.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project require any demolition, excavation, and/or grading construction activities that encompass an area exceeding 20,000 square feet?

¹ A "project" means the whole of an action which has a potential for resulting in physical change to the environment, including construction activities, clearing or grading of land, improvements to existing structures, and activities or equipment involving the issuance of a permit. For example, a project might include installation of a new, or modification of an existing internal combustion engine, dry cleaning facility, boiler, gas turbine, spray coating booth, solvent cleaning tank, etc.

² Form 400-CEQA, Table 2 – Other Air Toxics and Their Screening Levels, contains a list of air toxics that either do not have a cancer potency (CP) or reference exposure level (REL) approved by the Office of Environmental Health Hazards Assessment (OEHA) or have a combination of OEHA-approved and non-approved CPs or RELs.

Section C – Review of Impacts Which May Trigger Further CEQA (concluded)			
	Yes	No	
7.	<input checked="" type="radio"/>	<input type="radio"/>	Will the project utilize a boiler, engine, or other combustion equipment that uses fuel (e.g., gasoline, diesel, natural gas, liquefied petroleum gas (LPG), or landfill gas)? If "Yes" is checked, then the applicant will need to calculate the amount of GHGs from fuel use via on the Greenhouse Gas (GHG) online estimator [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms], and attaching the printout or by conducting hand calculations and providing the documentation. Refer to the Instructions for Form 400-CEQA for guidance.
8.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project utilize other types of equipment not addressed in Question 7 that require the use of, or will generate, any chemicals listed on Form 400-CEQA, Table 3 - Greenhouse Gases [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms]? If "Yes" is checked, attach a separate sheet to identify each equipment unit, the chemical name(s), and the quantity of each chemical identified.
9.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project include the open outdoor storage of dry bulk solid materials that could generate dust? If "Yes" is checked, include a plot plan with the application package.
10.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in or make worse noticeable off-site odors from activities that may not be subject to SCAQMD permit requirements? For example, landfills, materials recovery/recycling facilities (MRF), and compost materials or other types of greenwaste (e.g., lawn clippings, tree trimmings, etc.) have the potential to generate odor complaints subject to SCAQMD Rule 402 – Nuisance.
11.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project cause an increase of emissions from marine vessels, trains and/or airplanes?
12.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project increase demand for potable water at the facility by more than 262,820 gallons per day? The following examples identify some, but not all, types of projects that may result in a "Yes" answer to this question: 1) a project that generates steam; 2) a project that uses water as part of operating air pollution control equipment; 3) a project that requires water as part of the production process; 4) a project that requires a new, or the expansion of an existing, sewage treatment facility, new water lines, sewage lines, sewage hook-ups etc.; 5) a project where the water demand exceeds the capacity of the local water purveyor to supply sufficient water for the project; 6) a project that requires new or the expansion of existing, water supply and conveyance facilities; and, 7) a project that requires water to hydrotest pipelines, storage tanks etc. for structural integrity.
13.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create an increase in the mass inflow of effluents to a public wastewater treatment facility that would require a new, or revision to an existing, National Pollutant Discharge Elimination System (NPDES) or other related permit at the facility?
14.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in the need for more than 350 new employees?
15.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in an increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round-trips per day?
16.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in an increase in customer traffic by more than 700 visits per day?
17.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in temporary or permanent noise or vibration in excess of what is allowed by the applicable local noise ordinance?
18.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create a permanent need for new or additional solid waste disposal? Check "No" if the projected potential amount of solid waste to be generated by the project is less than five tons per day.
19.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create a permanent need for new or additional hazardous waste disposal? Check "No" if the projected potential amount of hazardous wastes to be generated by the project is less than 42 cubic yards per day (or equivalent in pounds).
20.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project include equipment that after installation or modification will change the visual character of the site and its surroundings or block views?
21.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project have equipment that will create a new source of external lighting that will be visible at the property line?

Section D – SIGNATURES

I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. I UNDERSTAND THAT THIS FORM IS A SCREENING TOOL AND THAT THE SCAQMD RESERVES THE RIGHT TO CONSIDER OTHER PERTINENT INFORMATION IN DETERMINING CEQA APPLICABILITY.

1. Signature of Responsible Official of Firm:		2. Title of Responsible Official of Firm: Chief Operating Officer	
3. Print Name of Responsible Official of Firm: Derek Kramer		4. Date Signed:	
5. Phone # of Responsible Official of Firm: (380) 900-2739	6. Fax # of Responsible Official of Firm:	7. Email of Responsible Official of Firm: dkramer@archaea.energy	
8. Signature of Preparer, (if prepared by person other than responsible official of firm): 		9. Title of Preparer: Project Manager	
10. Print Name of Preparer: Maria Bowen		11. Date Signed: 12/14/2023	
12. Phone # of Preparer: (619) 455-9518	13. Fax # of Preparer:	14. Email of Preparer: mbowen@scsengineers.com	

THIS CONCLUDES FORM 400-CEQA. INCLUDE THIS FORM AND ANY ATTACHMENTS WITH FORM 400-A.



South Coast Air Quality Management District

Form 400-A**Application Form for Permit or Plan Approval**

List only one piece of equipment or process per form.

Mail To:

SCAQMD

P.O. Box 4944

Diamond Bar, CA 91765-0944

Tel: (909) 396-3385

www.aqmd.gov

Section A - Operator Information**1. Facility Name** (Business Name of Operator to Appear on the Permit):

Biofuels Coyote Canyon Biogas, LLC

2. Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD):**3. Owner's Business Name** (If different from Business Name of Operator):**Section B - Equipment Location Address****4. Equipment Location Is:** ☒ **Fixed Location** ☐ **Various Location**
(For equipment operated at various locations, provide address of initial site.)

20661 Newport Coast Drive

Street Address

Newport Beach, CA 92377

City

Zip

Nevin Edwards Air Permitting Manager

Contact Name

Title

(724) 766-8388

Phone #

Ext.

Fax #

E-Mail: nedwards@archaea.energy

Section C - Permit Mailing Address**5. Permit and Correspondence Information:**☐ Check here if same as equipment location address

201 Helios Way, Floor 6

Address

Houston, TX 77079

City

State

Zip

Derek Kramer Chief Operating Officer

Contact Name

Title

(380) 900-2739

Phone #

Ext.

Fax #

E-Mail: dkramer@archaea.energy

Section D - Application Type**6. The Facility Is:** ☒ **Not In RECLAIM or Title V** ☐ **In RECLAIM** ☐ **In Title V** ☐ **In RECLAIM & Title V Programs****7. Reason for Submitting Application** (Select only ONE):**7a. New Equipment or Process Application:**

- ☒ New Construction (Permit to Construct)
☐ Equipment On-Site But Not Constructed or Operational
☐ Equipment Operating Without A Permit *
☐ Compliance Plan
☐ Registration/Certification
☐ Streamlined Standard Permit

7b. Facility Permits:

- ☐ Title V Application or Amendment (Refer to Title V Matrix)
☐ RECLAIM Facility Permit Amendment

7c. Equipment or Process with an Existing/Previous Application or Permit:

- ☐ Administrative Change
☐ Alteration/Modification
☐ Alteration/Modification without Prior Approval *
☐ Change of Condition
☐ Change of Condition without Prior Approval *
☐ Change of Location
☐ Change of Location without Prior Approval *
☐ Equipment Operating with an Expired/Inactive Permit *

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

Existing or Previous Permit/Application

If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

8a. Estimated Start Date of Construction (mm/dd/yyyy):**8b. Estimated End Date of Construction** (mm/dd/yyyy):**8c. Estimated Start Date of Operation** (mm/dd/yyyy):**9. Description of Equipment or Reason for Compliance Plan** (list applicable rule):

Condensate Storage Tank 2 (b)

10. For identical equipment, how many additional applications are being submitted with this application?
(Form 400-A required for each equipment / process)**11. Are you a Small Business as per AQMD's Rule 102 definition?**

(10 employees or less and total gross receipts are \$500,000 or less OR a not-for-profit training center)

☒ No ☐ Yes**12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment?**
If Yes, provide NOV/NC#:☒ No ☐ Yes**Section E - Facility Business Information****13. What type of business is being conducted at this equipment location?**

Renewable Natural Gas Plant

14. What is your business primary NAICS Code?

(North American Industrial Classification System)

221210

15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator?☒ No ☐ Yes**16. Are there any schools (K-12) within 1000 feet of the facility property line?**☒ No ☐ Yes**Section F - Authorization/Signature**

I hereby certify that all information contained herein and information submitted with this application are true and correct.

17. Signature of Responsible Official:**18. Title of Responsible Official:**

Chief Operating Officer

19. I wish to review the permit prior to issuance.

(This may cause a delay in the application process.)

☐ No☒ Yes**20. Print Name:**

Derek Kramer

21. Date:**22. Do you claim confidentiality of data?** (If Yes, see instructions.)☒ No ☐ Yes**23. Check List:**☒ **Authorized Signature/Date**☒ **Form 400-CEQA**☒ **Supplemental Form(s) (ie., Form 400-E-xx)**☒ **Fees Enclosed**

AQMD USE ONLY		APPLICATION TRACKING #		CHECK #		AMOUNT RECEIVED		PAYMENT TRACKING #		VALIDATION	
DATE	APP REJ	DATE	APP REJ	CLASS I III	BASIC CONTROL	EQUIPMENT CATEGORY CODE		TEAM	ENGINEER	REASON/ACTION TAKEN	



The SCAQMD is required by state law, the California Environmental Quality Act (CEQA), to review discretionary permit project applications for potential air quality and other environmental impacts. This form is a screening tool to assist the SCAQMD in clarifying whether or not the project ¹ has the potential to generate significant adverse environmental impacts that might require preparation of a CEQA document [CEQA Guidelines § 15060(a)]. Form 400-CEQA and the instructions for guidance on completing this form are available at <http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms> or <http://www.aqmd.gov/home/permits/permit-application-forms>. For each Form 400-A application, also complete and submit one Form 400-CEQA. If submitting multiple Form 400-A applications for the same project at the same time, only one Form 400-CEQA is necessary for the entire project. If you need assistance completing this form, contact Permit Services at (909) 396-3385.

Section A – Facility Information**1. Facility Name** (Business Name of Operator to Appear on the Permit):

Biofuels Coyote Canyon Biogas, LLC

2. SCAQMD Facility ID:**3. Project Description:**

Underground Condensate Storage Tank 2

Section B – Review For Exemption From Further CEQA Action

Check "Yes" or "No" as applicable. If "Yes" is checked for any question in Section B, skip Section C and proceed to page 2 and complete Section D – Signatures.

	Yes	No	Is this application for:
1.	<input type="radio"/>	<input checked="" type="radio"/>	A request for a change of operator only (without equipment or process change modifications)?
2.	<input type="radio"/>	<input checked="" type="radio"/>	A functionally identical permit unit replacement with no increase in equipment unit rating or emissions?
3.	<input type="radio"/>	<input checked="" type="radio"/>	A change of daily VOC permit limit to a monthly VOC permit limit?
4.	<input type="radio"/>	<input checked="" type="radio"/>	Equipment damaged as a result of a disaster during state of emergency?
5.	<input type="radio"/>	<input checked="" type="radio"/>	A Title V (e.g., SCAQMD Regulation XXX) permit renewal without equipment or process change modifications?
6.	<input type="radio"/>	<input checked="" type="radio"/>	A Title V administrative permit revision?
7.	<input type="radio"/>	<input checked="" type="radio"/>	The conversion of an existing permit into an initial Title V permit?

Section C – Review of Impacts Which May Trigger Further CEQA Review

Check "Yes" or "No" as applicable. To avoid delays in processing your application(s), explain all "Yes" responses on a separate sheet and attach it to this form.

	Yes	No	
1.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project specifically evaluated in a previously certified or adopted CEQA document? If "Yes" is checked, attach a copy of the signed Notice of Determination to this form.
2.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project specifically exempted from CEQA by another entity (e.g., city or agency)? If "Yes" is checked, attach a copy of the signed Notice of Exemption or other documentation from the entity to this form.
3.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project part of a larger project? If "Yes" is checked, attach a separate sheet to briefly describe the larger project.
4.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project increase the QUANTITY of hazardous materials stored aboveground onsite or transported by mobile vehicle to or from the site by greater than or equal to the amounts associated with each compound listed on Form 400-CEQA, Table 1 - Regulated Substances List and Threshold Quantities for Accidental Release Prevention [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms]? If "Yes" is checked, attach a separate sheet to identify each hazardous material and corresponding quantity to be transported, stored, or used.
5.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project emit any air toxic listed on Form 400-CEQA, Table 2 - Other Air Toxics and Their Screening Levels [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms] ² ? If "Yes" is checked, attach a separate sheet to identify each air toxic and corresponding quantity to be emitted.
6.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project require any demolition, excavation, and/or grading construction activities that encompass an area exceeding 20,000 square feet?

¹ A "project" means the whole of an action which has a potential for resulting in physical change to the environment, including construction activities, clearing or grading of land, improvements to existing structures, and activities or equipment involving the issuance of a permit. For example, a project might include installation of a new, or modification of an existing internal combustion engine, dry cleaning facility, boiler, gas turbine, spray coating booth, solvent cleaning tank, etc.

² Form 400-CEQA, Table 2 – Other Air Toxics and Their Screening Levels, contains a list of air toxics that either do not have a cancer potency (CP) or reference exposure level (REL) approved by the Office of Environmental Health Hazards Assessment (OEHA) or have a combination of OEHA-approved and non-approved CPs or RELs.

Section C – Review of Impacts Which May Trigger Further CEQA (concluded)			
	Yes	No	
7.	<input checked="" type="radio"/>	<input type="radio"/>	Will the project utilize a boiler, engine, or other combustion equipment that uses fuel (e.g., gasoline, diesel, natural gas, liquefied petroleum gas (LPG), or landfill gas)? If "Yes" is checked, then the applicant will need to calculate the amount of GHGs from fuel use via on the Greenhouse Gas (GHG) online estimator [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms], and attaching the printout or by conducting hand calculations and providing the documentation. Refer to the Instructions for Form 400-CEQA for guidance.
8.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project utilize other types of equipment not addressed in Question 7 that require the use of, or will generate, any chemicals listed on Form 400-CEQA, Table 3 - Greenhouse Gases [http://www.aqmd.gov/home/regulations/ceqa/ceqa-permit-forms]? If "Yes" is checked, attach a separate sheet to identify each equipment unit, the chemical name(s), and the quantity of each chemical identified.
9.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project include the open outdoor storage of dry bulk solid materials that could generate dust? If "Yes" is checked, include a plot plan with the application package.
10.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in or make worse noticeable off-site odors from activities that may not be subject to SCAQMD permit requirements? For example, landfills, materials recovery/recycling facilities (MRF), and compost materials or other types of greenwaste (e.g., lawn clippings, tree trimmings, etc.) have the potential to generate odor complaints subject to SCAQMD Rule 402 – Nuisance.
11.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project cause an increase of emissions from marine vessels, trains and/or airplanes?
12.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project increase demand for potable water at the facility by more than 262,820 gallons per day? The following examples identify some, but not all, types of projects that may result in a "Yes" answer to this question: 1) a project that generates steam; 2) a project that uses water as part of operating air pollution control equipment; 3) a project that requires water as part of the production process; 4) a project that requires a new, or the expansion of an existing, sewage treatment facility, new water lines, sewage lines, sewage hook-ups etc.; 5) a project where the water demand exceeds the capacity of the local water purveyor to supply sufficient water for the project; 6) a project that requires new or the expansion of existing, water supply and conveyance facilities; and, 7) a project that requires water to hydrotest pipelines, storage tanks etc. for structural integrity.
13.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create an increase in the mass inflow of effluents to a public wastewater treatment facility that would require a new, or revision to an existing, National Pollutant Discharge Elimination System (NPDES) or other related permit at the facility?
14.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in the need for more than 350 new employees?
15.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in an increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round-trips per day?
16.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in an increase in customer traffic by more than 700 visits per day?
17.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project result in temporary or permanent noise or vibration in excess of what is allowed by the applicable local noise ordinance?
18.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create a permanent need for new or additional solid waste disposal? Check "No" if the projected potential amount of solid waste to be generated by the project is less than five tons per day.
19.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project create a permanent need for new or additional hazardous waste disposal? Check "No" if the projected potential amount of hazardous wastes to be generated by the project is less than 42 cubic yards per day (or equivalent in pounds).
20.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project include equipment that after installation or modification will change the visual character of the site and its surroundings or block views?
21.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project have equipment that will create a new source of external lighting that will be visible at the property line?

Section D – SIGNATURES

I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. I UNDERSTAND THAT THIS FORM IS A SCREENING TOOL AND THAT THE SCAQMD RESERVES THE RIGHT TO CONSIDER OTHER PERTINENT INFORMATION IN DETERMINING CEQA APPLICABILITY.

1. Signature of Responsible Official of Firm:		2. Title of Responsible Official of Firm: Chief Operating Officer	
3. Print Name of Responsible Official of Firm: Derek Kramer		4. Date Signed:	
5. Phone # of Responsible Official of Firm: (380) 900-2739	6. Fax # of Responsible Official of Firm:	7. Email of Responsible Official of Firm: dkramer@archaea.energy	
8. Signature of Preparer, (if prepared by person other than responsible official of firm): 		9. Title of Preparer: Project Manager	
10. Print Name of Preparer: Maria Bowen		11. Date Signed: 12/14/2023	
12. Phone # of Preparer: (619) 455-9518	13. Fax # of Preparer:	14. Email of Preparer: mbowen@scsengineers.com	

THIS CONCLUDES FORM 400-CEQA. INCLUDE THIS FORM AND ANY ATTACHMENTS WITH FORM 400-A.

**Form 400-E-18
Storage Tank**

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (909) 396-3385
www.aqmd.gov**Section A - Operator Information**

Facility Name (Business Name of Operator That Appears On Permit):

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD):

Biofuels Coyote Canyon Biogas, LLC

Address where the equipment will be operated (for equipment which will be moved to various locations in AQMD's jurisdiction, please list the initial location site):

20661 Newport Coast Drive, Newport Beach, California 92657

☒ Fixed Location ☐ Various Locations

Tank Type (Select ONE)	<input type="radio"/> External Floating Roof Tank (EFRT)	<input type="radio"/> Internal Floating Roof Tank (IFRT)	<input type="radio"/> Horizontal Tank (HT)
	<input checked="" type="radio"/> Vertical Fixed Roof Tank (VFRT)	<input type="radio"/> Domed External Roof Tank (DEFRT)	
Identification	Tank Identification Number: CST-01 (A)	Tank Contents/Product (include MSDS): RNG Condensate	

Section B - Tank Information

Tank Characteristics	Shell Diameter (ft.): 10	Shell Length (ft.): 10	Shell Height (ft.): 26	Turnovers Per Year: 24
	Is Tank Heated? <input type="radio"/> Yes <input checked="" type="radio"/> No	Is Tank Underground? <input type="radio"/> Yes <input checked="" type="radio"/> No	Net Throughput (gal/year): 200000	Self Support Roof: <input checked="" type="radio"/> Yes <input type="radio"/> No
	Number of Columns? 1	Effective Column Diameter: <input type="radio"/> 9" by 7" Built Up Column - 1.1	<input type="radio"/> 8" Diameter Pipe - 0.7	<input type="radio"/> Unknown - 1
	External Shell Condition: <input checked="" type="radio"/> Good <input type="radio"/> Poor	Internal Shell Color: <input type="radio"/> Light Rust <input type="radio"/> Dense Rust <input type="radio"/> Guniting Lining	External Shell Color: <input checked="" type="radio"/> White/White <input type="radio"/> Aluminum/Specular <input type="radio"/> Aluminum/Diffuse	<input type="radio"/> Gray/Light <input type="radio"/> Gray/Medium <input type="radio"/> Red/Primer
	Average Liquid Height (ft.) (Vertical Only): 9	Maximum Liquid Height (ft.) (Vertical Only): 12	Working Volume (gal.) (Vertical Only): 13500	Actual Volume (gal.) (Vertical Only): 15000
	Paint Condition: <input checked="" type="radio"/> Good <input type="radio"/> Poor	Paint Color/Shade: <input checked="" type="radio"/> White/White <input type="radio"/> Aluminum/Diffuse	<input type="radio"/> Gray/Light <input type="radio"/> Aluminum/Specular	<input type="radio"/> Gray/Medium <input type="radio"/> Red/Primer
	Roof Type: <input type="radio"/> Pontoon <input type="radio"/> Double Deck	<input type="radio"/> Dome Roof (Height _____ ft.) <input checked="" type="radio"/> Cone Roof (Height 26.5 ft.)	Roof Fitting Category: <input type="radio"/> Typical <input checked="" type="radio"/> Detail	Roof Height (ft.): 26.5
Roof Paint Condition: <input checked="" type="radio"/> Good <input type="radio"/> Poor	Roof Color/Shade: <input checked="" type="radio"/> White/White <input type="radio"/> Aluminum/Diffuse	<input type="radio"/> Gray/Light <input type="radio"/> Aluminum/Specular	<input type="radio"/> Gray/Medium <input type="radio"/> Red/Primer	
Deck Characteristics (Floating Roof Tank)	Deck Type: <input type="radio"/> Welded <input type="radio"/> Bolted	Deck Fitting Characteristics: <input type="radio"/> Typical <input type="radio"/> Detailed (Complete Deck Seam)		
		Construction: <input type="radio"/> Sheet <input type="radio"/> Panel	Deck Seam Length (ft.): _____	Deck Seam: <input type="radio"/> 5 ft. wide <input type="radio"/> 6 ft. wide <input type="radio"/> 7 ft. wide <input type="radio"/> 5 x 7.5 ft. <input type="radio"/> 5 x 12 ft.
Tank Construction and Rim -Seal System (Floating Roof Tank)	Tank Construction: <input checked="" type="radio"/> Welded <input type="radio"/> Riveted	Primary Seal: <input type="radio"/> Mechanical Shoe <input type="radio"/> Vapor Mounted	Liquid Mounted <input type="radio"/> Rim Mounted <input type="radio"/> Shoe Mounted	None <input type="radio"/>
Breather Vent Setting	Vacuum Setting (psig): _____	Pressure Setting (psig): _____		

* Section D of the application MUST be completed.

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Storage Tank**

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Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (909) 396-3385
www.aqmd.gov**Section B - Tank Information (cont.)**

Site Selection	Nearest Major City: <u>Newport Beach</u>	
	Daily Average Ambient Temperature (°F): <u>62</u>	Annual Average Minimum Temperature (°F): <u>56</u>
	Annual Average Maximum Temperature (°F): <u>67</u>	Average Wind Speed (mph): _____
	Annual Average Solar Insulation Factor (Btu / (ft ³ * ft * day)): _____	
Tank Contents	Chemical Category: <input checked="" type="radio"/> Organic Liquids <input type="radio"/> Crude Oil <input type="radio"/> Petroleum Distillates	
	Liquid: <input checked="" type="radio"/> Single <input type="radio"/> Multiple	
	If Multiple, Select Speciation Option: <input type="radio"/> Full Speciation <input type="radio"/> Partial Speciation	
	<input type="radio"/> Various Weight Speciation <input type="radio"/> None	

Section C - Operation Information

Vapor Control	Vapor Control During Loading or Unloading: <input type="checkbox"/> Sparger <input type="checkbox"/> Vapor Balance System <input type="checkbox"/> Vapor Return Line <input type="checkbox"/> Vented to Air Pollution Control Equipment ¹						
¹ A separate permit is required. If APC equipment is already permitted, provide Permit or Device Number: _____							
Vent Valve Data	Indicate Type of Setting and Vapor Disposal						
		Number	Pressure Setting	Vaccum Setting	Discharging to (Check Appropriate Box)		
					Atmosphere	Vapor Control	Flare
	Combination				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Pressure				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Vaccum				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Open	1			<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Materials	Name all liquids, vapors, gases, or mixtures of such material to be stored in this tank: <u>Liquid RNG condensate</u>						
	If material is stored in a solution, supply the following information:						
	Name of Solvent: _____			Name of Materials Dissolved: _____			
	Concentration of Materials Dissolved: _____ % by Weight OR _____ % by Volume OR <u>8.33</u> lbs/gal						

Section D - Roof/Deck Fitting

Section D is required for the following tanks: External Floating Roof Tank, Internal Floating Roof Tanks, or Domed External Floating Roof Tanks.

Select the number of fittings for each applicable question. Examples: 3 Unbolted Cover, Ungasketed
Unbolted Cover, Gasketed

Roof/Deck Fitting Details	1. Access Hatch (24" diameter well)	2. Automatic Gauge Float Well (20" diameter well)	3. Column Well (24" diameter well)
	<u>1</u> Bolted Cover, Gasketed	_____ Bolted Cover, Gasketed	_____ Built-Up Col - Sliding Cover, Gasketed
	_____ Unbolted Cover, Ungasketed	_____ Unbolted Cover, Ungasketed	_____ Built-Up Col - Sliding Cover, Ungasketed
	_____ Unbolted Cover, Gasketed	_____ Unbolted Cover, Gasketed	_____ Pipe Col - Flex, Fabric Sleeve Seal
			_____ Pipe Col - Sliding Cover, Gasketed
			_____ Pipe Col - Sliding Cover, Ungasketed

**Form 400-E-18
Storage Tank**

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Section D - Roof/Deck Fitting (cont.)

Roof/Deck Fitting Details (cont.)	4. Gauge Hatch/Sample Well (8" diameter well) _____ Weighted Mechanical Actuation, Gasketed _____ Weighted Mechanical Actuation, Ungasketed 6. Rim Vent (6" diameter) _____ Weighted Mechanical Actuation, Gasketed _____ Weighted Mechanical Actuation, Ungasketed 8. Roof Leg (3" diameter leg) _____ Adjustable, Pontoon Area, Ungasketed _____ Adjustable, Center Area, Ungasketed _____ Adjustable, Double-Deck Roofs _____ Fixed _____ Adjustable, Pontoon Area, Gasketed _____ Adjustable, Pontoon Area, Sock _____ Adjustable, Center Area, Gasketed _____ Adjustable, Center Area, Sock	5. Ladder Well (36" diameter) _____ Sliding Cover, Gasketed _____ Sliding Cover, Ungasketed 7. Roof Drain (3" diameter) _____ Open _____ 90% Close 9. Roof Leg or Hang Well _____ Adjustable _____ Fixed 10. Sample Pipe (24" diameter) _____ Slotted Pipe – Sliding Cover, Gasketed _____ Slotted Pipe – Sliding Cover, Ungasketed _____ Slit Fabric Seal, 10% Open
	11. Guided Pole/Sample Well _____ Ungasketed, Sliding Cover, Without Float _____ Ungasketed Sliding Cover, With Float _____ Gasketed Sliding Cover, Without Float _____ Gasketed Sliding Cover, With Float _____ Gasketed Sliding Cover, With Pole Sleeve _____ Gasketed Sliding Cover, With Pole Wiper _____ Gasketed Sliding Cover, With Float, Wiper _____ Gasketed Sliding Cover, With Float, Sleeve, Wiper _____ Gasketed Sliding Cover, With Pole Sleeve, Wiper	12. _____ Stub Drain (1" diameter) 13. Unslotted Guide – Pole Well _____ Ungasketed, Sliding Cover _____ Gasketed Sliding Cover _____ Ungasketed Sliding Cover with Sleeve _____ Gasketed Sliding Cover with Sleeve _____ Gasketed Sliding Cover with Wiper 14. Vacuum Breaker (10" diameter well) _____ Weighted Mechanical Actuation, Gasketed _____ Weighted Mechanical Actuation, Ungasketed

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info	Signature: _____ Date: 12/14/2023 Title: _____ Company Name: _____ Project Manager SCS Engineers	Name: Maria Bowen Phone #: (619) 455-9518 Fax #: _____ Email: mbowen@scsengineers.com
	Name: Nevin Edwards Title: Air Permitting Mgr. Company Name: Archaea	Phone #: (724) 766-8388 Fax #: _____ Email: newards@archaea.energy

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.

Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

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Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (909) 396-3385
www.aqmd.gov**Section A - Operator Information**

Facility Name (Business Name of Operator That Appears On Permit):

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD):

Biofuels Coyote Canyon Biogas, LLC

Address where the equipment will be operated (for equipment which will be moved to various locations in AQMD's jurisdiction, please list the initial location site):

20661 Newport Coast Drive, Newport Beach, California 92657

☒ Fixed Location ☐ Various Locations

Tank Type (Select ONE)	<input type="radio"/> External Floating Roof Tank (EFRT)	<input type="radio"/> Internal Floating Roof Tank (IFRT)	<input type="radio"/> Horizontal Tank (HT)
	<input checked="" type="radio"/> Vertical Fixed Roof Tank (VFRT)	<input type="radio"/> Domed External Roof Tank (DEFRT)	
Identification	Tank Identification Number: CST-01 (B)	Tank Contents/Product (include MSDS): RNG Condensate	

Section B - Tank Information

Tank Characteristics	Shell Diameter (ft.): 10	Shell Length (ft.): 10	Shell Height (ft.): 26	Turnovers Per Year: 24
	Is Tank Heated? <input type="radio"/> Yes <input checked="" type="radio"/> No	Is Tank Underground? <input type="radio"/> Yes <input checked="" type="radio"/> No	Net Throughput (gal/year): 200000	Self Support Roof: <input checked="" type="radio"/> Yes <input type="radio"/> No
	Number of Columns? 1	Effective Column Diameter: <input type="radio"/> 9" by 7" Built Up Column - 1.1	<input type="radio"/> 8" Diameter Pipe - 0.7	<input type="radio"/> Unknown - 1
	External Shell Condition: <input checked="" type="radio"/> Good <input type="radio"/> Poor	Internal Shell Color: <input type="radio"/> Light Rust <input type="radio"/> Dense Rust <input type="radio"/> Guniting Lining	External Shell Color: <input checked="" type="radio"/> White/White <input type="radio"/> Aluminum/Specular <input type="radio"/> Aluminum/Diffuse	<input type="radio"/> Gray/Light <input type="radio"/> Gray/Medium <input type="radio"/> Red/Primer
	Average Liquid Height (ft.) (Vertical Only): 9	Maximum Liquid Height (ft.) (Vertical Only): 12	Working Volume (gal.) (Vertical Only): 13500	Actual Volume (gal.) (Vertical Only): 15000
	Paint Condition: <input checked="" type="radio"/> Good <input type="radio"/> Poor	Paint Color/Shade: <input checked="" type="radio"/> White/White <input type="radio"/> Aluminum/Diffuse	<input type="radio"/> Gray/Light <input type="radio"/> Aluminum/Specular	<input type="radio"/> Gray/Medium <input type="radio"/> Red/Primer
	Roof Type: <input type="radio"/> Pontoon <input type="radio"/> Double Deck	<input type="radio"/> Dome Roof (Height _____ ft.) <input checked="" type="radio"/> Cone Roof (Height 26.5 ft.)	Roof Fitting Category: <input type="radio"/> Typical <input checked="" type="radio"/> Detail	Roof Height (ft.): 26.5
Roof Paint Condition: <input checked="" type="radio"/> Good <input type="radio"/> Poor	Roof Color/Shade: <input checked="" type="radio"/> White/White <input type="radio"/> Aluminum/Diffuse	<input type="radio"/> Gray/Light <input type="radio"/> Aluminum/Specular	<input type="radio"/> Gray/Medium <input type="radio"/> Red/Primer	
Deck Characteristics (Floating Roof Tank)	Deck Type: <input type="radio"/> Welded <input type="radio"/> Bolted	Deck Fitting Characteristics: <input type="radio"/> Typical <input type="radio"/> Detailed (Complete Deck Seam)		
		Construction: <input type="radio"/> Sheet <input type="radio"/> Panel	Deck Seam Length (ft.): _____	Deck Seam: <input type="radio"/> 5 ft. wide <input type="radio"/> 6 ft. wide <input type="radio"/> 7 ft. wide <input type="radio"/> 5 x 7.5 ft. <input type="radio"/> 5 x 12 ft.
Tank Construction and Rim -Seal System (Floating Roof Tank)	Tank Construction: <input checked="" type="radio"/> Welded <input type="radio"/> Riveted	Primary Seal: <input type="radio"/> Mechanical Shoe <input type="radio"/> Vapor Mounted	Liquid Mounted <input type="radio"/> Rim Mounted <input type="radio"/> Shoe Mounted	None <input type="radio"/>
Breather Vent Setting	Vacuum Setting (psig): _____	Pressure Setting (psig): _____		

* Section D of the application MUST be completed.

**Form 400-E-18
Storage Tank**

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Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944Tel: (909) 396-3385
www.aqmd.gov**Section B - Tank Information (cont.)**

Site Selection	Nearest Major City: <u>Newport Beach</u>	
	Daily Average Ambient Temperature (°F): <u>62</u>	Annual Average Minimum Temperature (°F): <u>56</u>
	Annual Average Maximum Temperature (°F): <u>67</u>	Average Wind Speed (mph): _____
	Annual Average Solar Insulation Factor (Btu / (ft ³ * ft * day)): _____	
Tank Contents	Chemical Category: <input checked="" type="radio"/> Organic Liquids <input type="radio"/> Crude Oil <input type="radio"/> Petroleum Distillates	
	Liquid: <input checked="" type="radio"/> Single <input type="radio"/> Multiple	
	If Multiple, Select Speciation Option: <input type="radio"/> Full Speciation <input type="radio"/> Partial Speciation	
	<input type="radio"/> Various Weight Speciation <input type="radio"/> None	

Section C - Operation Information

Vapor Control	Vapor Control During Loading or Unloading: <input type="checkbox"/> Sparger <input type="checkbox"/> Vapor Balance System <input type="checkbox"/> Vapor Return Line <input type="checkbox"/> Vented to Air Pollution Control Equipment ¹						
	¹ A separate permit is required. If APC equipment is already permitted, provide Permit or Device Number: _____						
Vent Valve Data	Indicate Type of Setting and Vapor Disposal						
		Number	Pressure Setting	Vaccum Setting	Discharging to (Check Appropriate Box)		
					Atmosphere	Vapor Control	Flare
	Combination				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Pressure				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Vaccum				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open	1			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Materials	Name all liquids, vapors, gases, or mixtures of such material to be stored in this tank: <u>Liquid RNG condensate</u>						
	If material is stored in a solution, supply the following information:						
	Name of Solvent: _____			Name of Materials Dissolved: _____			
	Concentration of Materials Dissolved: _____ % by Weight OR _____ % by Volume OR <u>8.33</u> lbs/gal						

Section D - Roof/Deck Fitting

Section D is required for the following tanks: External Floating Roof Tank, Internal Floating Roof Tanks, or Domed External Floating Roof Tanks.

Select the number of fittings for each applicable question. Examples: 3 Unbolted Cover, Ungasketed
Unbolted Cover, Gasketed

Roof/Deck Fitting Details	1. Access Hatch (24" diameter well)	2. Automatic Gauge Float Well (20" diameter well)	3. Column Well (24" diameter well)
	<u>1</u> Bolted Cover, Gasketed	_____ Bolted Cover, Gasketed	_____ Built-Up Col - Sliding Cover, Gasketed
	_____ Unbolted Cover, Ungasketed	_____ Unbolted Cover, Ungasketed	_____ Built-Up Col - Sliding Cover, Ungasketed
	_____ Unbolted Cover, Gasketed	_____ Unbolted Cover, Gasketed	_____ Pipe Col - Flex, Fabric Sleeve Seal
			_____ Pipe Col - Sliding Cover, Gasketed
			_____ Pipe Col - Sliding Cover, Ungasketed

**Form 400-E-18
Storage Tank**

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Section D - Roof/Deck Fitting (cont.)

Roof/Deck Fitting Details (cont.)	4. Gauge Hatch/Sample Well (8" diameter well) _____ Weighted Mechanical Actuation, Gasketed _____ Weighted Mechanical Actuation, Ungasketed 6. Rim Vent (6" diameter) _____ Weighted Mechanical Actuation, Gasketed _____ Weighted Mechanical Actuation, Ungasketed 8. Roof Leg (3" diameter leg) _____ Adjustable, Pontoon Area, Ungasketed _____ Adjustable, Center Area, Ungasketed _____ Adjustable, Double-Deck Roofs _____ Fixed _____ Adjustable, Pontoon Area, Gasketed _____ Adjustable, Pontoon Area, Sock _____ Adjustable, Center Area, Gasketed _____ Adjustable, Center Area, Sock	5. Ladder Well (36" diameter) _____ Sliding Cover, Gasketed _____ Sliding Cover, Ungasketed 7. Roof Drain (3" diameter) _____ Open _____ 90% Close 9. Roof Leg or Hang Well _____ Adjustable _____ Fixed 10. Sample Pipe (24" diameter) _____ Slotted Pipe – Sliding Cover, Gasketed _____ Slotted Pipe – Sliding Cover, Ungasketed _____ Slit Fabric Seal, 10% Open
	11. Guided Pole/Sample Well _____ Ungasketed, Sliding Cover, Without Float _____ Ungasketed Sliding Cover, With Float _____ Gasketed Sliding Cover, Without Float _____ Gasketed Sliding Cover, With Float _____ Gasketed Sliding Cover, With Pole Sleeve _____ Gasketed Sliding Cover, With Pole Wiper _____ Gasketed Sliding Cover, With Float, Wiper _____ Gasketed Sliding Cover, With Float, Sleeve, Wiper _____ Gasketed Sliding Cover, With Pole Sleeve, Wiper	12. _____ Stub Drain (1" diameter) 13. Unslotted Guide – Pole Well _____ Ungasketed, Sliding Cover _____ Gasketed Sliding Cover _____ Ungasketed Sliding Cover with Sleeve _____ Gasketed Sliding Cover with Sleeve _____ Gasketed Sliding Cover with Wiper 14. Vacuum Breaker (10" diameter well) _____ Weighted Mechanical Actuation, Gasketed _____ Weighted Mechanical Actuation, Ungasketed

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info	Signature: _____ Date: 12/14/2023 Title: _____ Company Name: _____ Project Manager SCS Engineers	Name: Maria Bowen Phone #: (619) 455-9518 Fax #: _____ Email: mbowen@scsengineers.com
	Name: Nevin Edwards Title: Air Permitting Mgr. Company Name: Archaea	Phone #: (724) 766-8388 Fax #: _____ Email: newards@archaea.energy

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Appendix

Appendix C Tree Information and Potential to Occur Matrices

Appendix

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Coyote Canyon Landfill Gas Plant - Tree Information and Disposition matrix

Tree No.	Botanical Name	Common Name	No. of Stems	Individual Stem Diameters (in.)						Combined Diameter (in.)	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Recommendation	Notes	Latitude	Longitude
				D1	D2	D3	D4	D5	D6									
1	<i>Corymbia citriodora</i>	Lemon-Scented Gum	1	16						16	50	37	Poor	Fair	Removal		33.6135633	-117.822179
2	<i>Salix lasiolepis</i>	Arroyo Willow	24	0.25	0.25	0.25	0.25	0.25	0.25	6	5	6	Good	Poor	Removal	Stems .25"	33.6135434	-117.822145
3	<i>Alnus rhombifolia</i>	White Alder	1	9						9	25	23	Poor	Fair	Remain		33.613543	-117.822069
4	<i>Salix lasiolepis</i>	Arroyo Willow	30	0.25	0.25	0.25	0.25	0.25	0.25	7.5	6	7	Good	Poor	Removal	Stems .25"	33.6134931	-117.822062
5	<i>Quercus agrifolia</i>	Coast Live Oak	2	4	6					10	6	7	Critical	Fair	Remain		33.613533	-117.822036
6	<i>Platanus racemosa</i>	California Sycamore	1	10						10	42	15	Fair	Fair	Removal		33.6134821	-117.822023
7	<i>Quercus agrifolia</i>	Coast Live Oak	2	7	10					17	18	24	Fair	Fair	Remain		33.6134437	-117.821931
8	<i>Salix lasiolepis</i>	Arroyo Willow	30	0.25	0.25	0.25	0.25	0.25	0.25	7.5	4	7	Critical	Critical	Removal	Stump resprout, all stems .25"	33.6134104	-117.821935
9	<i>Platanus racemosa</i>	California Sycamore	1	10						10	42	30	Fair	Fair	Removal		33.6133938	-117.821917
10	<i>Salix lasiolepis</i>	Arroyo Willow	30	0.25	0.25	0.25	0.25	0.25	0.25	7.5	6	15	Good	Poor	Removal	Stump resprout, all stems .25"	33.6133278	-117.821772
11	<i>Salix lasiolepis</i>	Arroyo Willow	30	0.25	0.25	0.25	0.25	0.25	0.25	7.5	6	12	Good	Poor	Removal	Stump resprout, all stems .25"	33.6132966	-117.821761
12	<i>Corymbia citriodora</i>	Lemon-Scented Gum	2	17	13					30	55	54	Fair	Fair	Removal		33.6133133	-117.821694
13	<i>Alnus rhombifolia</i>	White Alder	4	5	7	2	6			20	30	25	Fair	Fair	Removal		33.6132585	-117.821652
14	<i>Alnus rhombifolia</i>	White Alder	1	8						8	30	15	Fair	Fair	Removal		33.6132187	-117.82157
15	<i>Platanus racemosa</i>	California Sycamore	1	12						12	43	32	Fair	Fair	Removal		33.6131913	-117.8215
16	<i>Alnus rhombifolia</i>	White Alder	1	11						11	30	25	Fair	Fair	Removal		33.613136	-117.82142
17	<i>Platanus racemosa</i>	California Sycamore	4	8	9	7	3			27	50	30	Fair	Fair	Remain	Remove 8" stem	33.6131327	-117.821363
18	<i>Quercus agrifolia</i>	Coast Live Oak	6	5	6	4	3	6	2	26	25	25	Fair	Fair	Removal		33.613086	-117.821317
19	<i>Quercus agrifolia</i>	Coast Live Oak	2	8	4					12	25	25	Poor	Fair	Remain		33.6130844	-117.821236
20	<i>Alnus rhombifolia</i>	White Alder	1	8						8	25	16	Fair	Fair	Remain		33.6129974	-117.821137
21	<i>Quercus agrifolia</i>	Coast Live Oak	2	5	5					10	12	10	Fair	Fair	Remain		33.6129598	-117.821165
22	<i>Corymbia citriodora</i>	Lemon-Scented Gum	1	13						13	70	35	Fair	Fair	Remain		33.6128955	-117.821192
23	<i>Quercus agrifolia</i>	Coast Live Oak	2	6	0.5					6.5	22	12	Poor	Fair	Remain		33.6128733	-117.821204
24	<i>Quercus agrifolia</i>	Coast Live Oak	1	7						7	18	15	Fair	Fair	Remain		33.6128233	-117.821231
25	<i>Platanus racemosa</i>	California Sycamore	1	8						8	45	30	Fair	Fair	Remain		33.61281	-117.821277
26	<i>Alnus rhombifolia</i>	White Alder	1	7						7	25	15	Fair	Fair	Remain		33.6127597	-117.821311
27	<i>Platanus racemosa</i>	California Sycamore	4	6	6	2	1			15	40	20	Fair	Fair	Remain		33.6127206	-117.82135
28	<i>Alnus rhombifolia</i>	White Alder	1	4						4	20	10	Fair	Fair	Remain		33.6126622	-117.821374
29	<i>Platanus racemosa</i>	California Sycamore	4	4	5	6	1			16	35	40	Fair	Fair	Remain		33.6126356	-117.821406
30	<i>Platanus racemosa</i>	California Sycamore	1	8						8	55	37	Fair	Fair	Remain		33.612598	-117.821444
31	<i>Salix lasiolepis</i>	Arroyo Willow	5	1	1	1	1	1		5	25	18	Fair	Fair	Remain		33.6126032	-117.821455
32	<i>Quercus agrifolia</i>	Coast Live Oak	2	6	6					12	27	30	Fair	Fair	Remain		33.6125412	-117.821479
33	<i>Platanus racemosa</i>	California Sycamore	1	8						8	40	25	Fair	Fair	Remain		33.6125271	-117.821501
34	<i>Salix lasiolepis</i>	Arroyo Willow	2	0.25	0.25					0.5	3	2	Good	Fair	Removal		33.6124672	-117.821542
35	<i>Quercus agrifolia</i>	Coast Live Oak	2	6	4					10	22	25	Poor	Fair	Remain		33.6124574	-117.821573
36	<i>Baccharis salicifolia</i>	Mulefat	5	0.25	0.25	0.25	0.25	0.25		1.25	3	2	Good	Fair	Removal		33.6124526	-117.82159

Coyote Canyon Landfill Gas Plant - Tree Information and Disposition matrix

Tree No.	Botanical Name	Common Name	No. of Stems	Individual Stem Diameters (in.)						Combined Diameter (in.)	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Recommendation	Notes	Latitude	Longitude
				D1	D2	D3	D4	D5	D6									
37	<i>Salix lasiolepis</i>	Arroyo Willow	12	0.25	0.25	0.25	0.25	0.25	0.25	3	3	2	Good	Fair	Removal	All stems .25"	33.6124597	-117.821596
38	<i>Quercus agrifolia</i>	Coast Live Oak	1	11						11	25	25	Fair	Fair	Remain		33.6124606	-117.821622
39	<i>Alnus rhombifolia</i>	White Alder	2	7	4					11	23	20	Fair	Fair	Remain		33.612463	-117.82167
40	<i>Platanus racemosa</i>	California Sycamore	4	7	6	5	5			23	50	30	Fair	Fair	Remain	Remove 7" limb	33.6124957	-117.821685
41	<i>Quercus agrifolia</i>	Coast Live Oak	1	12						12	30	25	Fair	Fair	Remain		33.6125019	-117.821727
42	<i>Quercus agrifolia</i>	Coast Live Oak	4	5	4	5	5			19	24	22	Fair	Fair	Remain		33.6125298	-117.821742
43	<i>Quercus agrifolia</i>	Coast Live Oak	2	5	4					9	22	12	Critical	Fair	Remain		33.6125467	-117.821787
44	<i>Quercus agrifolia</i>	Coast Live Oak	2	7	4					11	15	16	Fair	Fair	Removal		33.6135508	-117.822541
45	<i>Quercus agrifolia</i>	Coast Live Oak	1	1						1	7	5	Fair	Fair	Remain		33.6135126	-117.822601
46	<i>Quercus agrifolia</i>	Coast Live Oak	1	7						7	25	15	Fair	Fair	Remain		33.6134744	-117.822644
47	<i>Quercus agrifolia</i>	Coast Live Oak	1	4						4	16	12	Fair	Fair	Remain		33.613402	-117.822699
48	<i>Quercus agrifolia</i>	Coast Live Oak	3	5	4	3				12	25	15	Fair	Fair	Remain		33.6133806	-117.822723
49	<i>Quercus agrifolia</i>	Coast Live Oak	2	5	4					9	20	20	Fair	Fair	Remain		33.6133533	-117.822698
50	<i>Quercus agrifolia</i>	Coast Live Oak	6	2	2	2	3	1	2	12	15	15	Fair	Fair	Remain		33.6132768	-117.822726
51	<i>Quercus agrifolia</i>	Coast Live Oak	1	1						1	5	5	Dead	Dead	Removal		33.6132736	-117.822678
52	<i>Platanus racemosa</i>	California Sycamore	4	1	7	4	6			18	30	26	Fair	Fair	Removal		33.6131486	-117.82267
53	<i>Quercus agrifolia</i>	Coast Live Oak	4	4	5	4	6			19	22	22	Fair	Fair	Remain		33.6130876	-117.822687
54	<i>Alnus rhombifolia</i>	White Alder	1	1						1	15	8	Dead	Dead	Removal		33.6130949	-117.822641
55	<i>Quercus agrifolia</i>	Coast Live Oak	2	7	6					13	12	12	Fair	Fair	Remain		33.613044	-117.822667
56	<i>Quercus agrifolia</i>	Coast Live Oak	4	7	3	4	4			18	12	15	Fair	Fair	Remain		33.6129939	-117.822623
57	<i>Quercus agrifolia</i>	Coast Live Oak	7	3	1	3	2	4	5	19	12	15	Poor	Fair	Remain	DBH7:1	33.6129686	-117.822586
58	<i>Platanus racemosa</i>	California Sycamore	1	9						9	30	18	Fair	Fair	Remain		33.6129533	-117.822549
59	<i>Quercus agrifolia</i>	Coast Live Oak	2	3	4					7	12	12	Critical	Fair	Remain		33.6129203	-117.822507
60	<i>Quercus agrifolia</i>	Coast Live Oak	1	6						6	15	10	Fair	Fair	Remain		33.6128981	-117.822411
61	<i>Quercus agrifolia</i>	Coast Live Oak	1	8						8	15	15	Fair	Poor	Removal		33.6129065	-117.822342
62	<i>Alnus rhombifolia</i>	White Alder	1	5						5	25	12	Fair	Fair	Remain		33.6128635	-117.822375
63	<i>Platanus racemosa</i>	California Sycamore	1	9						9	30	15	Fair	Fair	Remain		33.6128659	-117.822348
64	<i>Sambucus mexicana</i>	Blue elderberry	10	2.5	0.25	0.25	0.25	0.25	0.25	29.5	3	5	Fair	Poor	Removal	All stems .25"	33.6128504	-117.822356
65	<i>Alnus rhombifolia</i>	White Alder	1	6						6	25	15	Fair	Fair	Remain		33.6128361	-117.822308
66	<i>Quercus agrifolia</i>	Coast Live Oak	2	4	4					8	12	12	Critical	Fair	Remain		33.6128519	-117.822265
67	<i>Quercus agrifolia</i>	Coast Live Oak	5	3	4	3	5	3		18	15	12	Fair	Fair	Remain		33.6128228	-117.82223
68	<i>Quercus agrifolia</i>	Coast Live Oak	5	3	3	3	3	3		15	7	5	Poor	Poor	Removal		33.6128236	-117.822179
69	<i>Corymbia citriodora</i>	Lemon-Scented Gum	1	9						9	55	27	Fair	Fair	Removal		33.6128114	-117.822137
70	<i>Schinus molle</i>	California Pepper	5	11	9	8	7	7		42	25	27	Fair	Fair	Remain		33.6127986	-117.8222
71	<i>Platanus racemosa</i>	California Sycamore	3	5	6	5				16	30	20	Fair	Fair	Removal		33.6127807	-117.822114
72	<i>Quercus agrifolia</i>	Coast Live Oak	4	4	4	4	4			16	20	12	Fair	Fair	Remain		33.6127297	-117.822135
73	<i>Corymbia citriodora</i>	Lemon-Scented Gum	1	8						8	45	10	Critical	Fair	Removal		33.6127616	-117.822062
74	<i>Quercus agrifolia</i>	Coast Live Oak	6	7	6	5	5	4	7	34	18	13	Fair	Fair	Remain		33.6127226	-117.822079

Coyote Canyon Landfill Gas Plant - Tree Information and Disposition matrix

Tree No.	Botanical Name	Common Name	No. of Stems	Individual Stem Diameters (in.)						Combined Diameter (in.)	Height (ft.)	Crown Width (ft.)	Health	Structural Integrity	Recommendation	Notes	Latitude	Longitude
				D1	D2	D3	D4	D5	D6									
75	<i>Alnus rhombifolia</i>	White Alder	1	4						4	25	12	Poor	Poor	Remain		33.6126973	-117.822062
76	<i>Platanus racemosa</i>	California Sycamore	1	5						5	30	18	Fair	Fair	Remain		33.6126879	-117.822
77	<i>Corymbia citriodora</i>	Lemon-Scented Gum	2	10	10					20	55	25	Fair	Fair	Removal		33.6126769	-117.821924
78	<i>Quercus agrifolia</i>	Coast Live Oak	5	1	5	5	3	2		16	30	20	Fair	Fair	Remain		33.612639	-117.821993
79	<i>Quercus agrifolia</i>	Coast Live Oak	3	5	4	2				11	15	12	Fair	Fair	Remain		33.612637	-117.821958
80	<i>Quercus agrifolia</i>	Coast Live Oak	3	6	6	3				15	15	12	Fair	Fair	Remain		33.6126182	-117.821949
81	<i>Quercus agrifolia</i>	Coast Live Oak	7	0.25	0.25	0.25	0.25	0.25	0.25	1.75	2	3	Fair	Fair	Remain	All stems are .25"	33.6126043	-117.821876
82	<i>Quercus agrifolia</i>	Coast Live Oak	3	1	1	1				3	15	10	Fair	Fair	Remain		33.6125694	-117.821878
83	<i>Platanus racemosa</i>	California Sycamore	5	5	3	3	4	2		17	28	20	Fair	Fair	Remain		33.6125623	-117.821868
84	<i>Alnus rhombifolia</i>	White Alder	1	4						4	25	12	Fair	Fair	Remain		33.6125632	-117.821812
85	<i>Quercus agrifolia</i>	Coast Live Oak	2	5	5					10	25	12	Dead	Dead	Remain		33.6125391	-117.82179

Scientific Name	Common Name	Status (Federal/State)	Central/Coastal Orange County	Habitat	Potential to Occur
Amphibians					
<i>Anaxyrus californicus</i>	arroyo toad	FE/SSC	Covered	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Not expected to occur. No suitable vegetation present.
<i>Spea hammondi</i>	western spadefoot	None/SSC	Covered	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley-foothill woodlands, pastures, and other agriculture	Not expected to occur. No suitable vegetation present.
<i>Taricha torosa</i> (Monterey Co. south only)	California newt	None/SSC	None	Wet forests, oak forests, chaparral, and rolling grassland	Not expected to occur. No suitable vegetation present.
Reptiles					
<i>Anniella stebbinsi</i>	southern California legless lizard	None/SSC	None	Coastal dunes, stabilized dunes, beaches, dry washes, valley-foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	Low potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. Therefore, it lacks habitat typically used by this species.
<i>Arizona elegans occidentalis</i>	California glossy snake	None/SSC	None	Arid scrub, rocky washes, grasslands, chaparral, open areas with loose soil	Low potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. Therefore, it lacks

Scientific Name	Common Name	Status (Federal/State)	Central/Coastal Orange County	Habitat	Potential to Occur
					habitat typically used by this species.
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	None/WL	Covered	Low-elevation coastal scrub, chaparral, and valley-foothill hardwood	Low potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. Therefore, it lacks habitat typically used by this species.
<i>Aspidoscelis tigris stejnegeri</i>	San Diegan tiger whiptail	None/SSC	Covered	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Low potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. Therefore, it lacks habitat typically used by this species.
<i>Crotalus ruber</i>	red diamondback rattlesnake	None/SSC	Covered	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	Low potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. Therefore, it lacks habitat typically used by this species.
<i>Phrynosoma blainvillii</i>	Blainville's horned lizard	None/SSC	Covered	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley-foothill hardwood, conifer, riparian, pine-cypress, juniper, and annual grassland habitats	Low potential to occur. The site is primarily disturbed with a small strip of native and non-native trees

Scientific Name	Common Name	Status (Federal/State)	Central/Coastal Orange County	Habitat	Potential to Occur
					surrounding the site. Therefore, it lacks habitat typically used by this species.
<i>Plestiodon skiltonianus interparietalis</i>	Coronado skink	None/WL	Covered	Woodlands, grasslands, pine forests, and chaparral; rocky areas near water	Low potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. Therefore, it lacks habitat typically used by this species.
<i>Salvadora hexalepis virgultea</i>	coast patch-nosed snake	None/SSC	None	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Low potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. Therefore, it lacks habitat typically used by this species.
<i>Thamnophis hammondi</i>	two-striped gartersnake	None/SSC	None	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not expected to occur. No suitable vegetation present.
<i>Thamnophis sirtalis</i> ssp. (Southern California coastal plain from Ventura County to San Diego County, and from sea level to about 850 m)	south coast garter snake	None/SSC	None	Marsh and upland habitats near permanent water and riparian vegetation	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State)	Central/Coastal Orange County	Habitat	Potential to Occur
<i>Actinemys pallida</i>	southwestern pond turtle	FPT/SSC	None	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Not expected to occur. No suitable vegetation present.
Birds					
<i>Accipiter cooperii</i> (nesting)	Cooper's hawk	None/WL	None	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	High potential to occur. There is nesting habitat within trees and foraging habitat within and adjacent to the site.
<i>Agelaius tricolor</i> (nesting colony)	tricolored blackbird	BCC/SSC, ST	None	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	Not expected to occur. No suitable vegetation present.
<i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned sparrow	None/WL	Covered	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Not expected to occur. No suitable vegetation present.
<i>Ammodramus savannarum</i> (nesting)	grasshopper sparrow	None/SSC	None	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	Not expected to occur. No suitable vegetation present.
<i>Aquila chrysaetos</i> (nesting and wintering)	golden eagle	None/FP, WL	Covered	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Not expected to nest on site. Suitable foraging habitat in vicinity of project.
<i>Asio otus</i> (nesting)	long-eared owl	None/SSC	None	Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/ State)	Central/ Coastal Orange County	Habitat	Potential to Occur
<i>Athene cunicularia</i> (burrow sites and some wintering sites)	burrowing owl	BCC/SC	None	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Not expected to occur. No suitable vegetation present.
<i>Buteo regalis</i> (wintering)	ferruginous hawk	None/WL	None	Winters and forages in open, dry country, grasslands, open fields, agriculture	Not expected to winter on site. Suitable foraging habitat in vicinity of project.
<i>Campylorhynchus brunneicapillus sandiegensis</i> (San Diego and Orange Counties only)	coastal cactus wren	None/SSC	Covered	Southern cactus scrub patches	Not expected to occur. No suitable vegetation present.
<i>Circus hudsonius</i> (nesting)	northern harrier	BCC/SSC	Covered	Nests in open wetlands (marshy meadows, wet lightly-grazed pastures, old fields, freshwater and brackish marshes); also in drier habitats (grassland and grain fields); forages in grassland, scrubs, rangelands, emergent wetlands, and other open habitats	Not expected to occur. No suitable vegetation present.
<i>Coccyzus americanus occidentalis</i> (nesting)	western yellow-billed cuckoo	FT/SE	None	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. No suitable vegetation present.
<i>Coturnicops noveboracensis</i>	yellow rail	BCC/SSC	None	Nesting requires wet marsh/sedge meadows or coastal marshes with wet soil and shallow, standing water	Not expected to occur. No suitable vegetation present.
<i>Elanus leucurus</i> (nesting)	white-tailed kite	None/FP	None	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Low potential to occur. This species is not expected to nest on site due to the lack of riparian habitat.
<i>Empidonax traillii extimus</i> (nesting)	southwestern willow flycatcher	FE/SE	None	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State)	Central/Coastal Orange County	Habitat	Potential to Occur
<i>Eremophila alpestris actia</i>	California horned lark	None/WL	None	This subspecies of horned lark occurs on the state's southern and central coastal slope and in the San Joaquin Valley. Nests and forages in grasslands, disturbed lands, agriculture, and beaches.	Not expected to occur. No suitable vegetation present.
<i>Icteria virens</i> (nesting)	yellow-breasted chat	None/SSC	None	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Low potential to occur. This species is not expected to nest on site due to the lack of riparian habitat.
<i>Laterallus jamaicensis coturniculus</i>	California black rail	None/FP, ST	None	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Not expected to occur. No suitable vegetation present.
<i>Passerculus sandwichensis beldingi</i>	Belding's savannah sparrow	BCC/SE	None	Nests and forages in coastal saltmarsh dominated by pickleweed (<i>Salicornia</i> spp.)	Not expected to occur. No suitable vegetation present.
<i>Polioptila californica californica</i>	coastal California gnatcatcher	FT/SSC	Covered	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Not expected to occur. No suitable vegetation present.
<i>Rallus obsoletus levipes</i>	light-footed Ridgway's rail	FE/FP, SE	None	Coastal wetlands, brackish areas, coastal saline emergent wetlands	Not expected to occur. No suitable vegetation present.
<i>Setophaga petechia</i> (nesting)	yellow warbler	None/SSC	None	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Low potential to occur. This species is not expected to nest on site due to the lack of riparian habitat.

Scientific Name	Common Name	Status (Federal/ State)	Central/ Coastal Orange County	Habitat	Potential to Occur
<i>Sternula antillarum browni</i> (nesting colony)	California least tern	FE/FP, SE	None	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	Not expected to occur. No suitable vegetation present.
<i>Vireo bellii pusillus</i> (nesting)	least Bell's vireo	FE/SE	Covered	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Low potential to occur. This species is not expected to nest on site due to the lack of riparian habitat.
Fishes					
<i>Eucyclogobius newberryi</i>	tidewater goby	FE/None	None	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River	Not expected to occur. No suitable vegetation present.
<i>Gila orcuttii</i>	arroyo chub	None/SSC	None	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths >40 centimeters (16 inches); substrates of sand or mud	Not expected to occur. No suitable vegetation present.
<i>Oncorhynchus mykiss irideus</i> pop. 10	southern steelhead - southern California DPS	FE/SCE	None	Clean, clear, cool, well-oxygenated streams; needs relatively deep pools in migration and gravelly substrate to spawn	Not expected to occur. No suitable vegetation present.
<i>Rhinichthys osculus</i> ssp. 8	Santa Ana speckled dace	None/SSC	None	Headwaters of the Santa Ana and San Gabriel Rivers; may be extirpated from the Los Angeles River system	Not expected to occur. No suitable vegetation present.
Mammals					
<i>Antrozous pallidus</i>	pallid bat	None/SSC	None	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Moderate potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. The surrounding trees could provide marginal roosting habitat.

Scientific Name	Common Name	Status (Federal/ State)	Central/ Coastal Orange County	Habitat	Potential to Occur
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	None/ None	None	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	Low potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. Therefore, it lacks habitat typically used by this species.
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None/ None	None	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland	Low potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. Therefore, it lacks habitat typically used by this species.
<i>Choeronycteris mexicana</i>	Mexican long-tongued bat	None/SSC	None	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland; roosts in caves, mines, and buildings	Not expected to occur. No suitable vegetation present.
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FT/ST	None	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	Low potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. Therefore, it lacks habitat typically used by this species.
<i>Eumops perotis californicus</i>	western mastiff bat	None/SSC	None	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons	Low potential to occur. The site is primarily disturbed with a small

Scientific Name	Common Name	Status (Federal/State)	Central/Coastal Orange County	Habitat	Potential to Occur
				and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	strip of native and non-native trees surrounding the site. Therefore, it lacks habitat typically used by this species.
<i>Myotis yumanensis</i>	Yuma myotis	None/None	None	Riparian, arid scrublands and deserts, and forests associated with water (streams, rivers, tinajas); roosts in bridges, buildings, cliff crevices, caves, mines, and trees	Moderate potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. The surrounding trees could provide marginal roosting habitat.
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None/SSC	Covered	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Not expected to occur. No suitable vegetation present.
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	None/SSC	None	Pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings	Not expected to occur. No suitable vegetation present.
<i>Nyctinomops macrotis</i>	big free-tailed bat	None/SSC	None	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	Moderate potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. The surrounding trees could provide marginal roosting habitat.

Scientific Name	Common Name	Status (Federal/State)	Central/Coastal Orange County	Habitat	Potential to Occur
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	None/SSC	None	Grassland and sparse coastal scrub	Low potential to occur. The site is primarily disturbed with a small strip of native and non-native trees surrounding the site. Therefore, it lacks habitat typically used by this species.
<i>Perognathus longimembris pacificus</i>	Pacific pocket mouse	FE/SSC	Covered	fine-grained sandy substrates in open coastal strand, coastal dunes, and river alluvium	Not expected to occur. No suitable vegetation present.
<i>Sorex ornatus salicornicus</i>	southern California saltmarsh shrew	None/SSC	None	Saltmarsh, saltgrass, dense willow, bulrush	Not expected to occur. No suitable vegetation present.
<i>Taxidea taxus</i>	American badger	None/SSC	None	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. No suitable vegetation present.
<i>Lasiurus frantzii</i>	western red bat	None/SSC	None	Forest, woodland, riparian, mesquite bosque, and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy	Not expected to occur. No suitable vegetation present.
Invertebrates					
<i>Bombus crotchii</i>	Crotch's bumble bee	None/SCE	None	Open grassland and scrub communities supporting suitable floral resources.	Low potential to occur on site due to limited floral resources and nesting habitat. Potential to fly over site from surrounding habitat.

Scientific Name	Common Name	Status (Federal/State)	Central/Coastal Orange County	Habitat	Potential to Occur
<i>Branchinecta sandiegonensis</i>	San Diego fairy shrimp	FE/None	Covered	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. No suitable vegetation present.
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE/None	Covered	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. No suitable vegetation present.
<i>Danaus plexippus plexippus</i> pop. 1	monarch - California overwintering population	FC/None	None	Wind-protected tree groves with nectar sources and nearby water sources	Not expected to occur. No suitable vegetation present.

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Scientific Name	Common Name	Status (Federal/ State/ CRPR)	OC Central Coastal NCCP	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Aphanisma blitoides</i>	aphanisma	None/None/ 1B.2	None	Coastal bluff scrub, Coastal dunes, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/annual herb/ Feb–June/5–1,000	Not expected to occur. No suitable vegetation present.
<i>Astragalus brauntonii</i>	Braunton's milk-vetch	FE/None/ 1B.1	None	Chaparral, Coastal scrub, Valley and foothill grassland; Burned areas (sometimes), Carbonate, Disturbed areas (sometimes), Sandstone (usually)/perennial herb/ Jan–Aug/15–2,100	Low potential to occur. The site is primarily disturbed habitat with some native and non-native trees on the surrounding slope.
<i>Atriplex coulteri</i>	Coulter's saltbush	None/None/ 1B.2	None	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; Alkaline (sometimes), Clay (sometimes)/perennial herb/ Mar–Oct/10–1,510	Not expected to occur. No suitable vegetation present.
<i>Atriplex pacifica</i>	south coast saltscale	None/None/ 1B.2	None	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas/ annual herb/Mar–Oct/0–460	Not expected to occur. No suitable vegetation present.
<i>Atriplex parishii</i>	Parish's brittlescale	None/None/ 1B.1	None	Chenopod scrub, Playas, Vernal pools; Alkaline/annual herb/June–Oct/80–6,235	Not expected to occur. No suitable vegetation present.
<i>Atriplex serenana</i> var. <i>davidsonii</i>	Davidson's saltscale	None/None/ 1B.2	None	Coastal bluff scrub, Coastal scrub; Alkaline/annual herb/ Apr–Oct/35–655	Not expected to occur. No suitable vegetation present.
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT/SE/1B.1	None	Chaparral (openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools; Clay (often)/perennial	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	OC Central Coastal NCCP	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
				bulbiferous herb/Mar-June/80-3,675	
<i>Calochortus catalinae</i>	Catalina mariposa lily	None/None/4.2	Covered	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/ perennial bulbiferous herb/ (Feb)Mar-June/50-2295	Not expected to occur. No suitable vegetation present.
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa-lily	None/None/1B.2	Covered	Chaparral, Coastal scrub, Valley and foothill grassland; Rocky/perennial bulbiferous herb/May-July/345-2,805	Not expected to occur. No suitable vegetation present.
<i>Centromadia parryi</i> ssp. <i>australis</i>	southern tarplant	None/None/1B.1	None	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools/annual herb/ May-Nov/0-1575	Not expected to occur. No suitable vegetation present.
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	None/None/1B.1	None	Coastal bluff scrub (sandy), Coastal dunes/annual herb/ Jan-Aug/0-330	Not expected to occur. No suitable vegetation present.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	None/None/1B.2	None	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools; Clay (often)/annual herb/Apr-July/100-5,020	Not expected to occur. No suitable vegetation present.
<i>Clinopodium chandleri</i>	San Miguel savory	None/None/1B.2	None	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland, Valley and foothill grassland; Gabbroic (sometimes), Rocky (sometimes)/perennial shrub/Mar-July/395-3,525	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	OC Central Coastal NCCP	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	summer holly	None/None/ 1B.2	None	Chaparral, Cismontane woodland/perennial evergreen shrub/Apr–June/ 100–2590	Not expected to occur. No suitable vegetation present.
<i>Convolvulus simulans</i>	small-flowered morning-glory	None/None/ 4.2	None	Chaparral (openings), Coastal scrub, Valley and foothill grassland; Clay, Seeps, Serpentinite/annual herb/ Mar–July/100–2,430	Not expected to occur. No suitable vegetation present.
<i>Deinandra paniculata</i>	paniculate tarplant	None/None/ 4.2	None	Coastal scrub, Valley and foothill grassland, Vernal pools; Sandy (sometimes), Vernal Mesic (usually)/ annual herb/ (Mar)Apr–Nov/ 80–3,085	Not expected to occur. No suitable vegetation present.
<i>Dichondra occidentalis</i>	western dichondra	None/None/ 4.2	Covered	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/ perennial rhizomatous herb/ (Jan)Mar–July/165–1640	Not expected to occur. No suitable vegetation present.
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	Blochman's dudleya	None/None/ 1B.1	Covered	Chaparral, Coastal bluff scrub, Coastal scrub, Valley and foothill grassland; Clay (often), Rocky, Serpentinite/ perennial herb/Apr–June/ 15–1,475	Not expected to occur. No suitable vegetation present.
<i>Dudleya multicaulis</i>	many-stemmed dudleya	None/None/ 1B.2	None	Chaparral, Coastal scrub, Valley and foothill grassland; Clay (often)/perennial herb/ Apr–July/50–2,590	Not expected to occur. No suitable vegetation present.
<i>Dudleya stolonifera</i>	Laguna Beach dudleya	FT/ST/1B.1	Covered	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; Rocky/perennial stoloniferous herb/May–July/35–855	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	OC Central Coastal NCCP	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Dudleya viscida</i>	sticky dudleya	None/None/ 1B.2	None	Chaparral, Cismontane woodland, Coastal bluff scrub, Coastal scrub; Rocky/ perennial herb/May–June/ 35–1,805	Not expected to occur. No suitable vegetation present.
<i>Eryngium pendletonense</i>	Pendleton button-celery	None/None/ 1B.1	None	Coastal bluff scrub, Valley and foothill grassland, Vernal pools; Clay, Vernal Mesic/perennial herb/Apr–June(July)/50–360	Not expected to occur. No suitable vegetation present.
<i>Euphorbia misera</i>	cliff spurge	None/None/ 2B.2	Covered	Coastal bluff scrub, Coastal scrub, Mojavean desert scrub; Rocky/perennial shrub/ (Oct)Dec–Aug/35–1,640	Not expected to occur. No suitable vegetation present.
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	None/None/ 4.2	Covered	Chaparral, Coastal scrub, Valley and foothill grassland; Clay, Openings/annual herb/ Mar–May/65–3,135	Not expected to occur. No suitable vegetation present.
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	None/None/ 1A	None	Marshes and swamps (freshwater, coastal salt)/ perennial rhizomatous herb/ Aug–Oct/35–5005	Not expected to occur. No suitable vegetation present.
<i>Hesperocyparis forbesii</i>	Tecate cypress	None/None/ 1B.1	Covered	Chaparral, Closed-cone coniferous forest; Clay, Gabbroic (sometimes)/ perennial evergreen tree/ N.A./260–4,920	Not expected to occur. No suitable vegetation present.
<i>Hordeum intercedens</i>	vernal barley	None/None/ 3.2	None	Coastal dunes, Coastal scrub, Valley and foothill grassland (depressions, saline flats), Vernal pools/annual herb/ Mar–June/15–3280	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	OC Central Coastal NCCP	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia	None/None/ 1B.1	None	Chaparral (maritime), Cismontane woodland, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/perennial herb/ Feb–July(Sep)/ 230–2,660	Not expected to occur. No suitable vegetation present.
<i>Imperata brevifolia</i>	California satintail	None/None/ 2B.1	None	Chaparral, Coastal scrub, Meadows and seeps (often alkali), Mojavean desert scrub, Riparian scrub; Mesic/ perennial rhizomatous herb/ Sep–May/0–3,985	Not expected to occur. No suitable vegetation present.
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	None/None/ 1B.2	None	Chaparral, Coastal scrub (often disturbed areas, sandy)/ perennial shrub/Apr–Nov/ 35–820	Not expected to occur. No suitable vegetation present.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	None/None/ 1B.1	None	Marshes and swamps (coastal salt), Playas, Vernal pools/ annual herb/Feb–June/ 5–4005	Not expected to occur. No suitable vegetation present.
<i>Lepechinia cardiophylla</i>	heart-leaved pitcher sage	None/None/ 1B.2	Covered	Chaparral, Cismontane woodland, Closed-cone coniferous forest/perennial shrub/Apr–July/1705–4495	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	None/None/ 4.3	None	Chaparral, Coastal scrub/ annual herb/Jan–July/ 5–2905	Not expected to occur. No suitable vegetation present.
<i>Lycium brevipes</i> var. <i>hassei</i>	Santa Catalina Island desert-thorn	None/None/ 3.1	None	Coastal bluff scrub, Coastal scrub/perennial deciduous shrub/June(Aug)/215–985	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	OC Central Coastal NCCP	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Lycium californicum</i>	California box-thorn	None/None/ 4.2	None	Coastal bluff scrub, Coastal scrub/perennial shrub/ Mar–Aug(Dec)/15–490	Not expected to occur. No suitable vegetation present.
<i>Malacothrix saxatilis</i> var. <i>saxatilis</i>	cliff malacothrix	None/None/ 4.2	None	Coastal bluff scrub, Coastal scrub/perennial rhizomatous herb/Mar–Sep/10–655	Not expected to occur. No suitable vegetation present.
<i>Monardella hypoleuca</i> ssp. <i>intermedia</i>	intermediate monardella	None/None/ 1B.3	None	Chaparral, Cismontane woodland, Lower montane coniferous forest (sometimes)/ perennial rhizomatous herb/ Apr–Sep/ 1310–4100	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	None/None/ 1B.3	None	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland/perennial rhizomatous herb/June–Oct/ 2395–7200	Not expected to occur. The site is outside of the species' known elevation range.
<i>Myosurus minimus</i> ssp. <i>apus</i>	little mousetail	None/None/ 3.1	None	Valley and foothill grassland, Vernal pools (alkaline)/annual herb/Mar–June/65–2100	Not expected to occur. No suitable vegetation present.
<i>Nama stenocarpa</i>	mud nama	None/None/ 2B.2	None	Marshes and swamps (lake margins, riverbanks)/ annual/perennial herb/Jan–July/ 15–1640	Not expected to occur. No suitable vegetation present.
<i>Nasturtium gambelii</i>	Gambel's water cress	FE/ST/1B.1	None	Marshes and swamps (brackish, freshwater)/ perennial rhizomatous herb/ Apr–Oct/15–1085	Not expected to occur. No suitable vegetation present.
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	None/None/ 1B.2	None	Coastal scrub, Meadows and seeps, Valley and foothill grassland (alkaline), Vernal	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	OC Central Coastal NCCP	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
				pools; Mesic/annual herb/ Apr–July/10–3,970	
<i>Nolina cismontana</i>	chaparral nolina	None/None/ 1B.2	None	Chaparral, Coastal scrub; Gabbroic (sometimes), Sandstone (sometimes)/ perennial evergreen shrub/ (Mar)May–July/460–4,185	Not expected to occur. No suitable vegetation present.
<i>Pentachaeta aurea</i> ssp. <i>allenii</i>	Allen's pentachaeta	None/None/ 1B.1	None	Coastal scrub (openings), Valley and foothill grassland/ annual herb/Mar–June/ 245–1705	Not expected to occur. No suitable vegetation present.
<i>Phacelia keckii</i>	Santiago Peak phacelia	None/None/ 1B.3	None	Chaparral, Closed-cone coniferous forest/annual herb/May–July/1790–5250	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Pseudognaphalium leucocephalum</i>	white rabbit-tobacco	None/None/ 2B.2	None	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; Gravelly, Sandy/perennial herb/ (July)Aug–Nov(Dec)/0–6,890	Not expected to occur. No suitable vegetation present.
<i>Quercus dumosa</i>	Nuttall's scrub oak	None/None/ 1B.1	Covered	Chaparral, Closed-cone coniferous forest, Coastal scrub; Clay, Loam, Sandy/ perennial evergreen shrub/ Feb–Apr(May–Aug)/50–1,310	Not expected to occur. No suitable vegetation present.
<i>Rhinotropis cornuta</i> var. <i>fishiae</i>	Fish's milkwort	None/None/ 4.3	None	Chaparral, Cismontane woodland, Riparian woodland/ perennial deciduous shrub/ May–Aug/330–3280	Not expected to occur. No suitable vegetation present.
<i>Romneya coulteri</i>	Coulter's matilija poppy	None/None/ 4.2	Covered	Chaparral, Coastal scrub; Burned areas (often)/perennial rhizomatous herb/ Mar–July(Aug)/65–3,935	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	OC Central Coastal NCCP	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Senecio aphanactis</i>	chaparral ragwort	None/None/ 2B.2	None	Chaparral, Cismontane woodland, Coastal scrub; Alkaline (sometimes)/annual herb/Jan–Apr(May)/50–2,625	Not expected to occur. No suitable vegetation present.
<i>Sidalcea neomexicana</i>	salt spring checkerbloom	None/None/ 2B.2	None	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; Alkaline, Mesic/ perennial herb/Mar–June/ 50–5,020	Not expected to occur. No suitable vegetation present.
<i>Suaeda esteroa</i>	estuary seablite	None/None/ 1B.2	None	Marshes and swamps (coastal salt)/perennial herb/ (Jan–May)July–Oct/0–15	Not expected to occur. No suitable vegetation present.
<i>Symphyotrichum defoliatum</i>	San Bernardino aster	None/None/ 1B.2	None	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, Meadows and seeps, Valley and foothill grassland (vernally mesic); Streambanks/ perennial rhizomatous herb/ July–Nov/5–6,695	Not expected to occur. No suitable vegetation present.
<i>Verbesina dissita</i>	big-leaved crownbeard	FT/ST/1B.1	None	Chaparral (maritime), Coastal scrub/perennial herb/ (Mar)Apr–July/150–675	Not expected to occur. No suitable vegetation present.

Appendix

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**PRELIMINARY GEOTECHNICAL INVESTIGATION
PROPOSED RNG PLANT EQUIPMENT AREA
COYOTE CANYON LANDFILL
NEWPORT BEACH, CALIFORNIA**

**PROJECT NO. 23775.1
DECEMBER 10, 2021**

Prepared For:

Biofuels Coyote Canyon Biogas, LLC
500 Technology Drive, Upper Floor
Canonsburg, Pennsylvania 15317

Attention: Mr. Shawn Bratt

December 10, 2021

Biofuels Coyote Canyon Biogas, LLC
500 Technology Drive, Upper Floor
Canonsburg, Pennsylvania 15317

Project No. 23775.1

Attention: Mr. Shawn Bratt

Subject: Preliminary Geotechnical Investigation, Proposed RNG Plant Equipment Area, Coyote Canyon Landfill, Newport Beach, California.

LOR Geotechnical Group, Inc., is pleased to present this report of our geotechnical investigation for the subject project. In summary, it is our opinion that the proposed improvements are feasible from a geotechnical perspective, provided the recommendations presented in the attached report are incorporated into design and construction. However, the contents of this summary should not be solely relied upon.

To provide adequate support for the proposed structures, we recommend that a compacted fill mat be constructed beneath structural concrete slabs. The compacted fill mat will provide a dense, high-strength soil layer to uniformly distribute the anticipated foundation loads over the underlying soils. Any undocumented fill material should be removed from structural areas and areas to receive engineered compacted fill. The data developed during this investigation indicates that removals on the order of 0.5 to more than 12.5 feet will be required from the proposed project area. The given removal depths are preliminary and the actual depths of the removals should be determined during the grading operation by observation and/or in-place density testing.

Medium expansion potential and fair to good R-value quality generally characterize the onsite materials tested.

LOR Geotechnical Group, Inc.

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INTRODUCTION

During November and December of 2021, a Preliminary Geotechnical Investigation was performed by LOR Geotechnical Group, Inc., for proposed improvements within the RNG plant site at 20662 Newport Coast Drive in Newport Beach, California. The purpose of this investigation was to conduct a technical evaluation of the geologic setting of the site and to provide geotechnical design recommendations for the proposed improvements. The scope of our services included:

- Review of available geotechnical literature, reports, maps, and agency information pertinent to the study area;
- Interpretation of aerial photographs of the site and surrounding region dated 1938 through 2021;
- Geologic field reconnaissance mapping to verify the areal distribution of earth units and significance of surficial features as compiled from the reviewed documents, literature, and reports;
- A subsurface field investigation to determine the physical soil conditions pertinent to the proposed development;
- Laboratory testing of selected soil samples obtained during the field investigation;
- Development of geotechnical recommendations for site grading and foundation design; and
- Preparation of this report summarizing our findings and providing conclusions and recommendations for site development.

The approximate location of the site is shown on the attached Index Map, Enclosure A-1, within Appendix A.

To orient our investigation at the site, you provided us with a Site Plan showing the proposed boring locations. We have utilized this plan for use as a base map for our field investigation and it is presented as Enclosure A-2, within Appendix A.

PROJECT CONSIDERATIONS

Based on information provided you, an RNG plant equipment area will be built within the subject approximately 2.3 acre site. This property is in a relatively flat condition and, until recently, previously was occupied by a power plant. Remnants from the former facility,

mainly in the form of buried and abandoned utilities and partial foundations, are present locally. On the attached Site Plan, Enclosure A-2, the tentatively proposed improvements have been plotted within the enclosed property.

EXISTING SITE CONDITIONS

As mentioned above, the proposed RNG plant equipment area is the site of a previously existing and recently demolished power plant. The site is upon the top of a local bedrock ridge that was graded and built in the late 1980's to early 1990's. Cut grading appears to have mainly been conducted to create the generally flat plant area. The perimeter of the previously existing and future proposed improvements is defined by an approximately 12-foot high masonry wall that has an access gate at its northwest corner.

While most previously existing improvements have been removed, there are remnants of earlier development still present. In addition to the previously discussed partial foundations and abandoned underground utility lines, active waterlines that serve perimeter area fire hydrants and a remaining metal frame building are still present. The flare yard associated with the former power plant remains in the far northwestern portion and is still in use. In addition, there are two microwave/communication towers on the site - one near the flare yard and one in the far southeast corner of the property.

Beyond the perimeter wall, a 15 to 30 foot wide area of irrigated landscaping is present, followed by mostly natural brush beyond. An approximately 20-foot high cut slope is present just east of the site and an underground water reservoir site that was built in the early 1990's and serves the local water district is located below and to the north and east of the site. Other than the reservoir site to the northeast, vacant, largely undisturbed natural ground is present within other areas around the site. A paved road provides access to the site from the northwest, off of Newport Coast Drive.

AERIAL PHOTOGRAPH ANALYSIS

During our investigation we reviewed aerial photographs available through Google Earth (2021), Historic Aerials (2021), and Continental Aerial Photographs (2021). The dates of the aerial photographs ranged from 1938 through 2021 and were examined in detail to assess the local and regional geologic and geomorphic characteristics of the site and vicinity. During our review, we also noted minor changes that occurred at the site throughout this time span.

The site area remained in a natural condition until grading and site development with the original power plant and access road in the late 1980's through early 1990's. Although it is not clear how much cut grading was conducted to create the present day conditions, it is apparent that a ridge that previously extended roughly northwest-southeast across the site was cut to create the flat area of the site and the graded slope to the east-southeast of the site. Our review of historic aerial photographs did identify evidence for nearby faulting as subtle, linear, vegetational, tonal contrast photo-lineaments. The lineaments trend roughly north-northwest to south-southeast on either side of the site and appear to merge just north of the site. These two faults, shown as mapped by Morton and Miller (1981) on our Regional Geologic Map, Enclosure A-3 within Appendix A, are not considered to be active faults or identified as such by the California Geological Survey. No evidence for onsite or adjacent site mass movements, such as landslides, was noted on the photographs reviewed.

FIELD EXPLORATION PROGRAM

Our subsurface field exploration program was conducted on November 1st and 2nd, 2021 and consisted of the drilling of 11 exploratory borings with a truck-mounted Mobile B-61 drill rig equipped with 8-inch diameter hollow stem augers. The borings were drilled to depths of approximately 11.5 to 21.5 feet below the existing ground surface. The approximate locations of our exploratory borings are presented on the attached Site Plan, Enclosure A-2 within Appendix A.

The subsurface conditions encountered in the exploratory borings were logged by a geologist from this firm. Relatively undisturbed and bulk samples were obtained from our exploratory borings and returned to our geotechnical laboratory in sealed containers for further testing and evaluation. A detailed description of the field exploration program and the boring logs are presented in Appendix B.

LABORATORY TESTING PROGRAM

Selected soil samples obtained during the field investigation were subjected to laboratory testing to evaluate their physical and engineering properties. Laboratory testing included in-place moisture content and dry density, laboratory compaction characteristics, direct shear, sieve analysis, sand equivalent, R-value, expansion index, consolidation, and corrosion. Descriptions of the laboratory testing program and the test results are presented in Appendix C.

GEOLOGIC CONDITIONS

Regional Geologic Setting

The site is located in the northwest part of the Peninsular Ranges geomorphic province, in an area known as the San Joaquin Hills. In general, the San Joaquin Hills are underlain by Paleocene to Pliocene age marine and non marine sedimentary rocks, which have been locally intruded by Miocene dikes and sills of andesite and diabase. These rocks are overlain by Pleistocene and Holocene surficial units. Total thickness of these geologic units is believed to be as much as 22,000 feet.

As discussed further in this report, predominantly siltstone bedrock from the Los Trancos Member of the Topanga formation were encountered during our subsurface investigation.

Earthquake faults in the region include the Pelican Hill fault of the Newport/Inglewood fault zone, located approximately 2.1 kilometers (1.3 miles) to the southwest. The Elsinore fault zone is located approximately 33 kilometers (20.5 miles) to the northeast while the San Jacinto fault zone is located approximately 69 kilometers (43.5 miles) to the northeast. In addition, the San Andreas fault is located approximately 80 kilometers (50 miles) to the northeast.

The geologic conditions of the site and immediate surrounding region as mapped by the U.S.G.S. (Morton and Miller, 1981) is shown on Enclosure A-3, within Appendix A.

Site Geologic Conditions

The site is located in the northwestern San Joaquin Hills and east of Newport Beach. Within the subject property, undocumented fill soils associated with past use and/or demolition operations overlie sedimentary bedrock.

Fill: The proposed RNG equipment site is underlain by a variable thickness of undocumented fill soils that were created mainly during construction and demolition of the former power plant which was present onsite until recently. Although not encountered during our investigation, it is also possible that fill soils may be present within some perimeter areas of the property with this fill created during original site grading. However, for the majority of the site, it appears that cut grading was originally conducted to create the relatively flat pad area. As encountered within our exploratory borings, the fill soils consist of fine to coarse-grained silty sand to sandy silt soils that range from 1.5 to 12.5 feet in thickness. These materials were damp to moist and loose (soft) to medium dense (stiff).

Bedrock: The Los Trancos member of the Topanga formation underlies the site area. This sedimentary bedrock consists of laminated to typically thinly bedded siltstone with much lesser sandstone materials. In the area of the site, the Topanga formation is weakly cemented and moderately inclined to the northwest. Bedding orientations observed within bedrock outcrops below the site showed a fairly consistent dip of approximately 20 to 30 degrees in a northwest direction. The siltstone is typically fine grained and yellowish-brown in color and includes varying percentages of clay and/or sand. Significant amounts of sandstone were encountered only within our exploratory boring, B-1. In this area, the sandstone was found to be moderately cemented and hard, light yellowish-brown in color, and fine to medium grained.

A detailed description of the subsurface conditions as encountered within our exploratory borings is presented on the Boring Logs within Appendix B.

Groundwater Hydrology

Groundwater was not encountered within our exploratory borings advanced to a maximum depth of approximately 21.5 feet. No records for nearby wells were available from the State of California Department of Water Resources online database (CDWR, 2021). Bedrock that underlies the site is generally considered to be non-water bearing.

Surface Runoff

Current surface runoff of precipitation waters across the site area is generally as sheet flow to perimeter areas and local drainage devices.

Mass Movement

The Topanga formation is known for producing bedrock landslides, as indicated on our Regional Geologic Map, Enclosure A-3. However, in the area of the site, few landslides are mapped. Reconnaissance mapping and review of aerial photographs identified no landslide in the site vicinity. In addition, the site is not located within an earthquake-induced landslide zone as identified by the California Geological Survey (1998). The previous regional geologic mapping by others coupled with the findings of our site investigation indicate that the potential for mass movement at the site is low.

Faulting

No active or potentially active faults are known to exist at the subject site. In addition, the subject site does not lie within a current State of California Earthquake Fault Zone (Hart and Bryant, 2007). As previously mentioned, old, inactive faults are mapped as being present very near the western and eastern sides of the site. However, these faults are older faults that were likely developed during formation of the San Joaquin Hills and are not considered to be of significant consequence in relation to the proposed improvements.

As previously mentioned, the Pelican Hill fault Newport/Inglewood fault system is located approximately 2.1 kilometers (1.3 miles) to the southwest. In addition, other relatively close active faults include the Elsinore fault zone, located approximately 33 kilometers (20.5 miles) to the northeast; the San Jacinto fault zone, located approximately 69 kilometers (43.5 miles) to the northeast; and the San Andreas fault, located approximately 80 kilometers (50 miles) to the northeast.

The Newport-Inglewood fault zone on-shore segment is easily noted by the existence of a chain of low lying hills extending from Culver City to Signal Hill and south of Signal Hill it roughly parallels the coastline to just south of Newport Bay, where it heads off-shore and becomes the Newport-Inglewood-Rose Canyon fault. The surface trace of the Newport-Inglewood fault zone is discontinuous in the Los Angeles Basin. The Newport-Inglewood fault is believed to be capable of producing an earthquake magnitude on the order of 6.5 to 7.4.

The Elsinore fault zone includes both the Whittier and Chino faults and is one of the largest in southern California. At its northern end it splays into two segments and at its southern end it is cut by the Yuba Wells fault. The primary sense of slip along the Elsinore fault is right lateral strike-slip. It is believed that the Elsinore fault zone is capable of producing an earthquake magnitude on the order of 6.5 to 7.5.

The San Jacinto fault zone is a sub-parallel branch of the San Andreas fault zone, extending from the northwestern San Bernardino area, southward into the El Centro region. This fault has been active in recent times with several large magnitude events. It is believed that the San Jacinto fault is capable of producing an earthquake magnitude on the order of 6.5 or larger.

The San Andreas fault is considered to be the major tectonic feature of California, separating the Pacific plate and the North American plate. While estimates vary, the San Andreas fault is generally thought to have an average slip rate on the order of 24 mm/yr and capable of generating large magnitude events on the order of 7.5 or greater.

Current standards of practice have included a discussion of all potential earthquake sources within a 100 kilometer (62 mile) radius. While there are other large earthquake faults within a 100 kilometer (62 mile) radius of the site, none of these are considered as relevant as the faults described above, due to their greater distance and/or smaller anticipated magnitudes.

Historical Seismicity

In order to obtain a general perspective of the historical seismicity of the site and surrounding region a search was conducted for seismic events at and around the area within various radii. This search was conducted utilizing the historical seismic search website of the U.S.G.S. (2020). This website conducts a search of a user selected cataloged seismic events database, within a specified radius and selected magnitudes, and then plots the events onto a map. At the time of our search, the database contained data from 1932 through November 29, 2021.

In our first search, the general seismicity of the region was analyzed by selecting an epicenter map listing all events of magnitude 4.0 and greater, recorded since 1932, within a 100 kilometer (62 mile) radius of the site, in accordance with guidelines of the California Division of Mines and Geology. This map illustrates the regional seismic history of moderate to large events. As depicted on Enclosure A-4, within Appendix A, the site lies within a relatively active region with the Newport-Inglewood fault to the northwest showing much activity.

In the second search, the micro seismicity of the area lying within a 15 kilometer (9.3 mile) radius of the site was examined by selecting an epicenter map listing events on the order of 1.0 and greater since 1978. In addition, only the "A" events, or most accurate events were selected. Caltech indicates the accuracy of the "A" events to be approximately 1 kilometer. The results of this search is a map that presents the seismic history around the area of the site with much greater detail, not permitted on the larger map. The reason for limiting the events to the last 40± years on the detail map is to enhance the accuracy of the map. Events recorded prior the mid 1970's are generally considered to be less accurate due to advancements in technology. As depicted on this map, Enclosure A-5, the subject site lies within an area underlain by very numerous small events in the general area.

In summary, the historical seismicity of the site entails numerous small to medium magnitude earthquake events occurring around the subject site, predominately associated with the presence of the faults described within. Any future developments at the subject site should anticipate that moderate to large seismic events could occur very near the site.

Secondary Seismic Hazards

Other secondary seismic hazards generally associated with severe ground shaking during an earthquake include liquefaction, seiches and tsunamis, earthquake induced flooding, landsliding and rockfalls, and seismic-induced settlement.

Liquefaction: The potential for liquefaction generally occurs during strong ground shaking within loose granular sediments where the depth to groundwater is usually less than 50 feet. As groundwater is thought to be in excess of 50 feet beneath the site and is underlain by sedimentary bedrock, the possibility of liquefaction is considered nil.

Seiches/Tsunamis: The potential for the site to be affected by a seiche or tsunami (earthquake generated wave) is considered nil due to the absence of any large bodies of water near the site.

Flooding (Water Storage Facility Failure): There are no large water storage facilities located on or upstream which could possibly rupture during an earthquake and affect the site by flooding.

Seismically-Induced Landsliding: Our research and review of aerial photographs identified no evidence for the presence of landslides within the site area or within the vicinity of the site. Therefore, the potential for seismically-induced landsliding to impact the site is considered to be low.

Rockfalls: No large, exposed, loose, or unrooted boulders that could affect the integrity of the site are present upon or above the site.

Seismically-Induced Settlement: Settlement generally occurs within areas of loose, granular soils with relatively low density. Since the site is underlain by sedimentary bedrock, the potential for settlement is considered low. In addition, the earthwork operations recommended to be conducted during the development of the site will mitigate any near surface loose soil conditions.

SOILS AND SEISMIC DESIGN CRITERIA (California Building Code 2019)

Design requirements for structures can be found within Chapter 16 of the 2019 California Building Code (CBC) based on building type, use and/or occupancy. The classification of use and occupancy of all proposed structures at the site, and thus the design requirements, shall be the responsibility of the structural engineer and the building official.

Site Classification

Chapter 20 of the ASCE 7-16 defines six possible site classes for earth materials that underlie any given site. Bedrock is assigned one of three of these six site classes and these are: A, B, or C. Per ASCE 7-16, Site Class A and Site Class B shall be measured on-site or estimated by a geotechnical engineer, engineering geologist or seismologist for competent rock with moderate fracturing and weathering. Site Class A and Site Class B shall not be used if more than 10 feet of soil is between the rock surface and bottom of the spread footing or mat foundation. Site Class C can be used for very dense soil and soft rock with \bar{N} values greater than 50 blows per foot. Site Class D can be used for stiff soil with \bar{N} values ranging from 15 to 50 blows per foot. Site Class E is for soft clay soils with \bar{N} values less than 15 blows per foot. Our Standard Penetration Test (SPT) data indicate that the materials beneath the site are considered Site Class C.

CBC Earthquake Design Summary

Earthquake design criteria have been formulated in accordance with the 2019 CBC and ASCE 7-16 for the site based on the results of our investigation to determine the Site Class and an assumed Risk Category II. However, these values should be reviewed and the final design should be performed by a qualified structural engineer familiar with the region. In addition, the building official should confirm the Risk Category utilized in our design (Risk Category II). Our design values are provided below:

CBC 2019 SEISMIC DESIGN SUMMARY*	
Site Location (USGS WGS84) 33.61311, -117.82196, Risk Category II	
Site Class Definition Chapter 20 ASCE 7	C
S_s Mapped Spectral Response Acceleration at 0.2s Period	1.282
S₁ Mapped Spectral Response Acceleration at 1s Period	0.456
S_{MS} Adjusted Spectral Response Acceleration at 0.2s Period	1.538
S_{M1} Adjusted Spectral Response Acceleration at 1s Period	0.684
S_{DS} Design Spectral Response Acceleration at 0.2s Period	1.025
S_{D1} Design Spectral Response Acceleration at 1s Period	0.456
F_a Short Period Site Coefficient at 0.2s Period	1.2
F_v Long Period Site Coefficient at 1s Period	1.5
PGA_M	0.661
Seismic Design Category	D
*Values obtained from OSHPD Seismic Design Maps tool	

CONCLUSIONS

General

This investigation provides a broad overview of the geotechnical and geologic factors which are expected to influence future site planning and development. On the basis of our field investigation and testing program, it is the opinion of LOR Geotechnical Group, Inc., that the proposed development is feasible from a geotechnical standpoint, provided the recommendations presented in this report are incorporated into design and implemented during grading and construction.

The subsurface conditions encountered in our exploratory borings are indicative of the locations explored. The subsurface conditions presented here are not to be construed as being present the same everywhere across the site.

If conditions are encountered during the construction of the project which differ significantly from those presented in this report, this firm should be notified immediately so we may assess the impact to the recommendations provided.

Foundation Support

Based upon the field investigation and test data, it is our opinion that the existing undocumented fill soils will not, in their present condition, provide uniform and/or adequate support for the proposed improvements. Left as is, this condition could cause unacceptable differential and/or overall settlements upon application of the anticipated foundation loads.

To provide adequate support for the proposed structural improvements, we recommend that a compacted fill mat be constructed beneath foundations and structural concrete slabs. This compacted fill mat will provide a dense, high-strength soil layer to uniformly distribute the anticipated foundation loads over the underlying soils. A structural concrete slab foundation system, (mat foundation) or conventional continuous and/or spread foundations will provide adequate support for the anticipated downward and lateral loads when utilized in conjunction with the recommended fill mat.

Soil Expansiveness

Our borings placed across the site indicate medium expansive soil/bedrock materials, are present. Therefore, for any proposed foundations, mitigation of these conditions will be necessary. If the site is proposed for the receipt of import soils, the engineering characteristics of such should be determined once the source of the import is known. Import materials should have a non-critical expansion potential. Because the on-site medium expansive materials are anticipated at or near foundation and/or improvement levels, mitigation measures are provided here within for planning purposes.

Careful evaluation of on-site soils and any import fill for their expansion potential should be conducted during the grading operation.

Corrosion Potential

Select representative samples from our borings were taken to Project X Corrosion Engineering for full corrosion series testing. Results from soil corrosivity testing completed by Project X Corrosion Engineering are attached and summarized in the table below:

SOIL CORROSIVITY RESULTS					
Boring	Depth (feet)	pH	Sulfates (% by weight)	Chloride (% by weight)	Saturated Resistivity (ohm-cm)
B-3	2-5	8.4	0.3278	0.0044	570
B-6	4-7	9.2	0.0105	0.0885	938
B-9	1-4	8.3	0.0575	0.0028	804

The corrosivity test results indicate that soluble sulfate concentrations in one sample was above 0.3. These concentrations indicate an exposure class S2 for sulfate. Special mitigation methods are considered necessary.

The corrosivity test results indicate that chloride concentrations were locally above 500 ppm. This concentration indicates an exposure class C2 for chloride. Mitigation measures are considered necessary.

Soil pH for the samples was 8.3 to 9.2, slightly alkaline, respectively, therefore, the need for specialized design is anticipated.

Concentrations of ammonium and nitrate indicate the soil may be slightly aggressive towards copper.

The electrical resistivity (resistance to the flow of electric current) is a major factor in determining the corrosivity of a soil sample. Corrosion currents are inversely proportional to soil resistivity, thus a lower resistivity value for a selected sample translates to a more corrosive material. A qualitative table of this correlation is presented below:

RESISTIVITY – CORROSIVITY CORRELATION	
Soil Resistivity (ohm-cm)	Corrosivity Category
>10,000	Mildly Corrosive
2,000 to 10,000	Moderately Corrosive
1,000 to 2,000	Corrosive
<1,000	Severely Corrosive

When soil is saturated, resistivity is at approximately its lowest value. Therefore, for the laboratory testing, measurements of resistivity were taken after saturation with distilled water. Following the table above, resistivity results for the samples were in the severely corrosive range.

Based on the resistivity results above, this soil is classified as corrosive to ferrous metals and potentially aggressive towards copper. The laboratory data above should be reviewed and corrosion design should be completed by a qualified corrosion engineer.

In lieu of corrosion design for metal piping, ABS/PVC may be used. Soil corrosion is not considered a factor with ABS/PVC materials. ABS/PVC is considered suitable for use due to the corrosion potential of the on-site soils with respect to metals.

LOR Geotechnical does not practice corrosion engineering. If further information concerning the corrosion characteristics, or interpretation of the results submitted herein, is required, then a competent corrosion engineer could be consulted.

Geologic Mitigations

No special mitigation methods are deemed necessary at this time, other than the geotechnical recommendations provided in the following sections.

Seismicity

Seismic ground rupture is generally considered most likely to occur along pre-existing active faults. Since no known faults are known to exist near or project into the site, the probability of ground surface rupture occurring is considered nil.

Due to the close proximity to the faults described above, it is reasonable to expect a relatively strong ground motion seismic event to occur during the lifetime of the proposed development on the site. Large earthquakes could occur on other faults in the general area, but because of their lesser anticipated magnitude and/or greater distance, they are considered less significant than the faults described above from a ground motion standpoint.

The effects of ground shaking anticipated at the subject site should be mitigated by the seismic design requirements and procedures outlined in Chapter 16 of the California Building Code. However, it should be noted that the current building code requires the minimum design to allow a structure to remain standing after a seismic event, in order to

allow for safe evacuation. A structure built to code may still sustain damage which might ultimately result in the demolishing of the structure (Larson and Slosson, 1992).

RECOMMENDATIONS

Geologic Recommendations

No special geologic recommendations are deemed necessary at this time, other than the geotechnical recommendations provided in the following sections.

General Site Grading

It is imperative that no additional clearing and/or grading operations be performed without the presence of a qualified geotechnical engineer. An on-site, pre-job meeting with the owner, the contractor, and geotechnical engineer should occur prior to all grading related operations. Operations undertaken at the site without the geotechnical engineer present may result in exclusions of affected areas from the final compaction report for the project.

Grading of the subject site should be performed in accordance with the following recommendations as well as applicable portions of the California Building Code, and/or applicable local ordinances.

All areas to be graded should be stripped of significant vegetation and other deleterious materials. It is our recommendation that all existing fills under any proposed flatwork and/or paved areas be removed and replaced with engineered compacted fill. If this is not done, premature structural distress (settlement) of the flatwork and pavement may occur. Any undocumented fills encountered during grading should be completely removed and cleaned of significant deleterious materials. These may then be reused as compacted fill.

Cavities created by removal of undocumented fill soils and/or subsurface obstructions should be thoroughly cleaned of loose soil, organic matter and other deleterious materials, shaped to provide access for construction equipment, and backfilled as recommended in the following Engineered Compacted Fill section of this report.

Initial Site Preparation

All undocumented fill material should be removed from all proposed structural and/or fill areas. The data developed during this investigation indicates that removals on the order of 0.5 to 12.5 feet, and likely deeper locally, will be required from the proposed

development area in order to encounter competent bedrock upon which engineered compacted fill can be placed. As indicated on our boring logs, removal depths are anticipated to vary considerably across the site and the given removal depths are preliminary. The actual depths of the removals should be determined during the grading operation by observation and/or in-place density testing. All independent structural areas should have a fill thickness ratio of 3:1 or less beneath footings and/or slabs. For example, if the maximum fill thickness across a given structural area is 15 feet, the minimum fill thickness across this area should be 5 feet.

Preparation of Fill Areas

After completion of the removals described above and prior to placing fill, the surfaces of all areas to receive fill should be scarified to a depth of at least 6 inches. The scarified soil should be brought to near optimum moisture content and compacted to a relative compaction of at least 90 percent (ASTM D 1557).

Engineered Compacted Fill

The on-site soils and bedrock materials should provide adequate quality fill material, provided they are free from oversized and/or organic matter and other deleterious materials. Unless approved by the geotechnical engineer, rock or similar irreducible material with a maximum dimension greater than 6 inches should not be buried or placed in fills.

If required, import fill should be inorganic, non-expansive granular soils free from rocks or lumps greater than 6 inches in maximum dimension. Sources for import fill should be approved by the geotechnical engineer prior to their use. Fill should be spread in maximum 8-inch uniform, loose lifts, each lift brought to near optimum moisture content, and compacted to a relative compaction of at least 90 percent in accordance with ASTM D 1557.

Preparation of Foundation Areas

The proposed foundation systems, structural concrete slabs (mat foundations), should rest upon at least 24 inches of properly compacted fill material placed over competent native earth materials. In areas where the required fill thickness is not accomplished by the recommended removals, the foundation areas should be further subexcavated to a depth of at least 24 inches below the proposed footing base grade, with the subexcavation extending at least 5 feet beyond the foundation perimeter.

As previously mentioned, the minimum fill thickness across a given structural area beneath footings and/or slabs should be one third of the maximum fill thickness across this area. The bottom of all excavations should be scarified to a depth of 12 inches, brought to near optimum moisture content, and recompact to at least 90 percent relative compaction (ASTM D 1557) prior to the placement of compacted fill.

Foundation Design

Foundation design is provided for planning purposes and is based upon the engineering properties of the on-site soil/bedrock as found during this investigation. The required import soil should be evaluated, when known, so that appropriate recommendations can be provided.

Due to medium expansive soil conditions, we recommend that all structures be supported on reinforced, stiffened mat foundations resting over 24 inches of engineered compacted fill placed over competent native earth materials.

The design of the structural slab foundation should be performed in conformance to the Wire Reinforcement Institute (WRI) method or the Post-Tensioning Institute (PTI) method. For the application of the WRI method, a minimum effective plasticity index of 22 is recommended for foundation design. The slab thickness should be a minimum of 5 inches and should have a reinforcement of at least A_s equal to 3,300 pounds. This could consist of #3 reinforcing bars of 60-grade steel placed at a maximum spacing of 18 inches on center, each way or equivalent. Prior to placing concrete slabs, the upper 12 inches of the subgrade soil should be pre-saturated to 2 to 4 percent over optimum moisture content.

These reinforcement, depth, and spacing recommendations should be considered minimum. The actual requirements for slab-on-grade foundations design and construction should be provided by a structural engineer experienced in these matters. These conditions should be verified during the site grading by additional evaluation of on-site and any imported soils for their expansion potential and plasticity characteristics.

If slab-on-grade foundations per the PTI method are proposed, the following geotechnical parameters should be used for design:

- Edge Moisture Variation Distance, em:

Center Lift Loading Conditions:	9.0 ft
Edge Lift Loading Conditions:	8.5 ft
- Differential Swell, ym:

Center Lift	3.5 in
Edge Lift	8.5 in
- Subgrade Soil Friction Coefficient, μ : 0.30

The above design parameters are based upon the data collected during our site investigation and are in accordance with Design of Post-Tensioned Slabs-on-Ground, third edition, published by the Post-Tensioning Institute (2008).

For the minimum width and depth, spread foundations may be designed using an allowable bearing pressure of 2,000 pounds per square foot (psf). This bearing pressure may be increased by 200 psf for each additional foot of width, and by 500 psf for each additional foot of depth, up to a maximum of 4,000 psf.

The above values are net pressures; therefore, the weight of the foundations and the backfill over the foundations may be neglected when computing dead loads. The values apply to the maximum edge pressure for foundations subjected to eccentric loads or overturning. The recommended pressures apply for the total of dead plus frequently applied live loads, and incorporate a factor of safety of at least 3.0. The allowable bearing pressures may be increased by one-third for temporary wind or seismic loading. The resultant of the combined vertical and lateral seismic loads should act within the middle one-third of the footing width. The maximum calculated edge pressure under the toe of foundations subjected to eccentric loads or over turning should not exceed the increased allowable pressure. Buildings should be setback from slopes in accordance with the California Building Code.

Resistance to lateral loads will be provided by passive earth pressure and base friction. For footings bearing against compacted fill, passive earth pressure may be considered to be developed at a rate of 260 pounds per square foot per foot of depth. Base friction may be computed at 0.28 times the normal load. Base friction and passive earth pressure may be combined without reduction. These values are for dead load plus live load and may be increased by one-third for wind or seismic loading.

Wall Pressures

The design of footings for retaining walls should be performed in accordance with the recommendations described earlier under Preparation of Foundation Areas and Foundation Design. For design of retaining wall footings, the resultant of the applied loads should act in the middle one-third of the footing, and the maximum edge pressure should not exceed the basic allowable value without increase.

For design of retaining walls unrestrained against movement at the top, we recommend an active pressure of 45 pounds per square foot (psf) per foot of depth be used. This assumes level backfill consisting of recompacted, non-expansive, native soils placed against the structures and within the back cut slope extending upward from the base of the stem at 35 degrees from the vertical or flatter.

Retaining structures subject to uniform surcharge loads within a horizontal distance behind the structures equal to the structural height should be designed to resist additional lateral loads equal to 0.45 times the surcharge load. Any isolated or line loads from adjacent foundations or vehicular loading will impose additional wall loads and should be considered individually.

To avoid over stressing or excessive tilting during placement of backfill behind walls, heavy compaction equipment should not be allowed within the zone delineated by a 45 degree line extending from the base of the wall to the fill surface. The backfill directly behind the walls should be compacted using light equipment such as hand operated vibrating plates and rollers. No material larger than three inches in diameter should be placed in direct contact with the wall.

Wall pressures should be verified prior to construction, when the actual backfill materials and conditions have been determined. Recommended pressures are applicable only to level, non-expansive, properly drained backfill with no additional surcharge loadings.

If inclined backfills are proposed, this firm should be contacted to develop appropriate active earth pressure parameters.

Slab-On-Grade Design

Concrete floor slabs should bear on a minimum of 24 inches of engineered fill compacted to at least 90 percent (ASTM D 1557). The final pad surfaces should be rolled to provide smooth, dense surfaces upon which to place the concrete.

Settlement

Total settlement of individual foundations will vary depending on the width of the foundation and the actual load supported. Maximum settlement of shallow foundations designed and constructed in accordance with the preceding recommendations are estimated to be on the order of 0.5 inch. Differential settlements between adjacent footings should be about one-half of the total settlement. Settlement of all foundations is expected to occur rapidly, primarily as a result of elastic compression of supporting soils as the loads are applied, and should be essentially completed shortly after initial application of the loads.

Short-Term Excavations

Following the California Occupational and Safety Health Act (CAL-OSHA) requirements, excavations 5 feet deep and greater should be sloped or shored. All excavations and shoring should conform to CAL-OSHA requirements.

Short-term excavations 5-feet deep and greater shall conform to Title 8 of the California Code of Regulations, Construction Safety Orders, Section 1504 and 1539 through 1547. Based on our exploratory borings, it appears that Type C soil is the predominant type of soil on the project and all short-term excavations should be based on this type of soil. Deviation from the standard short-term slopes are permitted using Option 4, Design by a Registered Professional Engineer (Section 1541.1).

Short-term slope construction and maintenance are the responsibility of the contractor, and should be a consideration of his methods of operation and the actual soil conditions encountered.

Slope Construction

Preliminary data indicates that cut and fill slopes should be constructed no steeper than two horizontal to one vertical. Fill slopes should be overfilled during construction and then cut back to expose fully compacted soil. A suitable alternative would be to compact the slopes during construction, then roll the final slopes to provide dense, erosion-resistant surfaces.

Slope Protection

Since the site soils are susceptible to erosion by running water, measures should be provided to prevent surface water from flowing over slope faces. Slopes at the project

should be planted with a deep rooted ground cover as soon as possible after completion. The use of succulent ground covers such as iceplant or sedum is not recommended. If watering is necessary to sustain plant growth on slopes, the watering system should be monitored to assure proper operation and to prevent over watering.

Exterior Concrete Flatwork

To provide adequate support, exterior concrete flatwork improvements should rest on a minimum of 12 inches of soil compacted to at least 90 percent (ASTM D 1557).

To resist expansive soil forces, flatwork supported by medium expansive soils should be reinforced with a minimum of # 3 rebar at 18 inches each way. Flatwork areas should be pre-saturated to 2 to 4 percent over optimum prior to placing concrete.

Flatwork surface should be sloped a minimum of 1 percent away from buildings and slopes, to approved drainage structures.

Preliminary Pavement Design

Testing and design for preliminary on-site pavement was conducted in accordance with the California Highway Design Manual. Based upon our preliminary sampling and testing, and upon Traffic Indices typical for such projects, it appears that the structural section tabulated below should provide satisfactory pavement for the subject pavement improvements:

AREA	T.I.*	DESIGN R-VALUE	PRELIMINARY SECTION
Car Parking Areas and Access Lanes (ADTT=1)	5.0	30	0.25' AC / 0.45' AB 4.5" PCC / 4.0" AB
Entrance and Service Lanes (ADTT=25)	7.0	30	0.30' AC / 1.0' AB 6.0" PCC / 4.0" AB
AC - Asphalt Concrete AB - Class 2 Aggregate Base PCC-Portland Cement Concrete, MR = 550 psi *Actual Traffic Index to be determined by others			

The above structural section is predicated upon 90 percent relative compaction (ASTM D 1557) of all utility trench backfills and 95 percent relative compaction (ASTM D 1557) of the upper 12 inches of pavement subgrade soils and of any aggregate base utilized. In addition, the aggregate base should meet Caltrans specifications for Class 2 Aggregate Base.

It should be noted that all of the above pavement design was based upon the results of preliminary sampling and testing and should be verified by additional sampling and testing during construction when the actual subgrade soils are exposed. Improvement of the R-value quality of the soils may be provided through mixing with granular soils observed on-site.

Construction Monitoring

Post investigative services are an important and necessary continuation of this investigation. Project plans and specifications should be reviewed by the project geotechnical consultant prior to construction to confirm that the intent of the recommendations presented herein have been incorporated into the design.

Additional expansion index, R-value, and corrosion potential testing may be required during site rough grading.

During construction, sufficient and timely geotechnical observation and testing should be provided to correlate the findings of this investigation with the actual subsurface conditions exposed during construction. Items requiring observation and testing include, but are not necessarily limited to, the following:

1. Site preparation-stripping and removals.
2. Excavations, including approval of the bottom of excavation prior to processing and/or filling.
3. Processing and compaction of removal and/or over-excavation of bottom soils prior to fill placement.
4. Subgrade preparation for pavements and slabs-on-grade.

5. Placement of engineered compacted fill and backfill, including approval of fill materials and the performance of sufficient density tests to evaluate the degree of compaction being achieved.
6. Foundation excavations.

LIMITATIONS

This report contains geotechnical conclusions and recommendations developed solely for use by Biofuels Coyote Canyon Biogas, LLC, and their design constituents, for the purposes described earlier. It may not contain sufficient information for other uses or the purposes of other parties. The contents should not be extrapolated to other areas or used for other facilities without consulting LOR Geotechnical Group, Inc.

The recommendations are based on interpretations of the subsurface conditions concluded from information gained from subsurface explorations and a surficial site reconnaissance.

The interpretations may differ from actual subsurface conditions, which can vary horizontally and vertically across the site. If conditions are encountered during the construction of the project which differ significantly from those presented in this report, this firm should be notified immediately in order that we may assess the impact to the recommendations provided.

Due to possible subsurface variations, all aspects of field construction addressed in this report should be observed and tested by the project geotechnical consultant.

If parties other than LOR Geotechnical Group, Inc., provide construction monitoring services, they must be notified that they will be required to assume responsibility for the geotechnical phase of the project being completed by concurring with the recommendations provided in this report or by providing alternative recommendations.

The report was prepared using generally accepted geotechnical engineering practices under the direction of a state licensed geotechnical engineer. No warranty, expressed or implied, is made as to conclusions and professional advice included in this report. Any persons using this report for bidding or construction purposes should perform such independent investigations as deemed necessary to satisfy themselves as to the surface and subsurface conditions to be encountered and the procedures to be used in the performance of work on this project.

TIME LIMITATIONS

The findings of this report are valid as of this date. Changes in the condition of a property can, however, occur with the passage of time, whether they be due to natural processes or the work of man on this or adjacent properties. In addition, changes in the Standards-of-Practice and/or Governmental Codes may occur. Due to such changes, the findings of this report may be invalidated wholly or in part by changes beyond our control. Therefore, this report should not be relied upon after a significant amount of time without a review by LOR Geotechnical Group, Inc., verifying the suitability of the conclusions and recommendations.

CLOSURE

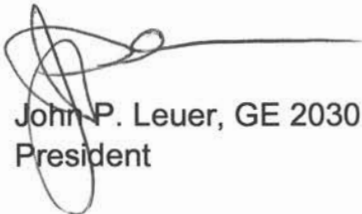
It has been a pleasure to assist you with this project. We look forward to being of further assistance to you as construction begins. Should conditions be encountered during construction that appear to be different than as indicated by this report, please contact this office immediately in order that we might evaluate these conditions.

Should you have any questions regarding this report, please do not hesitate to contact our office at your convenience.

Respectfully submitted,
LOR Geotechnical Group, Inc.



Robert M. Markoff, CEG
Engineering Geologist



John P. Leuer, GE 2030
President

RMM:JPL:ss

Distribution: Addressee (4) and PDF via email sbratt@archaea.energy

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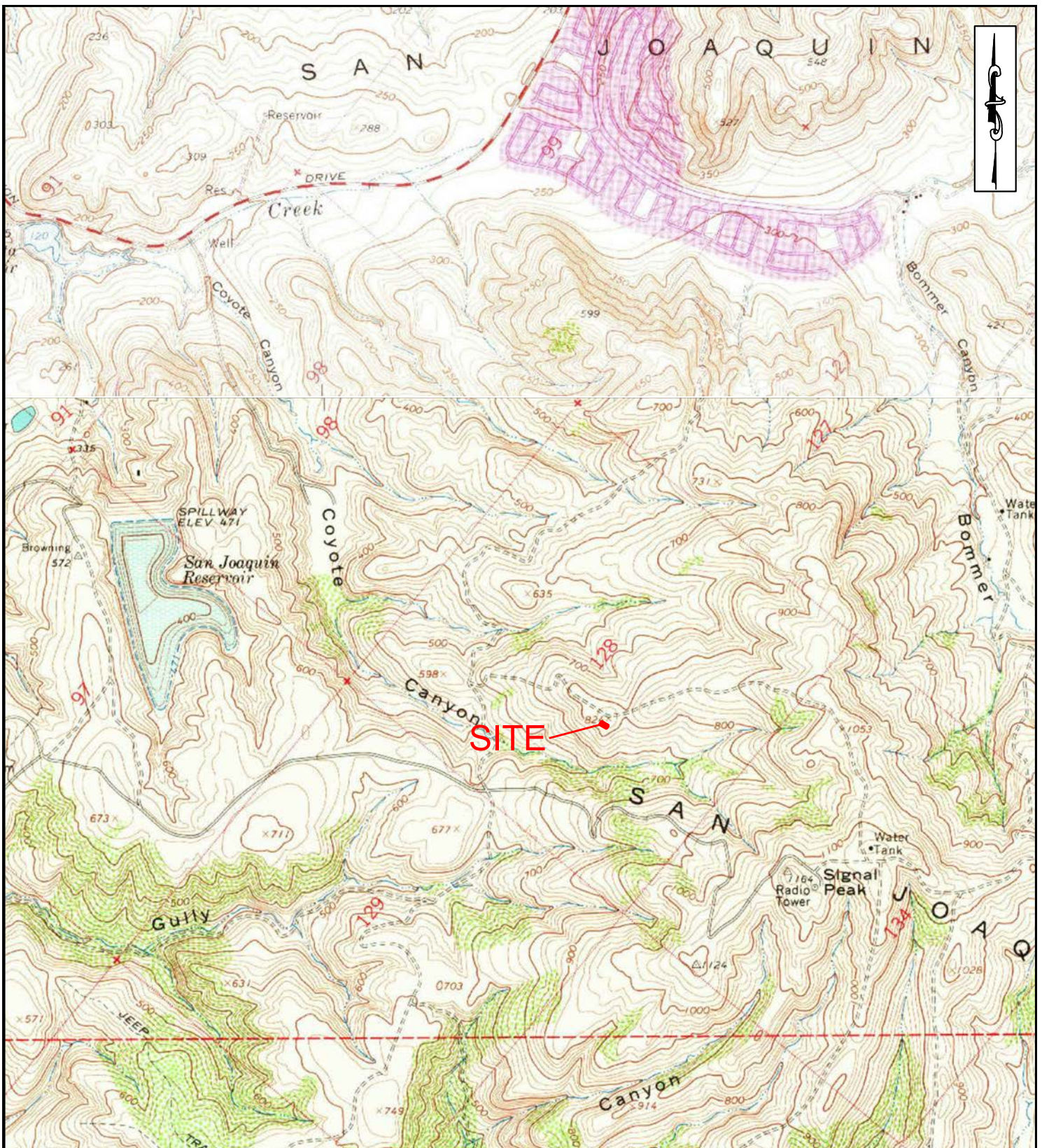
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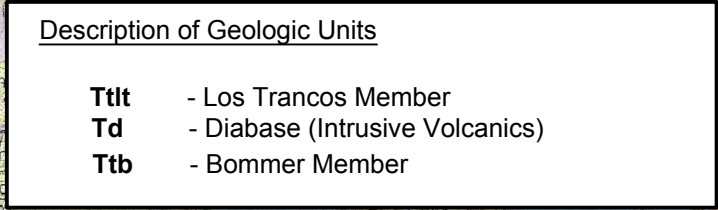
APPENDIX A

Index Map, Site Plan, Regional Geologic Map, and Historical Seismicity Maps

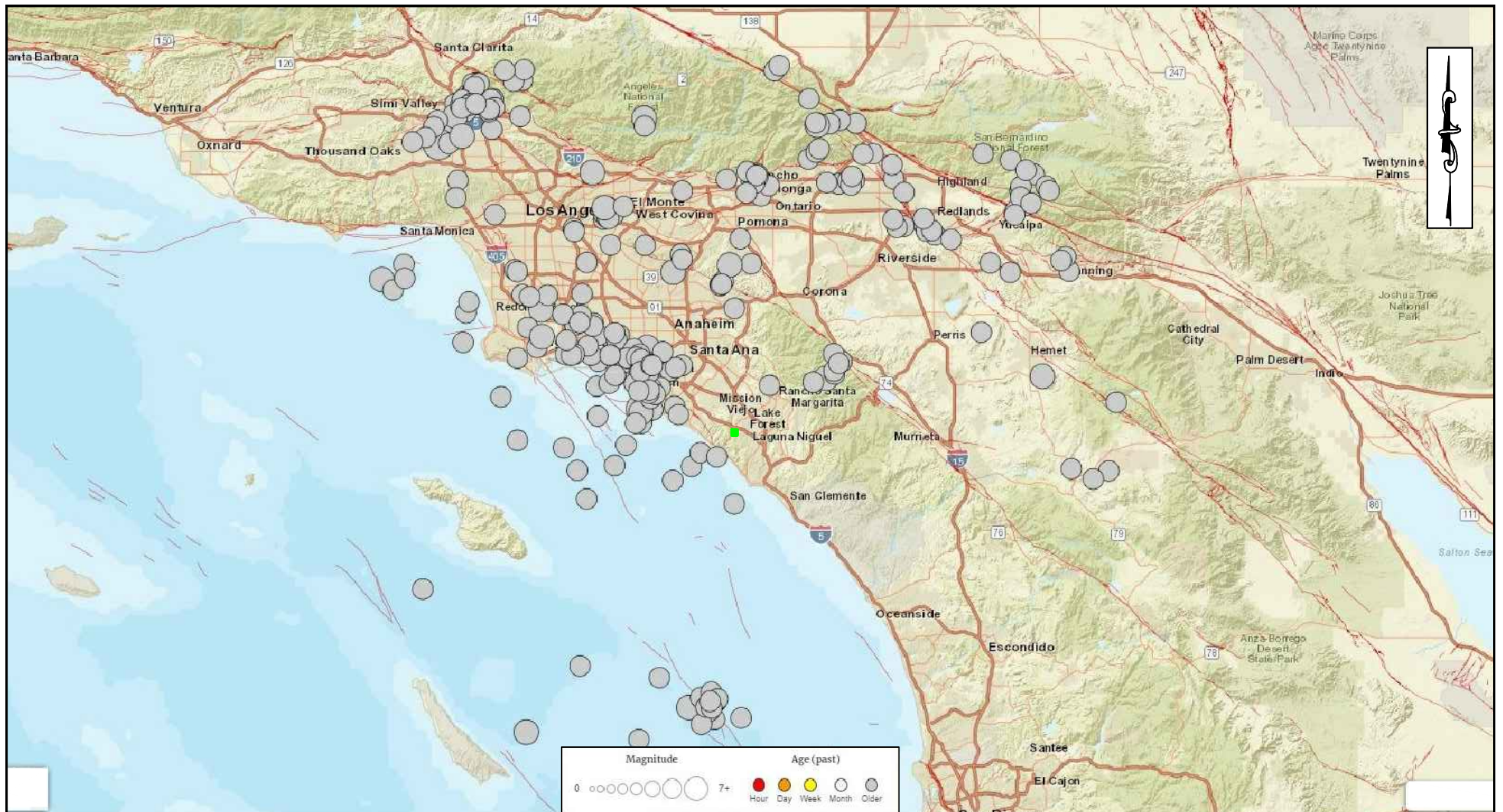


INDEX MAP

PROJECT:	Proposed RNG Plant Equipment Area	PROJECT NO.:	23775.1
CLIENT:	Biofuels Coyote Canyon Biogas, LLC	ENCLOSURE:	A-1
LOR GEOTECHNICAL GROUP, INC.		DATE:	December 2021
		SCALE:	1" ≈ 2,000'



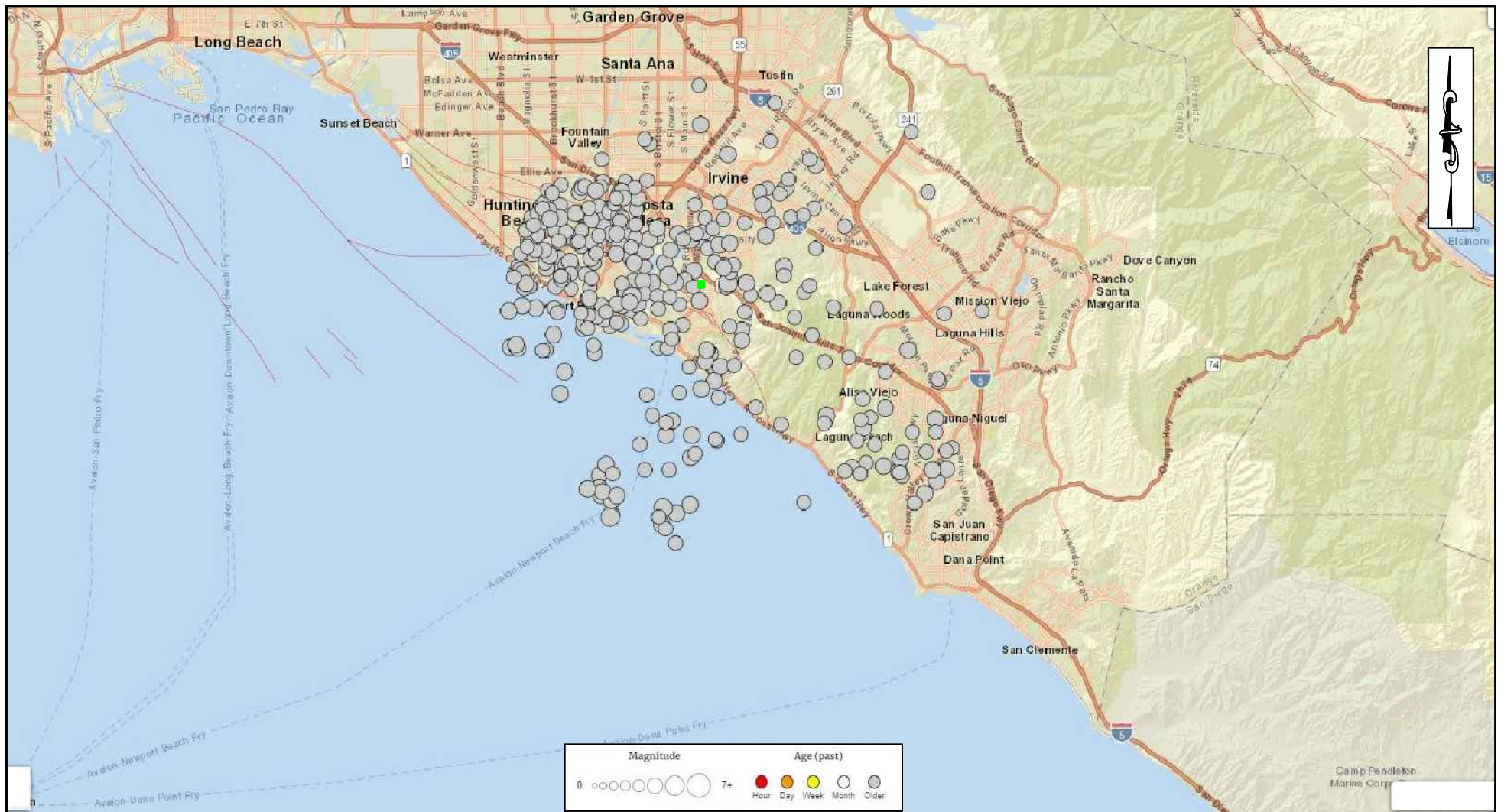
(Morton & Miller, 1981)



U.S. Geological Survey (2021) real-time earthquake epicenter map. Plotted are 271 epicenters of instrument-recorded events from 1932 to present (11/29/21) of local magnitude greater than M4.0 within a radius of ~62 miles (100 kilometers) of the site. Location accuracy varies. The site is indicated by the green square. The selected magnitude corresponds to a threshold intensity value where very light damage potential begins. These events are also generally widely felt by persons. Red lines mark the surface traces of known Quaternary-age faults.

HISTORICAL SEISMICITY MAP - 100km Radius

PROJECT:	Proposed RNG Plant Equipment Area	PROJECT NO.:	23775.1
CLIENT:	Biofuels Coyote Canyon Biogas, LLC	ENCLOSURE:	A-4
LOR GEOTECHNICAL GROUP, INC.		DATE:	December 2021
		SCALE:	1" ≈ 40km



U.S. Geological Survey (2021) real-time earthquake epicenter map. Plotted are 334 epicenters of instrument-recorded events from 1932 to present (11/29/21) of local magnitude greater than M1.0 within a radius of ~9.2 miles (15 kilometers) of the site. Location accuracy varies. The site is indicated by the green square. The selected magnitude corresponds to a threshold intensity value where very light damage potential begins. These events are also generally widely felt by persons. Red lines mark the surface traces of known Quaternary-age faults.

HISTORICAL SEISMICITY MAP - 15km Radius

PROJECT:	Proposed RNG Plant Equipment Area	PROJECT NO.:	23775.1
CLIENT:	Biofuels Coyote Canyon Biogas, LLC	ENCLOSURE:	A-5
LOR GEOTECHNICAL GROUP, INC.		DATE:	December 2021
		SCALE:	1" ≈ 10km

APPENDIX B

Field Investigation Program and Boring Logs

APPENDIX B

FIELD INVESTIGATION

Subsurface Exploration

The site was investigated on November 1st and 2nd 17, 2021 and consisted of the excavation and logging of 11 exploratory borings to depths ranging from approximately 11.5 feet to 21.5 feet below the existing ground surface. The approximate locations of the borings are shown on Enclosures A-2 within Appendix A.

The drilling exploration was conducted using a Mobile B-61 drill rig equipped with 8-inch diameter hollow stem augers. The soils were continuously logged by our geologist who inspected the site, created detailed logs of the borings, obtained undisturbed, as well as disturbed, soil samples for evaluation and testing, and classified the soils by visual examination in accordance with the Unified Soil Classification System.

Relatively undisturbed samples of the subsoils were obtained at a typical interval of 5 feet. The samples were recovered by using a California split barrel sampler of 2.50 inch inside diameter and 3.25 inch outside diameter or a Standard Penetration Sampler (SPT) from the ground surface to the total depth explored. The samplers were driven by a 140 pound automatic trip hammer dropped from a height of 30 inches. The number of hammer blows required to drive the sampler into the ground the final 12 inches were recorded and further converted to an equivalent SPT N-value. Factors such as efficiency of the automatic trip hammer used during this investigation (80%), borehole diameter (8"), and rod length at the test depth were considered for further computing of equivalent SPT N-values corrected for field procedures (N₆₀) which are included in the boring logs, Enclosures B-1 through B-11.

The undisturbed soil samples were retained in brass sample rings of 2.42 inches in diameter and 1.00 inch in height, and placed in sealed containers. Disturbed soil samples were obtained at selected levels within the borings and placed in sealed containers for transport to our geotechnical laboratory.

All samples obtained were taken to our geotechnical laboratory for storage and testing. Detailed logs of the borings are presented on the enclosed Boring Logs, Enclosures B-1 through B-11. A Boring Log Legend and Soil Classification Chart are presented on Enclosures B-i and B-ii, respectively.

CONSISTENCY OF SOIL

SANDS

SPT BLOWS

0-4	Very Loose
4-10	Loose
10-30	Medium Dense
30-50	Dense
Over 50	Very Dense

CONSISTENCY

COHESIVE SOILS

SPT BLOWS

0-2	Very Soft
2-4	Soft
4-8	Medium
8-15	Stiff
15-30	Very Stiff
30-60	Hard
Over 60	Very Hard

CONSISTENCY

SAMPLE KEY

Symbol

Description



INDICATES CALIFORNIA
SPLIT SPOON SOIL
SAMPLE

INDICATES BULK SAMPLE

INDICATES SAND CONE
OR NUCLEAR DENSITY
TEST

INDICATES STANDARD
PENETRATION TEST (SPT)
SOIL SAMPLE
















TYPES OF LABORATORY TESTS

- 1 Atterberg Limits
- 2 Consolidation
- 3 Direct Shear (undisturbed or remolded)
- 4 Expansion Index
- 5 Hydrometer
- 6 Organic Content
- 7 Proctor (4", 6", or Cal216)
- 8 R-value
- 9 Sand Equivalent
- 10 Sieve Analysis
- 11 Soluble Sulfate Content
- 12 Swell
- 13 Wash 200 Sieve

BORING LOG LEGEND

PROJECT:	Proposed RNG Plant Equipment Area, Newport Beach, California	PROJECT NO.:	23775.1
CLIENT:	Biofuels Coyote Canyon Biogas, LLC	ENCLOSURE:	B-i
LOR GEOTECHNICAL GROUP, INC.		DATE:	December 2021

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
		HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

PARTICLE SIZE LIMITS

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		COARSE	FINE	COARSE	MEDIUM	FINE	
12"	3"	3/4"	No. 4 (U.S. STANDARD SIEVE SIZE)	No. 10	No. 40	200	

SOIL CLASSIFICATION CHART

PROJECT:	Proposed RNG Plant Equipment Area, Newport Beach, California	PROJECT NO.:	23775.1
CLIENT:	Biofuels Coyote Canyon Biogas, LLC	ENCLOSURE:	B-ii
LOR GEOTECHNICAL GROUP, INC.		DATE:	December 2021

LOG OF BORING B-1

DEPTH IN FEET	TEST DATA							DESCRIPTION
	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	
0								SM
40 for 3"			2.0			■		<p>@ 0 feet, <u>FILL</u>: SILTY SAND, approximately 10% gravel (to 2" diameter), 10% coarse grained sand, 30% medium grained sand, 30% fine grained sand, 20% silty fines, brown, damp, loose.</p> <p>@ 1.5 feet, <u>BEDROCK</u>: SANDSTONE, approximately 5% coarse grained sand, 35% medium grained sand, 55% fine grained sand, 5% silty fines, light yellowish-brown, damp, moderately cemented, hard.</p> <p>@ 2 feet, sample disturbed.</p>
5	58 for 2"		3.2			|||		below 6± feet, slightly coarser grained, darker yellowish-brown, damp to moist.
10	65 for 4"		5.6			||||		
15	65 for 4"		7.1			||||		
20								END OF BORING @ 17' due to practical refusal
								<p>Fill to 1.5±'</p> <p>No groundwater</p> <p>Bedrock @ 1.5'</p>

PROJECT: Proposed RNG Plant Equipment Area

PROJECT NO.: 23775.1

CLIENT: Archaea Energy, LLC

ELEVATION: --

LOR GEOTECHNICAL GROUP, INC.

DATE DRILLED: November 1, 2021

EQUIPMENT: Mobile B-61

HOLE DIA.: 8" ENCLOSURE: B-1

LOG OF BORING B-2

DEPTH IN FEET	TEST DATA						U.S.C.S.	DESCRIPTION
	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	
0								
65 for 10"			2.9		123.7			SM @ 0 feet, <u>FILL</u> : SILTY SAND, approximately 5% gravel (to 2" diameter), 15% coarse grained sand, 30% medium grained sand, 25% fine grained sand, 15% silty fines, brown, damp, loose. SW @ 1 foot, processed import soil, approximately 10% fine gravel, 25% coarse grained sand, 25% medium grained sand, 30% fine grained sand and silty fines, grayish-brown, damp to moist, dense.
5	59		3.6		123.2			@ 5 feet, same as above.
43 for 5"			8.1		94.7			@ 6.5± feet, <u>BEDROCK</u> : SANDSTONE, approximately 30% medium grained sand, 65% fine grained sand, 5% silty fines, yellowish-brown, damp, moderately cemented, hard.
10	46 for 5"		7.3		100.4			below 10 feet, gravelly, harder drilling.
								END OF BORING @ 12' due to practical refusal
								Fill to 6.5±' No groundwater Bedrock @ 6.5'
15								

PROJECT: Proposed RNG Plant Equipment Area

PROJECT NO.: 23775.1

CLIENT: Archaea Energy, LLC

ELEVATION: --

LOR GEOTECHNICAL GROUP, INC.

DATE DRILLED: November 1, 2021

EQUIPMENT: Mobile B-61

HOLE DIA.: 8" ENCLOSURE: B-2

LOG OF BORING B-3

DEPTH IN FEET	TEST DATA						U.S.C.S.	DESCRIPTION
	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	
0								
	26	4, 7, 10, 11	14.5		108.4			<p>SM @ 0 feet, FILL: SILTY SAND with GRAVEL, approximately 30% gravel (to 1" diameter), 10% coarse grained sand, 20% medium grained sand, 25% fine grained sand, 15% silty fines, light brown, damp, dense.</p> <p>CL @ 1.5 feet, SANDY CLAY, approximately 5% gravel, 5% coarse grained sand, 10% medium grained sand, 20% fine grained sand, 60% clay and silt, brown, moist, stiff.</p>
5	29		15.6		106.6			<p>@ 5± feet, BEDROCK: CLAYEY SILTSTONE, approximately 5% medium grained sand, 25% fine grained sand, 70% silt and clay, thinly bedded to laminated (20±° dip), grayish-brown and brown layers, moist, weakly cemented.</p>
	74 for 11"		13.9		111.2			
10	69		14.2		110.6			
15	77 for 11"		11.5		116.9			<p>END OF BORING @ 15.92'</p> <p>Fill to 5±' No groundwater Bedrock @ 5'</p>
20								

PROJECT: Proposed RNG Plant Equipment Area

PROJECT NO.: 23775.1

CLIENT: Archaea Energy, LLC

ELEVATION: --

LOR GEOTECHNICAL GROUP, INC.

DATE DRILLED: November 1, 2021

EQUIPMENT: Mobile B-61

HOLE DIA.: 8" **ENCLOSURE:** B-3

LOG OF BORING B-4

DEPTH IN FEET	TEST DATA							DESCRIPTION
	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	
0								SM @ 0 feet, <u>FILL</u> : SILTY SAND with GRAVEL, approximately 30% gravel (to 1" diameter), 15% coarse grained sand, 20% medium grained sand, 20% fine grained sand, 15% silty fines, light brown, damp, loose to medium dense.
	25		9.1		118.5			@ 2.5 feet, <u>BEDROCK</u> : SANDSTONE, approximately 40% medium grained sand, 55% fine grained sand, 5% silty fines, light yellowish-brown to light grayish-brown, damp, moderately weathered, weakly cemented. below 3 feet, becomes dark yellowish-brown, coarser grained sand but also siltier.
5	46		11.4		115.6			@ 5 feet, fine grained, grayish-brown.
	76 for 11"		9.0		118.0			@ 7 feet, more yellowish-brown, still mostly fine grained.
10	78 for 11"		12.8		115.0			@ 10 feet, includes occasional SILTY SANDSTONE layers, locally oxidized to an orange to reddish-brown color.
								END OF BORING @ 11.42'
								Fill to 2.5' No groundwater Bedrock @ 2.5'
15								

PROJECT: Proposed RNG Plant Equipment Area

PROJECT NO.: 23775.1

CLIENT: Archaea Energy, LLC

ELEVATION: --

LOR GEOTECHNICAL GROUP, INC.

DATE DRILLED: November 1, 2021

EQUIPMENT: Mobile B-61

HOLE DIA.: 8" ENCLOSURE: B-4

LOG OF BORING B-5

DEPTH IN FEET	TEST DATA						U.S.C.S.	DESCRIPTION
	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	
0								
	49 for 6"		8.3					@ 0 feet, <u>FILL</u> : SILTY SAND with GRAVEL, approximately 25% gravel (to 1" diameter), 10% coarse grained sand, 20% medium grained sand, 25% fine grained sand, 25% silty fines, light brown, damp, loose to medium dense. @ 1.5 feet, becomes more grayish-brown, dense to very dense. @ 2 feet, sample disturbed.
5	72 for 11"	3, 4, 7, 10, 11	7.9		97.7			@ 5 feet, very dense.
	16	2	8.8		106.4			
10	18		12.9		114.5			@ 7± feet, <u>CLAYEY SAND</u> , approximately 10% fine gravel, 5% coarse grained sand, 15% medium grained sand, 25% fine grained sand, 45% clay and silt, yellowish-brown, moist, loose to medium dense.
	61		18.2		106.4			@ 10 feet, moist, yellowish-brown.
15	75		17.8		106.2			@ 12.5± feet, <u>BEDROCK</u> : SANDY SILTSTONE, fine grained, grayish-brown to yellowish-brown, moist, weakly cemented, low angle dip. @ 15 feet, includes minor, thin gypsum stingers along fractures.
20	73		14.3		108.6			@ 20 feet, moderately cemented.
25								END OF BORING @ 21' Fill to 12.5±' No groundwater Bedrock @ 12.5'

PROJECT: Proposed RNG Plant Equipment Area

PROJECT NO.: 23775.1

CLIENT: Archaea Energy, LLC

ELEVATION: --

LOR GEOTECHNICAL GROUP, INC.

DATE DRILLED: November 1, 2021

EQUIPMENT: Mobile B-61

HOLE DIA.: 8" ENCLOSURE: B-5

LOG OF BORING B-6

DEPTH IN FEET	TEST DATA							DESCRIPTION
	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	
0								SM @ 0 feet, <u>FILL</u> : SILTY SAND with GRAVEL, approximately 25% gravel (to 1" diameter), 10% coarse grained sand, 20% medium grained sand, 25% fine grained sand, 20% silty fines, light brown, damp, loose to medium dense.
	52		11.8		116.3			@ 2.5± feet, <u>BEDROCK</u> : SILTY SANDSTONE, approximately 15% medium grained sand, 30% fine grained sand, 55% silt and clay, yellowish-brown, moist, weakly to moderately cemented.
5	70		13.2		111.3			
	60		11.0		105.3			below 7 feet, sandier.
10	79 for 11"		15.8		107.6			@ 10 feet, locally oxidized to an orange/reddish-brown color. END OF BORING @ 10.42'
								Fill to 2.5' No groundwater Bedrock @ 2.5'
15								

PROJECT: Proposed RNG Plant Equipment Area

PROJECT NO.: 23775.1

CLIENT: Archaea Energy, LLC

ELEVATION: --

LOR GEOTECHNICAL GROUP, INC.

DATE DRILLED: November 1, 2021

EQUIPMENT: Mobile B-61

HOLE DIA.: 8" ENCLOSURE: B-6

LOG OF BORING B-7

DEPTH IN FEET	TEST DATA						U.S.C.S.	DESCRIPTION
	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	
0								
	47		15.6		104.5			<p>@ 0 feet, <u>FILL</u>: SILTY SAND, approximately 25% gravel (to 1" diameter), 10% coarse grained sand, 20% medium grained sand, 25% fine grained sand, 20% silty fines, light brown, damp, loose to medium dense.</p> <p>@ 1± foot, <u>BEDROCK</u>: SANDY SILTSTONE, approximately 5% medium grained sand, 20% fine grained sand, 70% silt and clay, laminated to thinly bedded, light yellowish-brown, damp, weakly cemented (moderate drilling).</p>
5	52		16.2		105.0			
	69		17.9		102.5			@ 7 feet, includes local areas oxidized to orange/reddish-brown color.
10	74 for 10"		17.5		103.9			@ 10 feet, sample reveals low to moderate dip amounts.
15	64		21.2		100.3			
20	72		18.1		105.5			@ 20 feet, slight increase in percentage of clay.
25								<p>END OF BORING @ 21.5'</p> <p>Fill to 1±'</p> <p>No groundwater</p> <p>Bedrock @ 1'</p>

PROJECT: Proposed RNG Plant Equipment Area

PROJECT NO.: 23775.1

CLIENT: Archaea Energy, LLC

ELEVATION: --

LOR GEOTECHNICAL GROUP, INC.

DATE DRILLED: November 2, 2021

EQUIPMENT: Mobile B-61

HOLE DIA.: 8" ENCLOSURE: B-7

LOG OF BORING B-8

DEPTH IN FEET	TEST DATA						U.S.C.S.	DESCRIPTION
	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	
0								
	52		11.9		117.6			<p>@ 0 feet, <u>FILL</u>: SILTY SAND with GRAVEL, approximately 15% gravel, 10 % coarse grained sand, 20% medium grained sand, 25% fine grained sand, 20% silty fines, light brown, damp, loose to medium dense.</p> <p>@ 2± feet, <u>BEDROCK</u>: SANDY SILTSTONE, approximately 5% medium grained sand, 30% fine grained sand, 65% silty with clay, yellowish-brown to grayish-brown, moist, weakly cemented.</p>
5	53		14.1		115.3			
	76		12.5		118.1			@ 7 feet, slightly sandier.
10	65		14.0		112.0			@ 10 feet, siltier with minor clayey siltstone.
15	36		13.7		108.2			@ 15 feet, includes occasional think (1/8 to 1/4") gypsum stringers.
20	82 for 9"		12.8		104.5			@ 20 feet, sandier.
								END OF BORING @ 21.25'
								Fill to 2±' No groundwater Bedrock @ 2'
25								

PROJECT: Proposed RNG Plant Equipment Area

PROJECT NO.: 23775.1

CLIENT: Archaea Energy, LLC

ELEVATION: --

LOR GEOTECHNICAL GROUP, INC.

DATE DRILLED: November 2, 2021

EQUIPMENT: Mobile B-61

HOLE DIA.: 8" ENCLOSURE: B-8

LOG OF BORING B-9

DEPTH IN FEET	TEST DATA							DESCRIPTION
	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	
0								@ 0 feet, <u>FILL</u> : approximately 1.5" asphalt concrete over gravelly sand.
	72 for 11"	3, 7, 8 10, 11	9.7		121.3			@ 0.5 feet, <u>BEDROCK</u> : SANDY SILTSONTE, approximately 40% fine grained sand, 60% silty fines, yellowish-brown, damp, weakly cemented, massive and somewhat fractured.
5	60		10.0		120.9			
	64		9.8		115.4			
10	76 for 11"		10.6		106.2			@ 10 feet, weakly to moderately cemented, very few fractures.
								END OF BORING @ 10.92'
								Fill to 0.5' No groundwater Bedrock @ 0.5'
15								

PROJECT: Proposed RNG Plant Equipment Area

PROJECT NO.: 23775.1

CLIENT: Archaea Energy, LLC

ELEVATION: --

LOR GEOTECHNICAL GROUP, INC.

DATE DRILLED: November 2, 2021

EQUIPMENT: Mobile B-61

HOLE DIA.: 8" **ENCLOSURE:** B-9

LOG OF BORING B-10

DEPTH IN FEET	TEST DATA							DESCRIPTION
	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	
0								@ 0 feet, <u>FIL</u> : 1.5±" asphalt over gravelly sand asphalt.
	67 for 11"		12.0		117.9			@ 0.5± feet, <u>BEDROCK</u> : SANDY SILTSTONE, approximately 45% fine grained sand, 55% silty fines, overall with some beds consisting of SILTY SANDSTONE, light-yellowish brown to light grayish-brown, damp, weakly to moderately cemented.
5	67 for 11"		10.3		112.9			
	67		12.7		112.6			@ 7 feet, includes occasional thin gypsum lined fractures.
10	74		10.6		116.5			
15	76 for 8"		7.9					below 14± feet, slower drilling, increase in sandstone beds. @ 15 feet, sample disturbed.
20								END OF BORING @ 18', practical refusal due to slow progress Fill to 0.5±' No groundwater Bedrock @ 0.5'

PROJECT: Proposed RNG Plant Equipment Area

PROJECT NO.: 23775.1

CLIENT: Archaea Energy, LLC

ELEVATION: --

LOR GEOTECHNICAL GROUP, INC.

DATE DRILLED: November 2, 2021

EQUIPMENT: Mobile B-61

HOLE DIA.: 8" **ENCLOSURE:** B-10

LOG OF BORING B-11

DEPTH IN FEET	TEST DATA							DESCRIPTION
	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	
0								@ 0 feet, <u>FILL</u> : approximately 1" asphalt concrete over 3" gravel. @ 0.33± feet, <u>BEDROCK</u> : SANDY SILTSTONE, approximately 35% fine grained sand, 65% silty fines, yellowish-brown, damp, thinly bedded, weakly to moderately cemented.
	38		10.4		117.8			
5	33		9.9		118.0			
	71 for 11"		9.0		122.8			below 7 feet, slightly sandier, moderately cemented.
10	72		9.9		123.8			below 10± feet, slower drilling.
15	69		9.6		118.6			@ 15 feet, sandier, trace of gypsum lined fractures.
								END OF BORING @ 16' Fill to 0.33' No groundwater Bedrock @ 0.33'

PROJECT: Proposed RNG Plant Equipment Area

PROJECT NO.: 23775.1

CLIENT: Archaea Energy, LLC

ELEVATION: --

LOR GEOTECHNICAL GROUP, INC.

DATE DRILLED: November 2, 2021

EQUIPMENT: Mobile B-61

HOLE DIA.: 8" ENCLOSURE: B-11

APPENDIX C

Laboratory Testing Program and Test Results

APPENDIX C

LABORATORY TESTING

General

Selected soil samples obtained from our borings were tested in our geotechnical laboratory to evaluate the physical properties of the soils affecting foundation design and construction procedures. The laboratory testing program performed in conjunction with our investigation included in-place moisture content and dry density, laboratory compaction characteristics, direct shear, sieve analysis, sand equivalent, R-value, expansion index, consolidation, and corrosion. Descriptions of the laboratory tests are presented in the following paragraphs:

Moisture Density Tests

The moisture content and dry density information provides an indirect measure of soil consistency for each stratum, and can also provide a correlation between soils on this site. The dry unit weight and field moisture content were determined for selected undisturbed samples, in accordance with ASTM D 2922 and ASTM D 2216, respectively, and the results are shown on the Boring Logs, Enclosures B-1 through B-11 for convenient correlation with the soil profile.

Laboratory Compaction

Selected soil samples were tested in the laboratory to determine compaction characteristics using the ASTM D 1557 compaction test method. The results are presented in the following table:

LABORATORY COMPACTION				
Boring Number	Sample Depth (feet)	Soil Description (U.S.C.S.)	Maximum Dry Density (pcf)	Optimum Moisture Content (percent)
B-3	2-5	(CL) Sandy Clay	113.0	15.5
B-6	4-7	Bedrock: Silty Sandstone	120.5	13.0
B-9	1-4	Bedrock: Silty Sandstone	121.5	11.5

Direct Shear Tests

Shear tests are performed with a direct shear machine in general accordance with ASTM D 3080 at a constant rate-of-strain (usually 0.04 inches/minute). The machine is designed to test a sample partially extruded from a sample ring in single shear. Samples are tested at varying normal loads in order to evaluate the shear strength parameters, angle of internal friction and cohesion. Samples are tested in a remolded condition (90 percent relative compaction per ASTM D 1557) and soaked, to represent the worst case conditions expected in the field.

The results of the shear tests are presented in the following table:

DIRECT SHEAR TESTS				
Boring Number	Sample Depth (feet)	Soil Description (U.S.C.S.)	Angle of Internal Friction (degrees)	Apparent Cohesion (psf)
B-6	4-7	Bedrock: Silty Sandstone	31	500
B-9	1-4	Bedrock: Silty Sandstone	28	150

Sieve Analysis

A quantitative determination of the grain size distribution was performed for selected samples in accordance with the ASTM D 422 laboratory test procedure. The determination is performed by passing the soil through a series of sieves, and recording the weights of retained particles on each screen. The results of the sieve analyses are presented graphically on Enclosure C-1.

Sand Equivalent

The sand equivalent of selected soils were evaluated using the California Sand Equivalent Test Method, Caltrans Number 217. The results of the sand equivalent tests are presented with the grain size distribution analyses on Enclosure C-1.

R-Value Test

Soil samples were obtained at the probable pavement subgrade level and sieve analysis and sand equivalent tests were conducted. Based on these indicator tests, a selected soil sample was tested to determine its R-value using the California R-Value Test Method, Caltrans Number 301. The result of the R-value test is presented on Enclosure C-1.

Expansion Index Tests

Remolded samples are tested to determine their expansion potential in accordance with the Expansion Index (EI) test. The test is performed in accordance with the Uniform Building Code Standard 18-2. The test results are presented in the following table:

EXPANSION INDEX TESTS				
Boring Number	Sample Depth (feet)	Soil Description (U.S.C.S.)	Expansion Index (EI)	Expansion Potential
B-3	2-5	(CL) Sandy Clay	85	Medium
B-6	4-7	Bedrock: Silty Sandstone	63	Low
Expansion Index:				
		0-20 Very low	21-50 Low	51-90 Medium
				91-130 High

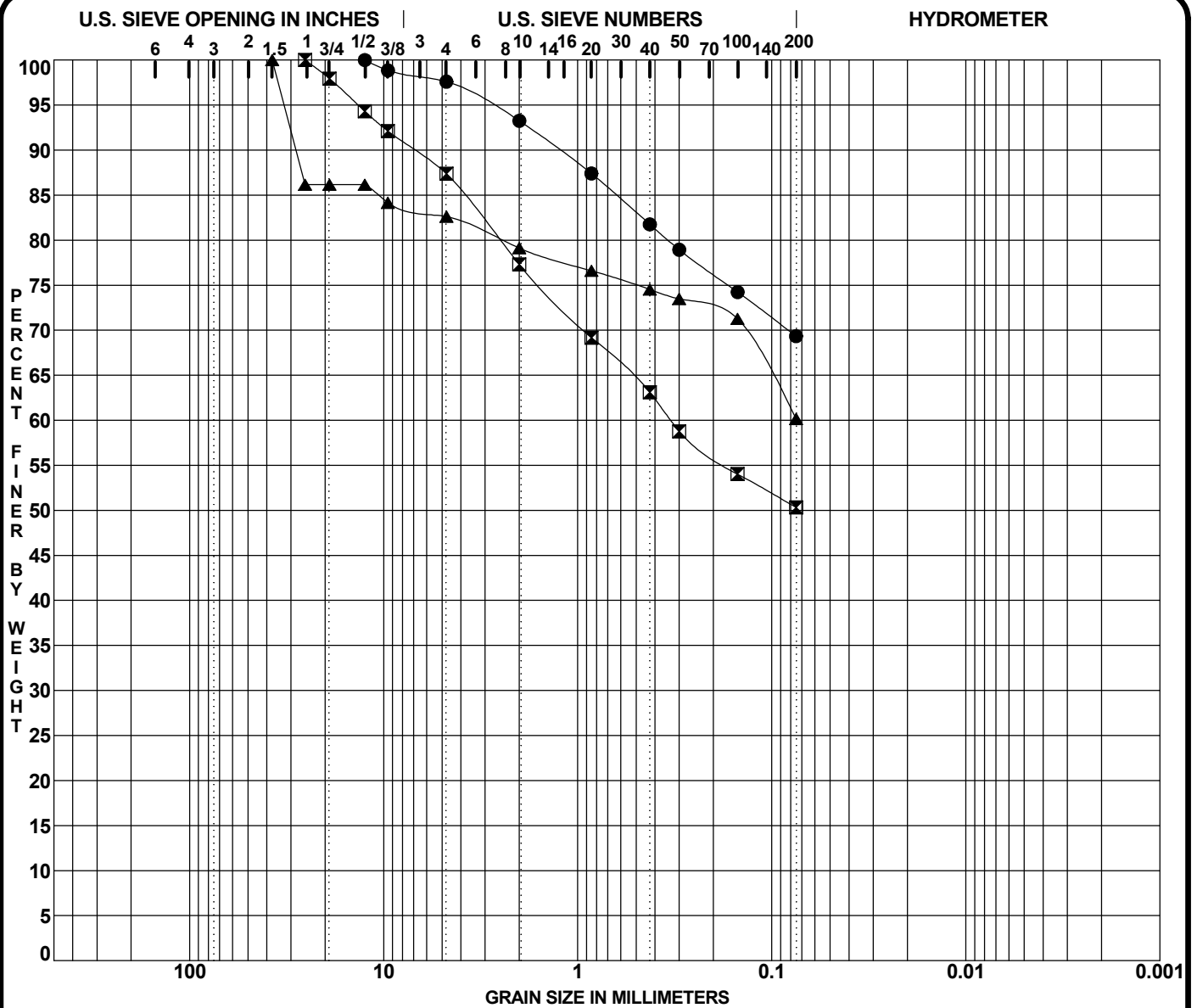
Consolidation Tests

The apparatus used for the consolidation tests (odometer) is designed to test a one-inch high portion of the undisturbed soil sample as contained in a sample ring. Porous stones and filler paper are placed in contact with the top and bottom of the specimen to permit the addition or release of water. Loads are applied to the test specimen in specified increments, and the resulting axial deformations are recorded. The results are plotted as log of axial pressure versus consolidation or compression, expressed as strain or sample height.

Samples are tested at field and greater-than field moisture contents. The results are shown on Enclosure C-2.

Atterberg Limits

Selected samples of the on-site fine grained soils were tested for their Atterberg limits in accordance with ASTM D 4318. The results of these tests are presented on Enclosure C-3.

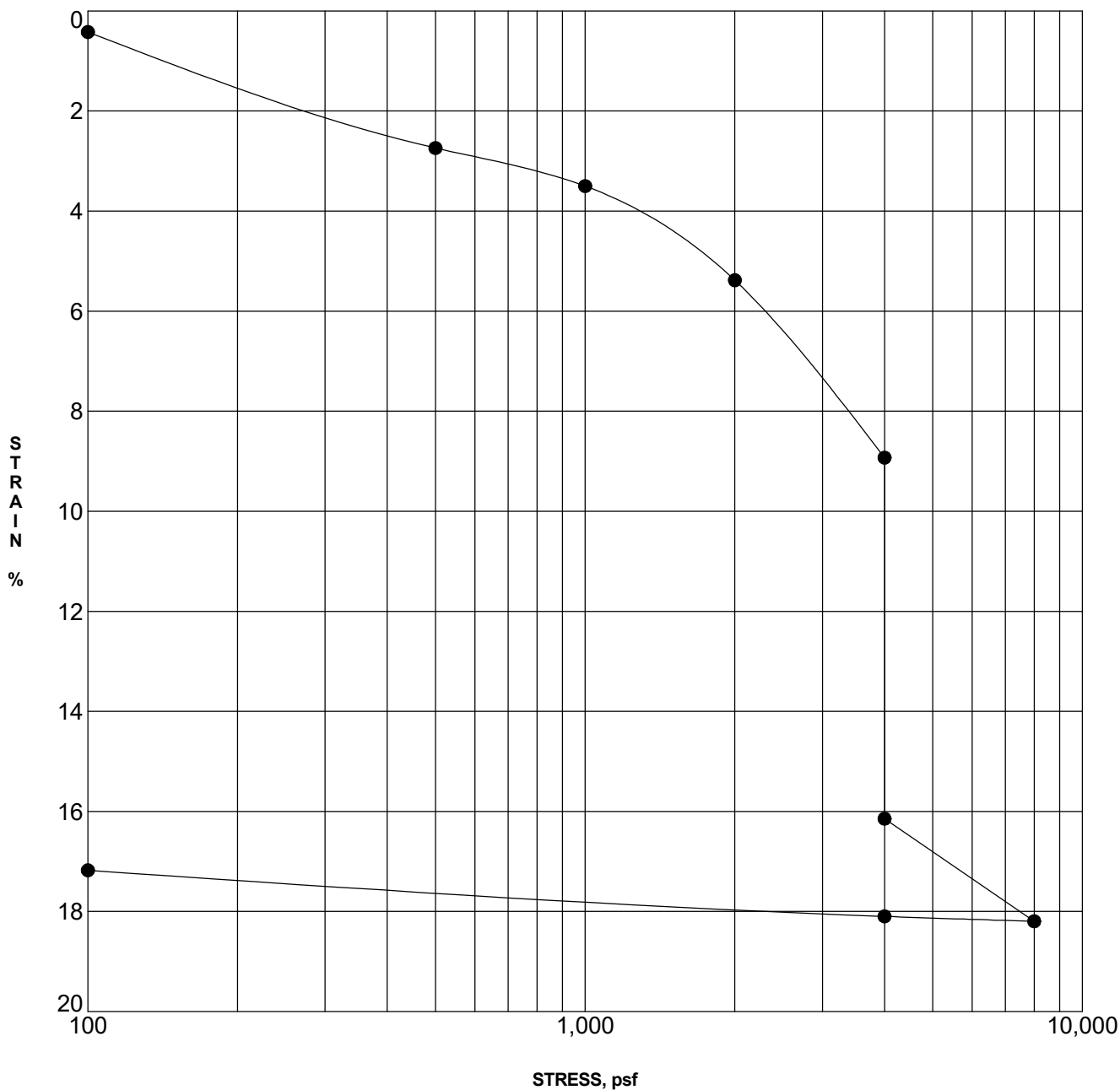


COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Soil Classification				SE	RV	PL	PI	Cc	Cu
●	B-03	@ 2-5'	(CL) Sandy Clay				--	--	11	22		
⊠	B-06	@ 4-7'	BEDROCK: Sandy Siltstone				12	--				
▲	B-09	@ 1-4'	BEDROCK: Sandy Siltstone				6	26				
Specimen Identification			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
●	B-03	@ 2-5'	12.50				2.4	28.3	69.3			
⊠	B-06	@ 4-7'	25.40	0.33			12.6	37.0	50.3			
▲	B-09	@ 1-4'	37.50				17.4	22.5	60.2			

PROJECT:	Proposed RNG Plant Equipment Area	PROJECT NO.:	23775.1
CLIENT:	Archaea Energy, LLC	DATE:	December 2021

GRADATION CURVES



Specimen Identification			Classification	DD	MC%
●	B-05	@ 7 ft	(SC) Clayey Sand	88	9

PROJECT:	Proposed RNG Plant Equipment Area	PROJECT NO.:	23775.1
CLIENT:	Archaea Energy, LLC	DATE:	December 2021

CONSOLIDATION TEST





Results Only Soil Testing for Biofuels Coyote Canyon Biogas, LLC

November 30, 2021

Prepared for:
Robb Markoff
LOR Geotechnical
6121 Quail Valley Ct
Riverside, CA
rmarkoff@lorgeo.com

Project X Job#: S211124G
Client Job or PO#: 23775-1

Respectfully Submitted,

Eduardo Hernandez, M.Sc., P.E.
Sr. Corrosion Consultant
NACE Corrosion Technologist #16592
Professional Engineer
California No. M37102
ehernandez@projectxcorrosion.com





Soil Analysis Lab Results

Client: LOR Geotechnical
Job Name: Biofuels Coyote Canyon Biogas, LLC
Client Job Number: 23775-1
Project X Job Number: S211124G
November 30, 2021

Bore# / Description	Method	ASTM D4327		ASTM D4327		ASTM G187		ASTM D4972	ASTM G200	ASTM D4658	ASTM D4327	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D4327	ASTM D4327
	Depth	Sulfates		Chlorides		Resistivity		pH	Redox	Sulfide	Nitrate	Ammonium	Lithium	Sodium	Potassium	Magnesium	Calcium	Fluoride	Phosphate
		SO ₄ ²⁻		Cl ⁻		As Rec'd | Minimum				S ²⁻	NO ₃ ⁻	NH ₄ ⁺	Li ⁺	Na ⁺	K ⁺	Mg ²⁺	Ca ²⁺	F ₂ ⁻	PO ₄ ³⁻
	(ft)	(mg/kg)	(wt%)	(mg/kg)	(wt%)	(Ohm-cm)	(Ohm-cm)		(mV)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BB-3 B-3 (Fill)	2-5	3,278.4	0.3278	43.9	0.0044	3,216	570	8.4	175	<0.01	3.6	2.0	0.03	170.5	6.0	7.0	143.9	4.0	1.6
BB-5 B-6 (Siltstone)	4-7	105.1	0.0105	884.6	0.0885	556,100	938	9.2	135	<0.01	6.6	11.6	0.01	474.3	2.3	1.2	5.1	35.9	4.1
BB-7 B-9 (Siltstone)	1-4	574.5	0.0575	27.7	0.0028	21,440	804	8.3	198	<0.01	1.2	3.4	0.04	236.2	1.9	2.4	2.9	12.4	0.3

Cations and Anions, except Sulfide and Bicarbonate, tested with Ion Chromatography

mg/kg = milligrams per kilogram (parts per million) of dry soil weight

ND = 0 = Not Detected | NT = Not Tested | Unk = Unknown

Chemical Analysis performed on 1:3 Soil-To-Water extract

PPM = mg/kg (soil) = mg/L (Liquid)

Ship Samples To: 29990 Technology Dr, Suite 13, Murrieta, CA 92563

Project X Job Number S211122 G LOR 237 75-1 Biofuels 3 Full													
IMPORTANT: Please complete Project and Sample Identification Data as you would like it to appear in report & include this form with samples.													
Company Name: LOR Geotechnical Group, Inc.				Contact Name: Robb		Phone No: 951-653-1760							
Mailing Address: 6121 Quail Valley Court				Contact Email: RMARKOFF@LORGEOTECH.COM									
Accounting Contact: John Leuer				Invoice Email: ATARDIE@LORGEOTECH.COM									
Client Project No: 23775-1				Project Name: BIOFUELS COYOTE CANYON BIOGAS, LLC									
P.O. #: --		3-5 Day Standard		3 Day Guarantee 50% mark-up		24 Hr RUSH 100% mark-up		ANALYSIS REQUESTED (Please circle)					
(Business Days) Turn Around Time: <input checked="" type="checkbox"/>													
Results By: <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email				ASTM AASHTO T288		ASTM AASHTO T290		ASTM AASHTO T291					
Date & Received by:				Default Method		ASTM G187		ASTM G51					
Special Instructions:				Geo Quad		Full Corrosion Series		Full Corrosion Series					
										Soil Resistivity		Soil Corrosivity	
										pH		Evaluation Report	
										Sulfate		Water Corrosivity	
Chloride		Mini Report		Moisture Content		Total Alkalinity		Thermal Resistivity					
Redox Potential				Metalurgical Analysis		Langelier Index		Puckorius Index					
Sulfide				XRF Elemental Analysis		Water Hardness							
Ammonia													
Nitrate													
Fluoride													
Phosphate													
Lithium													
Sodium													
Potassium													
Magnesium													
Calcium													
Bicarbonate													

SAMPLE ID - BORE #	DESCRIPTION	DEPTH (ft)	DATE COLLECTED
385 1 BB-3	B-3 (FILL)	2-5'	11-1-21
386 2 BB-5	B-6 (SILTSTONE)	4-7'	11-1-21
387 3 BB-7	B-9 (SILTSTONE)	1-4'	11-2-21
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Appendix

Appendix E Preliminary Water Quality Management Plan

Appendix

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County of Orange/Santa Ana Region Priority Project Preliminary Water Quality Management Plan (P-WQMP)

Project Name:

Coyote Canyon Landfill Project

20662 Newport Coast Drive

Newport Beach, CA 92657

Plan Check No. _____

Prepared for:

Archaea Energy Inc.

4444 Westheimer Road, Suite G450

Houston, TX 77027

Contact: Baffour Ennin – (832) 740-1241

bennin@archaea.energy

Prepared by:

BKF Engineers

4675 MacArthur Court, Suite 400

Newport Beach, CA 92660

Contact: Roger Chung – (949) 491-5615

rchung@bkf.com

3rd Submittal: June 24, 2024

Project Owner's Certification			
Permit/Application No.		Grading Permit No.	
Tract/Parcel Map No.		Building Permit No.	
20662 Newport Coast Drive, Newport Beach, CA 92657			

This Preliminary Water Quality Management Plan (P-WQMP) has been prepared for Orange County Waste & Recycling (County of Orange) by BKF Engineers. The Preliminary WQMP is intended to comply with the requirements of the local NPDES Stormwater Program requiring the preparation of the plan.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the current Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region or San Diego Region. Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP. An appropriate number of approved and signed copies of this document shall be available on the subject site in perpetuity.

Owner:			
Title			
Company	OC Waste & Recycling (County of Orange)		
Address	601 N. Ross Street, 5 th Floor, Santa Ana, CA 92701		
Email			
Telephone #			
Signature		Date	

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Section IV Best Management Practices (BMPs).....	17
Section V Inspection/Maintenance Responsibility for BMPs.....	29
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Attachments

- Attachment A – Educational Materials
- Attachment B – BMP Design & Calculations
- Attachment C – Operations & Maintenance Plan
- Attachment D – Construction Documents
- Attachment E – Geotechnical Information

Figures

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Figure 2. Areas of Special Biological Significance Near the CCL Project.....	18
Figure 3. Regional Location of the CCL Project.....	22

Section I Discretionary Permit(s) and Water Quality Conditions

Provide discretionary permit and water quality information.

Project Information	
Permit/Application No.	Tract/Parcel Map No.
Additional Information/ Comments:	20662 Newport Coast Drive, Newport Beach, CA 92657
Water Quality Conditions of Approval or Issuance	
Water Quality Conditions (list verbatim)	<p>This project qualifies as a Priority Project per the definition provided in Table 7.II-2 in the Model WQMP.</p> <p>All significant redevelopment projects, where significant redevelopment is defined as the addition or replacement of 5,000 or more square feet of impervious surface on an already developed site. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of the facility, or emergency redevelopment activity required to protect public health and safety.</p> <p>If the redevelopment results in the addition or replacement of less than 50 percent of the impervious area on-site and the existing development was not subject to WQMP requirement, the numeric sizing criteria discussed in Section 7.II-2.0 only applies to the addition or replacement area. If the addition or replacement accounts for 50 percent or more of the impervious area, the Project WQMP requirements apply to the entire development.</p>
Watershed-Based Plan Conditions	

<p>Provide applicable conditions from watershed - based plans including WIHMPs and TMDLs.</p>	<p>According to the 2018 303(d) list, the impaired water bodies that are downstream to the Project include:</p> <ul style="list-style-type: none">• San Diego Creek Reach 1 is listed as impaired for benthic community effects, dichlorodiphenyltrichloroethane (DDT), indicator bacteria, nutrients, sedimentation/siltation, selenium, toxaphene, toxicity, and malathion.• Upper Newport Bay is listed as impaired for chlordane, copper, dichlorodiphenyltrichloroethane (DDT), indicator bacteria, malathion, nutrients, polychlorinated biphenyls (PCBs), sedimentation/siltation, and toxicity.• Lower Newport Bay is listed as impaired for chlordane, copper, dichlorodiphenyltrichloroethane (DDT), indicator bacteria, nutrients, polychlorinated biphenyls (PCBs), and toxicity. <p>In addition to those pollutants, TMDLs have been developed for pesticides, sedimentation/siltation, and selenium.</p> <p>A Water Management Plan (WMP) is currently being developed for the North and Central Orange County area. The WMP includes the Newport Bay Watershed. Several regional projects are identified as part of the OC WMP.</p>
---	--

Section II Project Description

II.1 Project Description

Provide a detailed project description including:

- *Project areas;*
- *Land uses;*
- *Land cover;*
- *Design elements;*
- *A general description not broken down by drainage management areas (DMAs).*

Include attributes relevant to determining applicable source controls.

Description of Proposed Project		
Development Category (Verbatim from WQMP):	<p>All significant redevelopment projects, where significant redevelopment is defined as the addition or replacement of 5,000 or more square feet of impervious surface on an already developed site. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of the facility, or emergency redevelopment activity required to protect public health and safety.</p> <p>If the redevelopment results in the addition or replacement of less than 50 percent of the impervious area on-site and the existing development was not subject to WQMP requirement, the numeric sizing criteria discussed in Section 7.II-2.0 only applies to the addition or replacement area. If the addition or replacement accounts for 50 percent or more of the impervious area, the Project WQMP requirements apply to the entire development.</p>	
Project Area (ft ²): <u>46,606</u>	Number of Dwelling Units: <u>N/A</u>	SIC Code: <u>4923, 4953</u>
Narrative Project Description:	<p>The 1.07-acre project site is located at the Coyote Canyon Landfill (CCL) in the City of Newport Beach, approximately 4,000 feet southeast of the Newport Coast Drive and State Route 73 Interchange. CCL is owned by the County of Orange and maintained by Orange County Waste & Recycling.</p> <p>The Project involves building a new Renewable Natural Gas (RNG) Plant at the CCL. The RNG Plant converts landfill gas into a pipeline quality natural gas equivalent. The south corner of the site will be leased out to Southern California Gas. Southern California Gas will have facilities to receive the converted landfill gas in order to distribute it to consumers.</p>	

	Project runoff is captured by storm inlets along the northern/eastern perimeter access road and discharge into a subsurface gravel layer. Perforated pipes direct flows to a biofiltration BMP at the northwest corner of the Project site.			
Project Area	Pervious		Impervious	
	Area (acres)	Percentage	Area (acres)	Percentage
Pre-Project Conditions	1.07	100.0%	0.00	0.0%
Post-Project Conditions	0.36	33.6%	0.71	66.4%
Drainage Patterns/Connections	<p>For the pre-project site, runoff overlands northerly to a ditch at the northwest corner of the Project site. These ditch flows discharge to an existing offsite storm drain pipe. These piped flows join a 24-inch lateral RCP owned by the City of Newport Beach. The 24-inch drains to the OC Flood Control District Facility #F04P04 (78-inch) that successively discharges to Bonita Creek, San Diego Creek Reach 1, and Newport Bay.</p> <p>The post-project site will mimic pre-project drainage patterns. Runoff from the project site sheet flows north towards the perimeter access road along the Project's north and east boundaries. Runoff is conveyed by the road's gutter and collected by multiple storm inlets which discharge to a 24-inch deep gravel layer beneath the access road. The gravel layer has a perforated pipe to direct flows to a Modular Wetlands unit. Low-flows are treated via biofiltration by the unit and high-flows overtop the unit's internal bypass weir. Flows exiting the Modular Wetlands unit discharge to an existing offsite storm drain pipe, which connects with the City-owned 24-inch lateral RCP.</p>			

11.2 Potential Stormwater Pollutants

Determine and list expected stormwater pollutants based on land uses and site activities.

Pollutants of Concern			
Pollutant	Circle One: E=Expected to be of concern N=Not Expected to be of concern		Additional Information and Comments
Suspended Solids / Sediment	<input checked="" type="radio"/> E	<input type="radio"/> N	
Nutrients	<input type="radio"/> E	<input checked="" type="radio"/> N	
Heavy Metals	<input checked="" type="radio"/> E	<input type="radio"/> N	
Pathogens (Bacteria/Viruses)	<input checked="" type="radio"/> E	<input type="radio"/> N	
Pesticides	<input type="radio"/> E	<input checked="" type="radio"/> N	
Oil and Grease	<input checked="" type="radio"/> E	<input type="radio"/> N	
Toxic Organic Compounds	<input checked="" type="radio"/> E	<input type="radio"/> N	
Trash and Debris	<input checked="" type="radio"/> E	<input type="radio"/> N	

- **Suspended Solids / Sediment:** consist of soils or other surficial materials that are eroded and then transported or deposited by wind, water, or gravity. Excessive sedimentation can increase turbidity, clog fish gills, reduce spawning habitat, lower young aquatic organisms survival rates, smother bottom dwelling organisms, and suppress aquatic vegetation growth. Sediments in runoff also transport other pollutants that adhere to them, including trace metals, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and phosphorus. The largest source of suspended solids / sediment is typically erosion from disturbed soils.
- **Nutrients:** includes the macro-nutrients nitrogen and phosphorus. They commonly exist in the form of mineral salts dissolved or suspended in water and as particulate organic matter transported by storm water. Excessive discharge of nutrients to water bodies and streams can cause eutrophication, including excessive aquatic algae and plant growth, loss of dissolved oxygen, release of toxins in sediment, and significant swings in hydrogen ion concentration (pH). Primary sources of nutrients in urban runoff are fertilizers, trash and

debris, and eroded soils. Urban areas with improperly managed landscapes can be substantial sources.

- **Metals:** includes certain metals that can be toxic to aquatic life if concentrations become high enough to stress natural processes. Metals of concern include cadmium, chromium, copper, lead, mercury, and zinc. Lead and chromium have been used as corrosion inhibitors in primer coatings and are also raw material components in non-metal products such as fuels, adhesives, paints, and other coatings. Copper and zinc are typically associated with building materials, including galvanized metal and ornamental copper, and automotive products, including tires and brake pads. Humans can be impacted from contaminated groundwater resources, and bioaccumulation of metals in fish and shellfish. Environmental concerns regarding the potential for release of metals to the environment have already led to restricted metal usage in certain applications, for example lead additives in gasoline. The primary source of metals in urban storm water is typically commercially available metal products and automobiles.
- **Microbial Pathogens (Bacteria and Viruses):** include bacteria and viruses, which are ubiquitous microorganisms that thrive under a range of environmental conditions. Water containing excessive pathogenic bacteria and viruses can create a harmful environment for humans and aquatic life. The source of pathogenic bacteria and viruses is typically the transport of animal or human fecal wastes from the watershed, but pathogenic organisms do occur in the natural environment.
- **Oil and Grease:** are characterized as high-molecular weight organic compounds. Elevated oil and grease content can decrease the aesthetic value of the water body, as well as the water quality. Introduction of these pollutants to water bodies may occur due to the wide uses and applications of some of these products in municipal, residential, commercial, industrial, and construction areas. Primary sources of oil and grease are petroleum hydrocarbon products, motor products from leaking vehicles, esters, oils, fats, waxes, and high molecular-weight fatty acids.
- **Toxic Organic Compounds:** include organic compounds (pesticides, solvents, hydrocarbons) which at toxic concentrations constitute a hazard to humans and aquatic organisms. Storm water coming into contact with organic compounds can transport excessive levels organics to receiving waters. Dirt, grease, and grime retained in cleaning fluid or rinse water may also adsorb levels of organic compounds that are harmful or hazardous to aquatic life. Sources of organic compounds include landscape maintenance areas, vehicle maintenance areas, waste handling areas, and potentially most other urban areas.
- **Trash and Debris:** includes trash, such as paper, plastic, and various waste materials, that can typically be found throughout the urban landscape, and debris which includes waste products of natural origin which are not naturally discharged to water bodies such as landscaping waste, woody debris, etc. The presence of trash and debris may have a significant impact on the recreational value of a water body and upon the health of aquatic habitat.

11.3 Hydrologic Conditions of Concern

Determine if streams located downstream from the project area are determined to be potentially susceptible to hydromodification impacts.

☐ No – Show map

☒ Yes – Describe applicable hydrologic conditions of concern below.

According to "Section 2.2.3.1 Determining HCOCs in North Orange County" of the 2013 North OC TGD, Hydrologic Conditions of Concern (HCOCs) exist if any streams located downstream from the project are determined to be potentially susceptible to hydromodification impacts and either of the following conditions exists:

- Post-development runoff volume for the 2-year, 24-hour storm exceeds the pre-development runoff volume for the 2-year, 24-hour storm by more than 5 percent

OR

- Time of concentration of post-development runoff for the 2-year, 24-hour storm event exceeds the time of concentration of the pre-development condition for the 2-year, 24-hour storm event by more than 5 percent

Figure XIV.3 of the 2013 North OC TGD, entitled "Susceptibility Analysis Newport Bay-Newport Coastal Streams", identifies the susceptibility of all downstream reaches of the Project to hydromodification. The table below summarizes the findings of the susceptibility mapping.

Susceptibility Mapping Summary

Stream Name	Bed and Banks Composition	Susceptibility to Hydromodification
City 24" RCP	RCP	No
OCFCD #F04P04 (78" RCP)	RCP	No
City 66" RCP	RCP	No
City 72" RCP	RCP	Yes
Bonita Creek	Earthen - 1 non-engineered, unstable segment	Yes
San Diego Creek Reach 1	Earthen - 1 non-engineered, unstable segment	Yes
Newport Bay	N/A	N/A
Pacific Ocean	N/A	N/A

Calculation methods for determination of HCOCs in the North Orange County permit area are provided in Appendix IV.1 of the 2013 North OC TGD. If these conditions do not exist or streams are not potentially susceptible to hydromodification impacts, HCOCs do not exist and hydromodification does not need to be considered further.

Computations of the Project's time of concentration and runoff volume for the 2-year 24-hour storm were performed using the Orange County Hydrology Manual and Advanced Engineering Software (AES) software.

Computations are provided in Attachment B, and a summary of the results is provided in the table below.

2-Year 24-Hour Storm Computations Summary

Condition	Area (ac)	Imper (%)	Flowrate (cfs)	Volume (ac-ft)	T _c (min)
Pre-Project	1.07	0.0%	1.2	0.05	10.9
Post-Project	1.07	66.4%	1.7	0.12	7.1
Delta Δ	----	----	0.5	0.06	-3.8
Δ (%)	----	----	42%	120%	-35%

The post-project runoff volume of 0.12 acre-feet represents a 140 percent difference with respect to the pre-project runoff volume of 0.05 acre-feet.

Therefore, HCOCs do exist for the Project. The 2-year 24-hour runoff volume of 0.07 acre-feet (3,050 cubic feet), delta between post-project and pre-project, needs to be stored onsite. The site design proposes constructing a gravel layer beneath the access road to store the 2-year 24-hour runoff volume. Refer to Section IV.3.5.

II.4 Post Development Drainage Characteristics

Describe post development drainage characteristics.

Project site runoff overlands towards the northern/eastern perimeter access road. Flows concentrate in the road's gutter and are intercepted by a series of storm inlets which drain into a 24-inch deep gravel layer beneath the road. A perforated pipe embedded in the gravel later routes flows to a Modular Wetlands unit at the northwest corner of the Project site. Larger storm flows spill over the unit's internal bypass weir and smaller storm flows enter the unit's wetland media bed for treatment. Outflows from the Modular Wetlands unit drain to an existing offsite storm drain pipe, which flows to the City-owned 24-inch lateral RCP. The 24-inch drains to the OC Flood Control District Facility #F04P04 (78-inch) that successively discharges to Bonita Creek, San Diego Creek Reach 1, and Newport Bay.

11.5 Property Ownership/Management

Describe property ownership/management.

The RNG Plant Project is being built on property owned by the County of Orange. Orange County Waste & Recycling is responsible for the ongoing property ownership, management, and maintenance of the structures and adjacent areas. The operation and maintenance of the BMPs and onsite storm drain facilities within the lease boundary are the responsibility of Archaea Energy unless designated otherwise.

It is Archaea Energy's responsibility for all operation and maintenance related activities including a funding mechanism. A copy of the WQMP and BMP maintenance records will be kept by the owner, Orange County Waste & Recycling, and by Archaea Energy at all times and made available upon request.

Section III Site Description

III.1 Physical Setting

Fill out table with relevant information.

Planning Area/ Community Name	Coyote Canyon Landfill (CCL)
Location/Address	20662 Newport Coast Drive, Newport Beach, CA 92657
Land Use	Industrial
Zoning	City of Newport Beach: <i>OS – Open Space</i> per City Zoning Map
Acreage	1.07 acres
Predominant Soil Type	<p>A preliminary geotechnical investigation is summarized in a report entitled “Infiltration Testing for Proposed Infiltration System – Proposed RNG Plant Equipment Area Coyote Canyon Landfill”, and was prepared by LOR Geotechnical Group, dated April 14, 2023 (refer to Attachment E). The preliminary geotechnical report include an exploratory boring, which indicated the following shallow subsurface soils: silty sand with gravel, sandy siltstone, and clayey siltstone.</p> <p>Figure XVI-2a of the 2013 North OC TGD, entitled “NRCS Hydrologic Soil Groups”, shows the Project being in an area classified as Hydrologic Soil Groups C and D.</p>

III.2 Site Characteristics

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable.

Precipitation Zone	The Project site is located in the 0.75-inch design capture storm depth rainfall zone, based on Figure XVI-1 of the 2013 North OC TGD.
Topography	The development is located in the City of Newport Beach. The Project site is relatively flat with slopes less than 5%.
Drainage Patterns/Connections	<p>The Project is located in the San Diego Creek Watershed.</p> <p>In the pre-project condition runoff originating within the Project site is collected and conveyed through a City-owned 24-inch RCP to the OC Flood Control District Facility #F04P04 (78-inch).</p> <p>The post-project site will mimic pre-project drainage patterns.</p>
Soil Type, Geology, and Infiltration Properties	The preliminary geotechnical report by LOR Geotechnical Group included two borehole percolation tests at depths of 10 feet below the surface. The report stated the subsurface materials encountered at the site " <i>consisted predominantly of clayey siltstone with much lesser sandstone</i> ". The results of the infiltration testing showed rates of 0.01 inches/hour and 0.00 inches/hour for the two test locations.

<i>Site Characteristics (continued)</i>	
Hydrogeologic (Groundwater) Conditions	<p>Figure XVI-2d of the 2013 North OC TGD, entitled "North Orange County Mapped Depth to First Groundwater", shows the nearest groundwater contour is at least 30 feet below existing ground. Also the preliminary geotechnical report by LOR Geotechnical Group, stated the exploratory boring showed no groundwater at depth of 21+ feet.</p> <p>The USGS National Water Information System reveals that the closest well to the site with water depth information is located near the outlet of Bonita Canyon with San Diego Creek. Given that the site is a former landfill, it is expected that groundwater is deep.</p>

<p>Geotechnical Conditions (relevant to infiltration)</p>	<p>Research of the California Geological Survey (CGS) seismic hazard zones map (Tustin 7.5-minute Quadrangle) shows that the subject site is located within a zone of potential landslide, seismically-induced slope instability.</p> <p>Infiltration is not feasible for the Project site due to the following:</p> <ul style="list-style-type: none"> • Site is within Hydrologic Soil Groups C and D based on Figure XVI-2a. This results in an infiltration rate below the required 0.3 inch/hour minimum rate accepted by the 2013 North OC TGD. • Percolation tests by LOR Geotechnical Group showed extremely low, negligible infiltration rates between 0.00 and 0.01 inches/hour. <p>Furthermore, the preliminary geotechnical report by LOR Geotechnical Group states the following:</p> <p><i>"The results of our field investigation and percolation test data indicates the site earth materials at the depth and locations tested are not conducive to acceptable infiltration. Therefore, consideration should be given to alternative methods and water quality storm water systems should not incorporate on-site infiltration when determining storm water treatment capacity."</i></p>
<p>Off-Site Drainage</p>	<p>There is no offsite runoff discharging through the Project site. Onsite runoff, leaving the site, discharges offsite through a City-owned 24-inch RCP to the OC Flood Control District Facility #F04P04 (78-inch).</p>
<p>Utility and Infrastructure Information</p>	<p>Existing onsite storm drains and other utilities including water, sanitary sewer, communication, and electrical, are owned and maintained by the County of Orange. Proposed BMPs and onsite storm drain facilities will be maintained by the County of Orange.</p> <p>Upon completion of the project, the County of Orange will be required to maintain and inspect all storm drains.</p>

III.3 Watershed Description

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable.

Receiving Waters	<p>The project is located in the San Diego Creek Watershed. The receiving waters include:</p> <p>Bonita Creek, San Diego Creek Reach 1, Upper Newport Bay and Lower Newport Bay</p>
303(d) Listed Impairments	<p>According to the 2018 303(d) list, the impaired water bodies that are downstream to the Project include:</p> <ul style="list-style-type: none"> San Diego Creek Reach 1 is listed as impaired for benthic community effects, dichlorodiphenyltrichloroethane (DDT), indicator bacteria, nutrients, sedimentation/siltation, selenium, toxaphene, toxicity, and malathion. Upper Newport Bay is listed as impaired for chlordane, copper, dichlorodiphenyltrichloroethane (DDT), indicator bacteria, malathion, nutrients, polychlorinated biphenyls (PCBs), sedimentation/siltation, and toxicity. Lower Newport Bay is listed as impaired for chlordane, copper, dichlorodiphenyltrichloroethane (DDT), indicator bacteria, nutrients, polychlorinated biphenyls (PCBs), and toxicity.
Applicable TMDLs	<p>TMDLs:</p> <ul style="list-style-type: none"> San Diego Creek Reach 1 – Metals, Nutrients, Pesticides, Siltation Upper Newport Bay – Metals, Nutrients, Pathogens, Pesticides, Siltation Lower Newport Bay – Metals, Nutrients, Pathogens, Pesticides, Priority Organics, Siltation
Pollutants of Concern for the Project	<p>Suspended Solids / Sediment, Nutrients, Metals, Pathogens (Bacteria/Viruses), Pesticides, Oil and Grease, Toxic Organic Compounds, Trash and Debris</p>
Environmentally Sensitive and Special Biological Significant Areas	<p>The project is not located within 200 feet or adjacent to an Environmentally Sensitive Area (ESA). Also, there is no Area of Special Biological Significance (ASBS) in the City of Newport Beach.</p>



Figure 1. 303(d) Impaired Water Bodies

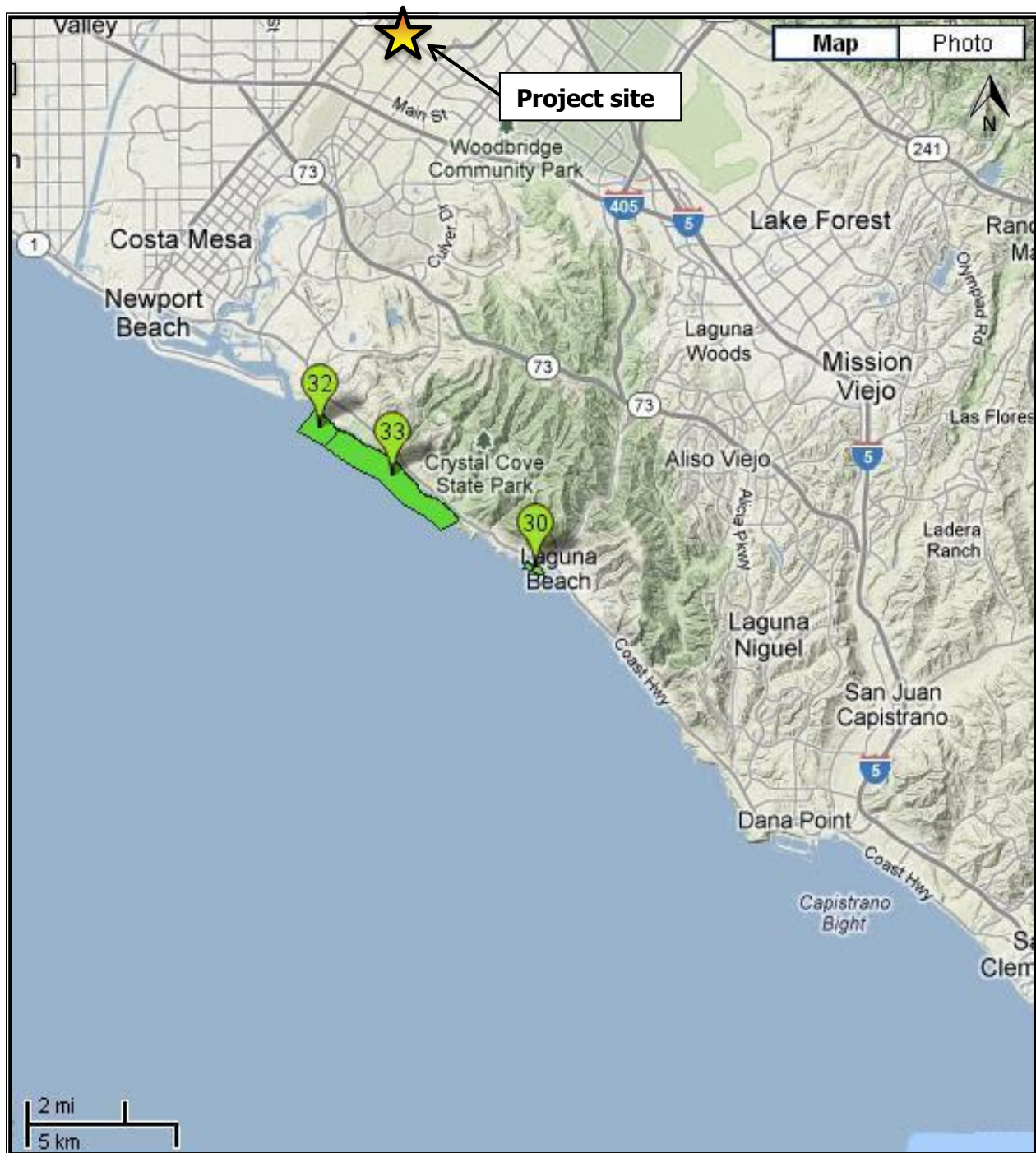


Figure 2. Areas of Special Biological Significance Near the CCL Project

Section IV Best Management Practices (BMPs)

IV. 1 Project Performance Criteria

Describe project performance criteria. Several steps must be followed in order to determine what performance criteria will apply to a project. These steps include:

- *If the project has an approved WIHMP or equivalent, then any watershed specific criteria must be used and the project can evaluate participation in the approved regional or sub-regional opportunities. The local Permittee planning or NPDES staff should be consulted regarding the existence of an approved WIHMP or equivalent.*
- *Determine applicable hydromodification control performance criteria.*
- *Determine applicable LID performance criteria.*
- *Determine applicable treatment control BMP performance criteria.*
- *Calculate the LID design storm capture volume for the project.*

(NOC Permit Area only) Is there an approved WIHMP or equivalent for the project area that includes more stringent LID feasibility criteria or if there are opportunities identified for implementing LID on regional or sub-regional basis?		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
If yes, describe WIHMP feasibility criteria or regional/sub-regional LID opportunities.	N/A		

Project Performance Criteria (continued)	
If HCOC exists, list applicable hydromodification control performance criteria (Section 7.II-2.4.2.2 in MWQMP)	<p>Following the North OC Model WQMP, assessment of potential impacts is based on:</p> <ul style="list-style-type: none"> • Increases in runoff volume • Decreases in infiltration • Changes in time of concentration • Potential for increases in post-development downstream erosion • Potential for adverse downstream impacts on physical structure, aquatic, and riparian habitat <p>A project does not have an HCOC if either of the following conditions is met:</p> <ul style="list-style-type: none"> • The volumes and time of concentration of stormwater runoff for the post-development condition do not significantly exceed those of the pre-development condition for a two-year frequency storm event (a difference of five percent or less is considered insignificant). • The site infiltrates at least the runoff from a two-year storm event. <p>For the Project site, Hydrologic Conditions of Concern (HCOC) do exist. The Project's post-development condition runoff volume for the 2-year, 24-hour storm exceeds the pre-development condition by more than 5%. Refer to Section IV.3.5.</p>
List applicable LID performance criteria (Section 7.II-2.4.3 from MWQMP)	<p>Based on the North OC Model WQMP, LID BMPs must be designed to:</p> <ul style="list-style-type: none"> • Retain, on-site, (infiltrate, harvest and use, or evapotranspire) stormwater runoff as feasible up to the Design Capture Volume, and • Recover (i.e., draw down) the storage volume as soon as possible after a storm event, and, if necessary • Biotreat, on-site, additional runoff, as feasible, up to 80 percent average annual capture efficiency (cumulative, retention plus biotreatment), and, if necessary • NOC Permit Area only – retain or biotreat, in a regional facility, the remaining runoff up to 80 percent average annual capture efficiency (cumulative, retention plus biotreatment, on-site plus off-site), and, if necessary

	<ul style="list-style-type: none">Fulfill alternative compliance obligations for runoff volume not retained or biotreated up to 80 percent average annual capture efficiency using treatment controls or other alternative approaches <p>The Project will treat the 85th percentile, 24-hour storm event with onsite flow-based biofiltration systems. An onsite retention system was not implemented due to infiltration infeasibility and insufficient water demand for potential harvest-and-use alternatives.</p> <p>Refer to Attachment B for calculations.</p>												
List applicable treatment control BMP performance criteria (Section 7.II-3.2.2 from MWQMP)	<p>Not applicable.</p> <p>Per the North OC Model WQMP Section 7.II-3.2.2, it is noted that the satisfaction of LID performance criteria also fully satisfies treatment control performance criteria, therefore the implementation of the treatment control BMPs is not required.</p>												
Calculate LID design storm capture volume for Project.	<p>The water quality design flowrate (Q) was calculated using the "Simple Method Runoff Coefficient for Flow-Based BMP Sizing", Appendix III.1.2 of the 2013 North OC TGD. See Attachment B for calculations.</p> <p>Design Flowrate (Q):</p> $Q = C \times i \times A$ <p>C = runoff coefficient = (0.75 × impervious + 0.15)</p> <p>i = rainfall intensity (in/hr) = 0.26 in/hr (Tc ≈ 5 minutes)</p> <p>A = tributary area (acres)</p> <table><tr><th>DMA</th><th>Area (ac)</th><th>Imp (%)</th><th>C</th><th>i (in/hr)</th><th>Q (cfs)</th></tr><tr><td>1</td><td>1.07</td><td>66.4%</td><td>0.648</td><td>0.26</td><td>0.180</td></tr></table> <p>Refer to BMP Map included in Exhibits section herein.</p>	DMA	Area (ac)	Imp (%)	C	i (in/hr)	Q (cfs)	1	1.07	66.4%	0.648	0.26	0.180
DMA	Area (ac)	Imp (%)	C	i (in/hr)	Q (cfs)								
1	1.07	66.4%	0.648	0.26	0.180								

IV.2. SITE DESIGN AND DRAINAGE PLAN

Describe site design and drainage plan including

- *A narrative of site design practices utilized or rationale for not using practices;*
- *A narrative of how site is designed to allow BMPs to be incorporated to the MEP*
- *A table of DMA characteristics and list of LID BMPs proposed in each DMA.*
- *Reference to the WQMP plot plan.*
- *Calculation of Design Capture Volume (DCV) for each drainage area.*
- *A listing of GIS coordinates for LID and Treatment Control BMPs (unless not required by local jurisdiction)*

This Project is located in the San Diego Creek Watershed as discussed in Section II.1. This Project is located within the limits of the City of Newport Beach and is bounded by open space and the Coyote Canyon Landfill (CCL) to the east, and Newport Coast Drive to the west.

The Project will involve building a new Renewable Natural Gas (RNG) Plant at the CCL. The drainage of the Project site is identified with the site map in **Attachment B**.

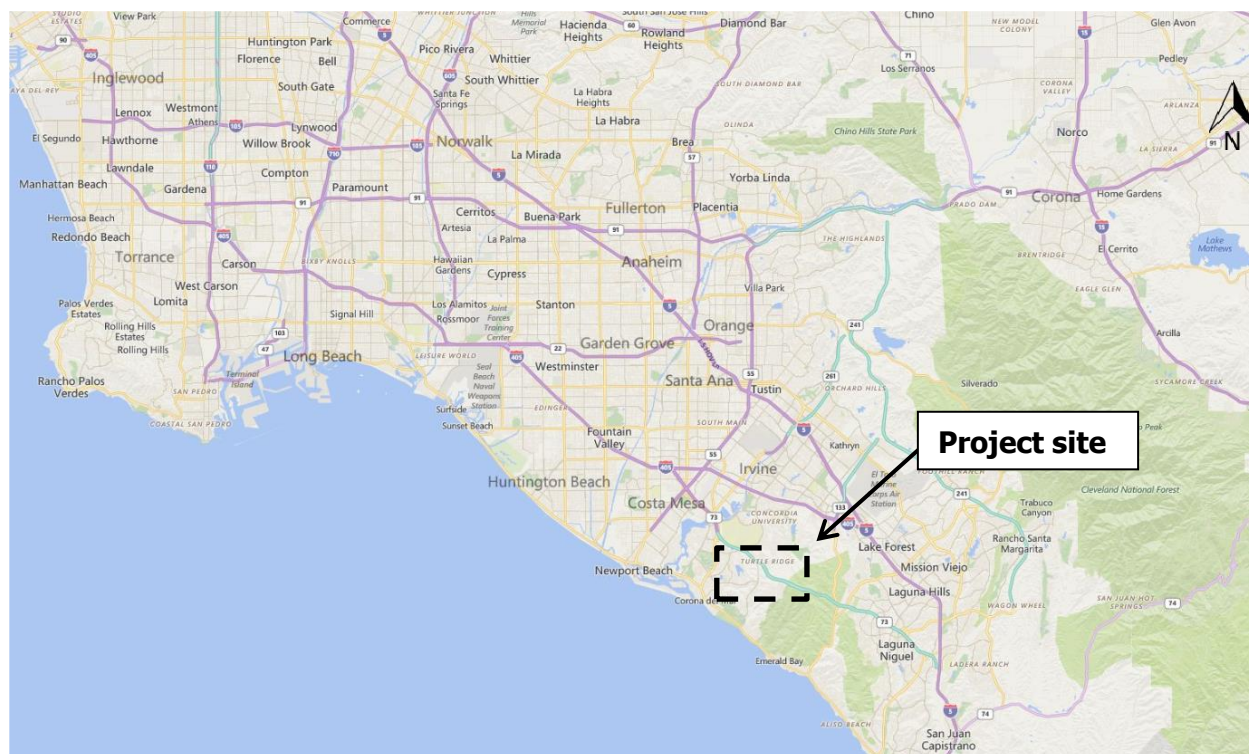


Figure 3. Regional Location of the CCL Project

DMA 1

The 1.07-acre drainage area (DMA 1) composes the entire CCL Project site. The area is 66.4% impervious, which includes the asphalt access road and concrete pads for RNG Plant equipment. The impervious area also includes the Southern California Gas's Facilities which are located at the southern corner of the site. The site runoff is intercepted by storm inlets along the perimeter access road, discharged into a subsurface gravel layer, and piped through perforated pipes to a BMP facility for treatment.

BMP 1

The site proposes to implement a Modular Wetlands unit (BMP 1) to treat the 85th percentile, 24-hour storm event. Modular Wetlands is a pre-engineered biofiltration system with a small footprint and high treatment capacity.

The site's proposed Modular Wetlands will be Contech's 8-ft x 8-ft underground configuration (Model # MWS-L-8-8-V-UG).

IV.3 LID BMP SELECTION AND PROJECT CONFORMANCE ANALYSIS

Each sub-section below documents that the proposed design features conform to the applicable project performance criteria via check boxes, tables, calculations, narratives, and/or references to worksheets.

IV.3.1 Hydrologic Source Controls

If required HSCs are included, fill out applicable check box forms. If the retention criteria are otherwise met with other LID BMPs, include a statement indicating HSCs not required.

Name	Included?
Localized on-lot infiltration	<input type="checkbox"/>
Impervious area dispersion (e.g. roof top disconnection)	<input type="checkbox"/>
Street trees (canopy interception)	<input type="checkbox"/>
Residential rain barrels (not actively managed)	<input type="checkbox"/>
Green roofs/Brown roofs	<input type="checkbox"/>
Blue roofs	<input type="checkbox"/>
Impervious area reduction (e.g. permeable pavers, site design)	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>

Hydrologic Source Controls (HSCs) are not integrated in this Project because flow-based biofiltration systems treat the water quality design flowrate (Q), as required by the 2013 North OC TGD.

IV.3.2 Infiltration BMPs

Identify infiltration BMPs to be used in project. If design volume cannot be met state why BMPs cannot be met

Name	Included?
Bioretention without underdrains	<input type="checkbox"/>
Rain gardens	<input type="checkbox"/>
Porous landscaping	<input type="checkbox"/>
Infiltration planters	<input type="checkbox"/>
Retention swales	<input type="checkbox"/>
Infiltration trenches	<input type="checkbox"/>
Infiltration basins	<input type="checkbox"/>
Drywells	<input type="checkbox"/>
Subsurface infiltration galleries	<input type="checkbox"/>
French drains	<input type="checkbox"/>
Permeable asphalt	<input type="checkbox"/>
Permeable concrete	<input type="checkbox"/>
Permeable concrete pavers	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>

Show calculations below to demonstrate if the LID Design Storm Capture Volume can be met with infiltration BMPs. If not document how much can be met with infiltration and document why it is not feasible to meet the full volume with infiltration BMPs.

Figure XVI-2a of the 2013 North OC TGD, entitled "NRCS Hydrologic Soil Groups", shows the Project being in an area classified as Hydrologic Soil Groups C and D. This results in an infiltration rate below the required 0.3 inch/hour minimum rate accepted by the 2013 North OC TGD. Also, percolation tests by LOR Geotechnical Group showed extremely low, negligible infiltration rates between 0.00 and 0.01 inches/hour. Therefore, infiltration is not feasible for the Project site.

IV.3.3 Evapotranspiration, Rainwater Harvesting BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs, describe any evapotranspiration, rainwater harvesting BMPs.

Name	Included?
All HSCs; See Section IV.3.1	<input type="checkbox"/>
Surface-based infiltration BMPs	<input type="checkbox"/>
Biotreatment BMPs	<input type="checkbox"/>
Above-ground cisterns and basins	<input type="checkbox"/>
Underground detention	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>

Show calculations below to demonstrate if the LID Design Storm Capture Volume can be met with evapotranspiration, rainwater harvesting BMPs in combination with infiltration BMPs. If not document how much can be met with either infiltration BMPs, evapotranspiration, rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with either of these BMPs categories.

There are no potential demands for rainwater harvesting for the Project.

IV.3.4 Biotreatment BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs, and/or evapotranspiration and rainwater harvesting BMPs, describe biotreatment BMPs. Include sections for selection, suitability, sizing, and infeasibility, as applicable.

Name	Included?
Bioretention with underdrains	<input type="checkbox"/>
Stormwater planter boxes with underdrains	<input type="checkbox"/>
Rain gardens with underdrains	<input type="checkbox"/>
Constructed wetlands	<input type="checkbox"/>
Vegetated swales	<input type="checkbox"/>
Vegetated filter strips	<input type="checkbox"/>
Proprietary vegetated biotreatment systems	<input type="checkbox"/>
Wet extended detention basin	<input type="checkbox"/>
Dry extended detention basins	<input type="checkbox"/>
Other: Modular Wetlands Device	<input checked="" type="checkbox"/>
Other:	<input type="checkbox"/>

Show calculations below to demonstrate if the LID Design Storm Capture Volume can be met with infiltration, evapotranspiration, rainwater harvesting and/or biotreatment BMPs. If not document how much can be met with either infiltration BMPs, evapotranspiration, rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with either of these BMPs categories.

Infiltration of the Design Capture Volume (DCV) is not feasible based on the Project site's infiltration rates. A flow-based biofiltration device will treat the water quality design flowrate (Q), as required by the 2013 North OC TGD. A single Modular Wetlands system will be incorporated into the site at the northwest corner of the Project site.

A summary of the Modular Wetlands system is shown in the table below. The drainage areas are delineated on the BMP Map included in Exhibits section herein.

LID Biofiltration BMPs – DMA Treatment

DMA	Area (ac)	Q ^[1] (cfs)	Biofiltration Model #	Treatment Capacity ^[2] (cfs)	Coordinates
1	1.07	0.180	MWS-L-8-8-V-UG	0.231	N 33.61334°, W 117.82189°

Notes:

[1] The water quality design flowrate (Q) was calculated using the "Simple Method Runoff Coefficient for Flow-Based BMP Sizing", Appendix III.1.2 of the 2013 North OC TGD

[2] Refer to Contech Standard Detail MWS-L-8-8-V-UG (see Attachment B)

IV.3.5 Hydromodification Control BMPs

Describe hydromodification control BMPs. See Section 5 TGD. Include sections for selection, suitability, sizing, and infeasibility, as applicable. Detail compliance with Prior Conditions of Approval.

Hydromodification Control BMPs	
BMP Name	BMP Description
Gravel Storage BMP	24-inch deep gravel layer placed under access road to provide storage of 2-year, 24-hour runoff volume; total proposed volume of gravel is 7,636 cubic feet

As identified in Section II.3, hydromodification control BMPs are required for the Project. For the Project site, Hydrologic Conditions of Concern (HCOC) do exist. The Project's post-development condition runoff volume for the 2-year, 24-hour storm exceeds the pre-development condition by more than 5%. The 2-year, 24-hour storm runoff volume will be stored in a gravel layer beneath the access road. The site's proposed gravel volume is 7,636 cubic feet, which provides an available storage volume of 3,054 cubic feet based on a 40% void ratio.

IV.3.6 Regional/Sub-Regional LID BMPs

Describe regional/sub-regional LID BMPs in which the project will participate.

Regional/Sub-Regional LID BMPs
Project does not require regional/sub-regional LID BMPs, onsite BMPs are adequate for the Project's requirements.

IV.3.7 Treatment Control BMPs

Treatment control BMPs can only be considered if the project conformance analysis indicates that it is not feasible to retain the full design capture volume with LID BMPs. Describe treatment control BMPs including sections for selection, sizing, and infeasibility, as applicable.

Treatment Control BMPs	
BMP Name	BMP Description

Per the North OC Model WQMP Section 7.II-3.2.2, it is noted that the satisfaction of LID performance criteria also fully satisfies treatment control performance criteria, therefore the implementation of the treatment control BMPs is not required.

IV.3.8 Non-structural Source Control BMPs

Fill out non-structural source control check box forms or provide a brief narrative explaining if non-structural source controls were not used.

Non-Structural Source Control BMPs				
Identifier	Name	Check One		If not applicable, state brief reason
		Included	Not Applicable	
N1	Education for Property Owners, Tenants and Occupants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N2	Activity Restrictions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N3	Common Area Landscape Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No proposed landscaping on site.
N4	BMP Maintenance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N5	Title 22 CCR Compliance (How development will comply)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No hazardous waste activities on site.
N6	Local Industrial Permit Compliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No fuel dispensing / industrial waste areas on site.
N7	Spill Contingency Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N8	Underground Storage Tank Compliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No underground tanks on site.
N9	Hazardous Materials Disclosure Compliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No hazardous waste activities on site.
N10	Uniform Fire Code Implementation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N11	Common Area Litter Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N12	Employee Training	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N13	Housekeeping of Loading Docks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No loading docks on site.
N14	Common Area Catch Basin Inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N15	Street Sweeping Private Streets and Parking Lots	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N16	Retail Gasoline Outlets	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No retail gas outlets on site.

N1 Education for Property Owners, Tenants and Occupants – Practical information materials will be provided to the County employees and contractors that operate at Coyote Canyon Landfill (CCL). Materials will cover general good housekeeping practices to promote protection of stormwater quality. These materials will be provided by the County of Orange.

N2 Activity Restrictions – Activities must be compliant with the water quality ordinance set forth by the County of Orange. The following activities are not permitted: No hosing down paved surfaces where non-stormwater will discharge to the storm drain. No dumping of waste materials into storm drain inlets.

N4 BMP Maintenance – The Project's WQMP will identify responsibility for implementation of each non-structural BMP and scheduled cleaning and/or maintenance of all structural BMP facilities. Documentation of inspection and maintenance records will be kept on-site.

N7 (SC-11) Spill Contingency Plan – The owner must prepare a "Spill Contingency Plan" which describes how employees that operate at Coyote Canyon Landfill (CCL) will prepare for and respond to spills of materials. An effective spill response and control plan will include spill/leak prevention measures, spill response procedures, spill cleanup procedures, reporting, and training.

N10 Uniform Fire Code Implementation – Compliance with Article 80 of the Uniform Fire Code enforced by fire protection agency.

N11 (SC-60) Common Area Litter Control – The owner is required to implement regularly scheduled maintenance which includes trash patrolling, trash receptacle emptying, trash disposal violation reporting, and "Best Management Practices" implementing.

N12 Employee Training – Education program applicable to future employees of the County of Orange. All employees would be trained and taught proper management techniques. Brochures and education materials provided to employees on an annual basis.

N14 (SC-74) Common Area Catch Basin Inspection – The owner is required to have all storm drain facilities inspected, cleaned, and maintained annually and after rain events. Cleaning should occur in the later summer/early fall prior to the start of the rainy season. Drainage facilities include catch basins (storm drain inlets) detention basins, retention basins, sediment basins, open drainage channels, and lift stations. Records should be kept to document annual maintenance.

N15 (SC-43, SC-70) Street Sweeping Private Streets and Parking Lots – The access road is required to be swept in late summer or early fall, prior to the start of the rainy season or equivalent as required by the governing jurisdiction. Hosing down paved surfaces is not permitted.

IV.3.9 Structural Source Control BMPs

Fill out structural source control check box forms or provide a brief narrative explaining if Structural source controls were not used.

Structural Source Control BMPs				
Identifier	Name	Check One		If not applicable, state brief reason
		Included	Not Applicable	
S1	Provide storm drain system stenciling and signage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
S2	Design and construct outdoor material storage areas to reduce pollution introduction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No outdoor storage material areas on site.
S3	Design and construct trash and waste storage areas to reduce pollution introduction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No proposed irrigation system on site.
S5	Protect slopes and channels and provide energy dissipation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No steep slopes or channel on site.
	Incorporate requirements applicable to individual priority project categories (from SDRWQCB NPDES Permit)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not applicable.
S6	Dock areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No dock areas on site.
S7	Maintenance bays	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No maintenance bays on site.
S8	Vehicle wash areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No vehicle wash areas on site.
S9	Outdoor processing areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
S10	Equipment wash areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No equipment wash areas on site
S11	Fueling areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No fueling areas on site.
S12	Hillside landscaping	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No hillside landscaping on site.
S13	Wash water control for food preparation areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No food preparation area on site.
S14	Community car wash racks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No car wash racks on site.

S1 (SD-13) Provide Storm Drain System Stenciling and Signage – Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain catch basins will include highly visible source control messages/graphics which includes prohibitive language (such as: NO DUMPING - DRAINS TO OCEAN) and/or graphical icons to prevent illegal dumping. Maintain legibility of stencils, and preform re-stenciling at a minimum of every 5 years.

S3 (SD-32) Design Trash Enclosures to Reduce Pollution Introduction – The site may include a designated trash enclosure, in which case the trash enclosure will include a solid roof or awning, impermeable paved surface, design not allowing run-on from adjoining areas, and walls to prevent off-site transport of trash. The trash area drain may not connect to the municipal storm drain system.

S9 (SD-36) Outdoor Processing Areas – Outdoor processing areas Outdoor process equipment operations shall adhere to the following requirements:

1. Cover or enclose areas that would be the sources of pollutants; or, slope the area toward a sump that will provide infiltration or evaporation with no discharge; or, if there are no other alternatives, discharge of non-stormwater flow to the sanitary sewer may be considered only allowed by the local sewerage agency through permitted connection.
2. Grade or berm area to prevent run-on from surrounding areas.
3. Installation of storm drains in areas of equipment repair is prohibited.
4. Other features which are comparable or equally effective that prevent unpermitted discharges to the municipal storm drain system.
5. Where wet material processing occurs (e.g. Electroplating), secondary containment structures (not double wall containers) shall be provided to hold spills resulting from accidents, leaking tanks or equipment, or any other unplanned releases (Note: If these are plumbed to the sanitary sewer, the structures and plumbing shall be with the prior approval of the sewer agency).

All non-structural and structural source control BMPs are under the responsibility of Kevin Oxford and the County of Orange. Orange County Waste & Recycling is located on 601 N. Ross Street, Santa Ana, CA 92701 and can be reached by phone at (949) 728-3042.

IV.4 ALTERNATIVE COMPLIANCE PLAN (IF APPLICABLE)

IV.4.1 Water Quality Credits

Determine if water quality credits are applicable for the project.

Description of Proposed Project				
Project Types that Qualify for Water Quality Credits (Select all that apply):				
<input type="checkbox"/> Redevelopment projects that reduce the overall impervious footprint of the project site.	<input type="checkbox"/> Brownfield redevelopment, meaning redevelopment, expansion, or reuse of real property which may be complicated by the presence or potential presence of hazardous substances, pollutants or contaminants, and which have the potential to contribute to adverse ground or surface WQ if not redeveloped.		<input type="checkbox"/> Higher density development projects which include two distinct categories (credits can only be taken for one category): those with more than seven units per acre of development (lower credit allowance); vertical density developments, for example, those with a Floor to Area Ratio (FAR) of 2 or those having more than 18 units per acre (greater credit allowance).	
<input type="checkbox"/> Mixed use development, such as a combination of residential, commercial, industrial, office, institutional, or other land uses which incorporate design principles that can demonstrate environmental benefits that would not be realized through single use projects (e.g. reduced vehicle trip traffic with the potential to reduce sources of water or air pollution).	<input type="checkbox"/> Transit-oriented developments, such as a mixed use residential or commercial area designed to maximize access to public transportation; similar to above criterion, but where the development center is within one half mile of a mass transit center (e.g. bus, rail, light rail or commuter train station). Such projects would not be able to take credit for both categories, but may have greater credit assigned		<input type="checkbox"/> Redevelopment projects in an established historic district, historic preservation area, or similar significant city area including core City Center areas (to be defined through mapping).	
<input type="checkbox"/> Developments with dedication of undeveloped portions to parks, preservation areas and other pervious uses.	<input type="checkbox"/> Developments in a city center area.	<input type="checkbox"/> Developments in historic districts or historic preservation areas.	<input type="checkbox"/> Live-work developments, a variety of developments designed to support residential and vocational needs together – similar to criteria to mixed use development; would not be able to take credit for both categories.	<input type="checkbox"/> In-fill projects, the conversion of empty lots and other underused spaces into more beneficially used spaces, such as residential or commercial areas.
Calculation of Water Quality Credits (if applicable)	Not Applicable			

The project is a redevelopment that maintains the overall impervious footprint of the project site. Credits are not considered in the WQMP.

IV.4.2 Alternative Compliance Plan Information

Describe an alternative compliance plan (if applicable). Include alternative compliance obligations (i.e., gallons, pounds) and describe proposed alternative compliance measures.

Alternative Compliance Measures are not required for the Project because flow-based biofiltration BMPs will meet the requirements of the Permit.

Section V Inspection/Maintenance Responsibility for BMPs

Fill out information in table below. Prepare and attach an Operation and Maintenance Plan. Identify the mechanism through which BMPs will be maintained. Inspection and maintenance records must be kept for a minimum of five years for inspection by the regulatory agencies.

BMP Inspection/Maintenance			
BMP	Reponsible Party(s)	Inspection/Maintenance Activities Required	Minimum Frequency of Activities
Modular Wetlands Systems BMP	Archaea Energy Baffour Ennin (832) 740-1241	Contractor to verify proper installation per manufacturer's specifications and recommendations. Engineer to inspect MSFWS components at place of installation.	After Installation
Modular Wetlands Systems BMP	Archaea Energy Baffour Ennin (832) 740-1241	Qualified person to inspect all MSFWS components and results of inspection to be recorded in an inspection log.	Every 6 to 12 months
Modular Wetlands Systems BMP	Archaea Energy Baffour Ennin (832) 740-1241	Remove sediment and debris from the separation chamber. Description and amount of sediment/debris collected to be documented in maintenance/inspection record.	Every 6 to 12 months
Modular Wetlands Systems BMP	Archaea Energy Baffour Ennin (832) 740-1241	Sediment, debris, trash, and organics captured by MSFWS to be transported and disposed at an approved disposal facility in accordance with local and state regulations.	Every 6 to 12 months
Modular Wetlands Systems BMP	Archaea Energy Baffour Ennin (832) 740-1241	Replace the pretreatment cartridge filter media. Condition of the filter to be documented in maintenance/inspection record.	Every 6 to 12 months

Modular Wetlands Systems BMP	Archaea Energy Baffour Ennin (832) 740-1241	Replace the drain-down filter media and note in maintenance/inspection record.	Every 6 to 12 months
Modular Wetlands Systems BMP	Archaea Energy Baffour Ennin (832) 740-1241	Trim vegetation and prune/remove any dead plant material. Replace dead plants. No chemical herbicides, pesticides, or fertilizers to be used for planting maintenance.	Every 6 to 12 months
Gravel Storage BMP	Archaea Energy Baffour Ennin (832) 740-1241	Inspect storm inlets for structural integrity and clean/sweep area prior to wet season. Check for trash and sediment build-up within inlets.	Annually and After Major Storms
Street Sweeping	Archaea Energy Baffour Ennin (832) 740-1241	Mechanically sweep access road and entrances associated with the site. Avoid wet weather sweeping if feasible.	Monthly
Storm Drain System Stenciling and Signage	Archaea Energy Baffour Ennin (832) 740-1241	Inspect stencilling and signage to ensure message is visible and not damaged. Re-stencil as necessary but at a minimum once every five years.	Once every five years

Section VI Site Plan and Drainage Plan

VI.1 SITE PLAN AND DRAINAGE PLAN

Include a site plan and drainage plan sheet set containing the following minimum information:

- Project location
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural BMP locations
- Drainage delineations and flow information
- Drainage connections
- BMP details

Refer to Exhibits section for BMP Map, Attachment B for hydrology, and Attachment D for construction documents.

VI.2 ELECTRONIC DATA SUBMITTAL

The minimum requirement is to provide submittal of PDF exhibits in addition to hard copies. Format must not require specialized software to open.

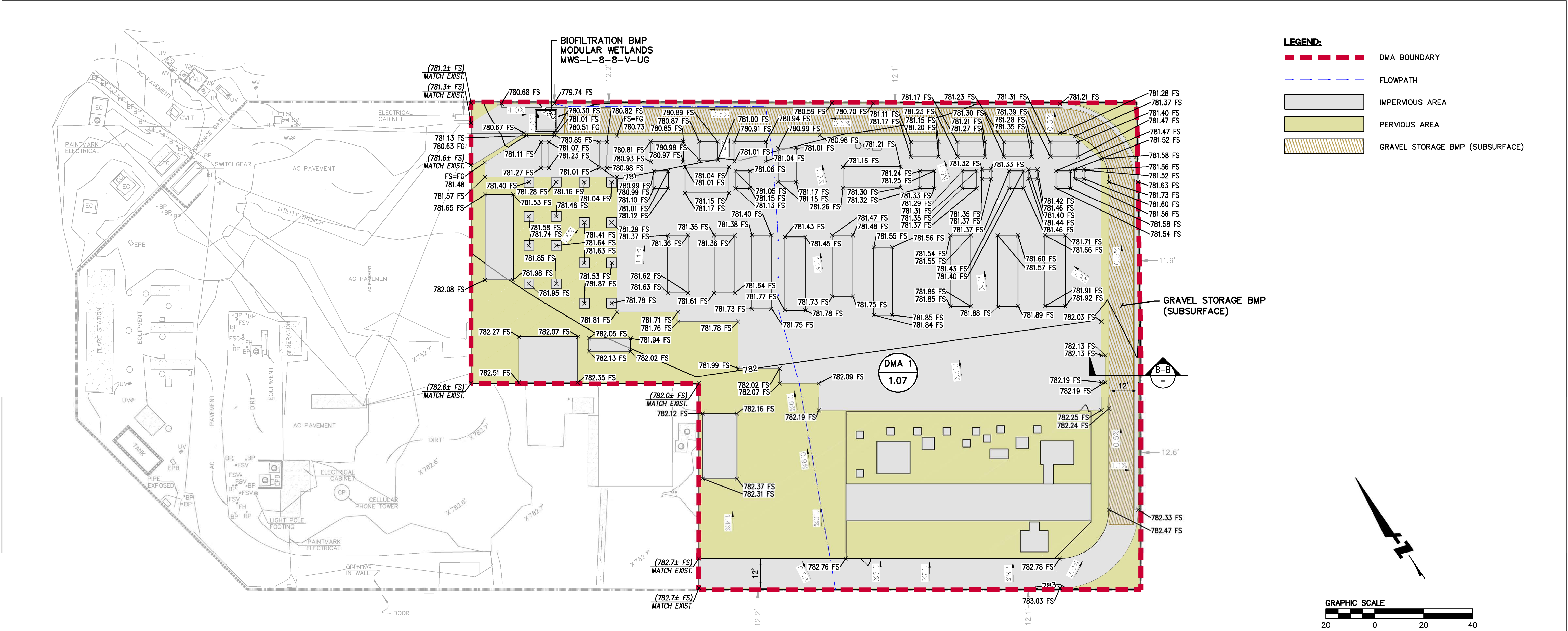
If the local jurisdiction requires specialized electronic document formats (CAD, GIS) to be submitted, this section will be used to describe the contents (e.g., layering, nomenclature, georeferencing, etc.) of these documents so that they may be interpreted efficiently and accurately.

Section VII Educational Materials

Education Materials			
Residential Material (http://www.ocwatersheds.com)	Check If Applicable	Business Material (http://www.ocwatersheds.com)	Check If Applicable
The Ocean Begins at Your Front Door	<input checked="" type="checkbox"/>	Tips for the Automotive Industry	<input type="checkbox"/>
Tips for Car Wash Fund-raisers	<input type="checkbox"/>	Tips for Using Concrete and Mortar	<input type="checkbox"/>
Tips for the Home Mechanic	<input type="checkbox"/>	Tips for the Food Service Industry	<input type="checkbox"/>
Homeowners Guide for Sustainable Water Use	<input type="checkbox"/>	Proper Maintenance Practices for Your Business	<input checked="" type="checkbox"/>
Household Tips	<input type="checkbox"/>	Other Material	Check If Attached
Proper Disposal of Household Hazardous Waste	<input type="checkbox"/>		
Recycle at Your Local Used Oil Collection Center (North County)	<input type="checkbox"/>	CASQA SC-11 – Spill Prevention, Control & Cleanup	<input checked="" type="checkbox"/>
Recycle at Your Local Used Oil Collection Center (Central County)	<input type="checkbox"/>	CASQA SC-43 – Parking Area Maintenance	<input checked="" type="checkbox"/>
Recycle at Your Local Used Oil Collection Center (South County)	<input type="checkbox"/>	CASQA SC-60 – Housekeeping Practices	<input checked="" type="checkbox"/>
Tips for Maintaining a Septic Tank System	<input type="checkbox"/>	CASQA SC-70 – Road and Street Maintenance	<input checked="" type="checkbox"/>
Responsible Pest Control	<input type="checkbox"/>	CASQA SC-74 – Drainage System Maintenance	<input checked="" type="checkbox"/>
Sewer Spill	<input type="checkbox"/>	CASQA SD-13 – Storm Drain Signage	<input checked="" type="checkbox"/>
Tips for the Home Improvement Projects	<input type="checkbox"/>	CASQA SD-32 – Trash Storage Areas	<input checked="" type="checkbox"/>
Tips for Horse Care	<input type="checkbox"/>	CASQA SD-36 – Outdoor Processing Areas	<input checked="" type="checkbox"/>
Tips for Landscaping and Gardening	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Pet Care	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Pool Maintenance	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Residential Pool, Landscape and Hardscape Drains	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Projects Using Paint	<input type="checkbox"/>		<input type="checkbox"/>

Refer to Attachment A for education materials.

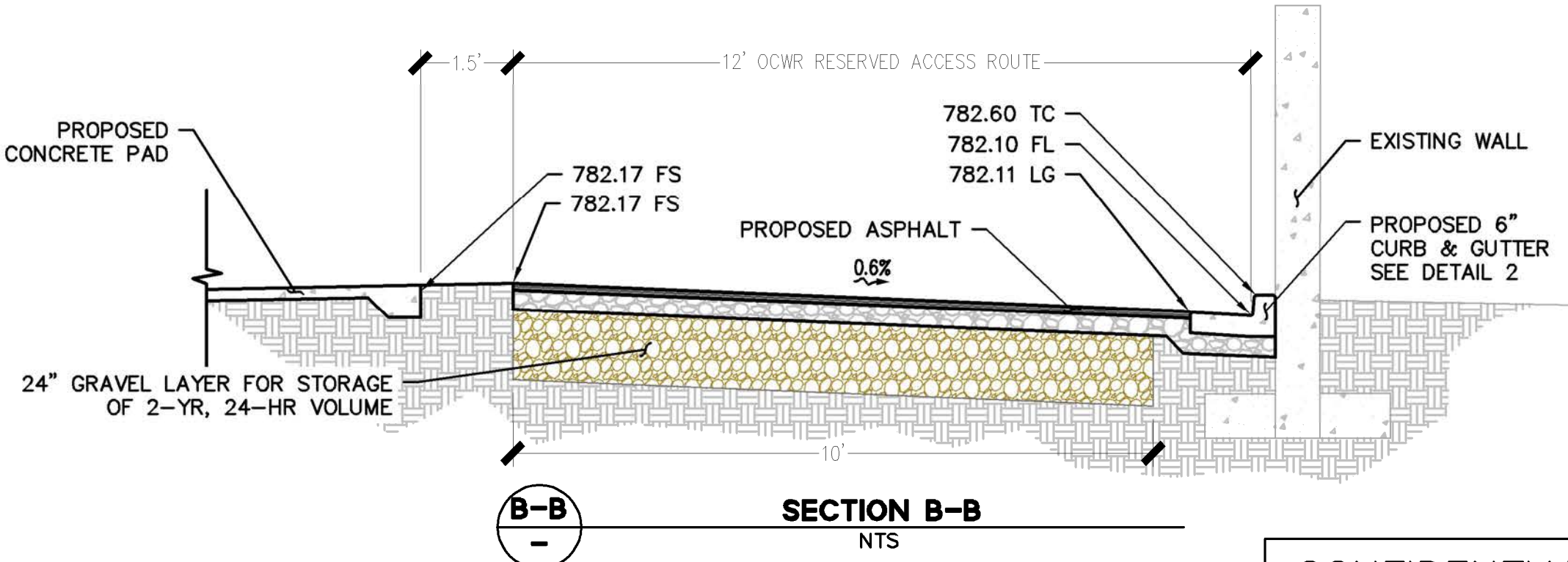
Exhibits



LID Biofiltration BMPs – DMA Treatment

DMA	Area (ac)	Q ^[1] (cfs)	Biofiltration Model #	Treatment Capacity ^[2] (cfs)	Coordinates
1	1.07	0.180	MWS-L-8-8-V-UG	0.231	N 33.61334° W 117.82189°

Notes:
[1] The water quality design flowrate (Q) was calculated using the "Simple Method Runoff Coefficient for Flow-Based BMP Sizing", Appendix III.1.2 of the 2013 North OC TGD
[2] Refer to Contech Standard Detail MWS-L-8-8-V-UG (see Attachment B)



REV	DATE	DESCRIPTION	DRN BY	CHK BY	APRV BY
0	11/16/23	ISSUE FOR BID	DMM	VL	RTC

CIVIL ENGINEER:

BKF **BKF ENGINEERS**
4675 MACARTHUR CT., SUITE 400
NEWPORT BEACH, CA 92660
(949) 526-8640
www.bkf.com

OWNER:

ARCHAEA ENERGY
4444 WESTHEIMER ROAD, SUITE G450
HOUSTON, TX 77027
Ph: (346) 708-8272

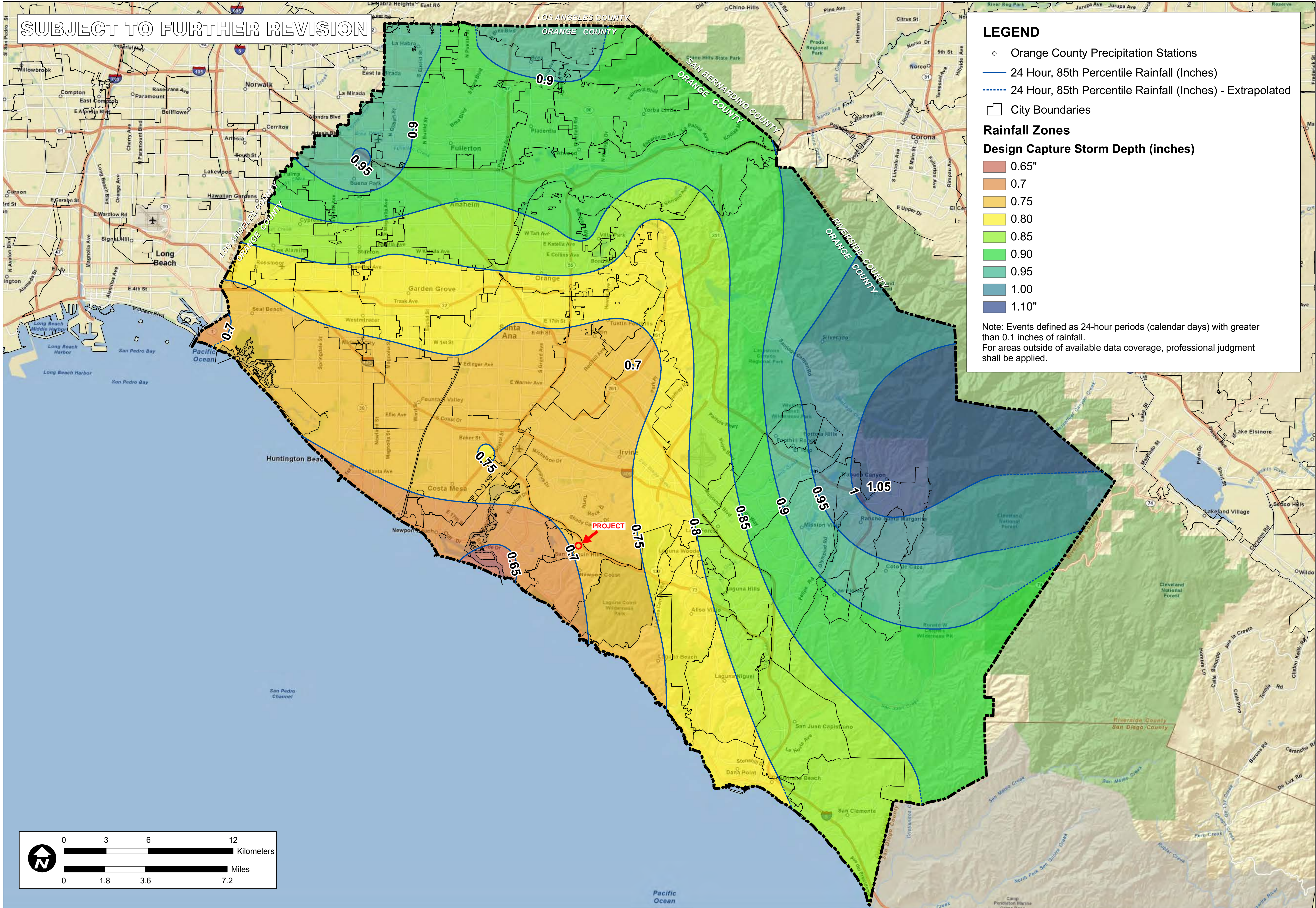
ENGINEER:

BIOGAS ENGINEERING
2321 E. 28TH STREET, SUITE 400
SIGNAL HILL, CA 90755, Ph: (562) 726-3565
EMAIL: INFO@BIOGASENG.COM

BMP MAP

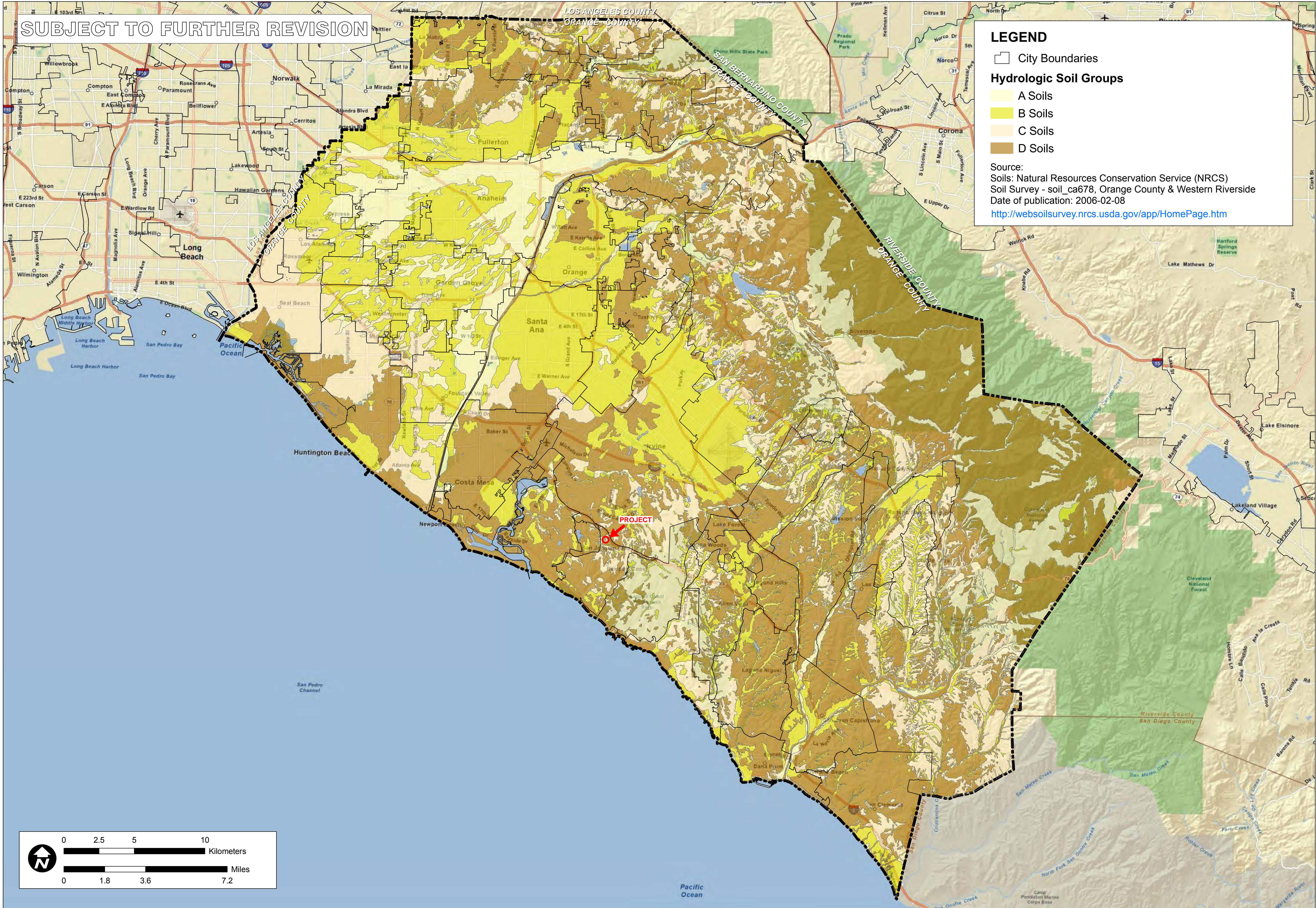
COYOTE CANYON LANDFILL
RNG PROJECT
20662 NEWPORT COAST DRIVE
NEWPORT BEACH, CA 92657

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ORANGE COUNTY TECHNICAL GUIDANCE DOCUMENT		RAINFALL ZONES	
ORANGE CO.		CA	
JOB NO. 9526-E		DATE 04/22/10	
CHECKED BMP		DRAWING TH	
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FIGURE XVI-1			

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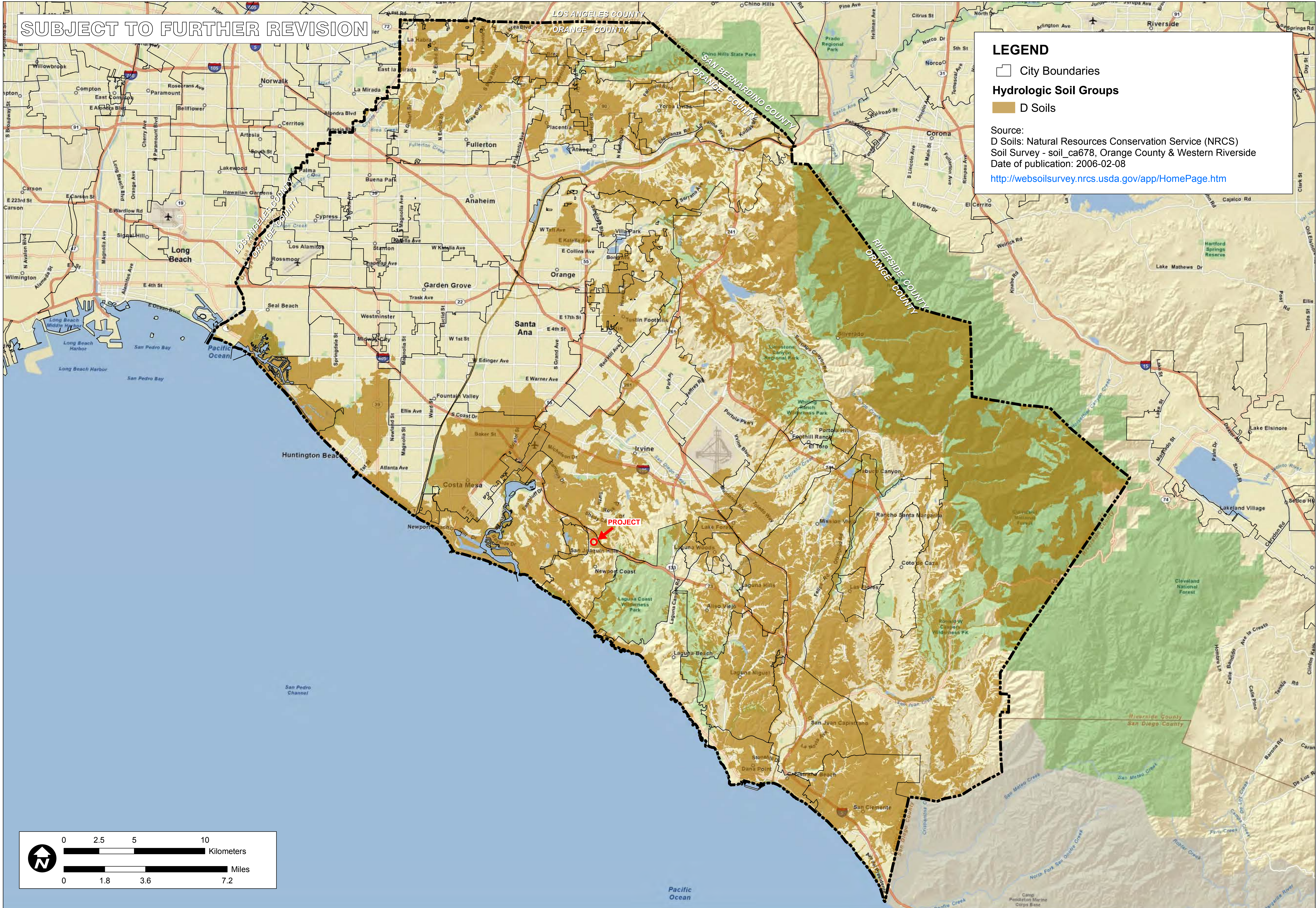


TITLE		ORANGE COUNTY INFILTRATION STUDY		CA	
JOB		ORANGE CO.		JOB NO. 9526-E	
SCALE	1" = 1.8 miles	DESIGNED	TH	DRAWING	TH
CHECKED	BMP	DATE	02/09/11	JOB NO. 9526-E	

PACE
Advanced Water Engineering

FIGURE
XVI-2a

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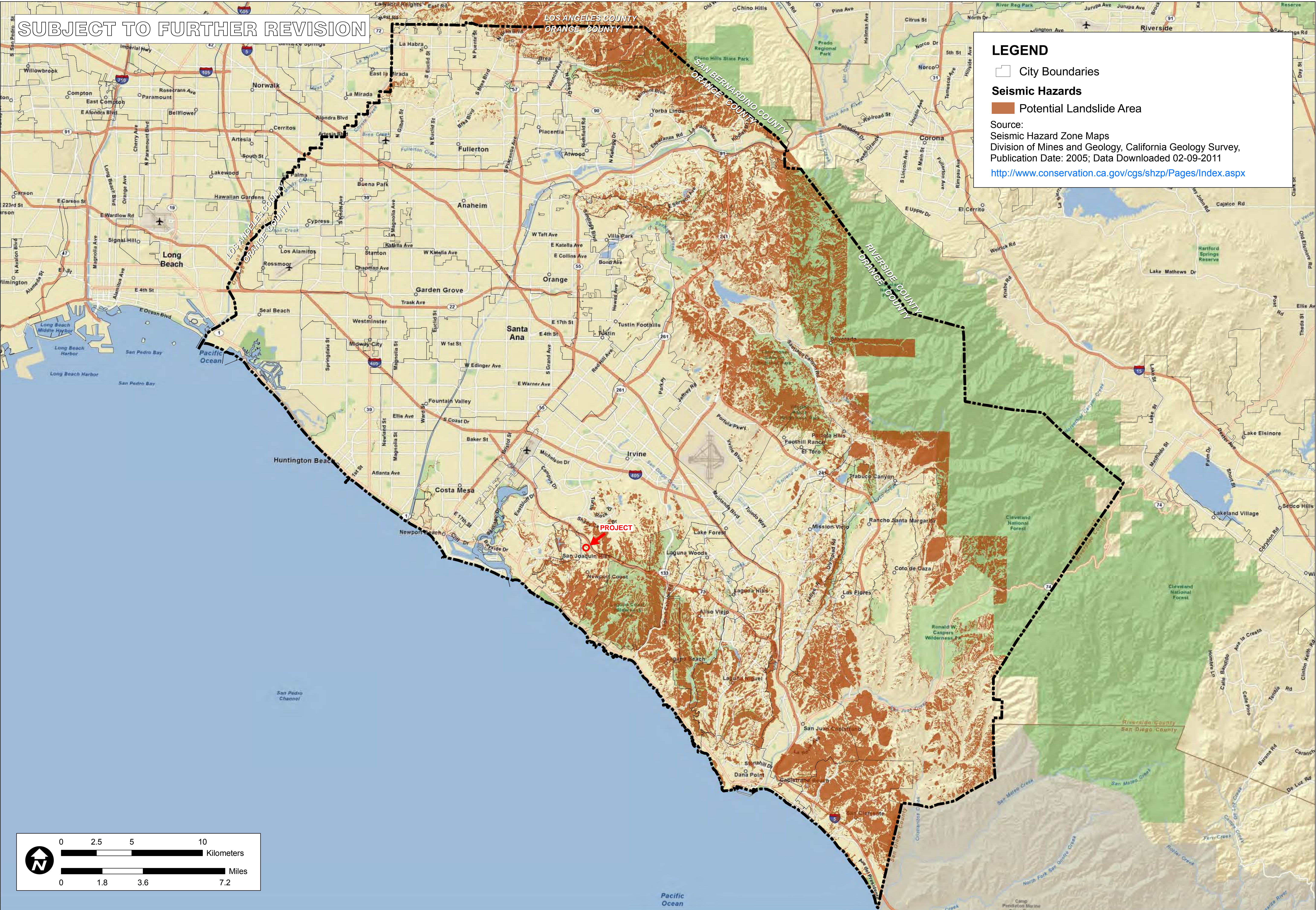
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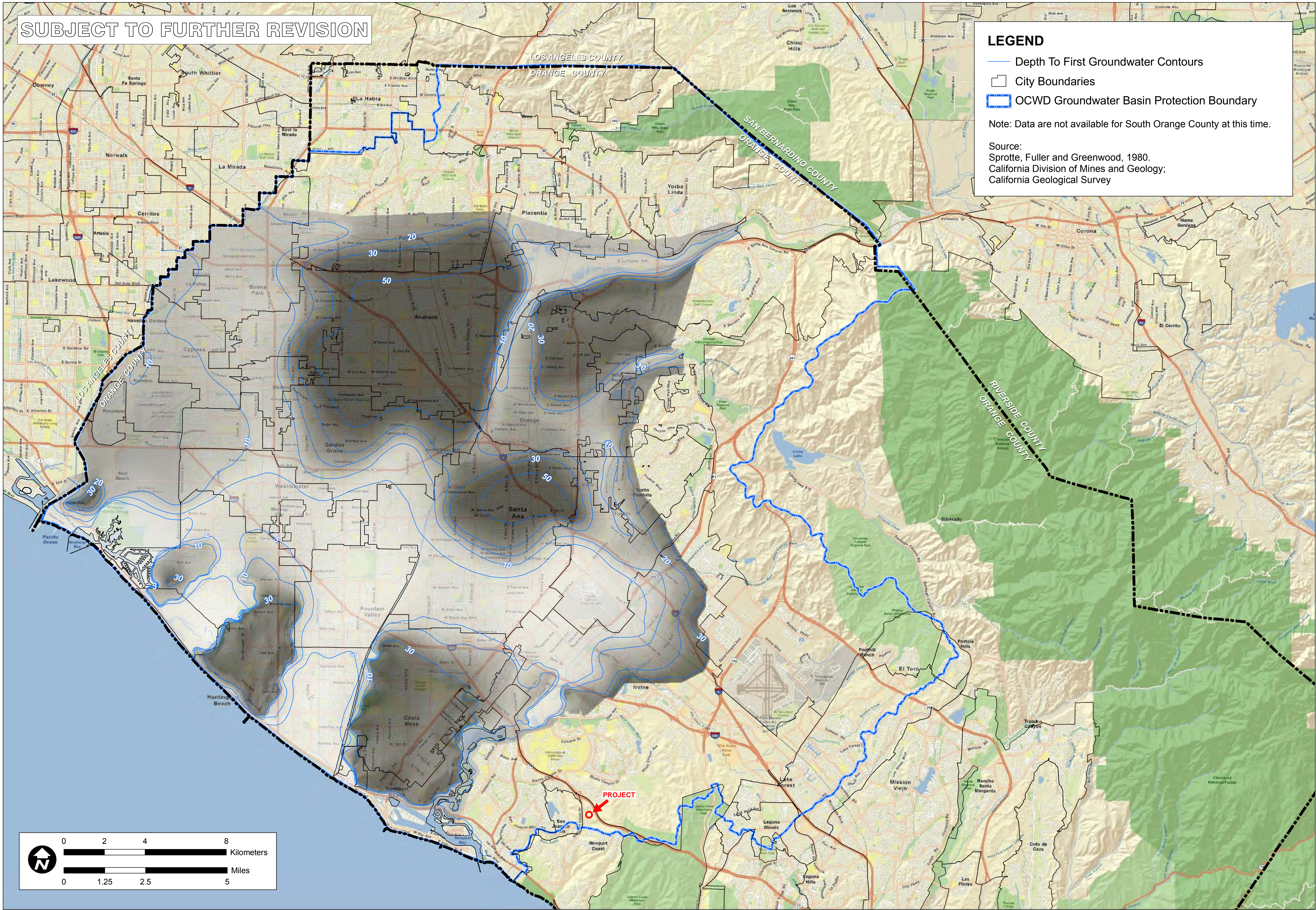
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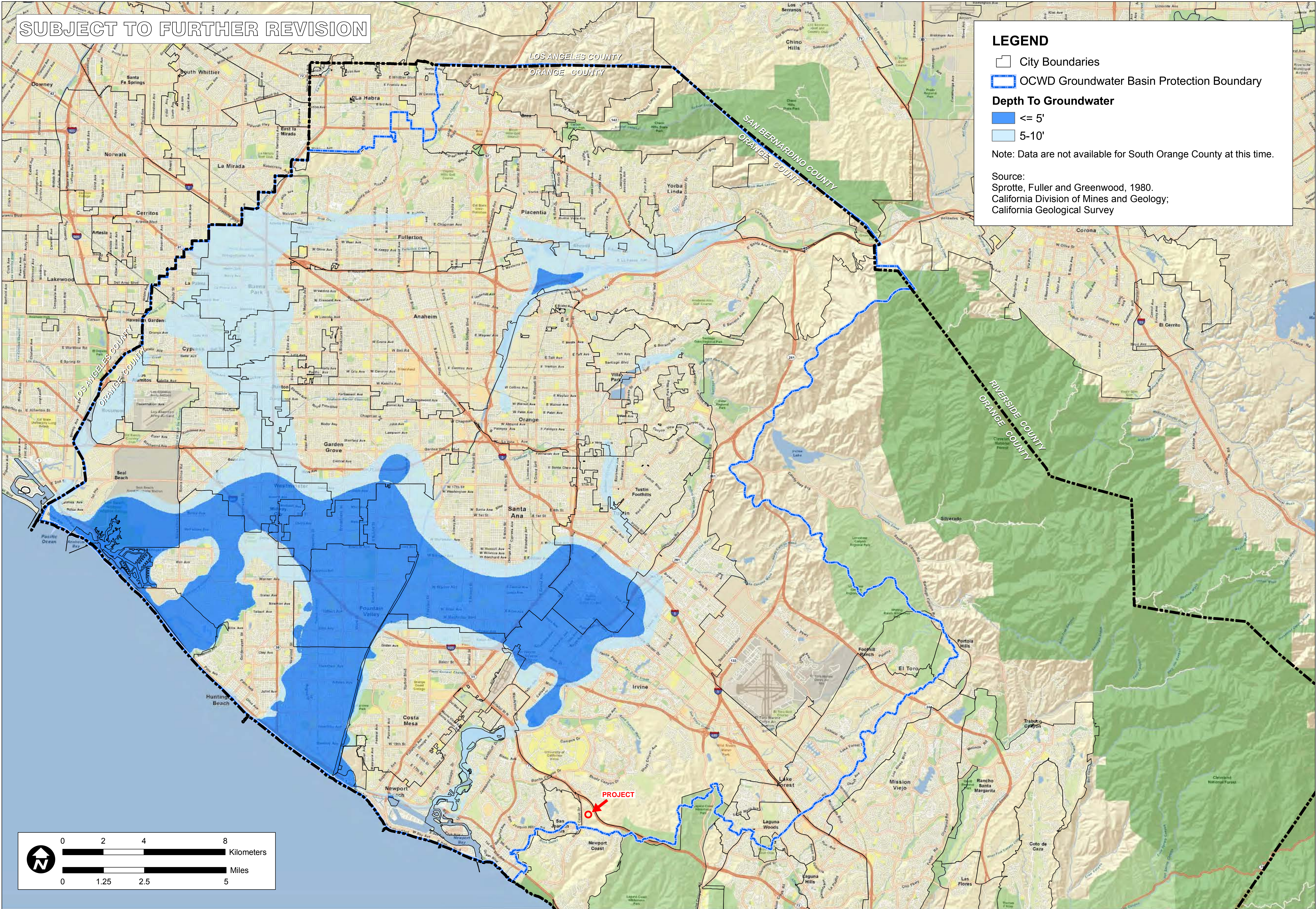
ORANGE COUNTY INTEGRATION STUDY		HYDROLOGIC SOIL GROUP TYPE D NRCS SOIL SURVEY	
ORANGE CO.		CA	
SCALE 1" = 1.25 miles		FIGURE XVI-2c	
DESIGNED TH	DRAWING TH	CHECKED BMP	DATE 02/09/11
JOB NO. 9526-E		JOB NO. 9526-E	

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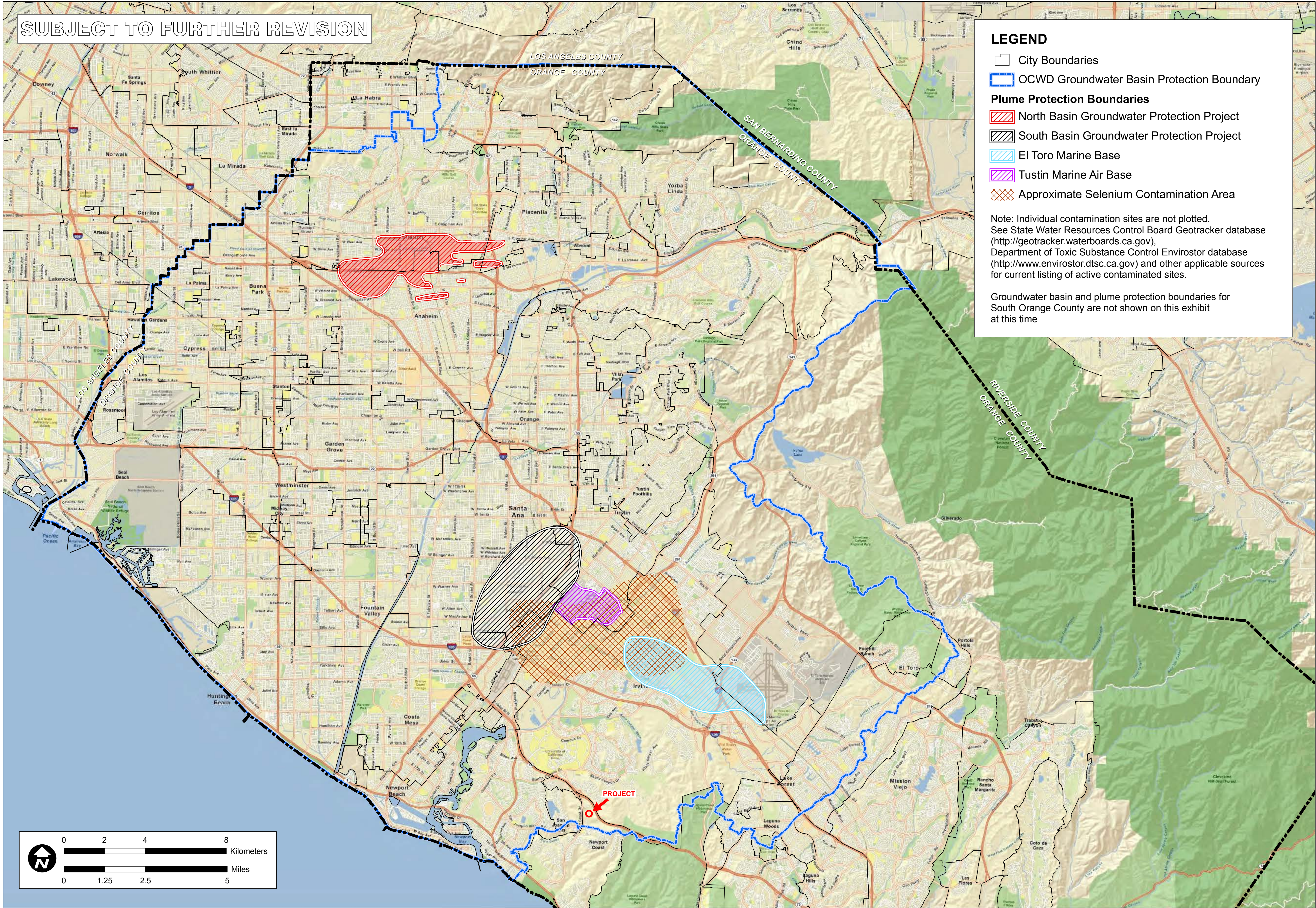
NORTH ORANGE COUNTY MAPPED DEPTH TO FIRST GROUNDWATER			ORANGE COUNTY INFILTRATION STUDY			CA		
TITLE			JOB			ORANGE CO.		
SCALE 1" = 1.25 miles			DESIGNED TH	DRAWING TH	CHECKED BMP	DATE 02/09/11	JOB NO. 9526-E	
FIGURE XVI-2d								

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NORTH ORANGE COUNTY MAPPED SHALLOW GROUNDWATER		TITLE	
ORANGE COUNTY INFILTRATION STUDY		CA	
ORANGE CO.		JOB	
SCALE	1" = 1.25 miles	DESIGNED	TH
DRAWING	TH	CHECKED	BMP
DATE	02/09/11	JOB NO.	9526-E
FIGURE		XVI-2e	



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NORTH ORANGE COUNTY GROUNDWATER PROTECTION AREAS		TITLE	
ORANGE COUNTY INFILTRATION STUDY		CA	
ORANGE CO.		JOB	
SCALE	1" = 1.25 miles	DESIGNED	TH
DRAWING	TH	CHECKED	BMP
DATE	04/22/10	JOB NO.	9526-E
FIGURE		XVI-2f	

PACE
Advanced Water Engineering



-  OCWD Groundwater Basin Protection Boundary
-  City Boundaries

Infiltration Constraints

-  1 Constraint
-  2 Overlapping Constraints
-  3 Overlapping Constraints
-  4 Overlapping Constraints

Analysis Layers Included: 1. Hydrologic Soil Group D, 2. Landslide Hazard Zone, 3. Groundwater Protection Areas 4. Approximate Selenium Area, 5. Depth to Groundwater <= 5'

Note: Screening datasets are not exhaustive. The applicant should always conduct a review of available site-specific information relative to infiltration constraints as part of assessing the feasibility of stormwater infiltration.

Source;
Infiltration Constraint Analysis: PACE/Geosyntec

TITLE

INFILTRATION ANALYSIS OVERLAPPING CONSTRAINT LOCATIONS

CA

ORANGE COUNTY INFILTRATION STUDY

ORANGE CO

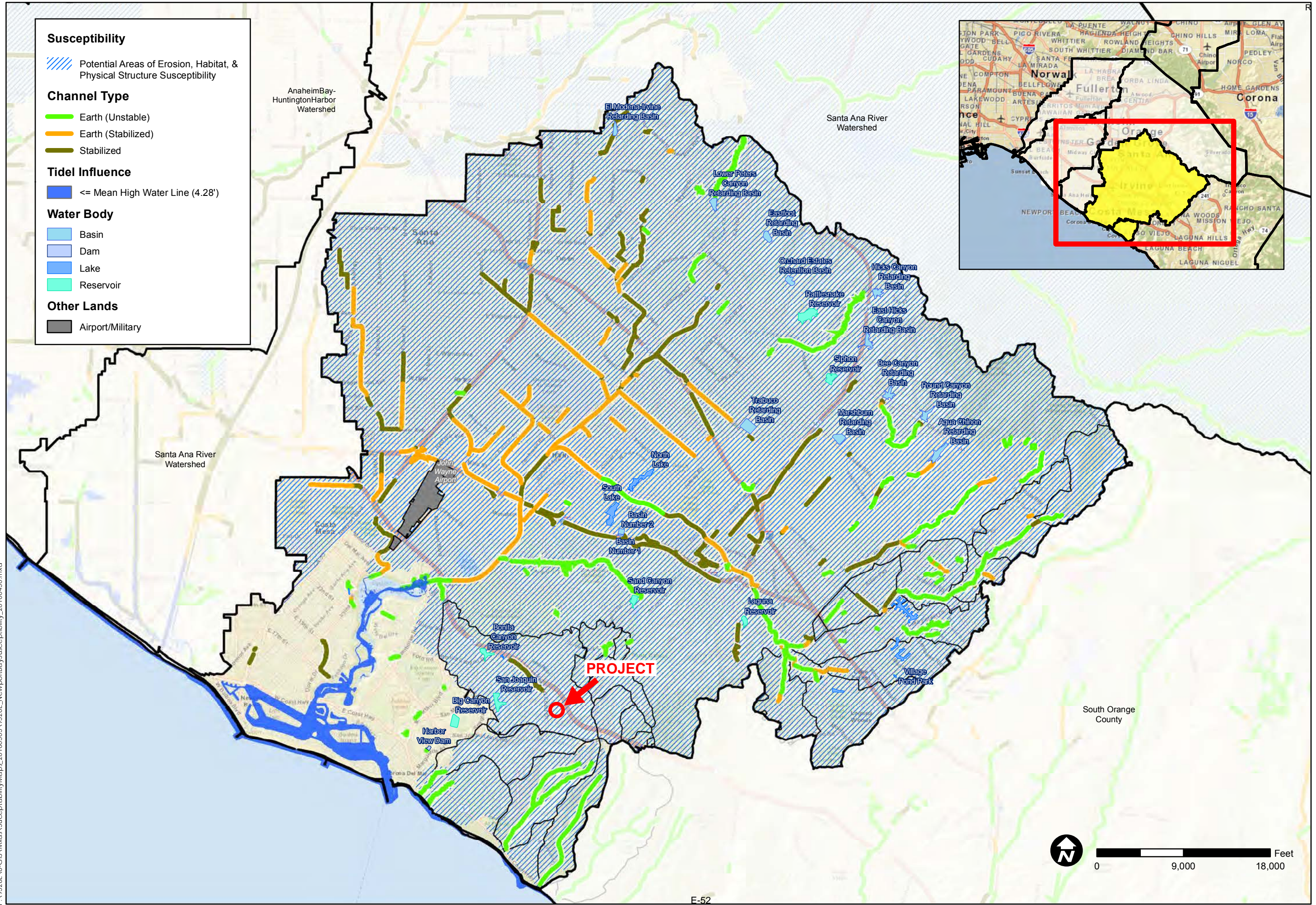
SCALE	1" = 1.8 miles
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CHECKED	BMP
DATE	04/22/10
JOB NO.	9526-F



FIGURE

XVI-2g

P:\9526E\6-GIS\Mxd\Susceptability\Maps_20100505\9526E_NewportBaySusceptibility_20100430.mxd



TITLE		SUSCEPTIBILITY ANALYSIS NEWPORT BAY- NEWPORT COASTAL STREAMS	
JOB		ORANGE COUNTY WATERSHED MASTER PLANNING ORANGE CO. CA	
SCALE	1" = 12000'	DESIGNED	TH
		DRAWING	TH
		CHECKED	BMP
		DATE	04/30/10
		JOB NO.	9526-E
FIGURE		4	

PACE
Advanced Water Engineering

Attachment A

Educational Materials

The Ocean Begins at Your Front Door



Follow these simple steps to help reduce water pollution:

Household Activities

- Do not rinse spills with water. Use dry cleanup methods such as applying cat litter or another absorbent material, sweep and dispose of in the trash. Take items such as used or excess batteries, oven cleaners, automotive fluids, painting products and cathode ray tubes, like TVs and computer monitors, to a Household Hazardous Waste Collection Center (HHWCC).
- For a HHWCC near you call (714) 834-6752 or visit www.oilandfills.com.
- Do not hose down your driveway, sidewalk or patio to the street, gutter or storm drain. Sweep up debris and dispose of it in the trash.

Automotive

- Take your vehicle to a commercial car wash whenever possible. If you wash your vehicle at home, choose soaps, cleaners, or detergents labeled non-toxic, phosphate-free or biodegradable. Vegetable and citrus-based products are typically safest for the environment.
- Do not allow washwater from vehicle washing to drain into the street, gutter or storm drain. Excess washwater should be disposed of in the sanitary sewer (through a sink or toilet) or onto an absorbent surface like your lawn.
- Monitor your vehicles for leaks and place a pan under leaks. Keep your vehicles well maintained to stop and prevent leaks.
- Never pour oil or antifreeze in the street, gutter or storm drain. Recycle these substances at a service station, a waste oil collection center or used oil recycling center. For the nearest Used Oil Collection Center call 1-800-CLEANUP or visit www.1800cleanup.org.

Pool Maintenance

- Pool and spa water must be dechlorinated and free of excess acid, alkali or color to be allowed in the street, gutter or storm drain.
- When it is not raining, drain dechlorinated pool and spa water directly into the sanitary sewer.
- Some cities may have ordinances that do not allow pool water to be disposed of in the storm drain. Check with your city.

Landscape and Gardening

- Do not over-water. Water your lawn and garden by hand to control the amount of water you use or set irrigation systems to reflect seasonal water needs. If water flows off your yard onto your driveway or sidewalk, your system is over-watering. Periodically inspect and fix leaks and misdirected sprinklers.
- Do not rake or blow leaves, clippings or pruning waste into the street, gutter or storm drain. Instead, dispose of waste by composting, hauling it to a permitted landfill, or as green waste through your city's recycling program.
- Follow directions on pesticides and fertilizer, (measure, do not estimate amounts) and do not use if rain is predicted within 48 hours.
- Take unwanted pesticides to a HHWCC to be recycled. For locations and hours of HHWCC, call (714) 834-6752 or visit www.oilandfills.com.

Trash

- Place trash and litter that cannot be recycled in securely covered trash cans.
- Whenever possible, buy recycled products.
- Remember: Reduce, Reuse, Recycle.

Pet Care

- Always pick up after your pet. Flush waste down the toilet or dispose of it in the trash. Pet waste, if left outdoors, can wash into the street, gutter or storm drain.
- If possible, bathe your pets indoors. If you must bathe your pet outside, wash it on your lawn or another absorbent/permeable surface to keep the washwater from entering the street, gutter or storm drain.
- Follow directions for use of pet care products and dispose of any unused products at a HHWCC.

Common Pollutants

- Home Maintenance
- Detergents, cleaners and solvents
 - Oil and latex paint
 - Swimming pool chemicals
 - Outdoor trash and litter

- Lawn and Garden
- Pet and animal waste
 - Pesticides
 - Clippings, leaves and soil
 - Fertilizer

- Automobile
- Oil and grease
 - Radiator fluids and antifreeze
 - Cleaning chemicals
 - Brake pad dust

The Ocean Begins at Your Front Door



Never allow pollutants to enter the street, gutter or storm drain!

Did You Know?

- Most people believe that the largest source of water pollution in urban areas comes from specific sources such as factories and sewage treatment plants. In fact, the largest source of water pollution comes from city streets, neighborhoods, construction sites and parking lots. This type of pollution is sometimes called “non-point source” pollution.
- There are two types of non-point source pollution: stormwater and urban runoff pollution.
- Stormwater runoff results from rainfall. When rainstorms cause large volumes of water to rinse the urban landscape, picking up pollutants along the way.
- Urban runoff can happen any time of the year when excessive water use from irrigation, vehicle washing and other sources carries trash, lawn clippings and other urban pollutants into storm drains.

Where Does It Go?

- Anything we use outside homes, vehicles and businesses – like motor oil, paint, pesticides, fertilizers and cleaners – can be blown or washed into storm drains.
- A little water from a garden hose or rain can also send materials into storm drains.
- Storm drains are separate from our sanitary sewer systems; unlike water in sanitary sewers (from sinks or toilets), water in storm drains is not treated before entering our waterways.

Sources of Non-Point Source Pollution

- Automotive leaks and spills.
- Improper disposal of used oil and other engine fluids.
- Metals found in vehicle exhaust, weathered paint, rust, metal plating and tires.
- Pesticides and fertilizers from lawns, gardens and farms.
- Improper disposal of cleaners, paint and paint removers.
- Soil erosion and dust debris from landscape and construction activities.
- Litter, lawn clippings, animal waste, and other organic matter.
- Oil stains on parking lots and paved surfaces.



The Effect on the Ocean



Non-point source pollution can have a serious impact on water quality in Orange County. Pollutants from the storm drain system can harm marine life

as well as coastal and wetland habitats. They can also degrade recreation areas such as beaches, harbors and bays.

Stormwater quality management programs have been developed throughout Orange County to educate and encourage the public to protect water quality, monitor runoff in the storm drain system, investigate illegal dumping and maintain storm drains.

Support from Orange County residents and businesses is needed to improve water quality and reduce urban runoff pollution. Proper use and disposal of materials will help stop pollution before it reaches the storm drain and the ocean.



For More Information

Orange County Stormwater Program

California Environmental Protection Agency

www.calepa.ca.gov

- **Air Resources Board**
www.arb.ca.gov
- **Department of Pesticide Regulation**
www.cdpr.ca.gov
- **Department of Toxic Substances Control**
www.dtsc.ca.gov
- **Integrated Waste Management Board**
www.ciwmb.ca.gov
- **Office of Environmental Health Hazard Assessment**
www.oehha.ca.gov
- **State Water Resources Control Board**
www.waterboards.ca.gov

Earth 911 - Community-Specific Environmental Information 1-800-cleanup or visit www.1800cleanup.org

Health Care Agency's Ocean and Bay Water Closure and Posting Hotline

(714) 433-6400 or visit www.ocbeachinfo.com

Integrated Waste Management Dept. of Orange County (714) 834-6752 or visit www.oclandfills.com for information on household hazardous waste collection centers, recycling centers and solid waste collection

O.C. Agriculture Commissioner

(714) 447-7100 or visit www.ocagcomm.com

Stormwater Best Management Practice Handbook

Visit www.cabmphandbooks.com

UC Master Gardener Hotline

(714) 708-1646 or visit www.uccemg.com

The Orange County Stormwater Program has created and moderates an electronic mailing list to facilitate communications, take questions and exchange ideas among its users about issues and topics related to stormwater and urban runoff and the implementation of program elements. To join the list, please send an email to ocstormwaterinfo-join@list.ocwatersheds.com

Aliso Viejo	(949)	425-2535
Anaheim Public Works Operations	(714)	765-6860
Brea Engineering	(714)	990-7666
Buena Park Public Works	(714)	562-3655
Costa Mesa Public Services	(714)	754-5323
Cypress Public Works	(714)	229-6740
Dana Point Public Works	(949)	248-3584
Fountain Valley Public Works	(714)	593-4441
Fullerton Engineering Dept.	(714)	738-6853
Garden Grove Public Works	(714)	741-5956
Huntington Beach Public Works	(714)	536-5431
Irvine Public Works	(949)	724-6315
La Habra Public Services	(562)	905-9792
La Palma Public Works	(714)	690-3310
Laguna Beach Water Quality	(949)	497-0378
Laguna Hills Public Services	(949)	707-2650
Laguna Niguel Public Works	(949)	362-4337
Laguna Woods Public Works	(949)	639-0500
Lake Forest Public Works	(949)	461-3480
Los Alamitos Community Dev.	(562)	431-3538
Mission Viejo Public Works	(949)	470-3056
Newport Beach, Code & Water		
Quality Enforcement	(949)	644-3215
Orange Public Works	(714)	532-6480
Placentia Public Works	(714)	993-8245
Rancho Santa Margarita	(949)	635-1800
San Clemente Environmental Programs	(949)	361-6143
San Juan Capistrano Engineering	(949)	234-4413
Santa Ana Public Works	(714)	647-3380
Seal Beach Engineering	(562)	431-2527 x317
Stanton Public Works	(714)	379-9222 x204
Tustin Public Works/Engineering	(714)	573-3150
Villa Park Engineering	(714)	998-1500
Westminster Public Works/Engineering	(714)	898-3311 x446
Yorba Linda Engineering	(714)	961-7138
Orange County Stormwater Program	(877)	897-7455
Orange County 24-Hour		
Water Pollution Problem Reporting Hotline		
1-877-89-SPILL (1-877-897-7455)		

On-line Water Pollution Problem Reporting Form

www.ocwatersheds.com



Printed on Recycled Paper

Preventing water pollution at your commercial/industrial site

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, many landscape and building maintenance activities can lead to water pollution if you're not careful. Paint, chemicals, plant clippings and other materials can be blown or washed into storm drains that flow to the ocean. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated before entering our waterways.

You would never pour soap or fertilizers into the ocean, so why would you let them enter the storm drains? Follow these easy tips to help prevent water pollution.

Some types of industrial facilities are required to obtain coverage under the State General Industrial Permit. For more information visit: www.swrcb.ca.gov/stormwater/industrial.html



For more information,
please call the
Orange County Stormwater Program
at **1-877-89-SPILL** (1-877-897-7455)
or visit
www.ocwatersheds.com

To report a spill,
call the
**Orange County 24-Hour
Water Pollution Problem
Reporting Hotline**
at **1-877-89-SPILL** (1-877-897-7455).

For emergencies, dial 911.



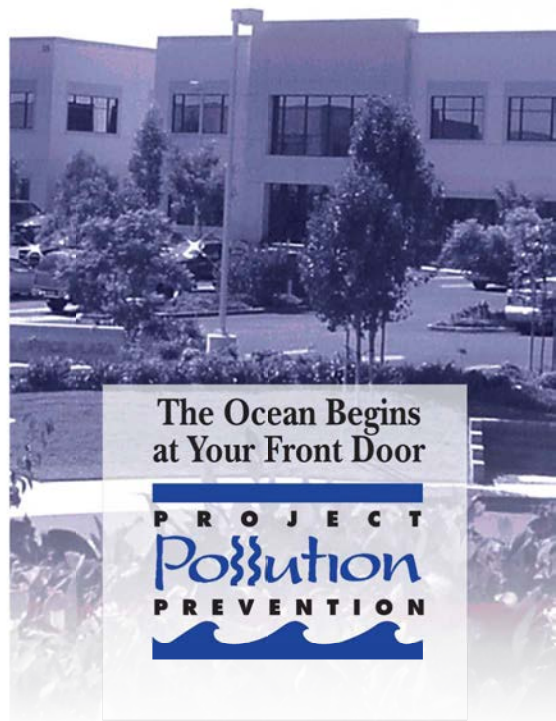
RECYCLE
USED OIL



Printed on Recycled Paper

Help Prevent Ocean Pollution:

Proper Maintenance Practices for Your Business



**The Ocean Begins
at Your Front Door**

**PROJECT
Pollution
PREVENTION**

Proper Maintenance Practices for your Business

Landscape Maintenance

- Compost grass clippings, leaves, sticks and other vegetation, or dispose of it at a permitted landfill or in green waste containers. Do not dispose of these materials in the street, gutter or storm drain.
- Irrigate slowly and inspect the system for leaks, overspraying and runoff. Adjust automatic timers to avoid overwatering.
- Follow label directions for the use and disposal of fertilizers and pesticides.
- Do not apply pesticides or fertilizers if rain is expected within 48 hours or if wind speeds are above 5 mph.
- Do not spray pesticides within 100 feet of waterways.
- Fertilizers should be worked into the soil rather than dumped onto the surface.
- If fertilizer is spilled on the pavement or sidewalk, sweep it up immediately and place it back in the container.

Building Maintenance

- Never allow washwater, sweepings or sediment to enter the storm drain.
- Sweep up dry spills and use cat litter, towels or similar materials to absorb wet spills. Dispose of it in the trash.
- If you wash your building, sidewalk or parking lot, you **must** contain the water. Use a shop vac to collect the water and contact your city or sanitation agency for proper disposal information. Do not let water enter the street, gutter or storm drain.
- Use drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly dispose of materials in the trash.
- Use a ground cloth or oversized tub for mixing paint and cleaning tools.
- Use a damp mop or broom to clean floors.
- Cover dumpsters to keep insects, animals, rainwater and sand from entering. Keep the area around the dumpster clear of trash and debris. Do not overfill the dumpster.

- Call your trash hauler to replace leaking dumpsters.
- Do not dump any toxic substance or liquid waste on the pavement, the ground, or near a storm drain. Even materials that seem harmless such as latex paint or biodegradable cleaners can damage the environment.
- Recycle paints, solvents and other materials. For more information about recycling and collection centers, visit www.oclandfills.com.
- Store materials indoors or under cover and away from storm drains.
- Use a construction and demolition recycling company to recycle lumber, paper, cardboard, metals, masonry, carpet, plastic, pipes, drywall, rocks, dirt, and green waste. For a listing of construction and demolition recycling locations in your area, visit www.ciwmmb.ca.gov/recycle.
- Properly label materials. Familiarize employees with Material Safety Data Sheets.

NEVER DISPOSE
OF ANYTHING
IN THE STORM
DRAIN.



Spill Prevention, Control & Cleanup SC-11



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Description

Spills and leaks, if not properly controlled, can adversely impact the storm drain system and receiving waters. Due to the type of work or the materials involved, many activities that occur either at a municipal facility or as a part of municipal field programs have the potential for accidental spills and leaks. Proper spill response planning and preparation can enable municipal employees to effectively respond to problems when they occur and minimize the discharge of pollutants to the environment.

Approach

- An effective spill response and control plan should include:
 - Spill/leak prevention measures;
 - Spill response procedures;
 - Spill cleanup procedures;
 - Reporting; and
 - Training
- A well thought out and implemented plan can prevent pollutants from entering the storm drainage system and can be used as a tool for training personnel to prevent and control future spills as well.

Pollution Prevention

- Develop and implement a Spill Prevention Control and Response Plan. The plan should include:

Targeted Constituents

Sediment	
Nutrients	✓
Trash	
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓
Oxygen Demanding	✓



SC-11 Spill Prevention, Control & Cleanup

- A description of the facility, the address, activities and materials involved
- Identification of key spill response personnel
- Identification of the potential spill areas or operations prone to spills/leaks
- Identification of which areas should be or are bermed to contain spills/leaks
- Facility map identifying the key locations of areas, activities, materials, structural BMPs, etc.
- Material handling procedures
- Spill response procedures including:
 - Assessment of the site and potential impacts
 - Containment of the material
 - Notification of the proper personnel and evacuation procedures
 - Clean up of the site
 - Disposal of the waste material and
 - Proper record keeping
- Product substitution – use less toxic materials (i.e. use water based paints instead of oil based paints)
- Recycle, reclaim, or reuse materials whenever possible. This will reduce the amount of materials that are brought into the facility or into the field.

Suggested Protocols

Spill/Leak Prevention Measures

- If possible, move material handling indoors, under cover, or away from storm drains or sensitive water bodies.
- Properly label all containers so that the contents are easily identifiable.
- Berm storage areas so that if a spill or leak occurs, the material is contained.
- Cover outside storage areas either with a permanent structure or with a seasonal one such as a tarp so that rain can not come into contact with the materials.
- Check containers (and any containment sumps) often for leaks and spills. Replace containers that are leaking, corroded, or otherwise deteriorating with containers in good condition. Collect all spilled liquids and properly dispose of them.

Spill Prevention, Control & Cleanup SC-11

- Store, contain and transfer liquid materials in such a manner that if the container is ruptured or the contents spilled, they will not discharge, flow or be washed into the storm drainage system, surface waters, or groundwater.
- Place drip pans or absorbent materials beneath all mounted taps and at all potential drip and spill locations during the filling and unloading of containers. Any collected liquids or soiled absorbent materials should be reused/recycled or properly disposed of.
- For field programs, only transport the minimum amount of material needed for the daily activities and transfer materials between containers at a municipal yard where leaks and spill are easier to control.
- If paved, sweep and clean storage areas monthly, do not use water to hose down the area unless all of the water will be collected and disposed of properly.
- Install a spill control device (such as a tee section) in any catch basins that collect runoff from any storage areas if the materials stored are oil, gas, or other materials that separate from and float on water. This will allow for easier cleanup if a spill occurs.
- If necessary, protect catch basins while conducting field activities so that if a spill occurs, the material will be contained.

Training

- Educate employees about spill prevention, spill response and cleanup on a routine basis.
- Well-trained employees can reduce human errors that lead to accidental releases or spills:
 - The employees should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.
 - Employees should be familiar with the Spill Prevention Control and Countermeasure Plan if one is available.
- Training of staff from all municipal departments should focus on recognizing and reporting potential or current spills/leaks and who they should contact.
- Employees responsible for aboveground storage tanks and liquid transfers for large bulk containers should be thoroughly familiar with the Spill Prevention Control and Countermeasure Plan and the plan should be readily available.

Spill Response and Prevention

- Identify key spill response personnel and train employees on who they are.
- Store and maintain appropriate spill cleanup materials in a clearly marked location near storage areas; and train employees to ensure familiarity with the site's spill control plan and/or proper spill cleanup procedures.
- Locate spill cleanup materials, such as absorbents, where they will be readily accessible (e.g. near storage and maintenance areas, on field trucks).

SC-11 Spill Prevention, Control & Cleanup

- Follow the Spill Prevention Control and Countermeasure Plan if one is available.
- If a spill occurs, notify the key spill response personnel immediately. If the material is unknown or hazardous, the local fire department may also need to be contacted.
- If safe to do so, attempt to contain the material and block the nearby storm drains so that the area impacted is minimized. If the material is unknown or hazardous wait for properly trained personnel to contain the materials.
- Perform an assessment of the area where the spill occurred and the downstream area that it could impact. Relay this information to the key spill response and clean up personnel.

Spill Cleanup Procedures

- Small non-hazardous spills
 - Use a rag, damp cloth or absorbent materials for general clean up of liquids
 - Use brooms or shovels for the general clean up of dry materials
 - If water is used, it must be collected and properly disposed of. The wash water can not be allowed to enter the storm drain.
 - Dispose of any waste materials properly
 - Clean or dispose of any equipment used to clean up the spill properly
- Large non-hazardous spills
 - Use absorbent materials for general clean up of liquids
 - Use brooms, shovels or street sweepers for the general clean up of dry materials
 - If water is used, it must be collected and properly disposed of. The wash water can not be allowed to enter the storm drain.
 - Dispose of any waste materials properly
 - Clean or dispose of any equipment used to clean up the spill properly
- For hazardous or very large spills, a private cleanup company or Hazmat team may need to be contacted to assess the situation and conduct the cleanup and disposal of the materials.
- Chemical cleanups of material can be achieved with the use of absorbents, gels, and foams. Remove the adsorbent materials promptly and dispose of according to regulations.
- If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste.

Reporting

- Report any spills immediately to the identified key municipal spill response personnel.

Spill Prevention, Control & Cleanup SC-11

- Report spills in accordance with applicable reporting laws. Spills that pose an immediate threat to human health or the environment must be reported immediately to the Office of Emergency Service (OES)
- Spills that pose an immediate threat to human health or the environment may also need to be reported within 24 hours to the Regional Water Quality Control Board.
- Federal regulations require that any oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hour)
- After the spill has been contained and cleaned up, a detailed report about the incident should be generated and kept on file (see the section on Reporting below). The incident may also be used in briefing staff about proper procedures

Other Considerations

- State regulations exist for facilities with a storage capacity of 10,000 gallons or more of petroleum to prepare a Spill Prevention Control and Countermeasure Plan (SPCC) Plan (Health & Safety Code Chapter 6.67).
- State regulations also exist for storage of hazardous materials (Health & Safety Code Chapter 6.95), including the preparation of area and business plans for emergency response to the releases or threatened releases.
- Consider requiring smaller secondary containment areas (less than 200 sq. ft.) to be connected to the sanitary sewer, if permitted to do so, prohibiting any hard connections to the storm drain.

Requirements

Costs

- Will vary depending on the size of the facility and the necessary controls.
- Prevention of leaks and spills is inexpensive. Treatment and/or disposal of wastes, contaminated soil and water is very expensive

Maintenance

- This BMP has no major administrative or staffing requirements. However, extra time is needed to properly handle and dispose of spills, which results in increased labor costs

Supplemental Information

Further Detail of the BMP

Reporting

Record keeping and internal reporting represent good operating practices because they can increase the efficiency of the response and containment of a spill. A good record keeping system helps the municipality minimize incident recurrence, correctly respond with appropriate containment and cleanup activities, and comply with legal requirements.

SC-11 Spill Prevention, Control & Cleanup

A record keeping and reporting system should be set up for documenting spills, leaks, and other discharges, including discharges of hazardous substances in reportable quantities. Incident records describe the quality and quantity of non-stormwater discharges to the storm drain.

These records should contain the following information:

- Date and time of the incident
- Weather conditions
- Duration of the spill/leak/discharge
- Cause of the spill/leak/discharge
- Response procedures implemented
- Persons notified
- Environmental problems associated with the spill/leak/discharge

Separate record keeping systems should be established to document housekeeping and preventive maintenance inspections, and training activities. All housekeeping and preventive maintenance inspections should be documented. Inspection documentation should contain the following information:

- The date and time the inspection was performed
- Name of the inspector
- Items inspected
- Problems noted
- Corrective action required
- Date corrective action was taken

Other means to document and record inspection results are field notes, timed and dated photographs, videotapes, and drawings and maps.

Examples

The City of Palo Alto includes spill prevention and control as a major element of its highly effective program for municipal vehicle maintenance shops.

References and Resources

King County Stormwater Pollution Control Manual - <http://dnr.metrokc.gov/wlr/dss/spcm.htm>

Orange County Stormwater Program

http://www.ocwatersheds.com/stormwater/swp_introduction.asp

Spill Prevention, Control & Cleanup SC-11

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program
(URMP)

<http://www.projectcleanwater.org/pdf/Model%20Program%20Municipal%20Facilities.pdf>

Description

Parking lots can contribute a number of substances, such as trash, suspended solids, hydrocarbons, oil and grease, and heavy metals that can enter receiving waters through stormwater runoff or non-stormwater discharges. The protocols in this fact sheet are intended to prevent or reduce the discharge of pollutants from parking areas and include using good housekeeping practices, following appropriate cleaning BMPs, and training employees.

BMPs for other outdoor areas on site (loading/unloading, material storage, and equipment operations) are described in SC-30 through SC-33.

Approach

The goal of this program is to ensure stormwater pollution prevention practices are considered when conducting activities on or around parking areas to reduce potential for pollutant discharge to receiving waters. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

General Pollution Prevention Protocols

- ☐ Encourage advanced designs and maintenance strategies for impervious parking lots. Refer to the treatment control BMP fact sheets in this manual for additional information.
- ☐ Keep accurate maintenance logs to evaluate BMP implementation.



Good Housekeeping

- ☐ Keep all parking areas clean and orderly. Remove debris, litter, and sediments in a timely fashion.
- ☐ Post "No Littering" signs and enforce anti-litter laws.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Minimum BMPs Covered

	Good Housekeeping	✓
	Preventative Maintenance	✓
	Spill and Leak Prevention and Response	✓
	Material Handling & Waste Management	
	Erosion and Sediment Controls	
	Employee Training Program	✓
	Quality Assurance Record Keeping	✓



- ☐ Provide an adequate number of litter receptacles.
- ☐ Clean out and cover litter receptacles frequently to prevent spillage.



Preventative Maintenance

Inspection

Have designated personnel conduct inspections of parking facilities and stormwater conveyance systems associated with parking facilities on a regular basis.

- ☐ Inspect cleaning equipment/sweepers for leaks on a regular basis.

Surface Cleaning

- ☐ Use dry cleaning methods (e.g., sweeping, vacuuming) to prevent the discharge of pollutants into the stormwater conveyance system if possible.
- ☐ Establish frequency of public parking lot sweeping based on usage and field observations of waste accumulation.
- ☐ Sweep all parking lots at least once before the onset of the wet season.
- ☐ Dispose of parking lot sweeping debris and dirt at a landfill.
- ☐ Follow the procedures below if water is used to clean surfaces:
 - ✓ Block the storm drain or contain runoff.
 - ✓ Collect and pump wash water to the sanitary sewer or discharge to a pervious surface. Do not allow wash water to enter storm drains.
- ☐ Follow the procedures below when cleaning heavy oily deposits:
 - ✓ Clean oily spots with absorbent materials.
 - ✓ Use a screen or filter fabric over inlet, then wash surfaces.
 - ✓ Do not allow discharges to the storm drain.
 - ✓ Vacuum/pump discharges to a tank or discharge to sanitary sewer.
 - ✓ Dispose of spilled materials and absorbents appropriately.

Surface Repair

- ☐ Check local ordinance for SUSMP/LID ordinance.
- ☐ Preheat, transfer or load hot bituminous material away from storm drain inlets.
- ☐ Apply concrete, asphalt, and seal coat during dry weather to prevent contamination from contacting stormwater runoff.
- ☐ Cover and seal nearby storm drain inlets where applicable (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc. Leave covers in

place until job is complete and all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal.

- ☐ Use only as much water as necessary for dust control during sweeping to avoid runoff.
- ☐ Catch drips from paving equipment that is not in use with pans or absorbent material placed under the machines. Dispose of collected material and absorbents properly.



Spill Response and Prevention Procedures

- ☐ Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- ☐ Place a stockpile of spill cleanup materials where it will be readily accessible or at a central location.
- ☐ Clean up fluid spills immediately with absorbent rags or material.
- ☐ Dispose of spilled material and absorbents properly.



Employee Training Program

- ☐ Provide regular training to field employees and/or contractors regarding cleaning of paved areas and proper operation of equipment.
- ☐ Train employees and contractors in proper techniques for spill containment and cleanup.
- ☐ Use a training log or similar method to document training.



Quality Assurance and Record Keeping

- ☐ Keep accurate maintenance logs that document minimum BMP activities performed for parking area maintenance, types and quantities of waste disposed of, and any improvement actions.
- ☐ Keep accurate logs of spill response actions that document what was spilled, how it was cleaned up, and how the waste was disposed.
- ☐ Establish procedures to complete logs and file them in the central office.

Potential Capital Facility Costs and Operation & Maintenance Requirements

Facilities

- ☐ Capital investments may be required at some sites to purchase sweeping equipment, train sweeper operators, install oil/water/sand separators, or implement advanced BMPs. These costs can vary significantly depending upon site conditions and the amount of BMPs required.

Maintenance

- ☐ Sweep and clean parking lots regularly to minimize pollutant transport into storm drains from stormwater runoff.
- ☐ Clean out oil/water/sand separators regularly, especially after heavy storms.
- ☐ Maintain advanced BMPs such as vegetated swales, infiltration trenches, or detention basins as appropriate. Refer to the treatment control fact sheets for more information.

Supplemental Information

Advanced BMPs

Some parking areas may require advanced BMPs to further reduce pollutants in stormwater runoff, and a few examples are listed below. Refer to the Treatment Control Fact Sheets and the New Development and Redevelopment Manual for more information.

- ☐ When possible, direct sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices.
- ☐ Utilize sand filters or oleophilic collectors for oily waste in low quantities.
- ☐ Arrange rooftop drains to prevent drainage directly onto paved surfaces.
- ☐ Design lot to include semi-permeable hardscape.

References and Resources

City of Seattle, Seattle Public Utilities Department of Planning and Development, 2009. *Stormwater Manual Vol. 1 Source Control Technical Requirements Manual*.

California Stormwater Quality Association, 2003. *New Development and Redevelopment Stormwater Best Management Practice Handbook*. Available online at: <https://www.casqa.org/resources/bmp-handbooks/new-development-redevelopment-bmp-handbook>.

Kennedy/Jenks Consultants, 2007. *The Truckee Meadows Industrial and Commercial Storm Water Best Management Practices Handbook*. Available online at: http://www.cityofsparks.us/sites/default/files/assets/documents/env-control/construction/TM-I-C_BMP_Handbook_2-07-final.pdf.

Orange County Stormwater Program, Best Management Practices for Industrial/Commercial Business Activities. Available online at: <http://ocwatersheds.com/documents/bmp/industrialcommercialbusinessesactivities>.

Pollution from Surface Cleaning Folder, 1996, 2003. Bay Area Stormwater Management Agencies Association. Available online at:

<http://basmaa.org/Portals/0/documents/pdf/Pollution%20from%20Surface%20Cleaning.pdf>.

Sacramento Stormwater Management Program. *Best Management Practices for Industrial Storm Water Pollution Control*. Available online at:

<http://www.msa.saccounty.net/sactostormwater/documents/guides/industrial-BMP-manual.pdf>.

The Storm Water Managers Resource Center, <http://www.stormwatercenter.net>.

US EPA. *Post-Construction Stormwater Management in New Development and Redevelopment*. BMP Fact Sheets. Available online at:

http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=5.

Description

Promote efficient and safe housekeeping practices (storage, use, and cleanup) when handling potentially harmful materials such as fertilizers, pesticides, cleaning solutions, paint products, automotive products, and swimming pool chemicals. Related information is provided in BMP fact sheets SC-11 Spill Prevention, Control & Cleanup and SC-34 Waste Handling & Disposal.

Approach

Pollution Prevention

- Purchase only the amount of material that will be needed for foreseeable use. In most cases this will result in cost savings in both purchasing and disposal. See SC-61 Safer Alternative Products for additional information.
- Be aware of new products that may do the same job with less environmental risk and for less or the equivalent cost. Total cost must be used here; this includes purchase price, transportation costs, storage costs, use related costs, clean up costs and disposal costs.

Suggested Protocols

General

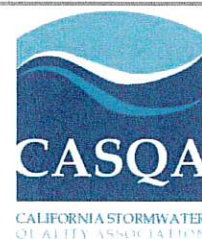
- Keep work sites clean and orderly. Remove debris in a timely fashion. Sweep the area.
- Dispose of wash water, sweepings, and sediments, properly.
- Recycle or dispose of fluids properly.
- Establish a daily checklist of office, yard and plant areas to confirm cleanliness and adherence to proper storage and security. Specific employees should be assigned specific inspection responsibilities and given the authority to remedy any problems found.
- Post waste disposal charts in appropriate locations detailing for each waste its hazardous nature (poison, corrosive, flammable), prohibitions on its disposal (dumpster, drain, sewer) and the recommended disposal method (recycle, sewer, burn, storage, landfill).
- Summarize the chosen BMPs applicable to your operation and post them in appropriate conspicuous places.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>
Trash	<input checked="" type="checkbox"/>
Metals	<input checked="" type="checkbox"/>
Bacteria	<input checked="" type="checkbox"/>
Oil and Grease	<input checked="" type="checkbox"/>
Organics	<input checked="" type="checkbox"/>
Oxygen Demanding	<input checked="" type="checkbox"/>



- Require a signed checklist from every user of any hazardous material detailing amount taken, amount used, amount returned and disposal of spent material.
- Do a before audit of your site to establish baseline conditions and regular subsequent audits to note any changes and whether conditions are improving or deteriorating.
- Keep records of water, air and solid waste quantities and quality tests and their disposition.
- Maintain a mass balance of incoming, outgoing and on hand materials so you know when there are unknown losses that need to be tracked down and accounted for.
- Use and reward employee suggestions related to BMPs, hazards, pollution reduction, work place safety, cost reduction, alternative materials and procedures, recycling and disposal.
- Have, and review regularly, a contingency plan for spills, leaks, weather extremes etc. Make sure all employees know about it and what their role is so that it comes into force automatically.

Training

- Train all employees, management, office, yard, manufacturing, field and clerical in BMPs and pollution prevention and make them accountable.
- Train municipal employees who handle potentially harmful materials in good housekeeping practices.
- Train personnel who use pesticides in the proper use of the pesticides. The California Department of Pesticide Regulation license pesticide dealers, certify pesticide applicators and conduct onsite inspections.
- Train employees and contractors in proper techniques for spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup.
- Keep your Spill Prevention Control and Countermeasure (SPCC) plan up-to-date, and implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- There are no major limitations to this best management practice.
- There are no regulatory requirements to this BMP. Existing regulations already require municipalities to properly store, use, and dispose of hazardous materials

Requirements

Costs

- Minimal cost associated with this BMP. Implementation of good housekeeping practices may result in cost savings as these procedures may reduce the need for more costly BMPs.

Maintenance

- Ongoing maintenance required to keep a clean site. Level of effort is a function of site size and type of activities.

Supplemental Information

Further Detail of the BMP

- The California Integrated Waste Management Board's Recycling Hotline, 1-800-553-2962, provides information on household hazardous waste collection programs and facilities.

Examples

There are a number of communities with effective programs. The most pro-active include Santa Clara County and the City of Palo Alto, the City and County of San Francisco, and the Municipality of Metropolitan Seattle (Metro).

References and Resources

British Columbia Lake Stewardship Society. Best Management Practices to Protect Water Quality from Non-Point Source Pollution. March 2000.

<http://www.nalms.org/bclss/bmphome.html#bmp>

King County Stormwater Pollution Control Manual - <http://dnr.metrokc.gov/wlr/dss/spcm.htm>

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities, Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July, 1998, Revised by California Coastal Commission, February 2002.

Orange County Stormwater Program

http://www.ocwatersheds.com/stormwater/swp_introduction.asp

San Mateo STOPPP - (<http://stoppp.tripod.com/bmp.html>)



Description

Streets, roads, and highways are significant sources of pollutants in stormwater discharges, and operation and maintenance (O&M) practices, if not conducted properly, can contribute to the problem. Stormwater pollution from roadway and bridge maintenance should be addressed on a site-specific basis. Use of the procedures outlined below, that address street sweeping and repair, bridge and structure maintenance, and unpaved roads will reduce pollutants in stormwater.

Approach

Pollution Prevention

- Use the least toxic materials available (e.g. water based paints, gels or sprays for graffiti removal)
- Recycle paint and other materials whenever possible.
- Enlist the help of citizens to keep yard waste, used oil, and other wastes out of the gutter.

Suggested Protocols

Street Sweeping and Cleaning

- Maintain a consistent sweeping schedule. Provide minimum monthly sweeping of curbed streets.
- Perform street cleaning during dry weather if possible.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	
Trash	<input checked="" type="checkbox"/>
Metals	<input checked="" type="checkbox"/>
Bacteria	
Oil and Grease	<input checked="" type="checkbox"/>
Organics	<input checked="" type="checkbox"/>
Oxygen Demanding	<input checked="" type="checkbox"/>



- Avoid wet cleaning or flushing of street, and utilize dry methods where possible.
- Consider increasing sweeping frequency based on factors such as traffic volume, land use, field observations of sediment and trash accumulation, proximity to water courses, etc. For example:
 - Increase the sweeping frequency for streets with high pollutant loadings, especially in high traffic and industrial areas.
 - Increase the sweeping frequency just before the wet season to remove sediments accumulated during the summer.
 - Increase the sweeping frequency for streets in special problem areas such as special events, high litter or erosion zones.
- Maintain cleaning equipment in good working condition and purchase replacement equipment as needed. Old sweepers should be replaced with new technologically advanced sweepers (preferably regenerative air sweepers) that maximize pollutant removal.
- Operate sweepers at manufacturer requested optimal speed levels to increase effectiveness.
- To increase sweeping effectiveness consider the following:
 - Institute a parking policy to restrict parking in problematic areas during periods of street sweeping.
 - Post permanent street sweeping signs in problematic areas; use temporary signs if installation of permanent signs is not possible.
 - Develop and distribute flyers notifying residents of street sweeping schedules.
- Regularly inspect vehicles and equipment for leaks, and repair immediately.
- If available use vacuum or regenerative air sweepers in the high sediment and trash areas (typically industrial/commercial).
- Keep accurate logs of the number of curb-miles swept and the amount of waste collected.
- Dispose of street sweeping debris and dirt at a landfill.
- Do not store swept material along the side of the street or near a storm drain inlet.
- Keep debris storage to a minimum during the wet season or make sure debris piles are contained (e.g. by berming the area) or covered (e.g. with tarps or permanent covers).

Street Repair and Maintenance

Pavement marking

- Schedule pavement marking activities for dry weather.

- Develop paint handling procedures for proper use, storage, and disposal of paints.
- Transfer and load paint and hot thermoplastic away from storm drain inlets.
- Provide drop cloths and drip pans in paint mixing areas.
- Properly maintain application equipment.
- Street sweep thermoplastic grindings. Yellow thermoplastic grindings may require special handling as they may contain lead.
- Paints containing lead or tributyltin are considered a hazardous waste and must be disposed of properly.
- Use water based paints whenever possible. If using water based paints, clean the application equipment in a sink that is connected to the sanitary sewer.
- Properly store leftover paints if they are to be kept for the next job, or dispose of properly.

Concrete installation and repair

- Schedule asphalt and concrete activities for dry weather.
- Take measures to protect any nearby storm drain inlets and adjacent watercourses, prior to breaking up asphalt or concrete (e.g. place sand bags around inlets or work areas).
- Limit the amount of fresh concrete or cement mortar mixed, mix only what is needed for the job.
- Store concrete materials under cover, away from drainage areas. Secure bags of cement after they are open. Be sure to keep wind-blown cement powder away from streets, gutters, storm drains, rainfall, and runoff.
- Return leftover materials to the transit mixer. Dispose of small amounts of hardened excess concrete, grout, and mortar in the trash.
- Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stockpile, or dispose in the trash.
- When making saw cuts in pavement, use as little water as possible and perform during dry weather. Cover each storm drain inlet completely with filter fabric or plastic during the sawing operation and contain the slurry by placing straw bales, sandbags, or gravel dams around the inlets. After the liquid drains or evaporates, shovel or vacuum the slurry residue from the pavement or gutter and remove from site. Alternatively, a small onsite vacuum may be used to pick up the slurry as this will prohibit slurry from reaching storm drain inlets.
- Wash concrete trucks off site or in designated areas on site designed to preclude discharge of wash water to drainage system.

Patching, resurfacing, and surface sealing

- Schedule patching, resurfacing and surface sealing for dry weather.
- Stockpile materials away from streets, gutter areas, storm drain inlets or watercourses. During wet weather, cover stockpiles with plastic tarps or berm around them if necessary to prevent transport of materials in runoff.
- Pre-heat, transfer or load hot bituminous material away from drainage systems or watercourses.
- Where applicable, cover and seal nearby storm drain inlets (with waterproof material or mesh) and maintenance holes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and until all water from emulsified oil sealants has drained or evaporated. Clean any debris from covered maintenance holes and storm drain inlets when the job is complete.
- Prevent excess material from exposed aggregate concrete or similar treatments from entering streets or storm drain inlets. Designate an area for clean up and proper disposal of excess materials.
- Use only as much water as necessary for dust control, to avoid runoff.
- Sweep, never hose down streets to clean up tracked dirt. Use a street sweeper or vacuum truck. Do not dump vacuumed liquid in storm drains.
- Catch drips from paving equipment that is not in use with pans or absorbent material placed under the machines. Dispose of collected material and absorbents properly.

Equipment cleaning maintenance and storage

- Inspect equipment daily and repair any leaks. Place drip pans or absorbent materials under heavy equipment when not in use.
- Perform major equipment repairs at the corporation yard, when practical.
- If refueling or repairing vehicles and equipment must be done onsite, use a location away from storm drain inlets and watercourses.
- Clean equipment including sprayers, sprayer paint supply lines, patch and paving equipment, and mud jacking equipment at the end of each day. Clean in a sink or other area (e.g. vehicle wash area) that is connected to the sanitary sewer.

*Bridge and Structure Maintenance**Paint and Paint Removal*

- Transport paint and materials to and from job sites in containers with secure lids and tied down to the transport vehicle.
- Do not transfer or load paint near storm drain inlets or watercourses.

- Test and inspect spray equipment prior to starting to paint. Tighten all hoses and connections and do not overfill paint container.
- Plug nearby storm drain inlets prior to starting painting where there is significant risk of a spill reaching storm drains. Remove plugs when job is completed.
- If sand blasting is used to remove paint, cover nearby storm drain inlets prior to starting work.
- Perform work on a maintenance traveler or platform, or use suspended netting or tarps to capture paint, rust, paint removing agents, or other materials, to prevent discharge of materials to surface waters if the bridge crosses a watercourse. If sanding, use a sander with a vacuum filter bag.
- Capture all clean-up water, and dispose of properly.
- Recycle paint when possible (e.g. paint may be used for graffiti removal activities). Dispose of unused paint at an appropriate household hazardous waste facility.

Grffiti Removal

- Schedule graffiti removal activities for dry weather.
- Protect nearby storm drain inlets prior to removing graffiti from walls, signs, sidewalks, or other structures needing graffiti abatement. Clean up afterwards by sweeping or vacuuming thoroughly, and/or by using absorbent and properly disposing of the absorbent.
- When graffiti is removed by painting over, implement the procedures under Painting and Paint Removal above.
- Direct runoff from sand blasting and high pressure washing (with no cleaning agents) into a landscaped or dirt area. If such an area is not available, filter runoff through an appropriate filtering device (e.g. filter fabric) to keep sand, particles, and debris out of storm drains.
- If a graffiti abatement method generates wash water containing a cleaning compound (such as high pressure washing with a cleaning compound), plug nearby storm drains and vacuum/pump wash water to the sanitary sewer.
- Consider using a waterless and non-toxic chemical cleaning method for graffiti removal (e.g. gels or spray compounds).

Repair Work

- Prevent concrete, steel, wood, metal parts, tools, or other work materials from entering storm drains or watercourses.
- Thoroughly clean up the job site when the repair work is completed.
- When cleaning guardrails or fences follow the appropriate surface cleaning methods (depending on the type of surface) outlined in SC-71 Plaza & Sidewalk Cleaning fact sheet.

- If painting is conducted, follow the painting and paint removal procedures above.
- If graffiti removal is conducted, follow the graffiti removal procedures above.
- If construction takes place, see the Construction Activity BMP Handbook.
- Recycle materials whenever possible.

Unpaved Roads and Trails

- Stabilize exposed soil areas to prevent soil from eroding during rain events. This is particularly important on steep slopes.
- For roadside areas with exposed soils, the most cost-effective choice is to vegetate the area, preferably with a mulch or binder that will hold the soils in place while the vegetation is establishing. Native vegetation should be used if possible.
- If vegetation cannot be established immediately, apply temporary erosion control mats/blankets; a comma straw, or gravel as appropriate.
- If sediment is already eroded and mobilized in roadside areas, temporary controls should be installed. These may include: sediment control fences, fabric-covered triangular dikes, gravel-filled burlap bags, biobags, or hay bales staked in place.

Non-Stormwater Discharges

Field crews should be aware of non-stormwater discharges as part of their ongoing street maintenance efforts.

- Refer to SC-10 Non-Stormwater Discharges
- Identify location, time and estimated quantity of discharges.
- Notify appropriate personnel.

Training

- Train employees regarding proper street sweeping operation and street repair and maintenance.
- Instruct employees and subcontractors to ensure that measures to reduce the stormwater impacts of roadway/bridge maintenance are being followed.
- Require engineering staff and/or consulting A/E firms to address stormwater quality in new bridge designs or existing bridge retrofits.
- Use a training log or similar method to document training.
- Train employees on proper spill containment and clean up, and in identifying non-stormwater discharges.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup.
- Keep your Spill Prevention Control and countermeasure (SPCC) plan up-to-date, and implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Densely populated areas or heavily used streets may require parking regulations to clear streets for cleaning.
- No currently available conventional sweeper is effective at removing oil and grease. Mechanical sweepers are not effective at removing finer sediments.
- Limitations may arise in the location of new bridges. The availability and cost of land and other economic and political factors may dictate where the placement of a new bridge will occur. Better design of the bridge to control runoff is required if it is being placed near sensitive waters.

Requirements

Costs

- The maintenance of local roads and bridges is already a consideration of most community public works or transportation departments. Therefore, the cost of pollutant reducing management practices will involve the training and equipment required to implement these new practices.
- The largest expenditures for street sweeping programs are in staffing and equipment. The capital cost for a conventional street sweeper is between \$60,000 and \$120,000. Newer technologies might have prices approaching \$180,000. The average useful life of a conventional sweeper is about four years, and programs must budget for equipment replacement. Sweeping frequencies will determine equipment life, so programs that sweep more often should expect to have a higher cost of replacement.
- A street sweeping program may require the following.
 - Sweeper operators, maintenance, supervisory, and administrative personnel are required.
 - Traffic control officers may be required to enforce parking restrictions.
 - Skillful design of cleaning routes is required for program to be productive.
 - Arrangements must be made for disposal of collected wastes.

- If investing in newer technologies, training for operators must be included in operation and maintenance budgets. Costs for public education are small, and mostly deal with the need to obey parking restrictions and litter control. Parking tickets are an effective reminder to obey parking rules, as well as being a source of revenue.

Maintenance

- Not applicable

Supplemental Information***Further Detail of the BMP******Street sweeping***

There are advantages and disadvantages to the two common types of sweepers. The best choice depends on your specific conditions. Many communities find it useful to have a compliment of both types in their fleet.

Mechanical Broom Sweepers - More effective at picking up large debris and cleaning wet streets. Less costly to purchase and operate. Create more airborne dust.

Vacuum Sweepers - More effective at removing fine particles and associated heavy metals. Ineffective at cleaning wet streets. Noisier than mechanical broom sweepers which may restrict areas or times of operation. May require an advance vehicle to remove large debris.

Street Flushers - Not affected by biggest interference to cleaning, parked cars. May remove finer sediments, moving them toward the gutter and stormwater inlets. For this reason, flushing fell out of favor and is now used primarily after sweeping. Flushing may be effective for combined sewer systems. Presently street flushing is not allowed under most NPDES permits.

Cross-Media Transfer of Pollutants

The California Air Resources Board (ARB) has established state ambient air quality standards including a standard for respirable particulate matter (less than or equal to 10 microns in diameter, symbolized as PM₁₀). In the effort to sweep up finer sediments to remove attached heavy metals, municipalities should be aware that fine dust, that cannot be captured by the sweeping equipment and becomes airborne, could lead to issues of worker and public safety.

Bridges

Bridges that carry vehicular traffic generate some of the more direct discharges of runoff to surface waters. Bridge scupper drains cause a direct discharge of stormwater into receiving waters and have been shown to carry relatively high concentrations of pollutants. Bridge maintenance also generates wastes that may be either directly deposited to the water below or carried to the receiving water by stormwater. The following steps will help reduce the stormwater impacts of bridge maintenance:

- Site new bridges so that significant adverse impacts to wetlands, sensitive areas, critical habitat, and riparian vegetation are minimized.

- Design new bridges to avoid the use of scupper drains and route runoff to land for treatment control. Existing scupper drains should be cleaned on a regular basis to avoid sediment/debris accumulation.
- Reduce the discharge of pollutants to surface waters during maintenance by using suspended traps, vacuums, or booms in the water to capture paint, rust, and paint removing agents. Many of these wastes may be hazardous. Properly dispose of this waste by referring to CA21 (Hazardous Waste Management) in the Construction Handbook.
- Train employees and subcontractors to reduce the discharge of wastes during bridge maintenance.

De-icing

- Do not over-apply deicing salt and sand, and routinely calibrate spreaders.
- Near reservoirs, restrict the application of deicing salt and redirect any runoff away from reservoirs.
- Consider using alternative deicing agents (less toxic, biodegradable, etc.).

References and Resources

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July. 1998.

Orange County Stormwater Program

http://www.ocwatersheds.com/stormwater/swp_introduction.asp

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Santa Clara Valley Urban Runoff Pollution Prevention Program. 1997 Urban Runoff Management Plan. September 1997, updated October 2000.

Santa Clara Valley Urban Runoff Pollution Prevention Program. 2001. Fresh Concrete and Mortar Application Best Management Practices for the Construction Industry. June.

Santa Clara Valley Urban Runoff Pollution Prevention Program. 2001. Roadwork and Paving Best Management Practices for the Construction Industry. June.

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Roadway and Bridge Maintenance. On-line http://www.epa.gov/npdes/menuofbmps/poll_13.htm



Photo Credit: Geoff Brosseau

Description

As a consequence of its function, the stormwater conveyance system collects and transports urban runoff that may contain certain pollutants. Maintaining catch basins, stormwater inlets, and other stormwater conveyance structures on a regular basis will remove pollutants, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.

Approach

Suggested Protocols

Catch Basins/Inlet Structures

- Municipal staff should regularly inspect facilities to ensure the following:
 - Immediate repair of any deterioration threatening structural integrity.
 - Cleaning before the sump is 40% full. Catch basins should be cleaned as frequently as needed to meet this standard.
 - Stenciling of catch basins and inlets (see SC-75 Waste Handling and Disposal).
- Clean catch basins, storm drain inlets, and other conveyance structures in high pollutant load areas just before the wet season to remove sediments and debris accumulated during the summer.

Objectives

- Contain
- Educate
- Reduce/Minimize

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>
Trash	<input checked="" type="checkbox"/>
Metals	<input checked="" type="checkbox"/>
Bacteria	<input checked="" type="checkbox"/>
Oil and Grease	<input checked="" type="checkbox"/>
Organics	<input checked="" type="checkbox"/>
Oxygen Demanding	<input checked="" type="checkbox"/>



- Conduct inspections more frequently during the wet season for problem areas where sediment or trash accumulates more often. Clean and repair as needed.
- Keep accurate logs of the number of catch basins cleaned.
- Record the amount of waste collected.
- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- Dewater the wastes with outflow into the sanitary sewer if permitted. Water should be treated with an appropriate filtering device prior to discharge to the sanitary sewer. If discharge to the sanitary sewer is not allowed, water should be pumped or vacuumed to a tank and properly disposed of. Do not dewater near a storm drain or stream.
- Except for small communities with relatively few catch basins that may be cleaned manually, most municipalities will require mechanical cleaners such as eductors, vacuums, or bucket loaders.

Storm Drain Conveyance System

- Locate reaches of storm drain with deposit problems and develop a flushing schedule that keeps the pipe clear of excessive buildup.
- Collect flushed effluent and pump to the sanitary sewer for treatment.

Pump Stations

- Clean all storm drain pump stations prior to the wet season to remove silt and trash.
- Do not allow discharge from cleaning a storm drain pump station or other facility to reach the storm drain system.
- Conduct quarterly routine maintenance at each pump station.
- Inspect, clean, and repair as necessary all outlet structures prior to the wet season.
- Sample collected sediments to determine if landfill disposal is possible, or illegal discharges in the watershed are occurring.

Open Channel

- Consider modification of storm channel characteristics to improve channel hydraulics, to increase pollutant removals, and to enhance channel/creek aesthetic and habitat value.
- Conduct channel modification/improvement in accordance with existing laws. Any person, government agency, or public utility proposing an activity that will change the natural (emphasis added) state of any river, stream, or lake in California, must enter into a stream or Lake Alteration Agreement with the Department of Fish and Game. The developer-applicant should also contact local governments (city, county, special districts), other state agencies

(SWRCB, RWQCB, Department of Forestry, Department of Water Resources), and Federal Corps of Engineers and USFWS

Illicit Connections and Discharges

- During routine maintenance of conveyance system and drainage structures field staff should look for evidence of illegal discharges or illicit connections:
 - Is there evidence of spills such as paints, discoloring, etc.
 - Are there any odors associated with the drainage system
 - Record locations of apparent illegal discharges/illicit connections
 - Track flows back to potential dischargers and conduct aboveground inspections. This can be done through visual inspection of up gradient manholes or alternate techniques including zinc chloride smoke testing, fluorometric dye testing, physical inspection testing, or television camera inspection.
 - Once the origin of flow is established, require illicit discharger to eliminate the discharge.
- Stencil storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

Illegal Dumping

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- Establish a system for tracking incidents. The system should be designed to identify the following:
 - Illegal dumping hot spots
 - Types and quantities (in some cases) of wastes
 - Patterns in time of occurrence (time of day/night, month, or year)
 - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
 - Responsible parties
- Post "No Dumping" signs in problem areas with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Refer to fact sheet SC-10 Non-Stormwater Discharges.

- The State Department of Fish and Game has a hotline for reporting violations called Cal TIP (1-800-952-5400). The phone number may be used to report any violation of a Fish and Game code (illegal dumping, poaching, etc.).
- The California Department of Toxic Substances Control's Waste Alert Hotline, 1-800-69TOXIC, can be used to report hazardous waste violations.

Training

- Train crews in proper maintenance activities, including record keeping and disposal.
- Only properly trained individuals are allowed to handle hazardous materials/wastes.
- Train municipal employees from all departments (public works, utilities, street cleaning, parks and recreation, industrial waste inspection, hazardous waste inspection, sewer maintenance) to recognize and report illegal dumping.
- Train municipal employees and educate businesses, contractors, and the general public in proper and consistent methods for disposal.
- Train municipal staff regarding non-stormwater discharges (See SC-10 Non-Stormwater Discharges).

Spill Response and Prevention

- Refer to SC-11, Prevention, Control & Cleanup
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Cleanup activities may create a slight disturbance for local aquatic species. Access to items and material on private property may be limited. Trade-offs may exist between channel hydraulics and water quality/riparian habitat. If storm channels or basins are recognized as wetlands, many activities, including maintenance, may be subject to regulation and permitting.
- Storm drain flushing is most effective in small diameter pipes (36-inch diameter pipe or less, depending on water supply and sediment collection capacity). Other considerations associated with storm drain flushing may include the availability of a water source, finding a downstream area to collect sediments, liquid/sediment disposal, and disposal of flushed effluent to sanitary sewer may be prohibited in some areas.
- Regulations may include adoption of substantial penalties for illegal dumping and disposal.
- Municipal codes should include sections prohibiting the discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the storm drain system.
- Private property access rights may be needed to track illegal discharges up gradient.

- Requirements of municipal ordinance authority for suspected source verification testing for illicit connections necessary for guaranteed rights of entry.

Requirements

Costs

- An aggressive catch basin cleaning program could require a significant capital and O&M budget. A careful study of cleaning effectiveness should be undertaken before increased cleaning is implemented. Catch basin cleaning costs are less expensive if vacuum street sweepers are available; cleaning catch basins manually can cost approximately twice as much as cleaning the basins with a vacuum attached to a sweeper.
- Methods used for illicit connection detection (smoke testing, dye testing, visual inspection, and flow monitoring) can be costly and time-consuming. Site-specific factors, such as the level of impervious area, the density and ages of buildings, and type of land use will determine the level of investigation necessary. Encouraging reporting of illicit discharges by employees can offset costs by saving expense on inspectors and directing resources more efficiently. Some programs have used funds available from "environmental fees" or special assessment districts to fund their illicit connection elimination programs.

Maintenance

- Two-person teams may be required to clean catch basins with vacuor trucks.
- Identifying illicit discharges requires teams of at least two people (volunteers can be used), plus administrative personnel, depending on the complexity of the storm sewer system.
- Arrangements must be made for proper disposal of collected wastes.
- Requires technical staff to detect and investigate illegal dumping violations, and to coordinate public education.

Supplemental Information

Further Detail of the BMP

Storm Drain flushing

Sanitary sewer flushing is a common maintenance activity used to improve pipe hydraulics and to remove pollutants in sanitary sewer systems. The same principles that make sanitary sewer flushing effective can be used to flush storm drains. Flushing may be designed to hydraulically convey accumulated material to strategic locations, such as to an open channel, to another point where flushing will be initiated, or over to the sanitary sewer and on to the treatment facilities, thus preventing re-suspension and overflow of a portion of the solids during storm events. Flushing prevents "plug flow" discharges of concentrated pollutant loadings and sediments. The deposits can hinder the designed conveyance capacity of the storm drain system and potentially cause backwater conditions in severe cases of clogging.

Storm drain flushing usually takes place along segments of pipe with grades that are too flat to maintain adequate velocity to keep particles in suspension. An upstream manhole is selected to place an inflatable device that temporarily plugs the pipe. Further upstream, water is pumped into the line to create a flushing wave. When the upstream reach of pipe is sufficiently full to

SC-74 Drainage System Maintenance

cause a flushing wave, the inflated device is rapidly deflated with the assistance of a vacuum pump, releasing the backed up water and resulting in the cleaning of the storm drain segment.

To further reduce the impacts of stormwater pollution, a second inflatable device, placed well downstream, may be used to re-collect the water after the force of the flushing wave has dissipated. A pump may then be used to transfer the water and accumulated material to the sanitary sewer for treatment. In some cases, an interceptor structure may be more practical or required to re-collect the flushed waters.

It has been found that cleansing efficiency of periodic flush waves is dependent upon flush volume, flush discharge rate, sewer slope, sewer length, sewer flow rate, sewer diameter, and population density. As a rule of thumb, the length of line to be flushed should not exceed 700 feet. At this maximum recommended length, the percent removal efficiency ranges between 65-75 percent for organics and 55-65 percent for dry weather grit/inorganic material. The percent removal efficiency drops rapidly beyond that. Water is commonly supplied by a water truck, but fire hydrants can also supply water. To make the best use of water, it is recommended that reclaimed water be used or that fire hydrant line flushing coincide with storm drain flushing.

Flow Management

Flow management has been one of the principal motivations for designing urban stream corridors in the past. Such needs may or may not be compatible with the stormwater quality goals in the stream corridor.

Downstream flood peaks can be suppressed by reducing through flow velocity. This can be accomplished by reducing gradient with grade control structures or increasing roughness with boulders, dense vegetation, or complex banks forms. Reducing velocity correspondingly increases flood height, so all such measures have a natural association with floodplain open space. Flood elevations laterally adjacent to the stream can be lowered by increasing through flow velocity.

However, increasing velocity increases flooding downstream and inherently conflicts with channel stability and human safety. Where topography permits, another way to lower flood elevation is to lower the level of the floodway with drop structures into a large but subtly excavated bowl where flood flows we allowed to spread out.

Stream Corridor Planning

Urban streams receive and convey stormwater flows from developed or developing watersheds. Planning of stream corridors thus interacts with urban stormwater management programs. If local programs are intended to control or protect downstream environments by managing flows delivered to the channels, then it is logical that such programs should be supplemented by management of the materials, forms, and uses of the downstream riparian corridor. Any proposal for steam alteration or management should be investigated for its potential flow and stability effects on upstream, downstream, and laterally adjacent areas. The timing and rate of flow from various tributaries can combine in complex ways to alter flood hazards. Each section of channel is unique, influenced by its own distribution of roughness elements, management activities, and stream responses.

Flexibility to adapt to stream features and behaviors as they evolve must be included in stream reclamation planning. The amenity and ecology of streams may be enhanced through the landscape design options of 1) corridor reservation, 2) bank treatment, 3) geomorphic restoration, and 4) grade control.

Corridor reservation - Reserving stream corridors and valleys to accommodate natural stream meandering, aggradation, degradation, and over bank flows allows streams to find their own form and generate less ongoing erosion. In California, open stream corridors in recent urban developments have produced recreational open space, irrigation of streamside plantings, and the aesthetic amenity of flowing water.

Bank treatment - The use of armoring, vegetative cover, and flow deflection may be used to influence a channel's form, stability, and biotic habitat. To prevent bank erosion, armoring can be done with rigid construction materials, such as concrete, masonry, wood planks and logs, riprap, and gabions. Concrete linings have been criticized because of their lack of provision of biotic habitat. In contrast, riprap and gabions make relatively porous and flexible linings. Boulders, placed in the bed reduce velocity and erosive power.

Riparian vegetation can stabilize the banks of streams that are at or near a condition of equilibrium. Binding networks of roots increase bank shear strength. During flood flows, resilient vegetation is forced into erosion-inhibiting mats. The roughness of vegetation leads to lower velocity, further reducing erosive effects. Structural flow deflection can protect banks from erosion or alter fish habitat. By concentrating flow, a deflector causes a pool to be scoured in the bed.

Geomorphic restoration -- Restoration refers to alteration of disturbed streams so their form and behavior emulate those of undisturbed streams. Natural meanders are retained, with grading to gentle slopes on the inside of curves to allow point bars and riffle-pool sequences to develop. Trees are retained to provide scenic quality, biotic productivity, and roots for bank stabilization, supplemented by plantings where necessary.

A restorative approach can be successful where the stream is already approaching equilibrium. However, if upstream urbanization continues new flow regimes will be generated that could disrupt the equilibrium of the treated system.

Grade Control - A grade control structure is a level shelf of a permanent material, such as stone, masonry, or concrete, over which stream water flows. A grade control structure is called a sill, weir, or drop structure, depending on the relation of its invert elevation to upstream and downstream channels.

A sill is installed at the preexisting channel bed elevation to prevent upstream migration of nick points. It establishes a firm base level below which the upstream channel can not erode.

A weir or check dam is installed with invert above the preexisting bed elevation. A weir raises the local base level of the stream and causes aggradation upstream. The gradient, velocity, and erosive potential of the stream channel are reduced. A drop structure lowers the downstream invert below its preexisting elevation, reducing downstream gradient and velocity. Weirs and drop structure control erosion by dissipating energy and reducing slope velocity.

When carefully applied, grade control structures can be highly versatile in establishing human and environmental benefits in stabilized channels. To be successful, application of grade control structures should be guided by analysis of the stream system both upstream and downstream from the area to be reclaimed.

Examples

The California Department of Water Resources began the Urban Stream Restoration Program in 1985. The program provides grant funds to municipalities and community groups to implement stream restoration projects. The projects reduce damages from streambank and watershed instability and floods while restoring streams' aesthetic, recreational, and fish and wildlife values.

In Buena Vista Park, upper floodway slopes are gentle and grassed to achieve continuity of usable park land across the channel of small boulders at the base of the slopes.

The San Diego River is a large, vegetative lined channel, which was planted in a variety of species to support riparian wildlife while stabilizing the steep banks of the floodway.

References and Resources

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United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Illegal Dumping Control. On line:

http://www.epa.gov/npdes/menuofbmpps/poll_7.htm

United States Environmental Protection Agency (USEPA). 2002. Pollution Prevention/Good Housekeeping for Municipal Operations Storm Drain System Cleaning. On line:

http://www.epa.gov/npdes/menuofbmpps/poll_16.htm



Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☒ Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

Designing New Installations

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include "NO DUMPING"



– DRAINS TO OCEAN” and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define “redevelopment” in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of “redevelopment”, then the requirements stated under “designing new installations” above should be included in all project design plans.

Additional Information

Maintenance Considerations

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner’s association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

Placement

- Signage on top of curbs tends to weather and fade.
- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

Supplemental Information

Examples

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Description

Trash storage areas are areas where a trash receptacle (s) are located for use as a repository for solid wastes. Stormwater runoff from areas where trash is stored or disposed of can be polluted. In addition, loose trash and debris can be easily transported by water or wind into nearby storm drain inlets, channels, and/or creeks. Waste handling operations that may be sources of stormwater pollution include dumpsters, litter control, and waste piles.

Approach

This fact sheet contains details on the specific measures required to prevent or reduce pollutants in stormwater runoff associated with trash storage and handling. Preventative measures including enclosures, containment structures, and impervious pavements to mitigate spills, should be used to reduce the likelihood of contamination.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Design requirements for waste handling areas are governed by Building and Fire Codes, and by current local agency ordinances and zoning requirements. The design criteria described in this fact sheet are meant to enhance and be consistent with these code and ordinance requirements. Hazardous waste should be handled in accordance with legal requirements established in Title 22, California Code of Regulation.

Wastes from commercial and industrial sites are typically hauled by either public or commercial carriers that may have design or access requirements for waste storage areas. The design criteria in this fact sheet are recommendations and are not intended to be in conflict with requirements established by the waste hauler. The waste hauler should be contacted prior to the design of your site trash collection areas. Conflicts or issues should be discussed with the local agency.

Designing New Installations

Trash storage areas should be designed to consider the following structural or treatment control BMPs:

- Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on. This might include berming or grading the waste handling area to prevent run-on of stormwater.
- Make sure trash container areas are screened or walled to prevent off-site transport of trash.

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ✓ Contain Pollutants
- Collect and Convey



- Use lined bins or dumpsters to reduce leaking of liquid waste.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Pave trash storage areas with an impervious surface to mitigate spills.
- Do not locate storm drains in immediate vicinity of the trash storage area.
- Post signs on all dumpsters informing users that hazardous materials are not to be disposed of therein.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define “redevelopment” in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of “redevelopment” must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under “designing new installations” above should be followed.

Additional Information***Maintenance Considerations***

The integrity of structural elements that are subject to damage (i.e., screens, covers, and signs) must be maintained by the owner/operator. Maintenance agreements between the local agency and the owner/operator may be required. Some agencies will require maintenance deed restrictions to be recorded of the property title. If required by the local agency, maintenance agreements or deed restrictions must be executed by the owner/operator before improvement plans are approved.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Description

Outdoor process equipment operations such as rock grinding or crushing, painting or coating, grinding or sanding, degreasing or parts cleaning, landfills, waste piles, wastewater and solid waste treatment and disposal, and others operations may contribute a variety of toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to the storm conveyance system.

Approach

Outdoor processing areas require a drainage approach different from the typical infiltration/detention strategy. In outdoor process equipment areas, infiltration is discouraged. Containment is encouraged, accompanied by collection and conveyance. Preventative measures include enclosures, secondary containment structures, dead-end sumps, and conveyance to treatment facilities in accordance with conditions established by the applicable sewer agency.

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ✓ Contain Pollutants
- ✓ Collect and Convey

Suitable Applications

Appropriate applications include commercial and industrial areas planned for development or redevelopment.

Design Considerations

Design requirements for outdoor processing areas are governed by Building and Fire codes, and by current local agency ordinances, and zoning requirements.

Designing New Installations

Operations determined to be a potential threat to water quality should consider to the following recommendations:

- Cover or enclose areas that would be the most significant source of pollutants; or slope the area toward a dead-end sump; or, discharge to the sanitary sewer system following appropriate treatment in accordance with conditions established by the applicable sewer agency.
- Grade or berm area to prevent run-on from surrounding areas.
- Do not install storm drains in areas of equipment repair.
- Consider other features that are comparable or equally effective.
- Provide secondary containment structures (not double wall containers) where wet material processing occurs (e.g., electroplating), to hold spills resulting from accidents, leaking tanks, or equipment, or any other unplanned releases (Note: if these are plumbed to the sanitary sewer, they must be with the prior approval of the sewer agency.)



Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define “redevelopment” in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of “redevelopment” must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under “designing new installations” above should be followed.

Additional Information

Stormwater and non-stormwater will accumulate in containment areas and sumps with impervious surfaces. Contaminated accumulated water must be disposed of in accordance with applicable laws and cannot be discharged directly to the storm drain or sanitary sewer system without the appropriate permit.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Attachment B

BMP Design & Calculations

BMP Calculations

Simple Method Runoff Coefficient for Volume-Based BMP Sizing

Design Capture Volume (DCV):

$$DCV = C \times d \times A \times 43560 \text{ ft}^2/\text{ac} \times 1/12 \text{ in/ft}$$

$$C = \text{runoff coefficient} = (0.75 \times \text{impervious} + 0.15)$$

$$d = \text{storm depth (inches)} = 0.75 \text{ in, refer to}$$

North OC TGD, Figure XVI-1 (attached herein)

$$A = \text{tributary area (acres)}$$

Simple Method Runoff Coefficient for Flow-Based BMP Sizing

Design Flowrate (Q):

$$Q = C \times i \times A$$

$$C = \text{runoff coefficient} = (0.75 \times \text{impervious} + 0.15)$$

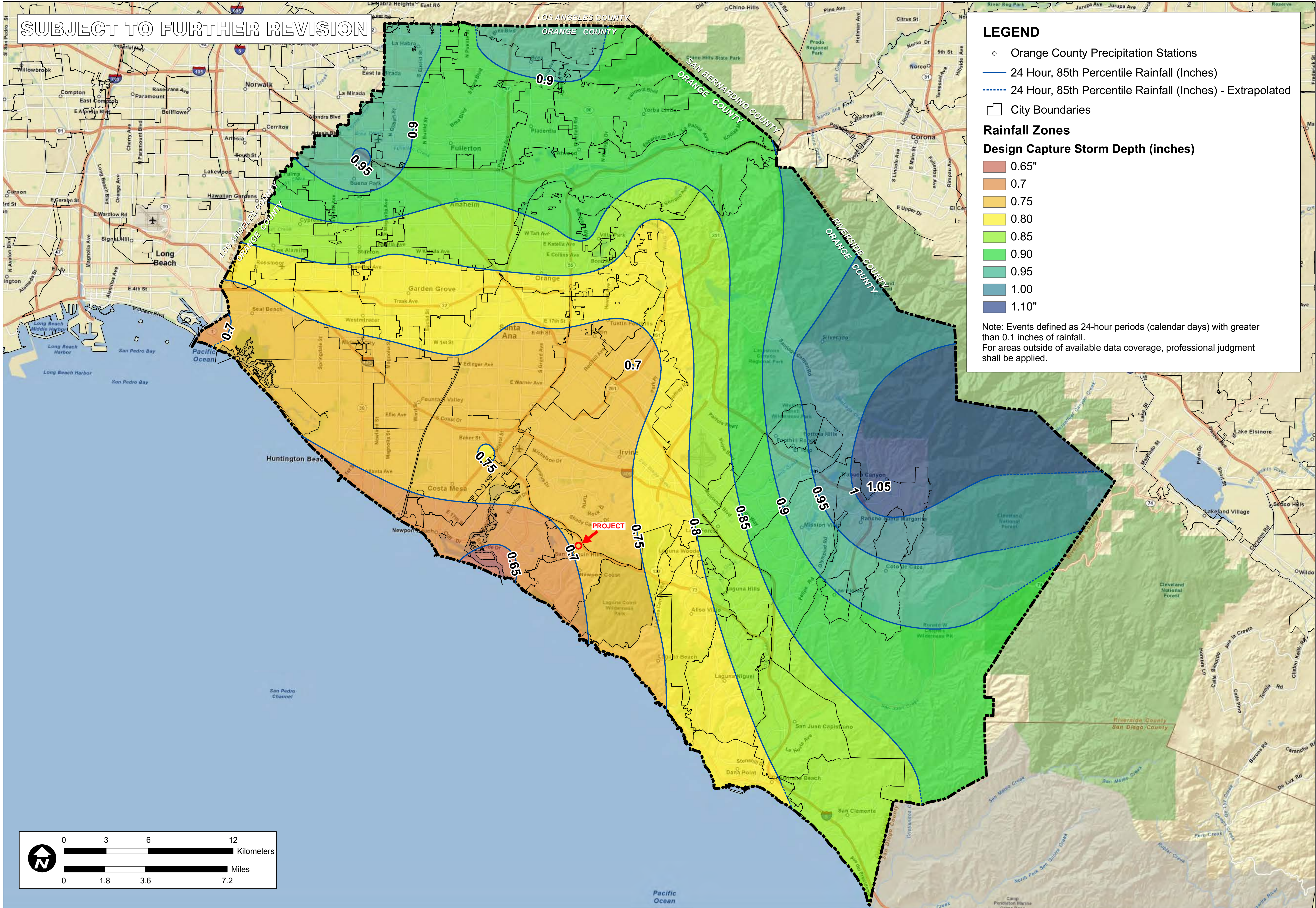
$$i = \text{rainfall intensity (inches/hour)} = 0.26 \text{ in/hr } (T_c \approx 5 \text{ minutes}), \text{ refer to}$$

North OC TGD, Appendix III, Capture Efficiency Figure (attached herein)

$$A = \text{tributary area (acres)}$$

DMA ID	BMP ID	A (ac)	Imp	C	DCV (ft ³)	Q (cfs)
1	1	1.070	66.4%	0.648	1,888	0.180

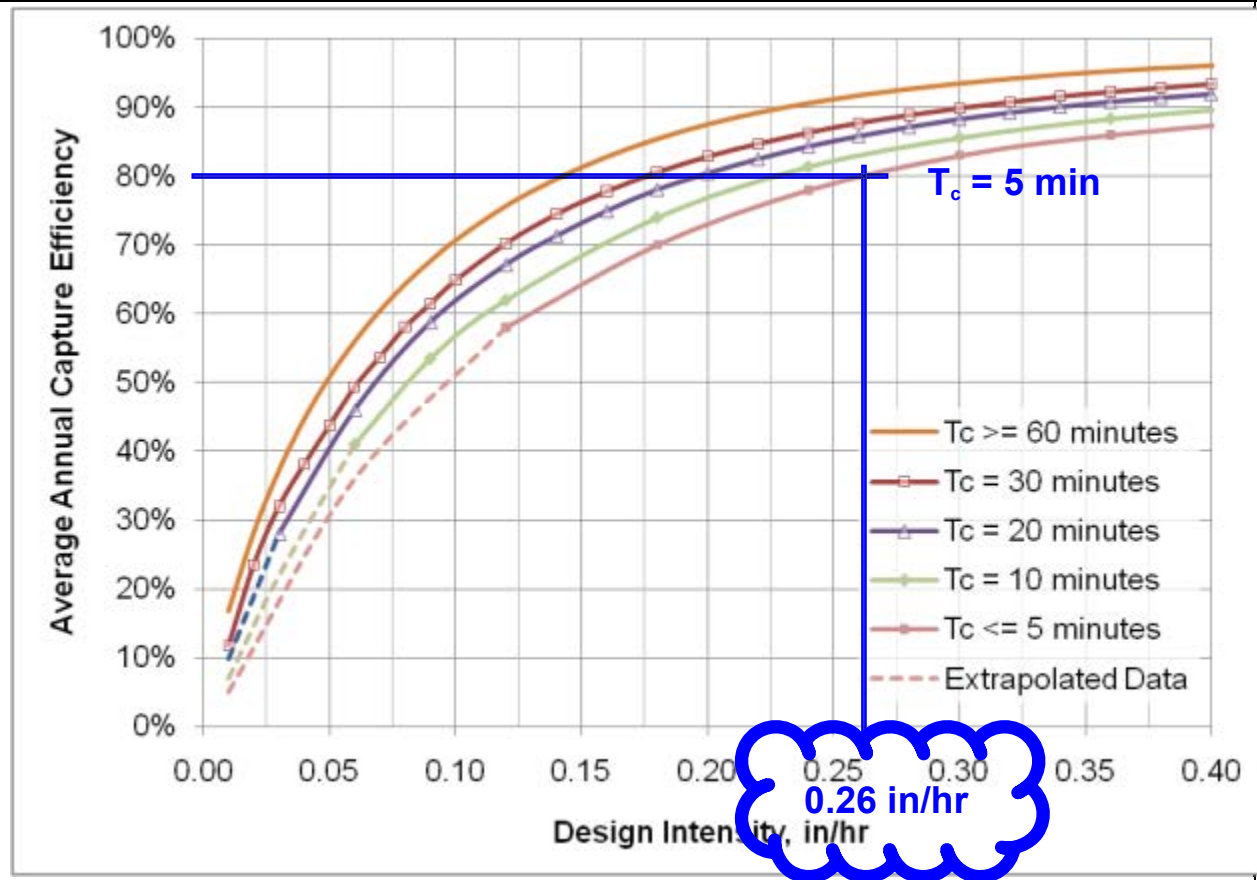
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ORANGE COUNTY TECHNICAL GUIDANCE DOCUMENT		RAINFALL ZONES	
ORANGE CO.		CA	
JOB NO. 9526-E		DATE 04/22/10	
CHECKED BMP		DRAWING TH	
DESIGNED TH		SCALE 1" = 1.8 miles	
FIGURE XVI-1		PACE Advanced Water Engineering	

Worksheet D: Capture Efficiency Method for Flow-Based BMPs

Graphical Operations



Provide supporting graphical operations. See Example [III.7](#).

Gravel Storage BMP Calculations

2-year, 24-hour

Condition	Area (ac)	Impervious	Vol (ac-ft)	Vol (cu ft)
Pre-Proj	1.07	0.0%	0.05	2,178
Post-Proj	1.07	66.4%	0.12	5,227

Refer to Advanced Engineering Software (AES) Small Area Unit Hydrograph (SA UH)
Calculations for 2-year, 24-hour volumes

Required Storage Volume = (Post Proj Vol) – (Pre Proj Vol)

Required Storage Volume = 3,049 cu ft

Gravel Void Ratio = 40.0%

Required Gravel Volume = 3049 cu ft / 40%

Required Gravel Volume = 7,623 cu ft

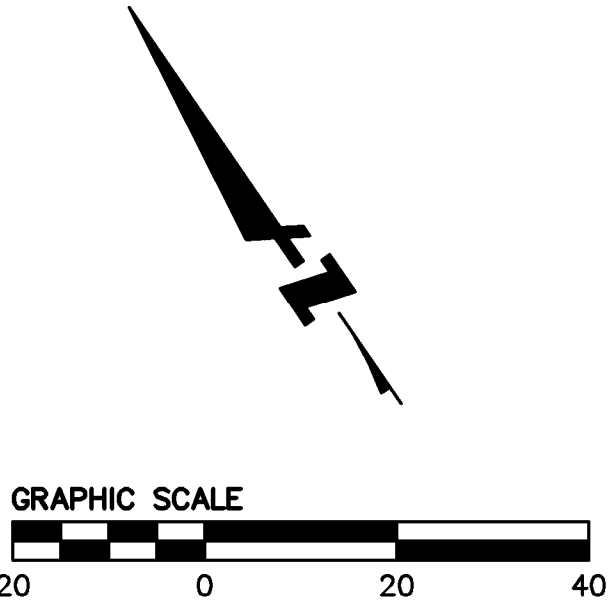
2-Year 24-Hour Storm
Advanced Engineering Software (AES)
Rational Method (RM) Calculations



LEGEND:

- DRAINAGE BOUNDARY
- FLOWPATH
- IMPERVIOUS AREA
- PERVIOUS AREA

Pre-Project
Area = 1.07 acres
Impervious = 0.0%



CONFIDENTIAL

NOT FOR CONSTRUCTION

ISSUE FOR BID

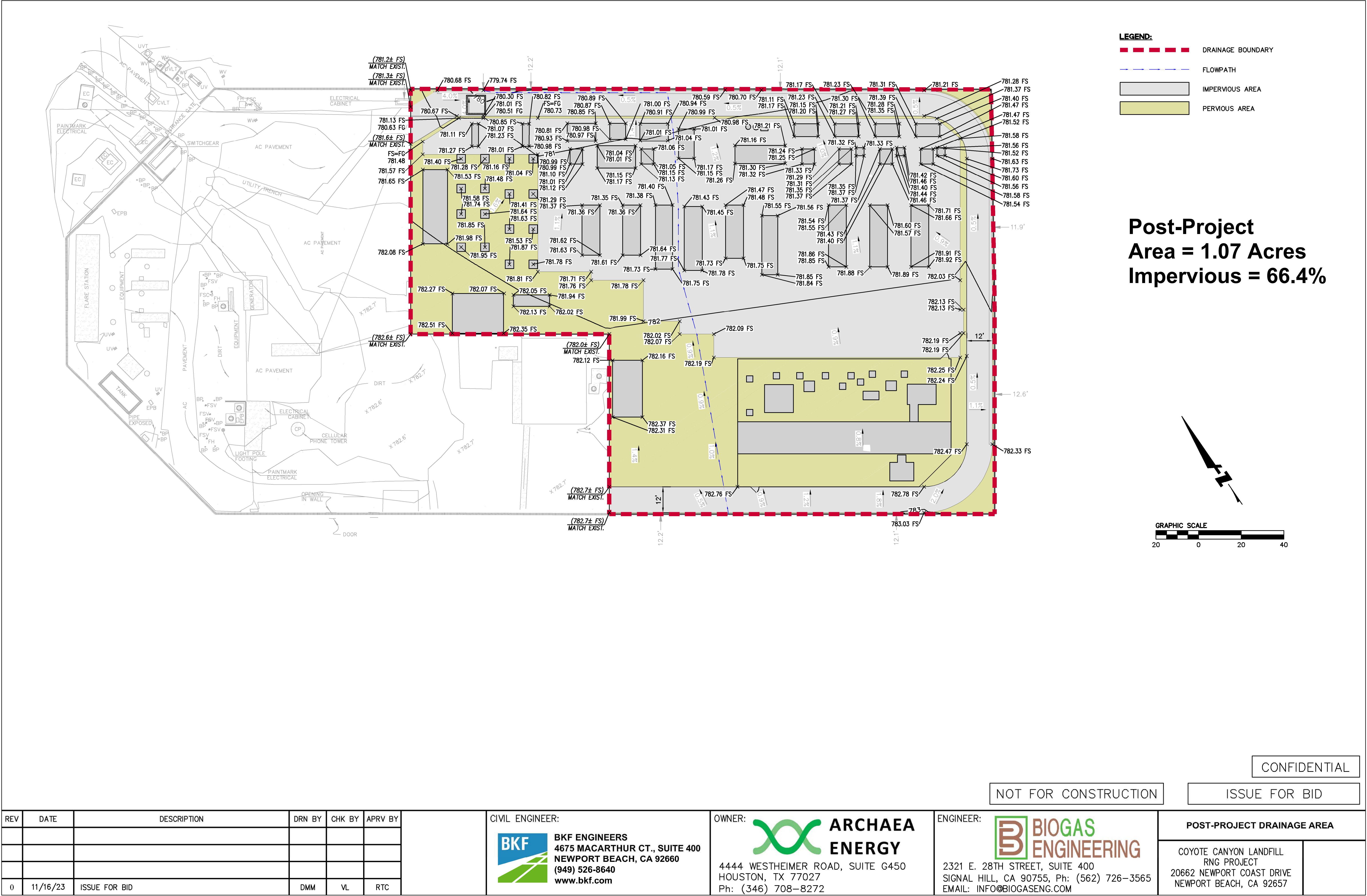
REV	DATE	DESCRIPTION	DRN BY	CHK BY	APRV BY
0	11/16/23	ISSUE FOR BID	DMM	VL	RTC

CIVIL ENGINEER:
BKF **BKF ENGINEERS**
4675 MACARTHUR CT., SUITE 400
NEWPORT BEACH, CA 92660
(949) 526-8640
www.bkf.com

OWNER:
ARCHAEA ENERGY
4444 WESTHEIMER ROAD, SUITE G450
HOUSTON, TX 77027
Ph: (346) 708-8272

ENGINEER:
BIOGAS ENGINEERING
2321 E. 28TH STREET, SUITE 400
SIGNAL HILL, CA 90755, Ph: (562) 726-3565
EMAIL: INFO@BIOGASENG.COM

PRE-PROJECT DRAINAGE AREA
COYOTE CANYON LANDFILL
RNG PROJECT
20662 NEWPORT COAST DRIVE
NEWPORT BEACH, CA 92657



RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
(Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
(c) Copyright 1983-2016 Advanced Engineering Software (aes)
Ver. 23.0 Release Date: 07/01/2016 License ID 1676

Analysis prepared by:

FILE NAME: CCLPRE.DAT
TIME/DATE OF STUDY: 12:06 12/11/2023
=====

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USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 2.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 12.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.85
DATA BANK RAINFALL USED
ANTECEDENT MOISTURE CONDITION (AMC) I ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	HALF- WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT- / PARK- SIDE / SIDE / WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP HIKE (FT) (FT) (FT)	MANNING FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0313 0.167	0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 101.10 TO NODE 101.20 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

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INITIAL SUBAREA FLOW-LENGTH(FEET) = 230.00
ELEVATION DATA: UPSTREAM(FEET) = 782.80 DOWNSTREAM(FEET) = 779.70

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 10.938
* 2 YEAR RAINFALL INTENSITY(INCH/HR) = 1.444
SUBAREA T_c AND LOSS RATE DATA(AMC I):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
URBAN POOR COVER "TURF"	D	1.07	0.20	1.000	73	10.94

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 1.000
SUBAREA RUNOFF(CFS) = 1.20
TOTAL AREA(ACRES) = 1.07 PEAK FLOW RATE(CFS) = 1.20

=====

END OF STUDY SUMMARY:

TOTAL AREA(ACRES) = 1.1 T_c (MIN.) = 10.94
EFFECTIVE AREA(ACRES) = 1.07 AREA-AVERAGED F_m (INCH/HR) = 0.20
AREA-AVERAGED F_p (INCH/HR) = 0.20 AREA-AVERAGED A_p = 1.000
PEAK FLOW RATE(CFS) = 1.20

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END OF RATIONAL METHOD ANALYSIS

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RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
(Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
(c) Copyright 1983-2016 Advanced Engineering Software (aes)
Ver. 23.0 Release Date: 07/01/2016 License ID 1676

Analysis prepared by:

FILE NAME: CCLPST.DAT
TIME/DATE OF STUDY: 09:55 06/11/2024
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USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

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--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 2.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 12.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.85
DATA BANK RAINFALL USED
ANTECEDENT MOISTURE CONDITION (AMC) I ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	HALF- WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT- / PARK- SIDE / SIDE / WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP HIKE (FT) (FT) (FT)	MANNING FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0313 0.167	0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 201.10 TO NODE 201.20 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 280.00
ELEVATION DATA: UPSTREAM(FEET) = 782.80 DOWNSTREAM(FEET) = 779.70

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 7.127

* 2 YEAR RAINFALL INTENSITY(INCH/HR) = 1.847

SUBAREA Tc AND LOSS RATE DATA(AMC I):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
URBAN POOR COVER						
"TURF"	D	0.28	0.20	1.000	73	12.31
COMMERCIAL	D	0.79	0.20	0.100	57	7.13

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.336

SUBAREA RUNOFF(CFS) = 1.71

TOTAL AREA(ACRES) = 1.07 PEAK FLOW RATE(CFS) = 1.71

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END OF STUDY SUMMARY:

TOTAL AREA(ACRES) = 1.1 TC(MIN.) = 7.13

EFFECTIVE AREA(ACRES) = 1.07 AREA-AVERAGED Fm(INCH/HR)= 0.07

AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.336

PEAK FLOW RATE(CFS) = 1.71

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END OF RATIONAL METHOD ANALYSIS



2-Year 24-Hour Storm

Advanced Engineering Software (AES)

Small Area Unit Hydrograph (SA UH) Calculations

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*** NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (Fm)
    AND LOW LOSS FRACTION ESTIMATIONS FOR AMC I:

TOTAL 24-HOUR DURATION RAINFALL DEPTH =      2.05 (inches)

SOIL-COVER      AREA      PERCENT OF      SCS CURVE      LOSS RATE
TYPE            (Acres)  PERVIOUS AREA  NUMBER      Fp(in./hr.)  YIELD
    1            1.07      100.00      87.(AMC II)    0.200        0.167

TOTAL AREA (Acres) =      1.07

AREA-AVERAGED LOSS RATE,  $\bar{F}_m$  (in./hr.) =  0.200

AREA-AVERAGED LOW LOSS FRACTION,  $\bar{Y}$  = 0.833
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RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
 TOTAL CATCHMENT AREA(ACRES) = 1.07
 SOIL-LOSS RATE, Fm,(INCH/HR) = 0.200
 LOW LOSS FRACTION = 0.833
 TIME OF CONCENTRATION(MIN.) = 10.90
 SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
 ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED
 RETURN FREQUENCY(YEARS) = 2
 5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.19
 30-MINUTE POINT RAINFALL VALUE(INCHES) = 0.40
 1-HOUR POINT RAINFALL VALUE(INCHES) = 0.53
 3-HOUR POINT RAINFALL VALUE(INCHES) = 0.89
 6-HOUR POINT RAINFALL VALUE(INCHES) = 1.22
 24-HOUR POINT RAINFALL VALUE(INCHES) = 2.05

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 0.05
 TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 0.14

TIME (HOURS)	VOLUME (AF)	Q (CFS)	0.	2.5	5.0	7.5	10.0
0.01	0.0000	0.00	Q	.	.	.	.
0.20	0.0000	0.01	Q	.	.	.	.
0.38	0.0001	0.01	Q	.	.	.	.
0.56	0.0002	0.01	Q	.	.	.	.
0.74	0.0003	0.01	Q	.	.	.	.
0.92	0.0004	0.01	Q	.	.	.	.
1.10	0.0004	0.01	Q	.	.	.	.
1.29	0.0005	0.01	Q	.	.	.	.
1.47	0.0006	0.01	Q	.	.	.	.
1.65	0.0007	0.01	Q	.	.	.	.
1.83	0.0008	0.01	Q	.	.	.	.
2.01	0.0008	0.01	Q	.	.	.	.
2.19	0.0009	0.01	Q	.	.	.	.
2.38	0.0010	0.01	Q	.	.	.	.
2.56	0.0011	0.01	Q	.	.	.	.
2.74	0.0012	0.01	Q	.	.	.	.
2.92	0.0013	0.01	Q	.	.	.	.
3.10	0.0014	0.01	Q	.	.	.	.
3.28	0.0014	0.01	Q	.	.	.	.
3.47	0.0015	0.01	Q	.	.	.	.
3.65	0.0016	0.01	Q	.	.	.	.
3.83	0.0017	0.01	Q	.	.	.	.
4.01	0.0018	0.01	Q	.	.	.	.
4.19	0.0019	0.01	Q	.	.	.	.
4.37	0.0020	0.01	Q	.	.	.	.
4.56	0.0021	0.01	Q	.	.	.	.
4.74	0.0022	0.01	Q	.	.	.	.
4.92	0.0023	0.01	Q	.	.	.	.
5.10	0.0024	0.01	Q	.	.	.	.
5.28	0.0025	0.01	Q	.	.	.	.
5.46	0.0026	0.01	Q	.	.	.	.
5.64	0.0027	0.01	Q	.	.	.	.
5.83	0.0028	0.01	Q	.	.	.	.
6.01	0.0029	0.01	Q	.	.	.	.
6.19	0.0030	0.01	Q	.	.	.	.
6.37	0.0031	0.01	Q	.	.	.	.
6.55	0.0032	0.01	Q	.	.	.	.
6.74	0.0033	0.01	Q	.	.	.	.
6.92	0.0034	0.01	Q	.	.	.	.
7.10	0.0035	0.01	Q	.	.	.	.
7.28	0.0036	0.01	Q	.	.	.	.
7.46	0.0037	0.01	Q	.	.	.	.
7.64	0.0038	0.01	Q	.	.	.	.
7.83	0.0040	0.01	Q	.	.	.	.
8.01	0.0041	0.01	Q	.	.	.	.
8.19	0.0042	0.01	Q	.	.	.	.
8.37	0.0043	0.01	Q	.	.	.	.
8.55	0.0044	0.01	Q	.	.	.	.
8.73	0.0046	0.01	Q	.	.	.	.
8.91	0.0047	0.01	Q	.	.	.	.

9.10	0.0048	0.01	Q	.	.	.	.
9.28	0.0049	0.01	Q	.	.	.	.
9.46	0.0051	0.01	Q	.	.	.	.
9.64	0.0052	0.01	Q	.	.	.	.
9.82	0.0053	0.01	Q	.	.	.	.
10.01	0.0055	0.01	Q	.	.	.	.
10.19	0.0056	0.01	Q	.	.	.	.
10.37	0.0058	0.01	Q	.	.	.	.
10.55	0.0059	0.01	Q	.	.	.	.
10.73	0.0061	0.01	Q	.	.	.	.
10.91	0.0062	0.01	Q	.	.	.	.
11.10	0.0064	0.01	Q	.	.	.	.
11.28	0.0065	0.01	Q	.	.	.	.
11.46	0.0067	0.01	Q	.	.	.	.
11.64	0.0069	0.01	Q	.	.	.	.
11.82	0.0070	0.01	Q	.	.	.	.
12.00	0.0072	0.01	Q	.	.	.	.
12.19	0.0074	0.02	Q	.	.	.	.
12.37	0.0077	0.02	Q	.	.	.	.
12.55	0.0079	0.02	Q	.	.	.	.
12.73	0.0081	0.02	Q	.	.	.	.
12.91	0.0084	0.02	Q	.	.	.	.
13.09	0.0086	0.02	Q	.	.	.	.
13.27	0.0089	0.02	Q	.	.	.	.
13.46	0.0092	0.02	Q	.	.	.	.
13.64	0.0094	0.02	Q	.	.	.	.
13.82	0.0097	0.02	Q	.	.	.	.
14.00	0.0100	0.02	Q	.	.	.	.
14.18	0.0104	0.02	Q	.	.	.	.
14.37	0.0107	0.02	Q	.	.	.	.
14.55	0.0111	0.03	Q	.	.	.	.
14.73	0.0115	0.03	Q	.	.	.	.
14.91	0.0119	0.03	Q	.	.	.	.
15.09	0.0124	0.03	Q	.	.	.	.
15.27	0.0129	0.03	Q	.	.	.	.
15.45	0.0134	0.04	Q	.	.	.	.
15.64	0.0140	0.04	Q	.	.	.	.
15.82	0.0154	0.15	Q	.	.	.	.
16.00	0.0185	0.27	.Q	.	.	.	.
16.18	0.0296	1.20	.	.	.	.	.
16.36	0.0392	0.08	Q	.	.	.	.
16.55	0.0401	0.04	Q	.	.	.	.
16.73	0.0406	0.03	Q	.	.	.	.
16.91	0.0410	0.03	Q	.	.	.	.
17.09	0.0414	0.02	Q	.	.	.	.
17.27	0.0417	0.02	Q	.	.	.	.
17.45	0.0420	0.02	Q	.	.	.	.
17.64	0.0422	0.02	Q	.	.	.	.
17.82	0.0425	0.02	Q	.	.	.	.
18.00	0.0427	0.02	Q	.	.	.	.
18.18	0.0430	0.01	Q	.	.	.	.
18.36	0.0431	0.01	Q	.	.	.	.
18.54	0.0433	0.01	Q	.	.	.	.
18.73	0.0435	0.01	Q	.	.	.	.
18.91	0.0436	0.01	Q	.	.	.	.
19.09	0.0438	0.01	Q	.	.	.	.
19.27	0.0439	0.01	Q	.	.	.	.
19.45	0.0440	0.01	Q	.	.	.	.
19.63	0.0442	0.01	Q	.	.	.	.
19.82	0.0443	0.01	Q	.	.	.	.
20.00	0.0444	0.01	Q	.	.	.	.
20.18	0.0445	0.01	Q	.	.	.	.
20.36	0.0447	0.01	Q	.	.	.	.
20.54	0.0448	0.01	Q	.	.	.	.
20.72	0.0449	0.01	Q	.	.	.	.
20.91	0.0450	0.01	Q	.	.	.	.
21.09	0.0451	0.01	Q	.	.	.	.
21.27	0.0452	0.01	Q	.	.	.	.
21.45	0.0453	0.01	Q	.	.	.	.
21.63	0.0454	0.01	Q	.	.	.	.
21.81	0.0455	0.01	Q	.	.	.	.
21.99	0.0456	0.01	Q	.	.	.	.
22.18	0.0457	0.01	Q	.	.	.	.
22.36	0.0458	0.01	Q	.	.	.	.
22.54	0.0459	0.01	Q	.	.	.	.
22.72	0.0460	0.01	Q	.	.	.	.
22.90	0.0460	0.01	Q	.	.	.	.

23.08	0.0461	0.01	Q	.	.	.	.
23.27	0.0462	0.01	Q	.	.	.	.
23.45	0.0463	0.01	Q	.	.	.	.
23.63	0.0464	0.01	Q	.	.	.	.
23.81	0.0465	0.01	Q	.	.	.	.
23.99	0.0465	0.01	Q	.	.	.	.
24.17	0.0466	0.01	Q	.	.	.	.
24.36	0.0466	0.00	Q	.	.	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1449.7
10%	32.7
20%	21.8
30%	10.9
40%	10.9
50%	10.9
60%	10.9
70%	10.9
80%	10.9
90%	10.9

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*** NON-HOMOGENEOUS WATERSHED AREA-AVERAGED LOSS RATE (\bar{F}_m)
AND LOW LOSS FRACTION ESTIMATIONS FOR AMC I:

TOTAL 24-HOUR DURATION RAINFALL DEPTH = 2.05 (inches)

SOIL-COVER TYPE	AREA (Acres)	PERCENT OF PERVIOUS AREA	SCS CURVE NUMBER	LOSS RATE F_p (in./hr.)	YIELD
1	0.36	100.00	87.(AMC II)	0.200	0.167
2	0.71	0.00	98.(AMC II)	0.200	0.890

TOTAL AREA (Acres) = 1.07

AREA-AVERAGED LOSS RATE, \bar{F}_m (in./hr.) = 0.067

AREA-AVERAGED LOW LOSS FRACTION, \bar{Y} = 0.353

=====

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA(ACRES) = 1.07
SOIL-LOSS RATE, F_m , (INCH/HR) = 0.067
LOW LOSS FRACTION = 0.353
TIME OF CONCENTRATION(MIN.) = 7.10
SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED
RETURN FREQUENCY(YEARS) = 2
5-MINUTE POINT RAINFALL VALUE(INCHES) = 0.19
30-MINUTE POINT RAINFALL VALUE(INCHES) = 0.40
1-HOUR POINT RAINFALL VALUE(INCHES) = 0.53
3-HOUR POINT RAINFALL VALUE(INCHES) = 0.89
6-HOUR POINT RAINFALL VALUE(INCHES) = 1.22
24-HOUR POINT RAINFALL VALUE(INCHES) = 2.05

TOTAL CATCHMENT RUNOFF VOLUME(ACRE-FEET) = 0.12
TOTAL CATCHMENT SOIL-LOSS VOLUME(ACRE-FEET) = 0.07

TIME (HOURS)	VOLUME (AF)	Q (CFS)	0.	2.5	5.0	7.5	10.0
0.03	0.0000	0.00	Q	.	.	.	.
0.14	0.0001	0.02	Q	.	.	.	.
0.26	0.0003	0.02	Q	.	.	.	.
0.38	0.0005	0.02	Q	.	.	.	.
0.50	0.0007	0.02	Q	.	.	.	.
0.62	0.0009	0.02	Q	.	.	.	.
0.74	0.0011	0.02	Q	.	.	.	.
0.85	0.0013	0.02	Q	.	.	.	.
0.97	0.0015	0.02	Q	.	.	.	.
1.09	0.0017	0.02	Q	.	.	.	.
1.21	0.0019	0.02	Q	.	.	.	.
1.33	0.0021	0.02	Q	.	.	.	.
1.45	0.0023	0.02	Q	.	.	.	.
1.56	0.0025	0.02	Q	.	.	.	.
1.68	0.0027	0.02	Q	.	.	.	.
1.80	0.0029	0.02	Q	.	.	.	.
1.92	0.0031	0.02	Q	.	.	.	.
2.04	0.0033	0.02	Q	.	.	.	.
2.16	0.0036	0.02	Q	.	.	.	.
2.27	0.0038	0.02	Q	.	.	.	.
2.39	0.0040	0.02	Q	.	.	.	.
2.51	0.0042	0.02	Q	.	.	.	.

2.63	0.0044	0.02	Q	.	.	.	.
2.75	0.0046	0.02	Q	.	.	.	.
2.87	0.0049	0.02	Q	.	.	.	.
2.98	0.0051	0.02	Q	.	.	.	.
3.10	0.0053	0.02	Q	.	.	.	.
3.22	0.0055	0.02	Q	.	.	.	.
3.34	0.0057	0.02	Q	.	.	.	.
3.46	0.0060	0.02	Q	.	.	.	.
3.58	0.0062	0.02	Q	.	.	.	.
3.69	0.0064	0.02	Q	.	.	.	.
3.81	0.0066	0.02	Q	.	.	.	.
3.93	0.0069	0.02	Q	.	.	.	.
4.05	0.0071	0.02	Q	.	.	.	.
4.17	0.0073	0.02	Q	.	.	.	.
4.29	0.0076	0.02	Q	.	.	.	.
4.40	0.0078	0.02	Q	.	.	.	.
4.52	0.0081	0.02	Q	.	.	.	.
4.64	0.0083	0.02	Q	.	.	.	.
4.76	0.0085	0.02	Q	.	.	.	.
4.88	0.0088	0.02	Q	.	.	.	.
5.00	0.0090	0.03	Q	.	.	.	.
5.11	0.0093	0.03	Q	.	.	.	.
5.23	0.0095	0.03	Q	.	.	.	.
5.35	0.0098	0.03	Q	.	.	.	.
5.47	0.0100	0.03	Q	.	.	.	.
5.59	0.0103	0.03	Q	.	.	.	.
5.71	0.0105	0.03	Q	.	.	.	.
5.82	0.0108	0.03	Q	.	.	.	.
5.94	0.0110	0.03	Q	.	.	.	.
6.06	0.0113	0.03	Q	.	.	.	.
6.18	0.0116	0.03	Q	.	.	.	.
6.30	0.0118	0.03	Q	.	.	.	.
6.41	0.0121	0.03	Q	.	.	.	.
6.53	0.0124	0.03	Q	.	.	.	.
6.65	0.0126	0.03	Q	.	.	.	.
6.77	0.0129	0.03	Q	.	.	.	.
6.89	0.0132	0.03	Q	.	.	.	.
7.01	0.0134	0.03	Q	.	.	.	.
7.12	0.0137	0.03	Q	.	.	.	.
7.24	0.0140	0.03	Q	.	.	.	.
7.36	0.0143	0.03	Q	.	.	.	.
7.48	0.0146	0.03	Q	.	.	.	.
7.60	0.0149	0.03	Q	.	.	.	.
7.72	0.0152	0.03	Q	.	.	.	.
7.84	0.0154	0.03	Q	.	.	.	.
7.95	0.0157	0.03	Q	.	.	.	.
8.07	0.0160	0.03	Q	.	.	.	.
8.19	0.0163	0.03	Q	.	.	.	.
8.31	0.0166	0.03	Q	.	.	.	.
8.43	0.0170	0.03	Q	.	.	.	.

8.55	0.0173	0.03	Q	.	.	.	.
8.66	0.0176	0.03	Q	.	.	.	.
8.78	0.0179	0.03	Q	.	.	.	.
8.90	0.0182	0.03	Q	.	.	.	.
9.02	0.0185	0.03	Q	.	.	.	.
9.14	0.0189	0.03	Q	.	.	.	.
9.26	0.0192	0.03	Q	.	.	.	.
9.37	0.0195	0.03	Q	.	.	.	.
9.49	0.0199	0.03	Q	.	.	.	.
9.61	0.0202	0.03	Q	.	.	.	.
9.73	0.0205	0.04	Q	.	.	.	.
9.85	0.0209	0.04	Q	.	.	.	.
9.97	0.0212	0.04	Q	.	.	.	.
10.08	0.0216	0.04	Q	.	.	.	.
10.20	0.0220	0.04	Q	.	.	.	.
10.32	0.0223	0.04	Q	.	.	.	.
10.44	0.0227	0.04	Q	.	.	.	.
10.56	0.0231	0.04	Q	.	.	.	.
10.68	0.0235	0.04	Q	.	.	.	.
10.79	0.0238	0.04	Q	.	.	.	.
10.91	0.0242	0.04	Q	.	.	.	.
11.03	0.0246	0.04	Q	.	.	.	.
11.15	0.0250	0.04	Q	.	.	.	.
11.27	0.0254	0.04	Q	.	.	.	.
11.38	0.0259	0.04	Q	.	.	.	.
11.50	0.0263	0.04	Q	.	.	.	.
11.62	0.0267	0.04	Q	.	.	.	.
11.74	0.0271	0.04	Q	.	.	.	.
11.86	0.0276	0.05	Q	.	.	.	.
11.98	0.0280	0.05	Q	.	.	.	.
12.10	0.0285	0.05	Q	.	.	.	.
12.21	0.0291	0.06	Q	.	.	.	.
12.33	0.0297	0.06	Q	.	.	.	.
12.45	0.0303	0.06	Q	.	.	.	.
12.57	0.0309	0.06	Q	.	.	.	.
12.69	0.0315	0.06	Q	.	.	.	.
12.80	0.0321	0.06	Q	.	.	.	.
12.92	0.0327	0.07	Q	.	.	.	.
13.04	0.0334	0.07	Q	.	.	.	.
13.16	0.0340	0.07	Q	.	.	.	.
13.28	0.0347	0.07	Q	.	.	.	.
13.40	0.0354	0.07	Q	.	.	.	.
13.52	0.0361	0.07	Q	.	.	.	.
13.63	0.0368	0.07	Q	.	.	.	.
13.75	0.0376	0.08	Q	.	.	.	.
13.87	0.0383	0.08	Q	.	.	.	.
13.99	0.0391	0.08	Q	.	.	.	.
14.11	0.0399	0.08	Q	.	.	.	.
14.23	0.0408	0.09	Q	.	.	.	.
14.34	0.0417	0.09	Q	.	.	.	.

14.46	0.0426	0.10	Q	.	.	.	.
14.58	0.0436	0.10	Q	.	.	.	.
14.70	0.0446	0.11	Q	.	.	.	.
14.82	0.0457	0.11	Q	.	.	.	.
14.93	0.0468	0.12	Q	.	.	.	.
15.05	0.0479	0.12	Q	.	.	.	.
15.17	0.0492	0.14	Q	.	.	.	.
15.29	0.0506	0.15	Q	.	.	.	.
15.41	0.0522	0.16	Q	.	.	.	.
15.53	0.0537	0.16	Q	.	.	.	.
15.65	0.0555	0.20	Q	.	.	.	.
15.76	0.0577	0.24	Q	.	.	.	.
15.88	0.0606	0.37	.Q	.	.	.	.
16.00	0.0651	0.53	. Q	.	.	.	.
16.12	0.0761	1.72	. Q	.	.	.	.
16.24	0.0860	0.29	.Q	.	.	.	.
16.35	0.0883	0.18	Q	.	.	.	.
16.47	0.0899	0.16	Q	.	.	.	.
16.59	0.0914	0.13	Q	.	.	.	.
16.71	0.0926	0.11	Q	.	.	.	.
16.83	0.0936	0.10	Q	.	.	.	.
16.95	0.0946	0.10	Q	.	.	.	.
17.07	0.0955	0.09	Q	.	.	.	.
17.18	0.0963	0.08	Q	.	.	.	.
17.30	0.0971	0.08	Q	.	.	.	.
17.42	0.0978	0.07	Q	.	.	.	.
17.54	0.0985	0.07	Q	.	.	.	.
17.66	0.0992	0.07	Q	.	.	.	.
17.77	0.0998	0.06	Q	.	.	.	.
17.89	0.1004	0.06	Q	.	.	.	.
18.01	0.1010	0.06	Q	.	.	.	.
18.13	0.1015	0.05	Q	.	.	.	.
18.25	0.1020	0.05	Q	.	.	.	.
18.37	0.1024	0.04	Q	.	.	.	.
18.48	0.1028	0.04	Q	.	.	.	.
18.60	0.1032	0.04	Q	.	.	.	.
18.72	0.1036	0.04	Q	.	.	.	.
18.84	0.1040	0.04	Q	.	.	.	.
18.96	0.1044	0.04	Q	.	.	.	.
19.08	0.1048	0.04	Q	.	.	.	.
19.19	0.1051	0.04	Q	.	.	.	.
19.31	0.1055	0.04	Q	.	.	.	.
19.43	0.1058	0.03	Q	.	.	.	.
19.55	0.1061	0.03	Q	.	.	.	.
19.67	0.1065	0.03	Q	.	.	.	.
19.79	0.1068	0.03	Q	.	.	.	.
19.91	0.1071	0.03	Q	.	.	.	.
20.02	0.1074	0.03	Q	.	.	.	.
20.14	0.1077	0.03	Q	.	.	.	.
20.26	0.1080	0.03	Q	.	.	.	.

20.38	0.1083	0.03	Q	.	.	.	.
20.50	0.1086	0.03	Q	.	.	.	.
20.61	0.1089	0.03	Q	.	.	.	.
20.73	0.1091	0.03	Q	.	.	.	.
20.85	0.1094	0.03	Q	.	.	.	.
20.97	0.1097	0.03	Q	.	.	.	.
21.09	0.1099	0.03	Q	.	.	.	.
21.21	0.1102	0.03	Q	.	.	.	.
21.33	0.1105	0.03	Q	.	.	.	.
21.44	0.1107	0.03	Q	.	.	.	.
21.56	0.1110	0.03	Q	.	.	.	.
21.68	0.1112	0.02	Q	.	.	.	.
21.80	0.1114	0.02	Q	.	.	.	.
21.92	0.1117	0.02	Q	.	.	.	.
22.03	0.1119	0.02	Q	.	.	.	.
22.15	0.1122	0.02	Q	.	.	.	.
22.27	0.1124	0.02	Q	.	.	.	.
22.39	0.1126	0.02	Q	.	.	.	.
22.51	0.1128	0.02	Q	.	.	.	.
22.63	0.1131	0.02	Q	.	.	.	.
22.74	0.1133	0.02	Q	.	.	.	.
22.86	0.1135	0.02	Q	.	.	.	.
22.98	0.1137	0.02	Q	.	.	.	.
23.10	0.1139	0.02	Q	.	.	.	.
23.22	0.1141	0.02	Q	.	.	.	.
23.34	0.1143	0.02	Q	.	.	.	.
23.45	0.1146	0.02	Q	.	.	.	.
23.57	0.1148	0.02	Q	.	.	.	.
23.69	0.1150	0.02	Q	.	.	.	.
23.81	0.1152	0.02	Q	.	.	.	.
23.93	0.1154	0.02	Q	.	.	.	.
24.05	0.1156	0.02	Q	.	.	.	.
24.17	0.1157	0.00	Q	.	.	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1441.3
10%	49.7
20%	21.3
30%	14.2
40%	7.1
50%	7.1
60%	7.1
70%	7.1

80%
90%

7.1
7.1

Modular Wetlands

SITE SPECIFIC DATA			
PROJECT NUMBER			
PROJECT NAME			
PROJECT LOCATION			
STRUCTURE ID			
TREATMENT REQUIRED			
FLOW BASED (CFS)			
0.231			
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			OFFLINE
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE			
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION			
SURFACE LOAD	DIRECT TRAFFIC		
NOTES:			

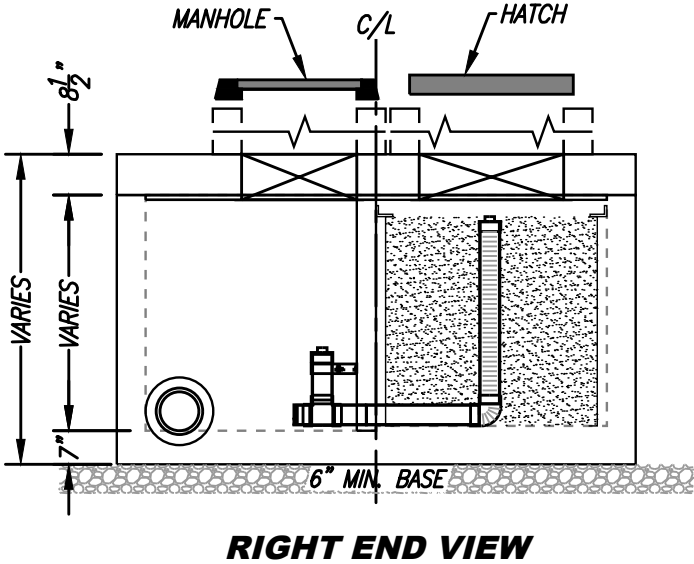
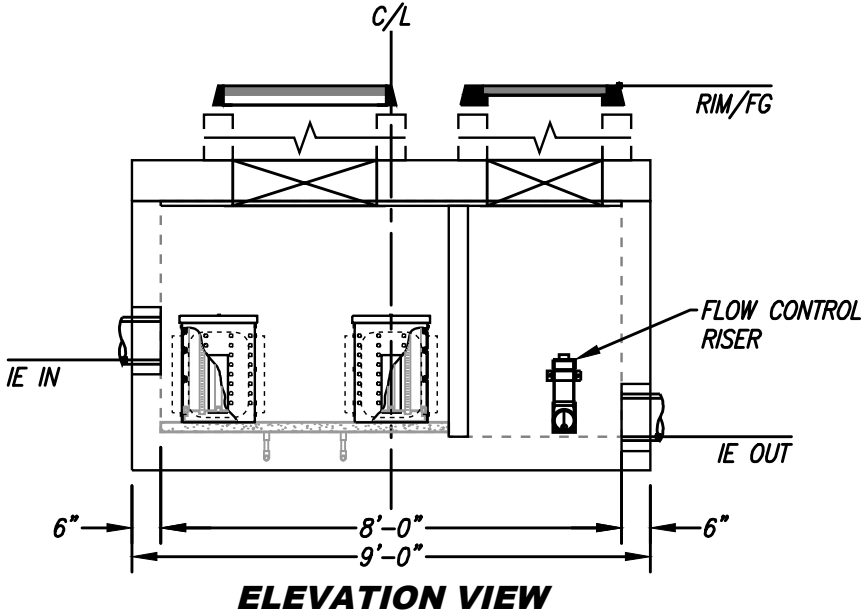
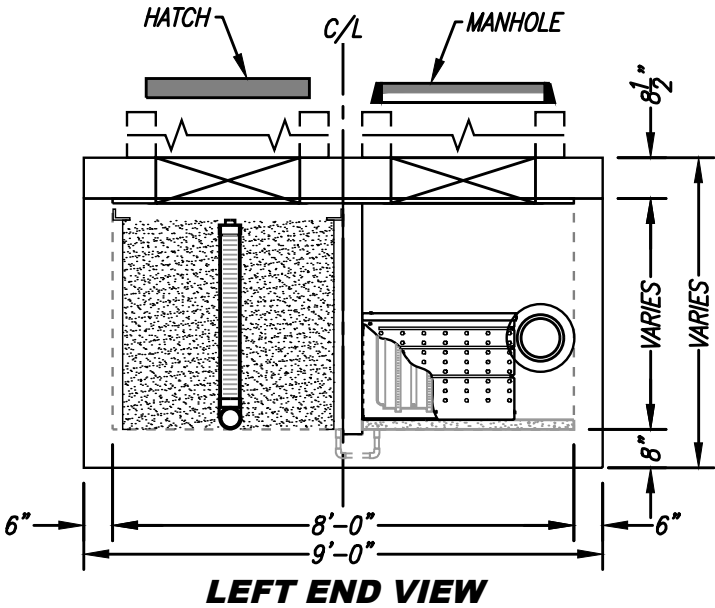
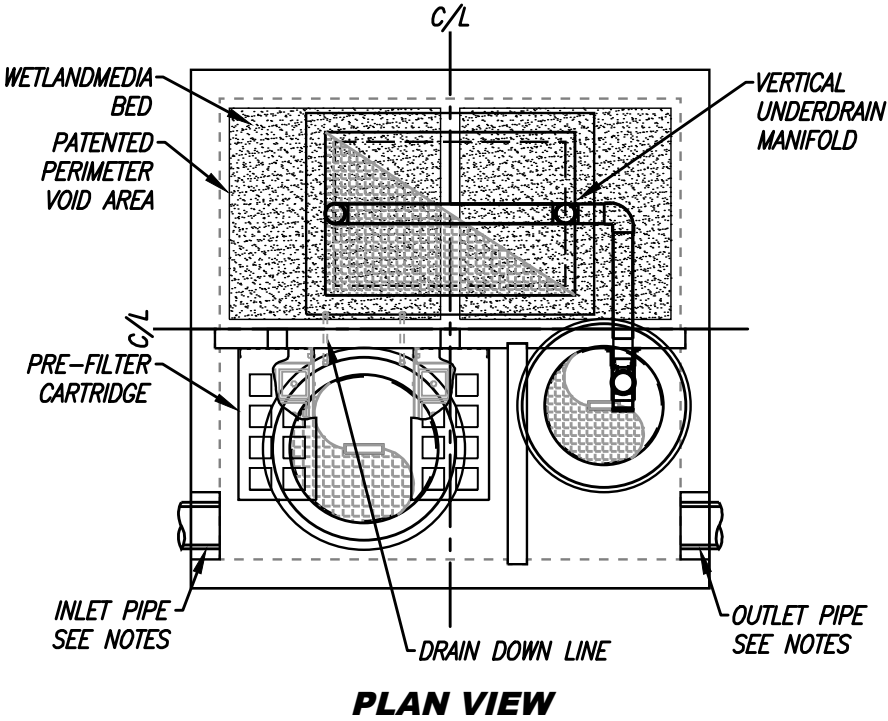
* PRELIMINARY NOT FOR CONSTRUCTION

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS' SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL PIPES, RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO USE GROUT AND/OR BRICKS TO MATCH COVERS WITH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
6. VEGETATION SUPPLIED AND INSTALLED BY OTHERS. ALL UNITS WITH VEGETATION MUST HAVE DRIP OR SPRAY IRRIGATION SUPPLIED AND INSTALLED BY OTHERS.
7. CONTRACTOR RESPONSIBLE FOR CONTACTING CONTECH FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A CONTECH REPRESENTATIVE.

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT CONTECH.



TREATMENT FLOW (CFS)	0.231
OPERATING HEAD (FT)	3.4
PRETREATMENT LOADING RATE (GPM/SF)	2.0
WETLAND MEDIA LOADING RATE (GPM/SF)	1.0



E-126

FOR PATENT INFORMATION, GO TO
www.ContechES.com/IP



MWS-L-8-8-V-UG
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

Modular Wetlands[®] Linear Stormwater Biofiltration



The experts you need to solve your stormwater challenges



Contech is the leader in stormwater solutions, helping engineers, contractors and owners with infrastructure and land development projects throughout North America.

With our responsive team of stormwater experts, local regulatory expertise and flexible solutions, Contech is the trusted partner you can count on for stormwater management solutions.

Your Contech Team



STORMWATER CONSULTANT

It's my job to recommend the best solution to meet permitting requirements.



STORMWATER DESIGN ENGINEER

I work with consultants to design the best approved solution to meet your project's needs.



REGULATORY MANAGER

I understand the local stormwater regulations and what solutions will be approved.



SALES ENGINEER

I make sure our solutions meet the needs of the contractor during construction.



Restoring Nature's Presence in Urban Areas – Modular Wetlands® Linear

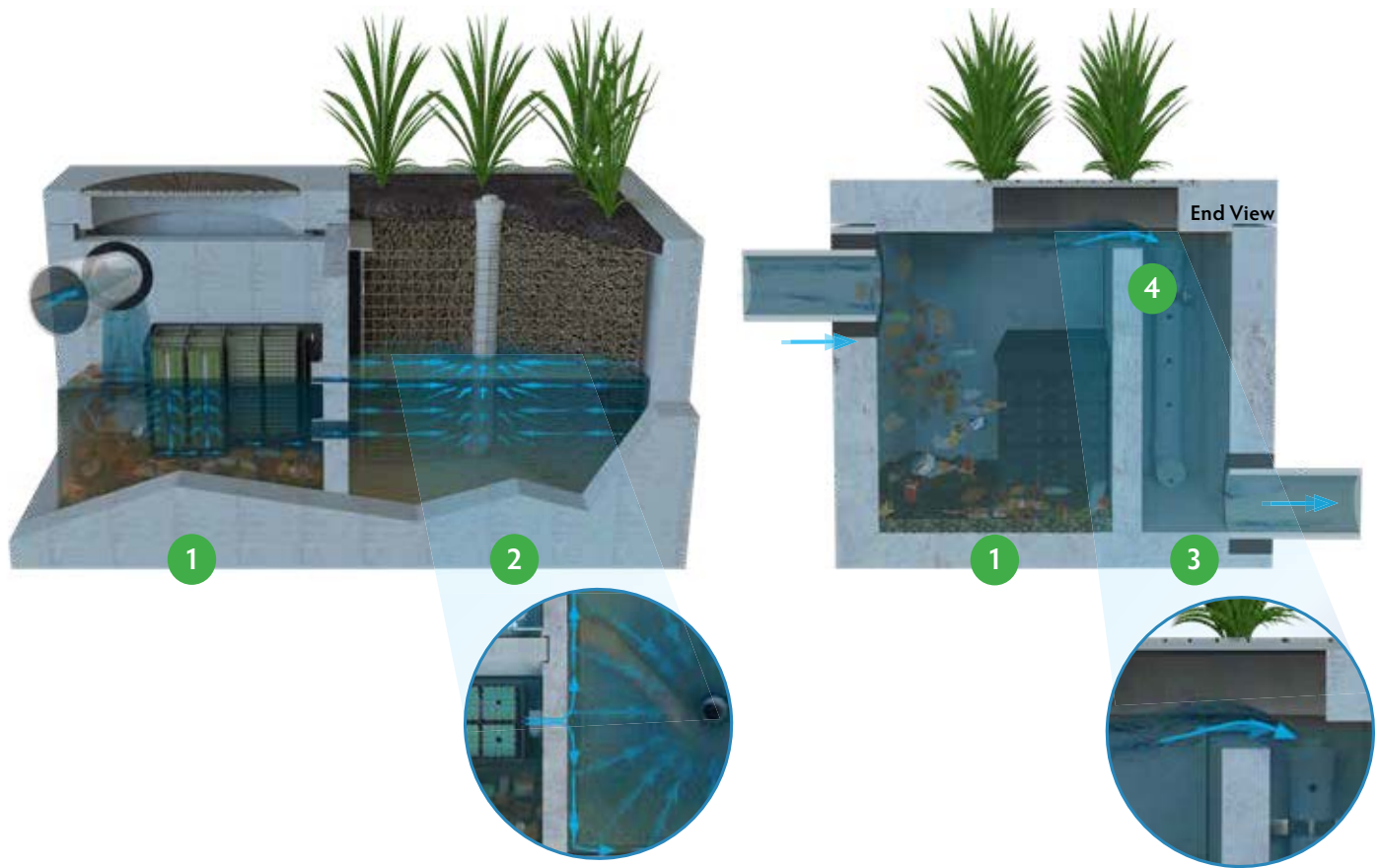
The Modular Wetlands® Linear is the only biofiltration system to utilize patented horizontal flow, allowing for a small footprint, high treatment capacity, and design versatility. It is also the only biofiltration system that can be routinely installed downstream of storage for additional volume control and treatment.

With numerous regulatory approvals, the system's aesthetic appeal and superior pollutant removal make it the ideal solution for a wide range of stormwater applications, including urban development projects, commercial parking lots, residential streets, mixed-use developments, streetscapes, and more.

As cities grow, there is less space for natural solutions to treat stormwater. Contech understands this and is committed to providing compact, Low Impact Development (LID) solutions like the Modular Wetlands Linear to protect our nation's waterways.



How the Modular Wetlands® Linear Works



- 1 **PRETREATMENT** | Stormwater enters the pretreatment chamber where total suspended solids settle, and trash and debris are contained within the chamber. Stormwater then travels through the pretreatment filter boxes that provide additional treatment.
- 2 **BIOFILTRATION** | As water enters the biofiltration chamber, it fills the void space in the chamber's perimeter. Horizontal forces push the water inward through the biofiltration media, where nutrients and metals are captured. The water then enters the drain pipe to be discharged.
- 3 **DISCHARGE** | The specially designed vertical drain pipe and orifice control plate control the flow of water through the media to a level lower than the media's capacity, ensuring media effectiveness. The water then enters the horizontal drain pipe to be discharged.
- 4 **BYPASS** | During peak flows, an internal weir in the side-by-side configuration allows high flows to bypass treatment, eliminating flooding and the need for a separate bypass structure. Bypass is not provided in the end-to-end configuration.

Modular Wetlands® Linear Features and Benefits

FEATURE	BENEFITS
Pretreatment chamber	Enhanced pollutant removal, faster maintenance
Horizontal flow biofiltration	Greater filter surface area
Performance verified by both the WA DOE and NJ DEP	Superior pollutant capture with confidence
Built-in high flow bypass	Eliminates flooding and the need for a separate bypass structure
Available in multiple configurations and sizes	Flexibility to meet site-specific needs

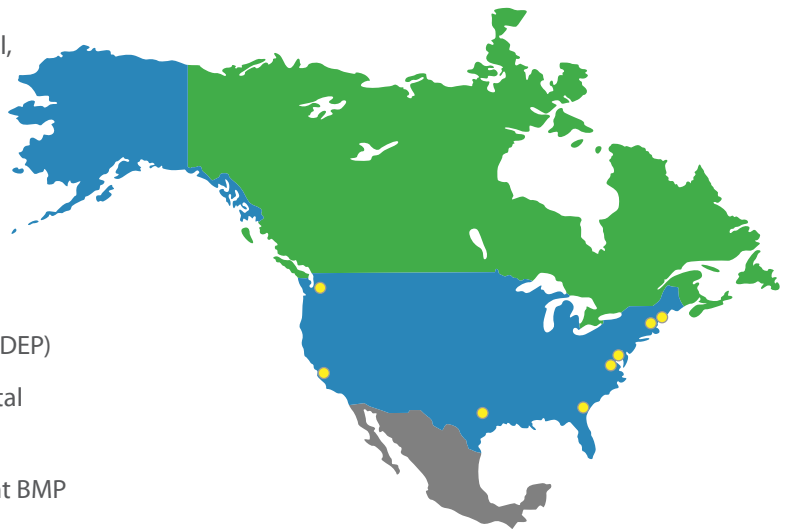


The Modular Wetlands system offers many different configurations.

Select Modular Wetlands® Linear Approvals

Modular Wetlands Linear is approved through numerous local, state and federal programs, including but not limited to:

- Washington State Department of Ecology TAPE
- California Water Resources Control Board, Full Capture Certification
- Virginia Department of Environmental Quality (VA DEQ)
- New Jersey Department of Environmental Protection (NJDEP)
- Maryland Department of the Environment - Environmental Site Design (ESD)
- Rhode Island Department of Environmental Management BMP
- Texas Commission on Environmental Quality (TCEQ)
- Atlanta Regional Commission Certification



Modular Wetlands® Performance

The Modular Wetlands® Linear continues to outperform other treatment methods with superior pollutant removal for TSS, heavy metals, nutrients, and hydrocarbons. The Modular Wetlands® Linear is field-tested on numerous sites across the country and is proven to effectively remove pollutants through a combination of physical, chemical, and biological filtration processes.

POLLUTANT OF CONCERN	MEDIAN REMOVAL EFFICIENCY	MEDIAN EFFLUENT CONCENTRATION (MG/L)
Total Suspended Solids (TSS)	89%	12
Total Phosphorus - TAPE (TP)	61%	0.041
Nitrogen (TN)	23%	1
Total Copper (TCu)	50%	0.006
Total Dissolved Copper	37%	0.006
Total Zinc (TZn)	66%	0.019
Dissolved Zinc	60%	0.0148
Motor Oil	79%	0.8

Sources:
TAPE Field Study - 2012
TAPE Field Study - 2013

Note: Some jurisdictions recognize higher removal rates. Contact your Contech Stormwater Consultant for performance expectations.

Modular Wetlands® Linear Maintenance

The Modular Wetlands® Linear is a self-contained treatment train. Maintenance requirements for the unit consist of five simple steps that can be completed using a vacuum truck. The system can also be cleaned by hand.

- Remove trash from the screening device
- Remove sediment from the separation chamber
- Periodically replace the pretreatment cartridge filter media
- Replace the drain down filter media
- Trim vegetation

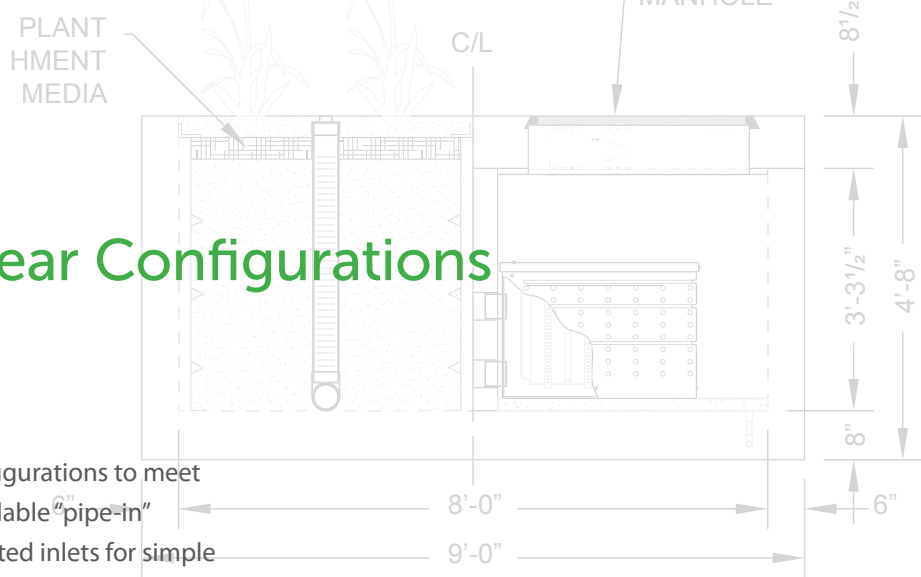


Most Modular Wetland Linear systems can be cleaned in about thirty minutes.

Modular Wetlands® Linear Configurations

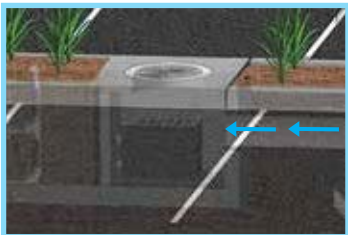
Multiple system configurations integrate with site hydraulic design and layout ...

The Modular Wetlands Linear is offered in multiple configurations to meet site specific needs. This highly versatile system has available “pipe-in” options on most models, along with built-in curb or grated inlets for simple integration into your storm drain design.



Curb Inlet

The Curb Inlet configuration accepts sheet flow through a curb opening and is commonly used along roadways and parking lots. It can be used in sump or flow-by conditions.



Vault

The Vault configuration can be used in end-of-the-line installations. Another benefit of the “pipe-in” design is the ability to install the system downstream of underground detention systems to meet water quality volume requirements, or for traffic-rated designs (no plants).



Downspout

The Downspout configuration is designed to accept a vertical downspout pipe from rooftop and podium areas. Some models have the option of utilizing an internal bypass, simplifying the overall design. The system can be installed as a raised planter, and the exterior can be stuccoed or covered with other finishes to match the look of adjacent buildings.

A partner you can rely on



STORMWATER
SOLUTIONS



PIPE
SOLUTIONS



STRUCTURES
SOLUTIONS

Few companies offer the wide range of high-quality stormwater resources you can find with us — state-of-the-art products, decades of expertise, and all the maintenance support you need to operate your system cost-effectively.

THE CONTECH WAY

Contech® Engineered Solutions provides innovative, cost-effective site solutions to engineers, contractors, and developers on projects across North America. Our portfolio includes bridges, drainage, erosion control, retaining wall, sanitary sewer and stormwater management products.

TAKE THE NEXT STEP

For more information: www.ContechES.com

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Attachment C

Operations & Maintenance Plan

Modular Wetlands[®] Linear Operation & Maintenance Manual



**MODULAR WETLANDS® LINEAR
OPERATION & MAINTENANCE MANUAL**

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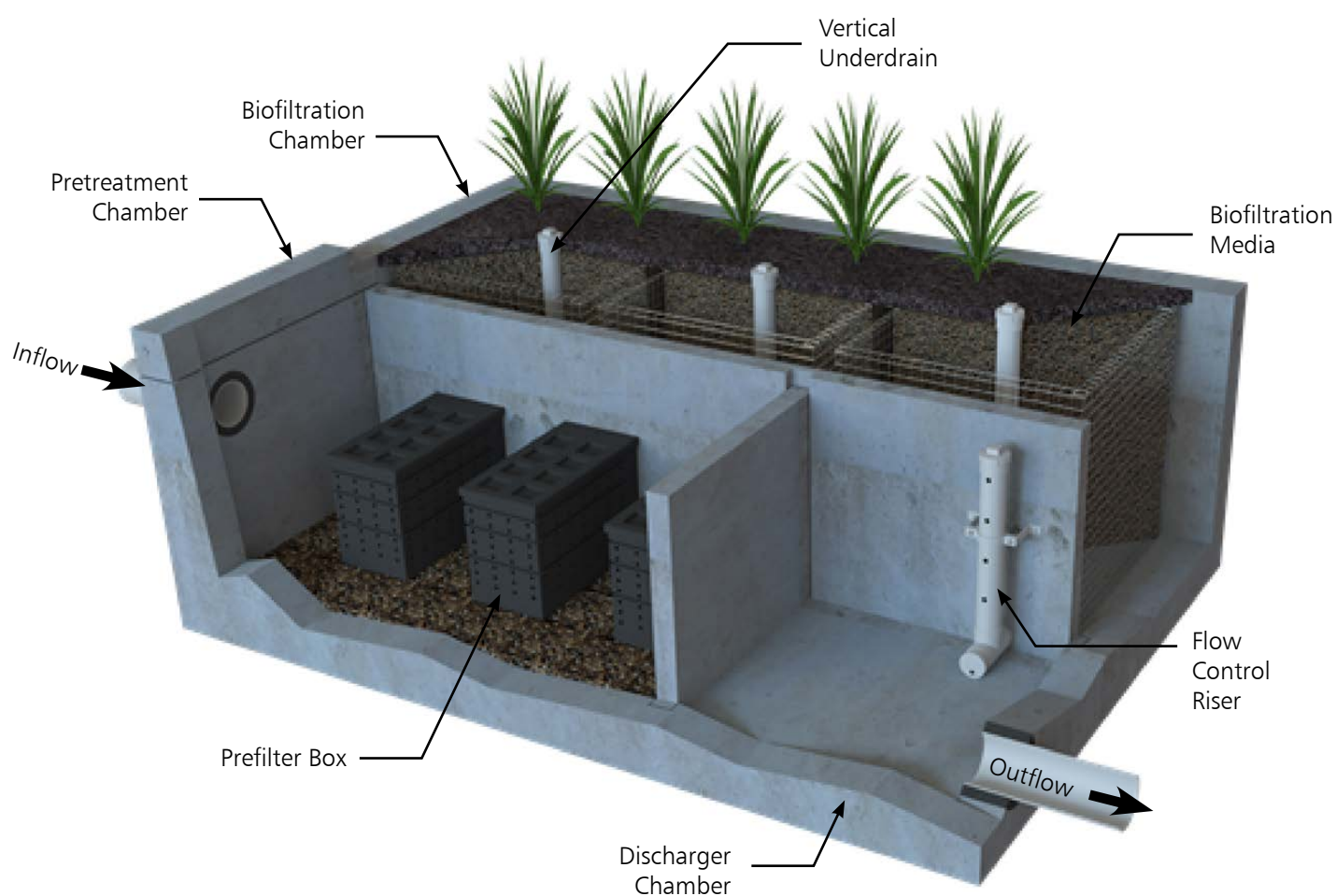
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OVERVIEW

The Modular Wetlands® Linear Biofilter is designed to remove high levels of trash, debris, sediments, nutrients, metals, and hydrocarbons. Its simple design allows for quick and easy installation. The system is housed in a standard precast structure and can be installed at various depths to meet site-specific conditions.

INTRODUCTION

This is the Modular Wetlands Linear Biofilter operation and maintenance manual. Before starting, read the instructions and equipment lists closely. It is important to follow all necessary safety procedures associated with state and local regulations. Some steps required confined space entry. Please contact Contech for more information on pre-authorized third party contractors who can provide installation services in your area. For a list of service providers in your area please visit: www.conteches.com/maintenance.



INSTRUCTIONS

INSPECTION SUMMARY

Stormwater regulations require BMPs be inspected and maintained to ensure they are operating as designed to allow for effective pollutant removal and provide protection to receiving water bodies. It is recommended that inspections be performed multiple times during the first year to assess the site specific loading conditions. The first year of inspections can be used to set inspection and maintenance intervals for subsequent years to ensure appropriate maintenance is provided.

- Inspect pre-treatment, biofiltration, and discharge chambers an average of once every six to twelve months. Varies based on site specific and local conditions.
- Average inspection time is approximately 15 minutes. Always ensure appropriate safety protocol and procedures are followed.

The following is a list of equipment required to allow for simple and effective inspection of the Modular Wetlands Linear:

- Modular Wetlands Linear Inspection Form
- Flashlight
- Manhole hook or appropriate tools to remove access hatches and covers
- Appropriate traffic control signage and procedures
- Measuring pole and/or tape measure
- Protective clothing and eye protection
- 7/16" open or closed ended wrench
- Large permanent black marker (initial inspections only - first year)

Note: entering a confined space requires appropriate safety and certification. It is generally not required for routine inspections of the system

INSPECTION AND MAINTENANCE NOTES

1. Following maintenance and/or inspection, it is recommended that the maintenance operator prepare a maintenance/inspection record. The record should include any maintenance activities performed, amount and description of debris collected, and condition of the system and its various filter mechanisms.
2. The owner should keep maintenance/inspection record(s) for a minimum of five years from the date of maintenance. These records should be made available to the governing municipality for inspection upon request at any time.
3. Transport all debris, trash, organics, and sediments to approved facility for disposal in accordance with local and state requirements.
4. Entry into chambers may require confined space training based on state and local regulations.
5. No fertilizer shall be used in the biofiltration chamber.
6. Irrigation should be provided as recommended by manufacturer and/or landscape architect. Amount of irrigation required is dependent on plant species. Some plants may not require irrigation after initial establishment.

INSPECTION PROCESS

1. Prepare the inspection form by writing in the necessary information including project name, location, date & time, unit number and other information (see inspection form).
2. Observe the inside of the system through the access covers. If minimal light is available and vision into the unit is impaired, utilize a flashlight to see inside the system and all of its chambers.
3. Look for any out of the ordinary obstructions in the inflow pipe, pre-treatment chamber, biofiltration chamber, discharge chamber or outflow pipe. Write down any observations on the inspection form.
4. Through observation and/or digital photographs, estimate the amount of trash, debris accumulated in the pre-treatment chamber. Utilizing a tape measure or measuring stick, estimate the amount of sediment in this chamber. Record this depth on the inspection form.
5. Through visual observation, inspect the condition of the pre-filter cartridges. Look for excessive build-up of sediment on the cartridges, any build-up on the tops of the cartridges, or clogging of the holes. Record this information on the inspection form. The prefilter cartridges can be further inspected by removing the cartridge tops and assessing the color of the BioMediaGREEN filter cubes (requires entry into pre-treatment chamber - see notes previous notes regarding confined space entry). Record the color of the material. New material is a light green color. As the media becomes clogged, it will turn darker in color, eventually becoming dark brown or black. The closer to black the media is the higher percentage that the media is exhausted and is in need of replacement.

New
BioMediaGREEN
0%

Exhausted
BioMediaGREEN
100%

85%



6. The biofiltration chamber is generally maintenance-free due to the system's advanced pre-treatment chamber. For units which have open planters with vegetation, it is recommended that the vegetation be inspected. Look for any plants that are dead or showing signs of disease or other negative stressors. Record the general health of the plants on the inspection form and indicate through visual observation or digital photographs if trimming of the vegetation is required.
7. The discharge chamber houses the orifice control structure, drain down filter (only in California - older models), and is connected to the outflow pipe. It is important to check to ensure the orifice is in proper operating conditions and free of any obstructions. It is also important to assess the condition of the drain down filter media which utilizes a block form of the BioMediaGREEN. Assess in the same manner as the cubes in the pre-filter cartridge as mentioned above. Generally, the discharge chamber will be clean and free of debris. Inspect the water marks on the side walls. If possible, inspect the discharge chamber during a rain event to assess the amount of flow leaving the system while it is at 100% capacity (pre-treatment chamber water level at peak HGL - top of bypass weir). The water level of the flowing water should be compared to the watermark level on the side walls, which is an indicator of the highest discharge rate the system achieved when initially installed. Record on the form if there is any difference in level from the watermark in inches.

NOTE: During the first few storms, the water level in the outflow chamber should be observed and a 6" long horizontal watermark line drawn (using a large permanent marker) at the water level in the discharge chamber while the system is operating at 100% capacity. The diagram below illustrates where the line should be drawn. This line is a reference point for future inspections of the system.

Water level in the discharge chamber is a function of flow rate and pipe size. Observation of the water level during the first few months of operation can be used as a benchmark level for future inspections. The initial mark and all future observations shall be made when the system is at 100% capacity (water level at maximum level in the pre-treatment chamber). If future water levels are below this mark when the system is at 100% capacity, this is an indicator that maintenance to the pre-filter cartridges may be needed.

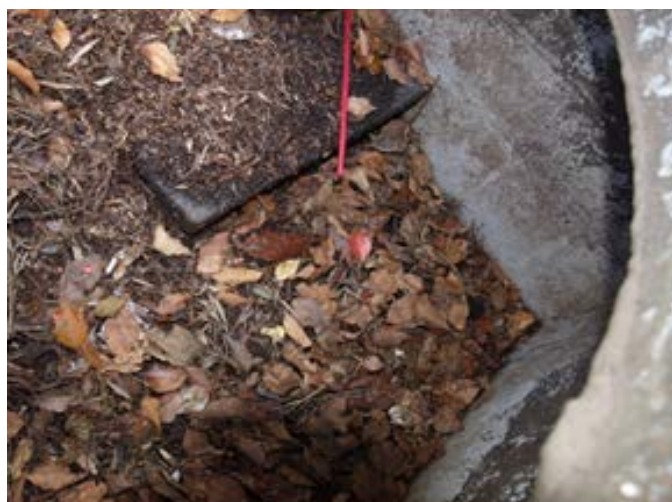
8. Finalize the inspection report for analysis by the maintenance manager to determine if maintenance is required.



MAINTENANCE INDICATORS

Based upon the observations made during inspection, maintenance of the system may be required based on the following indicators:

- Missing or damaged internal components or cartridges
- Obstructions in the system or its inlet and/or outlet pipes
- Excessive accumulation of floatables in the pretreatment chamber in which the length and width of the chamber is fully impacted more than 18". See photo below.
- Excessive accumulation of sediment in the pretreatment chamber of more than 6" in depth.
- Excessive accumulation of sediment on the BioMediaGREEN media housed within the pretreatment cartridges. The following chart shows photos of the condition of the BioMediaGREEN contained within the pre-filter cartridges. When media is more than 85% clogged, replacement is required.
- Excessive accumulation of sediment on the BioMediaGREEN media housed within the pretreatment cartridges. When media is more than 85% clogged, replacement is required. The darker the BioMediaGREEN, the more clogged it is and in need of replacement.



INSPECTION PROCESS

- Excessive accumulation of sediment on the BioMediaGREEN media housed within the drain down filter (California only - older models). The following photos show the condition of the BioMediaGREEN contained within the drain down filter. When media is more than 85% clogged, replacement is required.



- Overgrown vegetation.



- Water level in the discharge chamber during 100% operating capacity (pretreatment chamber water level at max height) is lower than the water mark by 20%.

MAINTENANCE SUMMARY

The time has come to maintain your Modular Wetlands® Linear. All necessary pre-maintenance steps must be carried out before maintenance occurs. Once traffic control has been set up per local and state regulations and access covers have been safely opened, the maintenance process can begin. It should be noted that some maintenance activities require confined space entry. All confined space requirements must be strictly followed before entry into the system. In addition, the following is recommended:

- Prepare the maintenance form by writing in the necessary information including project name, location, date & time, unit number and other info (see maintenance form).
- Set up all appropriate safety and cleaning equipment.
- Ensure traffic control is set up and properly positioned.
- Prepared pre-checks (OSHA, safety, confined space entry) are performed.

The following is a list of equipment to required for maintenance of the Modular Wetlands® Linear:

- Modular Wetlands Linear Maintenance Form
- Manhole hook or appropriate tools to access hatches and covers
- Protective clothing, flashlight, and eye protection
- 7/16" open or closed ended wrench
- Vacuum assisted truck with pressure washer
- Replacement BioMediaGREEN for pre-filter cartridges if required (order from one of Contech's Maintenance Team members at <https://www.conteches.com/maintenance>).

MAINTENANCE | PRETREATMENT CHAMBER

1. Remove access cover over pre-treatment chamber and position vacuum truck accordingly.
2. With a pressure washer, spray down pollutants accumulated on walls and pre-filter cartridges.
3. Vacuum out pre-treatment chamber and remove all accumulated pollutants including trash, debris, and sediments. Be sure to vacuum the floor until the pervious pavers are visible and clean.
4. If pre-filter cartridges require media replacement, continue to step 5. If not, replace access cover and move to step 11.

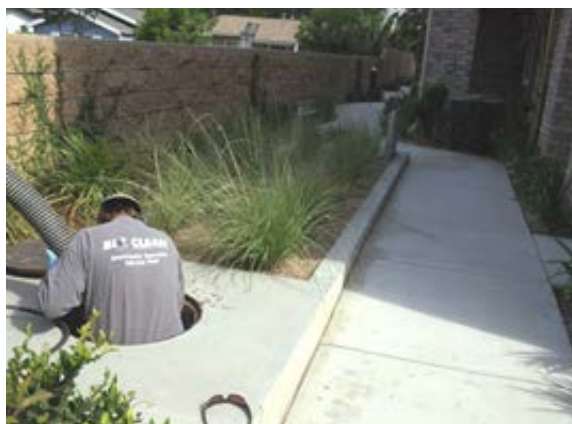


MAINTENANCE | PREFILTER CARTRIDGES

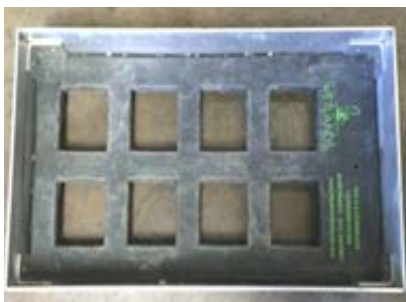
5. After successfully cleaning out the pre-treatment chamber (previous page) enter the pre-treatment chamber.
6. Unscrew the two bolts (circles shown below) holding the lid on each cartridge filter and remove lid.



7. Place the vacuum hose over each individual media filter to suck out filter media.



8. Once filter media has been sucked out, use a pressure washer to spray down the inside of the cartridge and it's media cages. Remove cleaned media cages and place to the side. Once removed, the vacuum hose can be inserted into the cartridge to vacuum out any remaining material near the bottom of the cartridge.
9. Reinstall media cages and fill with new media from the manufacturer or outside supplier. Manufacturer will provide specification of media and sources to purchase. Utilize the manufacture-provided refilling tray and place on top of the cartridge. Fill the tray with new bulk media and shake down into place. Using your hands, lightly compact the media into each filter cage. Once the cages are full, remove the refilling tray and replace the cartridge top, ensuring bolts are properly tightened.



10. Exit the pre-treatment chamber. Replace access hatch or manhole cover.

MAINTENANCE | BIOFILTRATION CHAMBER

11. In general, the biofiltration chamber is maintenance-free with the exception of maintaining the vegetation. The Modular Wetlands Linear utilizes vegetation similar to surrounding landscape areas, therefore trim vegetation to match surrounding vegetation. If any plants have died, replace them with new ones.



12. Each vertical under drain on the biofiltration chamber has a removable (threaded cap) that can be taken off to check any blockages or root growth. Once removed, a jetting attachment can be used to clean out the under drain and orifice riser.
13. As with all biofilter systems, at some point the biofiltration media (WetlandMedia) will need to be replaced. Either because of physical clogging or sorptive exhaustion of the media ion exchange capacity (to remove dissolved metals and phosphorous). The general life of this media is 10 to 20 years based on site specific conditions and pollutant loading. Utilize the vacuum truck to vacuum out the media by placing the hose into the chamber. Once all the media is removed use the power washer to spray down all the netting on the outer metal cage. Inspect the netting for any damage or holes. If the netting is damaged it can be repaired or replaced with guidance by the manufacturer.
14. Contact one of Contech's Maintenance Team members at <https://www.conteches.com/maintenance> to order new WetlandMedia. The quantity of media needed can be determined by providing the model number and unit depth. Media will be provided in super sacks for easy installation. Each sack will weigh between 1000 and 2000 lbs. A lifting apparatus (backhoe, boom truck, or other) is recommended to position the super sack over the biofiltration chamber. Fill the media cages up to the same level as the old media. Replant with vegetation.



MAINTENANCE | DISCHARGE CHAMBER

15. Remove access hatch or manhole cover over discharge chamber.
16. Enter chamber to gain access to the drain down filter. Unlock the locking mechanism and lift up drain down filter housing to remove used BioMediaGREEN filter block as shown below. *NOTE: Drain down filter is only found on units installed in California prior to 2023. If no drain down filter is present, skip steps 16 and 17.*



17. Insert a new BioMediaGREEN filter block and lock drain down filter housing back in place.
18. Replace access hatch or manhole cover over discharge chamber.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Inspection Report Modular Wetlands Linear

Project Name _____		For Office Use Only (Reviewed By) _____ (Date) _____ Office personnel to complete section to the left.
Project Address _____ (city) (Zip Code)		
Owner / Management Company _____		
Contact _____	Phone () - _____	
Inspector Name _____	Date ____ / ____ / ____	Time _____ AM / PM
Type of Inspection <input type="checkbox"/> Routine <input type="checkbox"/> Follow Up <input type="checkbox"/> Complaint <input type="checkbox"/> Storm Storm Event in Last 72-hours? <input type="checkbox"/> No <input type="checkbox"/> Yes		
Weather Condition _____		Additional Notes _____

Inspection Checklist

Modular Wetland System Type (Curb, Grate or UG Vault): _____ Size (22', 14' or etc.): _____

Structural Integrity:	Yes	No	Comments
Damage to pre-treatment access cover (manhole cover/grate) or cannot be opened using normal lifting pressure?			
Damage to discharge chamber access cover (manhole cover/grate) or cannot be opened using normal lifting pressure?			
Does the MWS unit show signs of structural deterioration (cracks in the wall, damage to frame)?			
Is the inlet/outlet pipe or drain down pipe damaged or otherwise not functioning properly?			
Working Condition:			
Is there evidence of illicit discharge or excessive oil, grease, or other automobile fluids entering and clogging the unit?			
Is there standing water in inappropriate areas after a dry period?			
Is the filter insert (if applicable) at capacity and/or is there an accumulation of debris/trash on the shelf system?			
Does the depth of sediment/trash/debris suggest a blockage of the inflow pipe, bypass or cartridge filter? If yes specify which one in the comments section. Note depth of accumulation in in pre-treatment chamber.			Depth: _____
Does the cartridge filter media need replacement in pre-treatment chamber and/or discharge chamber?			Chamber: _____
Any signs of improper functioning in the discharge chamber? Note issues in comments section.			
Other Inspection Items:			
Is there an accumulation of sediment/trash/debris in the wetland media (if applicable)?			
Is it evident that the plants are alive and healthy (if applicable)? Please note Plant Information below.			
Is there a septic or foul odor coming from inside the system?			

Waste:	Yes	No
Sediment / Silt / Clay		
Trash / Bags / Bottles		
Green Waste / Leaves / Foliage		

Recommended Maintenance	
No Cleaning Needed	
Schedule Maintenance as Planned	
Needs Immediate Maintenance	

Plant Information	
Damage to Plants	
Plant Replacement	
Plant Trimming	

Additional Notes: _____

Cleaning and Maintenance Report Modular Wetlands Linear

Project Name _____

Project Address _____
(city) (Zip Code)

Owner / Management Company _____

Contact _____

Phone () -

Inspector Name _____

Date ____ / ____ / ____

Time ____ AM / PM

Type of Inspection ☐ Routine ☐ Follow Up ☐ Complaint

☐ Storm

Storm Event in Last 72-hours? ☐ No ☐ Yes

Weather Condition _____

Additional Notes _____

For Office Use Only

(Reviewed By)

(Date)
Office personnel to complete section to the left.

Site Map #	GPS Coordinates of Insert	Manufacturer / Description / Sizing	Trash Accumulation	Foliage Accumulation	Sediment Accumulation	Total Debris Accumulation	Condition of Media 25/50/75/100 (will be changed @ 75%)	Operational Per Manufactures' Specifications (If not, why?)
	Lat:	MWS Catch Basins						
	Long:							
		MWS Sedimentation Basin						
		Media Filter Condition						
		Plant Condition						
		Drain Down Media Condition						
		Discharge Chamber Condition						
		Drain Down Pipe Condition						
		Inlet and Outlet Pipe Condition						
Comments:								



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800-338-1122

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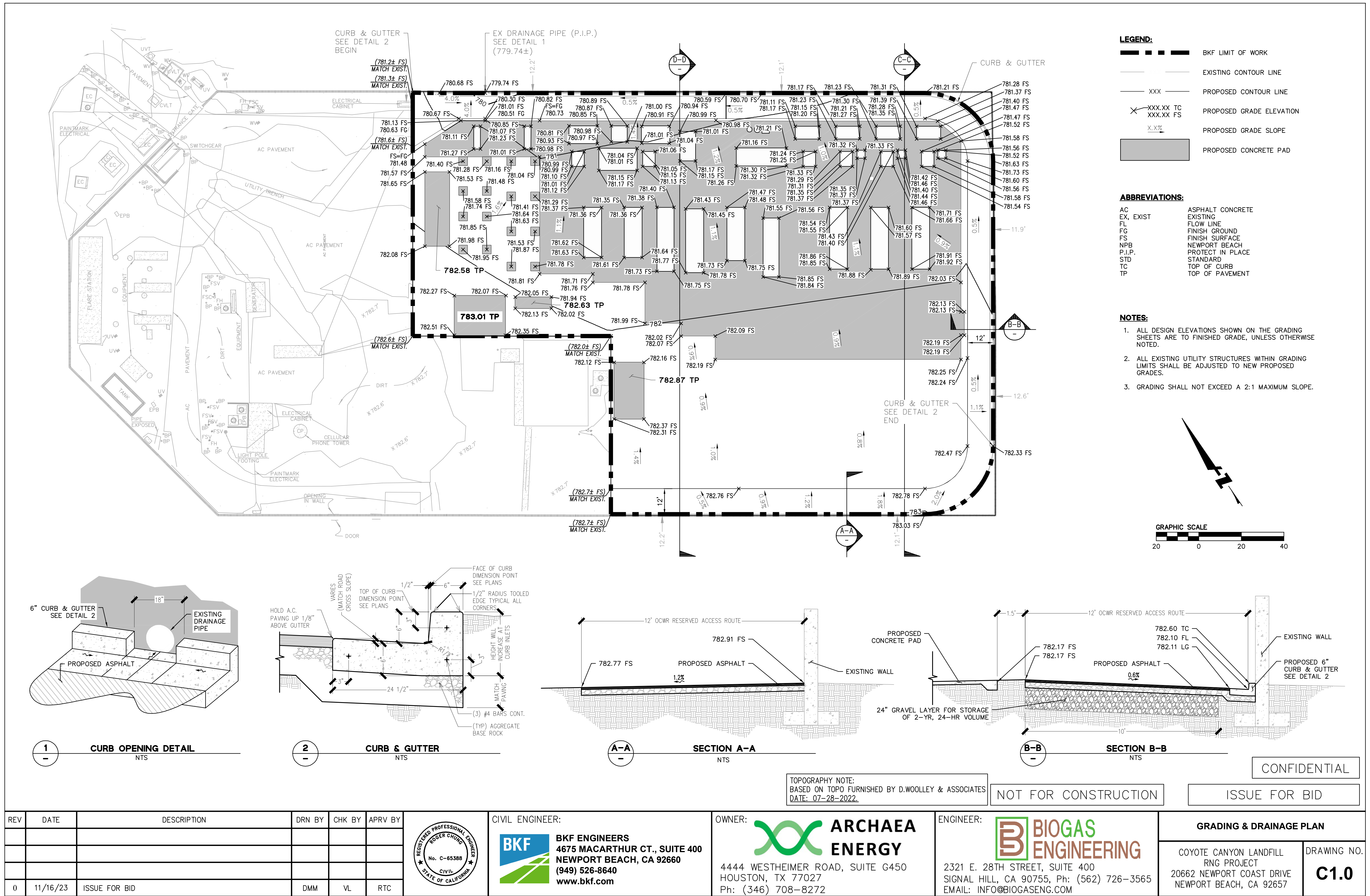
SUPPORT

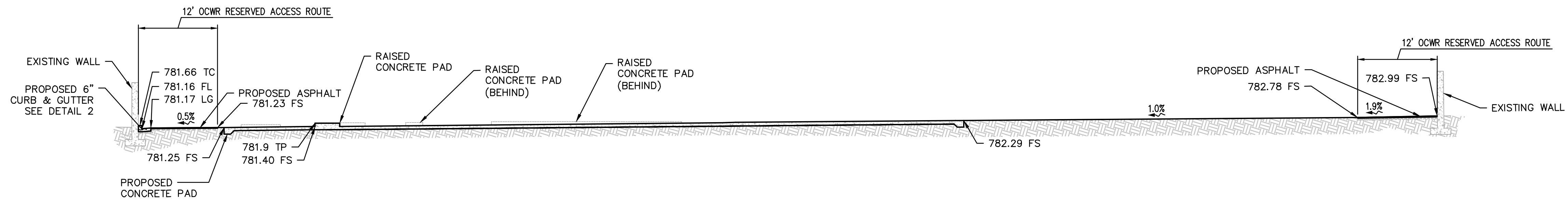
DRAWINGS AND SPECIFICATIONS ARE AVAILABLE AT WWW.CONTECHES.COM

Modular Wetlands Maintenance Guide 1/2023

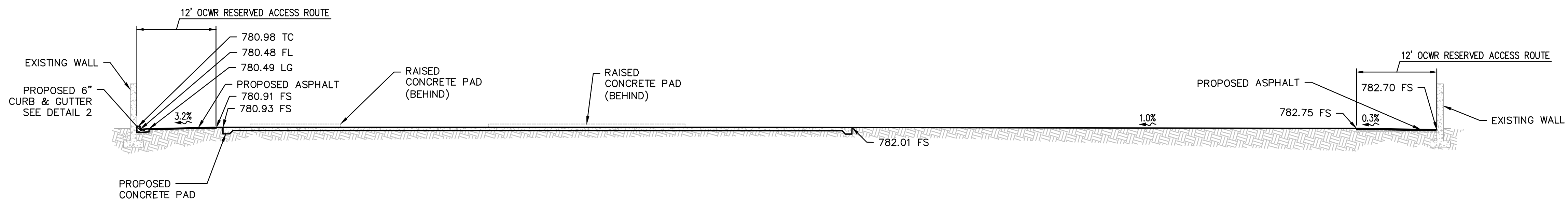
Attachment D

Construction Documents





C-C
SECTION C-C
NTS



D-D
SECTION D-D
NTS

ABBREVIATIONS:

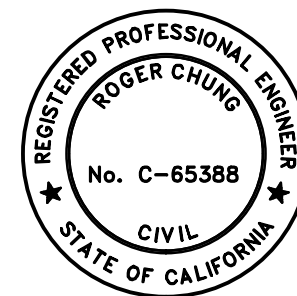


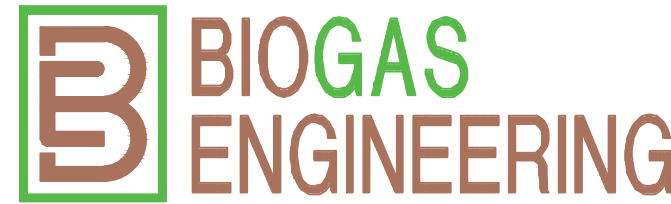
AC	ASPHALT CONCRETE
EX, EXIST	EXISTING
FL	FLOW LINE
FG	FINISH GROUND
FS	FINISH SURFACE
NPB	NEWPORT BEACH
P.I.P.	PROTECT IN PLACE
STD	STANDARD
TC	TOP OF CURB
TP	TOP OF PAVEMENT

CONFIDENTIAL

TOPOGRAPHY NOTE:
BASED ON TOPO FURNISHED BY D.WOOLLEY & ASSOCIATES
DATE: 07-28-2022.

NOT FOR CONSTRUCTION

ISSUE FOR BID

REV	DATE	DESCRIPTION	DRN BY	CHK BY	APRV BY		CIVIL ENGINEER:	OWNER:	ENGINEER:	SECTIONS	
							 BKF ENGINEERS 4675 MACARTHUR CT., SUITE 400 NEWPORT BEACH, CA 92660 (949) 526-8640 www.bkf.com	 ARCHAEA ENERGY 4444 WESTHEIMER ROAD, SUITE G450 HOUSTON, TX 77027 Ph: (346) 708-8272	 BIOGAS ENGINEERING 2321 E. 28TH STREET, SUITE 400 SIGNAL HILL, CA 90755, Ph: (562) 726-3565 EMAIL: INFO@BIOGASENG.COM	COYOTE CANYON LANDFILL RNG PROJECT 20662 NEWPORT COAST DRIVE NEWPORT BEACH, CA 92657	DRAWING NO. C1.1
0	11/16/23	ISSUE FOR BID	DMM	VL	RTC						

D:\Blogs Engineering\Blogseng - Documents\Engineering\Projects\USH2210.100 - Archaea - Coyote Canyon LF RNG BOP\Drawings\G-General Layout\G2.00 - Z Coordinate.dwg 28-09-2023 MRkarthik

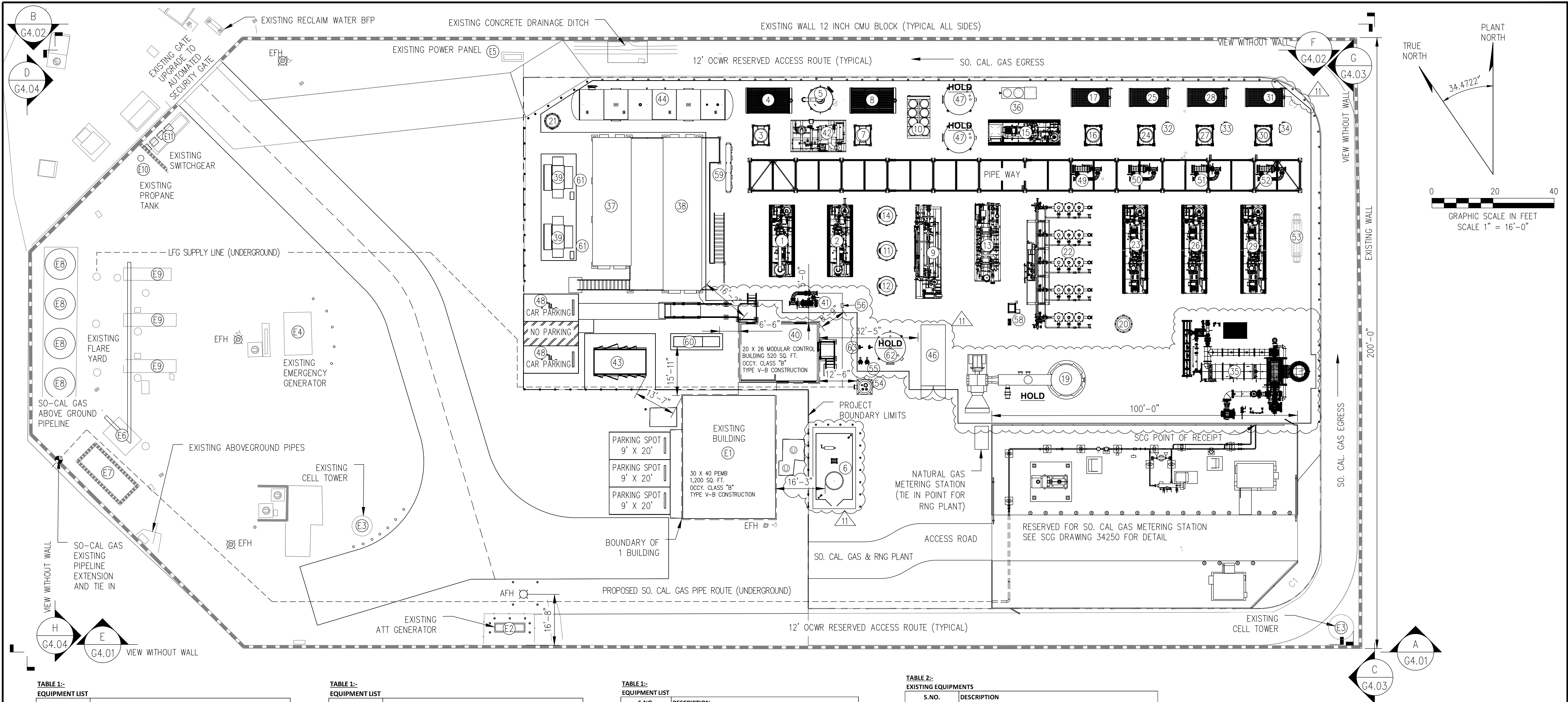


TABLE 1:-
EQUIPMENT LIST

S.NO.	DESCRIPTION
1	TYPE #1 FEED COMPRESSOR
2	TYPE #2 FEED COMPRESSOR
3	TYPE #1 COMPRESSOR FEED OIL COOLER
4	TYPE #1 COMPRESSOR FEED AFTERCOOLER
5	H2S REMOVAL VESSEL
6	LN2 PAD
7	TYPE #2 FEED COMPRESSOR OIL COOLER
8	TYPE #2 FEED COMPRESSOR AFTERCOOLER
9	TSA PRE-TREATMENT SKID
10	CHILLER
11	TSA ADSORBER VESSEL A (6' DIA.)
12	TSA ADSORBER VESSEL B (6' DIA.)
13	MEMBRANE SKID
14	VOC POLISHING VESSEL
15	TYPE #1 RECYCLE COMPRESSOR
16	TYPE #1 RECYCLE COMPRESSOR OIL COOLER
17	TYPE #1 RECYCLE COMPRESSOR AFTERCOOLER
18A	DEOXO SKID
18B	DEOXO DRYER
18C	DEOXO AFTERCOOLER
19	OFF-SPECIFICATION GAS FLARE

TABLE 1:-
EQUIPMENT LIST

S.NO.	DESCRIPTION
20	NRU BUFFER VESSEL
21	COMPRESSED AIR RECEIVER
22	NRU W/ADSORBERS
23	#1 NRU VAC. RINSE SKID
24	#1 NRU VAC. RINSE OIL COOLER
25	#1 NRU VAC. RINSE AFTERCOOLER
26	#2 NRU VAC. RINSE SKID
27	#2 NRU VAC RINSE OIL COOLER
28	#2 NRU VAC. RINSE AFTERCOOLER
29	#3 NRU VAC. RINSE SKID
30	#3 NRU VAC. RINSE OIL COOLER
31	#3 NRU VAC. RINSE AFTERCOOLER
32	#1 NRU DRYER VESSEL
33	#2 NRU DRYER VESSEL
34	#3 NRU DRYER VESSEL
35	THERMAL OXIDIZER
36	OILY WATER SEPARATOR
37	POWER DISTRIBUTION E-HOUSE
38	POWER DISTRIBUTION E-HOUSE BOP
39	TRANSFORMERS
40	OPERATOR/CONTROL SHELTER

TABLE 1:-
EQUIPMENT LIST

S.NO.	DESCRIPTION
41	STAGE #1 INLET PARTICULATE FILTER
42	H2S SKID
43	UTILITY INTERTIE SWITCHGEAR
44	TSA BLOWDOWN TANK 30,000 Gal
45	H2S GUARD BED
46	20 FEET STORAGE CONTAINER
47	CONDENSATE TANK (A & B)
48	PARKING AREA
49	NRU RINSE COMPRESSOR INLET FILTER A
50	NRU VACUUM COMPRESSOR INLET FILTER A
51	NRU RINSE COMPRESSOR INLET FILTER B
52	NRU VACUUM COMPRESSOR INLET FILTER B
53	HEAT EXCHANGER (FUTURE)
54	LFG SUMP
55	SUMP CONDENSATE PUMP
56	FLOW METER
57	CONDENSATE TANK PUMP (A & B)
58	GAS CHROMATOGRAPH
59	3rd NRU PANEL
60	EMERGENCY GENERATOR
61	NEUTRAL GROUNDING RESISTORS
62	UTILITY WATER TANK
63	UTILITY WATER PUMP

TABLE 2:-
EXISTING EQUIPMENTS

S.NO.	DESCRIPTION
E1	EXISTING BUILDING
E2	EXISTING ATT GENERATOR
E3	EXISTING CELL TOWER
E4	EXISTING EMERGENCY GENERATOR
E5	EXISTING POWER PANEL
E6	EXISTING PAD
E7	EXISTING TANK
E8	EXISTING FLARE
E9	EXISTING BLOWERS PAD
E10	EXISTING PROPANE TANK
E11	EXISTING SWITCHGEAR

AREA JUSTIFICATION FOR CONTROL BUILDING					TYPE CONSTRUCTION	OC CY CLASS	MAX. ALLOW. AREA
ID #	DESCRIPTION	WIDTH	LENGTH	AREA			
40	NEW MODULAR CONTROL BUILDING	26	20	520		V-B	9,000
E1	EXISTING PEMB BUILDING	30	40	1,200		B	9,000
TOTAL				1,880	100%		9,000

NOTES:
1 TREAT BUILDING 40 & E1 AS ONE BUILDING PER SEC. 503.1.2

HOLD:- VENDOR DRAWING IS AWAITED.

LEGENDS

EFH-EXISTING FIRE HYDRANT RETAINED	EFH
AFH-ADDED FIRE HYDRANT	AFH
GAS LINES	---
PROJECT BOUNDARY LIMITS	---
SO. CAL. GAS METERING STATION LIMITS	---

TOPOGRAPHY NOTE:
BASED ON TOPO FURNISHED BY D.WOOLLEY & ASSOCIATES
DATE: 07-28-2022.

CONFIDENTIAL

90% DESIGN REVIEW

REV	DATE	DESCRIPTION	DRN BY	CHK BY	APRV BY
8	06/15/2023	ISSUED FOR 60% DESIGN REVIEW (REVISED)	SS	TP	AG
9	07/06/2023	ISSUED FOR 60% DESIGN REVIEW (REVISED)	SS	TP	AG
10	08/16/2023	ISSUED FOR 60% DESIGN REVIEW (REVISED)	SS	TP	AG
11	09/14/2023	ISSUED FOR 90% DESIGN REVIEW	SS	TP	AG

OWNER:



4444 WESTHEIMER ROAD, SUITE G450
HOUSTON, TX 77027
Ph: (346) 708-8272

ENGINEER:



2321 E. 28TH STREET, SUITE 400
SIGNAL HILL, CA 90755, Ph: (562) 726-3565
EMAIL: INFO@BIOGASENG.COM

SITE PLAN

COYOTE CANYON LANDFILL
RNG PROJECT
20662 NEWPORT COAST DRIVE
NEWPORT BEACH, CA 92657

DRAWING NO.
G2.00

Attachment E

Geotechnical Information

**INFILTRATION TESTING FOR PROPOSED
INFILTRATION SYSTEM
PROPOSED RNG PLANT EQUIPMENT AREA
COYOTE CANYON LANDFILL
NEWPORT COAST, CALIFORNIA**

**PROJECT NO. 23775.4
APRIL 14, 2023**

Prepared For:

Biofuels Coyote Canyon Biogas, LLC
500 Technology Drive, Upper Floor
Canonsburg, Pennsylvania 15317

Attention: Mr. Nick Bauer

April 14, 2023

Biofuels Coyote Canyon Biogas, LLC.
500 Technology Drive, Upper Floor
Canonsburg, Pennsylvania 15317

Project No. 23775.4

Attention: Mr. Nick Bauer

Subject: Infiltration Testing, Proposed Infiltration System, Proposed RNG Plant
Equipment Area, Coyote Canyon Landfill, Newport Coast, California.

As requested by you, we recently conducted infiltration tests within the natural earth materials in the area of a proposed infiltration system at the subject site. Included herein are the results of our tests. The test locations were provided for us and are shown on Enclosure 1.

The earth materials encountered and tested at the site, at the proposed infiltration system location and bottom elevations, consisted predominantly of clayey siltstone with much lesser sandstone. This is consistent with the findings of our referenced Preliminary Geotechnical Investigation at the site (LOR, 2021). A log of the closest Boring (B-8) conducted during our previous site investigation is included as Enclosure 2.

Testing and Test Results

Two borehole percolation tests were conducted in general accordance with the Deep Percolation Test procedure as outlined in the Orange County Department of Public Works (2018). As mentioned above, the locations of our tests are illustrated on Enclosure 1 and the tests were conducted at the approximate requested depth of 10 feet below the surface. Subsequent to drilling, a 3-inch diameter, perforated PVC pipe wrapped in filter fabric was placed within each test hole and 3/4-inch gravel was placed between the outside of the pipe and the hole wall. Test holes were pre-soaked the same day as drilling. Testing took place the next day, March 4, 2023, within 26 hours but not before 15 hours, of the pre-soak. The holes were filled using water from a 200 gallon water tank. Test periods consisted of allowing the water to drop in approximately 30-minute intervals. After each reading, the hole was refilled. Testing was terminated after a total of 12 readings were recorded. The percolation test data was converted to an infiltration rate using the Porchet Method as outlined by the Orange County Department of Public Works (2018).

Infiltration test results are summarized in the following table:

Biofuels Coyote Canyon Biogas, LLC
April 14, 2023

Project No. 23775.4

Test No.	Depth* (ft)	Infiltration Rate** (in/hr)
P-1	10.0	0.01
P-2	10.0	0.00
* depth measured below existing ground surface ** Porchet Method determined clear water rate		

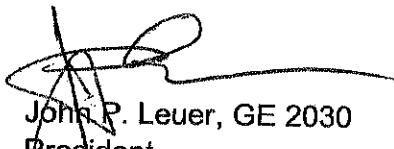
The results of this testing are presented as Enclosures 3 and 4.

Conclusions and Recommendations

The results of our field investigation and percolation test data indicates the site earth materials at the depths and locations tested are not conducive to acceptable infiltration. Therefore, consideration should be given to alternative methods and water quality storm water systems should not incorporate on-site infiltration when determining storm water treatment capacity.

We trust this information is as requested. If you have any questions regarding this letter, please do not hesitate to contact this office at your convenience.

Respectfully submitted,
LOR Geotechnical Group, Inc.


John P. Leuer, GE 2030
President



RMM:JPL:ss

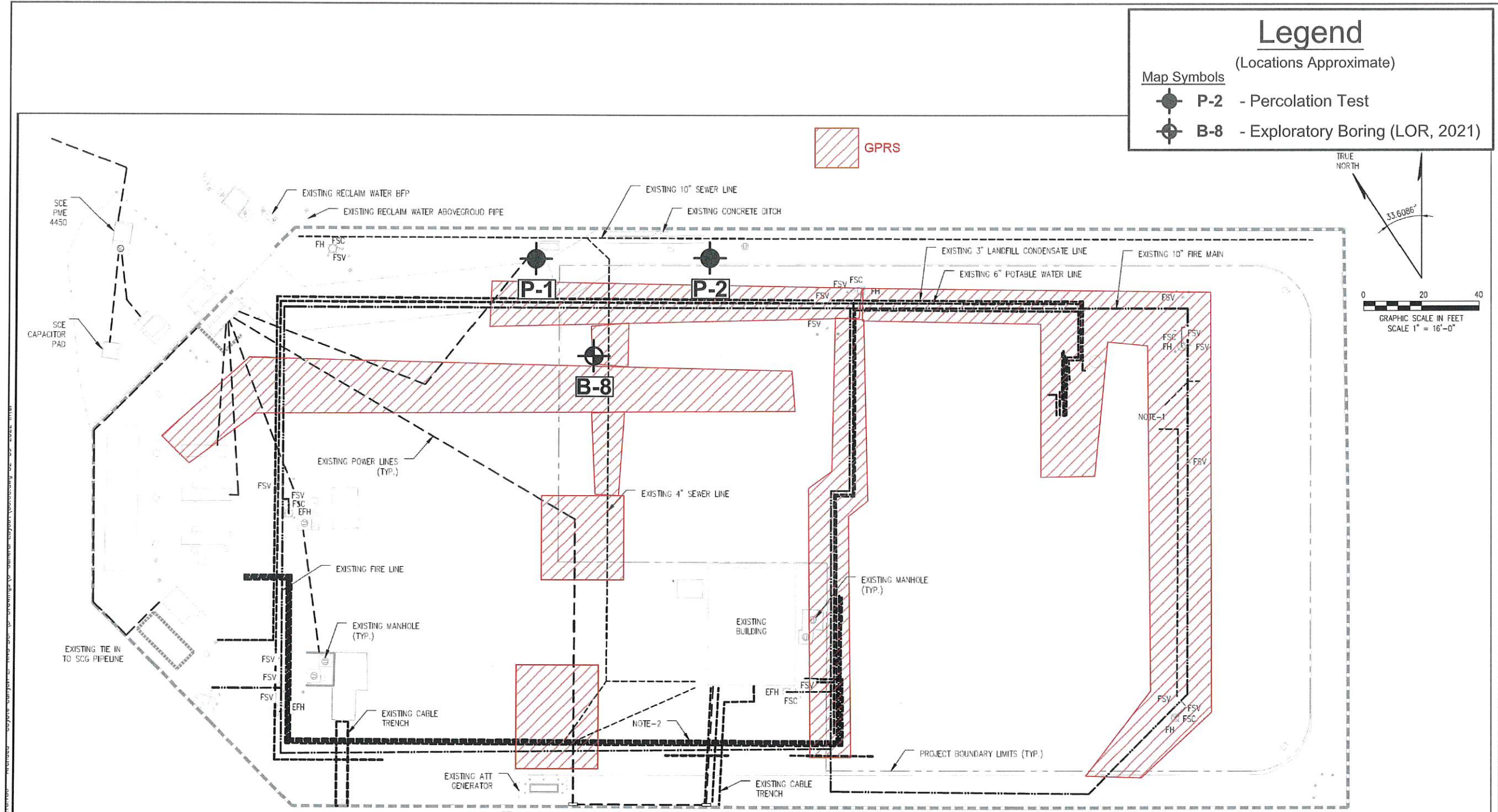
Enclosures Infiltration Map, Boring Log, and Infiltration Test Data

Distribution: Addressee (2) and via email nbauer@archaea.energy

REFERENCES


LOR Geotechnical Group, Inc., 2021, Preliminary Geotechnical Investigation, Proposed RNG Plant Equipment Area, Coyote Canyon Landfill, Newport Coast, California, Project No. 23775.1, dated December 10, 2021.


Orange County Department of Public Works, 2018, Technical Guidance Document (TGD) for the Preparation of Conceptual/Preliminary and/or Project Water Quality Management Plans (WQMPs), Version 1.1 with Minor Update, dated December 21, 2018.

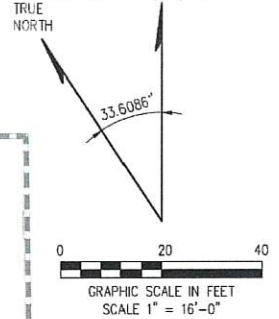


Legend
(Locations Approximate)

Map Symbols

 **P-2** - Percolation Test

 **B-8** - Exploratory Boring (LOR, 2021)



LEGENDS

- FIRE HYDRANT
- AFH-ADDED FIRE HYDRANT
- POWER LINES
- UTILITIES LINE
- FIRE LINE



LEGENDS

- FIRE SERVICE VALVE
- FIRE SERVICE CONNECT

- FSV
- FSC

NOTE:-

1. LOCATE THE DISCARDED BURIED PIPE THAT WAS PART OF PREVIOUS PROJECT.
2. EXISTING UG UTILITIES TO BE FIELD VERIFIED.

TOPOGRAPHY NOTE:
BASED ON TOPO FURNISHED BY D.WOOLLEY & ASSOCIATES
DATE: 07-28-2022.

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ISSUED FOR CUP

REV	DATE	DESCRIPTION	DRN BY	CHK BY	APRV BY
1.0	08/11/2022	ISSUED FOR CUP	AK	TP	AG

OWNER:



4444 WESTHEIMER ROAD, SUITE G450
HOUSTON, TX 77027
Ph: (346) 708-8272

ENGINEER:



2321 E. 28TH STREET, SUITE 400
SIGNAL HILL, CA 90755, Ph: (562) 726-3565
EMAIL: INFO@BIOGASENG.COM

EXISTING PIPES & CABLES
(FOR UG SERVICES SURVEY)

COYOTE CANYON LANDFILL
RNG PROJECT

DRAWING NO.
G6.00

INFILTRATION MAP

PROJECT:	Proposed RNG Plant Equipment Area	PROJECT NO.:	23775.4
CLIENT:	Biofuels Coyote Canyon Biogas, LLC	ENCLOSURE:	1
		DATE:	April 2023
		SCALE:	1" = 36'

LOR GEOTECHNICAL GROUP, INC.

LOG OF BORING B-8

TEST DATA							U.S.C.S.	DESCRIPTION
DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY		
0							SM	@ 0 feet, <u>FILL</u> : SILTY SAND with GRAVEL, approximately 15% gravel, 10 % coarse grained sand, 20% medium grained sand, 25% fine grained sand, 20% silty fines, light brown, damp, loose to medium dense.
	52		11.9	117.6				@ 2± feet, <u>BEDROCK</u> : SANDY SILTSTONE, approximately 5% medium grained sand, 30% fine grained sand, 65% silty with clay, yellowish-brown to grayish-brown, moist, weakly cemented.
5	53		14.1	115.3				
	76		12.5	118.1				@ 7 feet, slightly sandier.
10	65		14.0	112.0				@ 10 feet, siltier with minor clayey siltstone.
15	36		13.7	108.2				@ 15 feet, includes occasional think (1/8 to 1/4") gypsum stringers.
20	82 for 9"		12.8	104.5				@ 20 feet, sandier.
25								END OF BORING @ 21.25'
								Fill to 2±' No groundwater Bedrock @ 2'

PROJECT: Proposed RNG Plant Equipment Area

PROJECT NO.: 23775.1

CLIENT: Archaea Energy, LLC

ELEVATION: --

LOR GEOTECHNICAL GROUP, INC.

DATE DRILLED: November 2, 2021

EQUIPMENT: Mobile B-61

HOLE DIA.: 8" ENCLOSURE: B-8

BOREHOLE METHOD PERCOLATION TEST RESULTS

Project: Coyote Canyon Landfill
 Project No.: 23755.4
 Soil Classification: Topanga Formation: Los Trancos member
 Depth of Test Hole: 10.0 ft.
 Tested By: A.L.

Test Date: April 4, 2023
 Test Hole No.: P-1
 Effective Hole Dia.*: 4.8 in.
 Date Excavated: April 3, 2023

READING	TIME START	TIME STOP	TIME INTERVAL		TOTAL TIME hr.	INITIAL WATER LEVEL in.	FINAL WATER LEVEL in.	INITIAL HOLE DEPTH in.	FINAL HOLE DEPTH in.	CHANGE IN WATER LEVEL in.	AVERAGE WETTED DEPTH in.	PERCOLATION RATE (min/in)
			min	hr.								
1	9:23 AM	9:48 AM	25	0.42	0.42	27.25	27.50	120.00	120.00	0.25	92.63	100.0
2	9:48 AM	10:13 AM	25	0.42	0.83	27.50	27.75	120.00	120.00	0.25	92.38	100.0
3	10:13 AM	10:43 AM	30	0.50	1.33	27.75	28.25	120.00	120.00	0.50	92.00	60.0
4	10:43 AM	11:13 AM	30	0.50	1.83	28.25	28.75	120.00	120.00	0.50	91.50	60.0
5	11:13 AM	11:43 AM	30	0.50	2.33	28.75	29.25	120.00	120.00	0.50	91.00	60.0
6	11:43 AM	12:13 PM	30	0.50	2.83	29.25	29.75	120.00	120.00	0.50	90.50	60.0
7	12:13 PM	12:43 PM	30	0.50	3.33	29.75	30.25	120.00	120.00	0.50	90.00	60.0
8	12:43 PM	1:13 PM	30	0.50	3.83	30.25	30.75	120.00	120.00	0.50	89.50	60.0
9	1:13 PM	1:43 PM	30	0.50	4.33	30.75	31.25	120.00	120.00	0.50	89.00	60.0
10	1:43 PM	2:13 PM	30	0.50	4.83	31.25	31.75	120.00	120.00	0.50	88.50	60.0
11	2:13 PM	2:43 PM	30	0.50	5.33	31.75	32.25	120.00	120.00	0.50	88.00	60.0
12	2:43 PM	3:13 PM	30	0.50	5.83	32.25	32.75	120.00	120.00	0.50	87.50	60.0

PERCOLATION RATE CONVERSION (Porchet Method):

H_o 87.75
 H_f 87.25
 ΔH 0.50
 H_{avg} 87.50
 I_t 0.01 in/hr (clear water rate)

* diameter adjusted to an effective diameter due to the loss in volume of water because of gravel packing

BOREHOLE METHOD PERCOLATION TEST RESULTS

Project: Coyote Canyon Landfill
 Project No.: 23755.4
 Soil Classification: Topanga Formation: Los Trancos member
 Depth of Test Hole: 10.0 ft.
 Tested By: A.L.

Test Date: April 4, 2023
 Test Hole No.: P-2
 Effective Hole Dia.: 4.8 in.
 Date Excavated: April 3, 2023

READING	TIME START	TIME STOP	TIME INTERVAL		TOTAL TIME hr.	INITIAL WATER LEVEL	FINAL WATER LEVEL	INITIAL HOLE DEPTH	FINAL HOLE DEPTH	CHANGE IN WATER LEVEL	AVERAGE WETTED DEPTH	PERCOLATION RATE
			min	hr.		in.	in.	in.	in.	in.	in.	(min/in)
1	9:25 AM	9:50 AM	25	0.42	0.42	18.00	18.13	120.00	120.00	0.125	101.94	200.0
2	9:50 AM	10:15 AM	25	0.42	0.83	18.13	18.25	120.00	120.00	0.125	101.81	200.0
3	10:15 AM	10:45 AM	30	0.50	1.33	18.25	18.38	120.00	120.00	0.125	101.69	240.0
4	10:45 AM	11:15 AM	30	0.50	1.83	18.38	18.50	120.00	120.00	0.125	101.56	240.0
5	11:15 AM	11:45 AM	30	0.50	2.33	18.50	18.63	120.00	120.00	0.125	101.44	240.0
6	11:45 AM	12:15 PM	30	0.50	2.83	18.63	18.75	120.00	120.00	0.125	101.31	240.0
7	12:15 PM	12:45 PM	30	0.50	3.33	18.75	18.88	120.00	120.00	0.125	101.19	240.0
8	12:45 PM	1:15 PM	30	0.50	3.83	18.88	19.00	120.00	120.00	0.125	101.06	240.0
9	1:15 PM	1:45 PM	30	0.50	4.33	19.00	19.13	120.00	120.00	0.125	100.94	240.0
10	1:45 PM	2:15 PM	30	0.50	4.83	19.13	19.25	120.00	120.00	0.125	100.81	240.0
11	2:15 PM	2:45 PM	30	0.50	5.33	19.25	19.38	120.00	120.00	0.125	100.69	240.0
12	2:45 PM	3:15 PM	30	0.50	5.83	19.38	19.50	120.00	120.00	0.125	100.56	240.0

PERCOLATION RATE CONVERSION (Porchet Method):

H_o 100.63
 H_f 100.50
 ΔH 0.125
 H_{avg} 100.56
 I_t 0.00 in/hr (clear water rate)


* diameter adjusted to an effective diameter due to the loss in volume of water because of gravel packing

Appendix

Appendix F Hazardous Material Inventory Statement

Appendix

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Appendix F

Hazardous Material Inventory Statement

**COYOTE CANYON RNG PROJECT
HAZARDOUS MATERIAL INVENTORY STATEMENT**

CHEMICAL or TRADE NAME	CONC (%)	CAS NUMBER	PHYSICAL STATE	AMOUNT (LBS)	NFPA 704 RATING			
					H	F	R	S/H
METHANE	36-97	74-82-8	GAS	157	0	4	0	
HYDROGEN SULFIDE	0.00477	7783-06-4	GAS	0.01	4	4	3	
CARBON DIOXIDE	0.8-44	124-38-9	GAS	243	2	0	0	SA
NITROGEN	100	7727-37-9	LIQUID	10,064	3	0	0	
BSR-50				26,130	0	0	0	
ZINC OXIDE	20-60		SOLID					
IRON HYDROXIDE OXIDE	20-60		SOLID					
SILICON DIOXIDE	5-30		SOLID					
WATER (ABSORBED)	< 15		-					
F200 1/8" ALUMINUM OXIDE	80-100	1344-28-1	SOLID	19,206	1	0	0	
GRADE 06 SILICON OXIDE	99-100	7631-86-9	SOLID	26,712	1	0	0	
OXIGONE 230				1,700	0	0	0	
PLATINUM OXIDE	< 1	1314-15-4	SOLID					
ALUMINUM OXIDE	BALANCE	1344-28-1	SOLID					
NORBIT ACTIVATED CARBON	100	7440-44-0	SOLID	26,366	1	2	0	
RC-INERT BALLS				14,280	1	0	0	
SILICON DIOXIDE	50-70	1840860-7	SOLID					
ALUMINUM OXIDE	10-30	1344-28-1	SOLID					
TITANIUM OXIDE	0-2	13463-67-7	SOLID					
FERRIC OXIDE	0-2	1309-37-1	SOLID					
MAGNESIUM OXIDE	0-1	1309-48-4	SOLID					
POTASSIUM OXIDE	0-5	12136-45-7	SOLID					
SODIUM OXIDE	0-2	1313-59-3	SOLID					
MOISTURE	< 1	7732-18-5	-					
MSORB SYNTHETIC ZEOLITE	100	63231-69-6	SOLID	17,062	1	0	1	
SULFATRAP R7J			SOLID	6,303	2	0	0	
CUPRIC HYDROXIDE	> 60	20427-59-2						
POTASSIUM NITRATE	< 2	7757-79-1						
ALUMINUM OXIDE	< 10	1344-28-1						
SPOTLEAK 1039			LIQUID	895	2	4	0	
T-BUTYL MERCAPTAN	48-51	75-66-1						
TETRAHYDROTHIOPHENE	48-51	110-01-0						
REFRIGERANT R-410A			LIQUID	25.5	2	1	0	
DIFLOUROMETHANE	50	75-10-5						
PENTAFLUOROMETHANE	50	354-33-6						
LUBRICANT CPI-6005-150	100	N/A	LIQUID		1	1	0	
POLYALPHAOLEFIN								
DURING OPERATION				17,062				
DURING MAINTENANCE				34,123				
TRANSFORMER INSULATING OIL BIOTRAN-35								
VEGETABLE ESTER	99	N/A	LIQUID	19,916	0	0	0	
AGENT PACKAGE	1	N/A	LIQUID	201	0	0	0	

COYOTE CANYON RNG PROJECT VESSEL/TANK/PIPING INVENTORY														
DRAWING G2.00 TAG	NAME	FREE VOLUME (GAL)	DISPLACED VOLUME* (GAL)	MAWP (PSIG)	FUNCTION	CONTENTS	METHANE (%)	CO2 (%)	H2S (%)	CUFT	CH4 LBS	CO2 LBS	H2S LBS	OTHER LBS
5	H2S REMOVAL VESSEL	8500	3400	50	H2S REMOVAL FROM LANDFILL GAS	ADSORBANT MEDIA, LANDFILL GAS	43%	35%	0.005%	454	8.7	19.9	0.0021	
11	TSA ADSORBER VESSEL A	3700	1480	250	VOC & MOISTURE REMOVAL FROM LANDFILL GAS	ADSORBANT MEDIA, LANDFILL GAS	43%	35%	0	198	3.8	8.6	0.0000	
12	TSA ADSORBER VESSEL B	3700	1480	250	VOC & MOISTURE REMOVAL FROM LANDFILL GAS	ADSORBANT MEDIA, LANDFILL GAS	43%	35%	0	198	3.8	8.6	0.0000	
14	VOC POLISHING VESSEL	3700	1480	250	VOC REMOVAL FROM LANDFILL GAS	ADSORBANT MEDIA, LANDFILL GAS	43%	35%	0	198	3.8	8.6	0.0000	
45	H2S POLISHING BED	1000	400	250	TRACE H2S REMOVAL FROM LANDFILL GAS	ADSORBANT MEDIA, LANDFILL GAS	43%	35%	0.0002%	53	1.0	2.3	0.00001	
44	TSA BLOWDOWN TANK	30000	30000	150	BUFFER TANK TO RECYCLE PARTIALLY TREATED LANDFILL GAS.	PARTIALLY TREATED LANDFILL GAS	43%	35%	0	4,010	76.7	175.2	0.0000	
22	ADSORBER VESSELS N51 A/B/C	1455	582	150	NITROGEN REMOVAL FROM LANDFILL GAS	ADSORBENT MEDIA, PARTIALLY TREATED LANDFILL GAS	69%	0.53%	0	78	2.4	0.05	0.0000	
22	ADSORBER VESSELS N52 A/B/C	1455	582	150	NITROGEN REMOVAL FROM LANDFILL GAS	ADSORBENT MEDIA, PARTIALLY TREATED LANDFILL GAS	69%	0.53%	0	78	2.4	0.05	0.0000	
22	ADSORBER VESSELS N53 A/B/C	1455	582	150	NITROGEN REMOVAL FROM LANDFILL GAS	ADSORBENT MEDIA, PARTIALLY TREATED LANDFILL GAS	69%	0.53%	0	78	2.4	0.05	0.0000	
22	ADSORBER VESSELS N54 A/B/C	1455	582	150	NITROGEN REMOVAL FROM LANDFILL GAS	ADSORBENT MEDIA, PARTIALLY TREATED LANDFILL GAS	69%	0.53%	0	78	2.4	0.05	0.0000	
22	ADSORBER VESSELS N55 A/B/C	1455	582	150	NITROGEN REMOVAL FROM LANDFILL GAS	ADSORBENT MEDIA, PARTIALLY TREATED LANDFILL GAS	69%	0.53%	0	78	2.4	0.05	0.0000	
20	NRU BUFFER VESSEL	4000	4000	150	NRU WASTE GAS BUFFER TANK	WASTE GAS	15%	0%	0	535	3.5	0.00	0.0000	
32	NRU DRYER VESSEL #1	2000	800	150	TRACE MOISTURE REMOVAL FROM PRODUCT GAS	ADSORBENT MEDIA, PRODUCT GAS	97.0%	0.8%	0	107	4.6	0.11	0.0000	
33	NRU DRYER VESSEL #2	2000	800	150	TRACE MOISTURE REMOVAL FROM PRODUCT GAS	ADSORBENT MEDIA, PRODUCT GAS	97.0%	0.8%	0	107	4.6	0.11	0.0000	
34	NRU DRYER VESSEL #3	2000	800	150	TRACE MOISTURE REMOVAL FROM PRODUCT GAS	ADSORBENT MEDIA, PRODUCT GAS	97.0%	0.8%	0	107	4.6	0.11	0.0000	
NA	RNG FACILITY PIPING	8011	8011	250	PROCESS CONVEYANCE	LFG & PROCESS GAS	60.5%	14.5%	0.005%	1,071	29.0	19.2	0.0049	
DRAWING G5.02	SOCALGAS FACILITY PIPING	68	68	60	RNG METERING AND CONVEYANCE	RENEWABLE NATURAL GAS (RNG)	97.0%	0.8%	0	9	0.4	0.01	0.0000	
21	COMPRESSED AIR RECEIVER	1560	1560	165	STORAGE OF COMPRESSED AIR	AIR	-	-	-	209	-	-	-	
DRAWING G5.02	ODORANT TANK	120	120	150	STORAGE OF ODORANT LIQUID BY SOCALGAS	MERCAPTAN	-	-	-	16	-	-	-	895.2
6	LN2 TANK	1500	1500	250	STORAGE OF LIQUID NITROGEN TO VAPORIZE AND USE DURING STARTUP AND SHUTDOWN SYSTEM PURGING AND INERTING.	NITROGEN	-	-	-	201	-	-	-	10,064
47	CONDENSATE TANK	4200	4200	ATM	CONDENSATE COLLECTION AND HOLDING TANK, DISCHARGES TO SEWER.	LFG CONDENSATE	-	-	-	561	-	-	-	35,033
										SUM	156.7	243.05	0.007	

* DISPLACED VOLUME IS THE RESIDUAL FREE SPACE REMAINING ONCE THE VESSEL IS FILLED WITH MEDIA, AN AVERAGE OF 40% OF THE TOTAL VESSEL VOLUME

Appendix

Appendix G The EDR Radius Map Report with GeoCheck

Appendix

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Proposed Landfill Gas To Energy Plant

20662 Newport Coast Drive
Newport Coast, CA 92657

Inquiry Number: 7470886.2s
October 17, 2023

The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

20662 NEWPORT COAST DRIVE
NEWPORT COAST, CA 92657

COORDINATES

Latitude (North): 33.6131020 - 33° 36' 47.16"
Longitude (West): 117.8219590 - 117° 49' 19.05"
Universal Transverse Mercator: Zone 11
UTM X (Meters): 423748.8
UTM Y (Meters): 3719368.5
Elevation: 812 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 12014842 LAGUNA BEACH, CA
Version Date: 2018

North Map: 12014866 TUSTIN, CA
Version Date: 2018

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20200424
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:
20662 NEWPORT COAST DRIVE
NEWPORT COAST, CA 92657

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	COYOTE CANYON LANDFI	NEWPORT COAST DRIVE	RGA LF		TP
A2	COYOTE CANYON ENERGY	20662 NEWPORT COAST	FINDS		TP
A3	GAS RECOVERY SYSTEMS	20662 NEWPORT COAST	CPS-SLIC, HWTS, HAZNET		TP
A4	COYOTE CANYON LANDFI	20661 NEWPORT COAST	SWF/LF, CPS-SLIC, LDS, ENF, Financial Assurance,...		TP
A5	GAS RECOVERY SYSTEMS	20662 NEWPORT COAST	AST, Orange Co. Industrial Site, EMI, NPDES,...		TP
A6	COYOTE CANYON ENERGY	20662 NEWPORT COAST	HWTS, HAZNET		TP
A7	COYOTE CANYON ENERGY	20662 NEWPORT COAST	RCRA NonGen / NLR		TP
A8	OC WASTE & RECYCLING	20662 NEWPORT COAST	EMI		TP
A9	LANDFILLNACOYOTE CAN	20661 NEWPORT COAST	FINDS		TP
A10	OC WASTE & RECYCLING	20662 NEWPORT COAST	FINDS		TP
A11	COYOTE CANYON LANDFI	20661 NEWPORT COAST	CERS		TP
A12	OC WASTE & RECYCLING	20662 NEWPORT COAST	EMI		TP

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
COYOTE CANYON LANDFI NEWPORT COAST DRIVE IRVINE, CA	RGA LF	N/A
COYOTE CANYON ENERGY 20662 NEWPORT COAST NEWPORT COAST, CA 92657	FINDS Registry ID:: 110065556614	N/A
GAS RECOVERY SYSTEMS 20662 NEWPORT COAST NEWPORT BEACH, CA 92657	CPS-SLIC Database: CPS-SLIC, Date of Government Version: 06/05/2023 Facility Status: Completed - Case Closed Global Id: T10000017782 HWTS HAZNET GEPAID: CAL000311304	N/A
COYOTE CANYON LANDFI 20661 NEWPORT COAST NEWPORT BEACH, CA 92657	SWF/LF Database: SWF/LF (SWIS), Date of Government Version: 05/08/2023 Facility ID: 30-AB-0017 Operational Status: Closed Regulation Status: Permitted CPS-SLIC Database: CPS-SLIC, Date of Government Version: 06/05/2023 Facility Status: Completed - Case Closed Global Id: T10000009361 LDS Global Id: L10004005233 Status: Open - Closed/with Monitoring ENF Status: Historical Status: Active Status: Historical Facility Id: 236445 Financial Assurance Database: Financial Assurance 2, Date of Government Version: 05/04/2023 SWIS No: 30-AB-0017 CIWQS CERS	N/A
GAS RECOVERY SYSTEMS 20662 NEWPORT COAST NEWPORT BEACH, CA 92657	AST Database: AST, Date of Government Version: 07/06/2016 Orange Co. Industrial Site	N/A

EXECUTIVE SUMMARY

	Current Status: CLOSED Case ID: 06IC028	
	EMI Facility Id: 45448 Facility Id: 176967	
	NPDES CIWQS CERS	
COYOTE CANYON ENERGY 20662 NEWPORT COAST NEWPORT BEACH, CA 92657	HWTS HAZNET GEPAID: CAL000393667	N/A
COYOTE CANYON ENERGY 20662 NEWPORT COAST NEWPORT BEACH, CA 92657	RCRA NonGen / NLR EPA ID:: CAL000393667	CAL000393667
OC WASTE & RECYCLING 20662 NEWPORT COAST NEWPORT COAST, CA 92657	EMI Facility Id: 181426	N/A
LANDFILLNACoyote Can 20661 NEWPORT COAST NEWPORT BEACH, CA 92657	FINDS Registry ID:: 110066785009	N/A
OC WASTE & RECYCLING 20662 NEWPORT COAST NEWPORT COAST, CA 92657	FINDS Registry ID:: 110070521085	N/A
COYOTE CANYON LANDFI 20661 NEWPORT COAST NEWPORT BEACH, CA 92657	CERS	N/A
OC WASTE & RECYCLING 20662 NEWPORT COAST NEWPORT COAST, CA 92657	EMI Facility Id: 181426	N/A

EXECUTIVE SUMMARY

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL..... National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY..... Federal Facility Site Information listing
SEMS..... Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE..... Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS..... Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-SQG..... RCRA - Small Quantity Generators
RCRA-VSQG..... RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS..... Land Use Control Information System
US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROLS..... Institutional Controls Sites List

Federal ERNS list

ERNS..... Emergency Response Notification System

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE..... State Response Sites

EXECUTIVE SUMMARY

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR..... EnviroStor Database

Lists of state and tribal leaking storage tanks

LUST..... Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST..... Underground Storage Tank Listing
UST..... Active UST Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land

Lists of state and tribal voluntary cleanup sites

VCP..... Voluntary Cleanup Program Properties
INDIAN VCP..... Voluntary Cleanup Priority Listing

Lists of state and tribal brownfield sites

BROWNFIELDS..... Considered Brownfields Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT..... Waste Management Unit Database
SWRCY..... Recycler Database
HAULERS..... Registered Waste Tire Haulers Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
ODI..... Open Dump Inventory
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register
HIST Cal-Sites..... Historical Calsites Database
SCH..... School Property Evaluation Program
CDL..... Clandestine Drug Labs
CERS HAZ WASTE..... California Environmental Reporting System Hazardous Waste
Toxic Pits..... Toxic Pits Cleanup Act Sites
US CDL..... National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

SWEEPS UST..... SWEEPS UST Listing

EXECUTIVE SUMMARY

HIST UST..... Hazardous Substance Storage Container Database
 CA FID UST..... Facility Inventory Database
 CERS TANKS..... California Environmental Reporting System (CERS) Tanks

Local Land Records

LIENS..... Environmental Liens Listing
 LIENS 2..... CERCLA Lien Information
 DEED..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System
 CHMIRS..... California Hazardous Material Incident Report System
 MCS..... Military Cleanup Sites Listing
 SPILLS 90..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS..... Formerly Used Defense Sites
 DOD..... Department of Defense Sites
 SCR DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing
 US FIN ASSUR..... Financial Assurance Information
 EPA WATCH LIST..... EPA WATCH LIST
 2020 COR ACTION..... 2020 Corrective Action Program List
 TSCA..... Toxic Substances Control Act
 TRIS..... Toxic Chemical Release Inventory System
 SSTs..... Section 7 Tracking Systems
 ROD..... Records Of Decision
 RMP..... Risk Management Plans
 RAATS..... RCRA Administrative Action Tracking System
 PRP..... Potentially Responsible Parties
 PADS..... PCB Activity Database System
 ICIS..... Integrated Compliance Information System
 FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
 MLTS..... Material Licensing Tracking System
 COAL ASH DOE..... Steam-Electric Plant Operation Data
 COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List
 PCB TRANSFORMER..... PCB Transformer Registration Database
 RADINFO..... Radiation Information Database
 HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing
 DOT OPS..... Incident and Accident Data
 CONSENT..... Superfund (CERCLA) Consent Decrees
 INDIAN RESERV..... Indian Reservations
 FUSRAP..... Formerly Utilized Sites Remedial Action Program
 UMTRA..... Uranium Mill Tailings Sites
 LEAD SMELTERS..... Lead Smelter Sites
 US AIRS..... Aerometric Information Retrieval System Facility Subsystem
 US MINES..... Mines Master Index File
 ABANDONED MINES..... Abandoned Mines
 MINES MRDS..... Mineral Resources Data System
 ECHO..... Enforcement & Compliance History Information
 UXO..... Unexploded Ordnance Sites
 DOCKET HWC..... Hazardous Waste Compliance Docket Listing

EXECUTIVE SUMMARY

FUELS PROGRAM.....	EPA Fuels Program Registered Listing
PFAS NPL.....	Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES.....	Federal Sites PFAS Information
PFAS TSCA.....	PFAS Manufacture and Imports Information
PFAS TRIS.....	List of PFAS Added to the TRI
PFAS RCRA MANIFEST.....	PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR.....	PFAS Contamination Site Location Listing
PFAS WQP.....	Ambient Environmental Sampling for PFAS
PFAS NPDES.....	Clean Water Act Discharge Monitoring Information
PFAS ECHO.....	Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAINING.....	Facilities in Industries that May Be Handling PFAS Listing
PFAS PART 139 AIRPORT.....	All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC.....	Aqueous Foam Related Incidents Listing
BIOSOLIDS.....	ICIS-NPDES Biosolids Facility Data
PFAS.....	PFAS Contamination Site Location Listing
AQUEOUS FOAM.....	Former Fire Training Facility Assessments Listing
CA BOND EXP. PLAN.....	Bond Expenditure Plan
CHROME PLATING.....	Chrome Plating Facilities Listing
Cortese.....	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings.....	CUPA Resources List
DRYCLEANERS.....	Cleaner Facilities
ICE.....	Inspection, Compliance and Enforcement
HIST CORTESE.....	Hazardous Waste & Substance Site List
HWP.....	EnviroStor Permitted Facilities Listing
HWT.....	Registered Hazardous Waste Transporter Database
MINES.....	Mines Site Location Listing
MWMP.....	Medical Waste Management Program Listing
PEST LIC.....	Pesticide Regulation Licenses Listing
PROC.....	Certified Processors Database
Notify 65.....	Proposition 65 Records
HAZMAT.....	Hazardous Material Facilities
UIC.....	UIC Listing
UIC GEO.....	UIC GEO (GEOTRACKER)
WASTEWATER PITS.....	Oil Wastewater Pits Listing
WDS.....	Waste Discharge System
WIP.....	Well Investigation Program Case List
MILITARY PRIV SITES.....	MILITARY PRIV SITES (GEOTRACKER)
PROJECT.....	PROJECT (GEOTRACKER)
WDR.....	Waste Discharge Requirements Listing
NON-CASE INFO.....	NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS.....	OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS.....	PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT.....	SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ.....	Well Stimulation Project (GEOTRACKER)

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP.....	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto.....	EDR Exclusive Historical Auto Stations
EDR Hist Cleaner.....	EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST.....	Recovered Government Archive Leaking Underground Storage Tank
---------------	---

EXECUTIVE SUMMARY

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

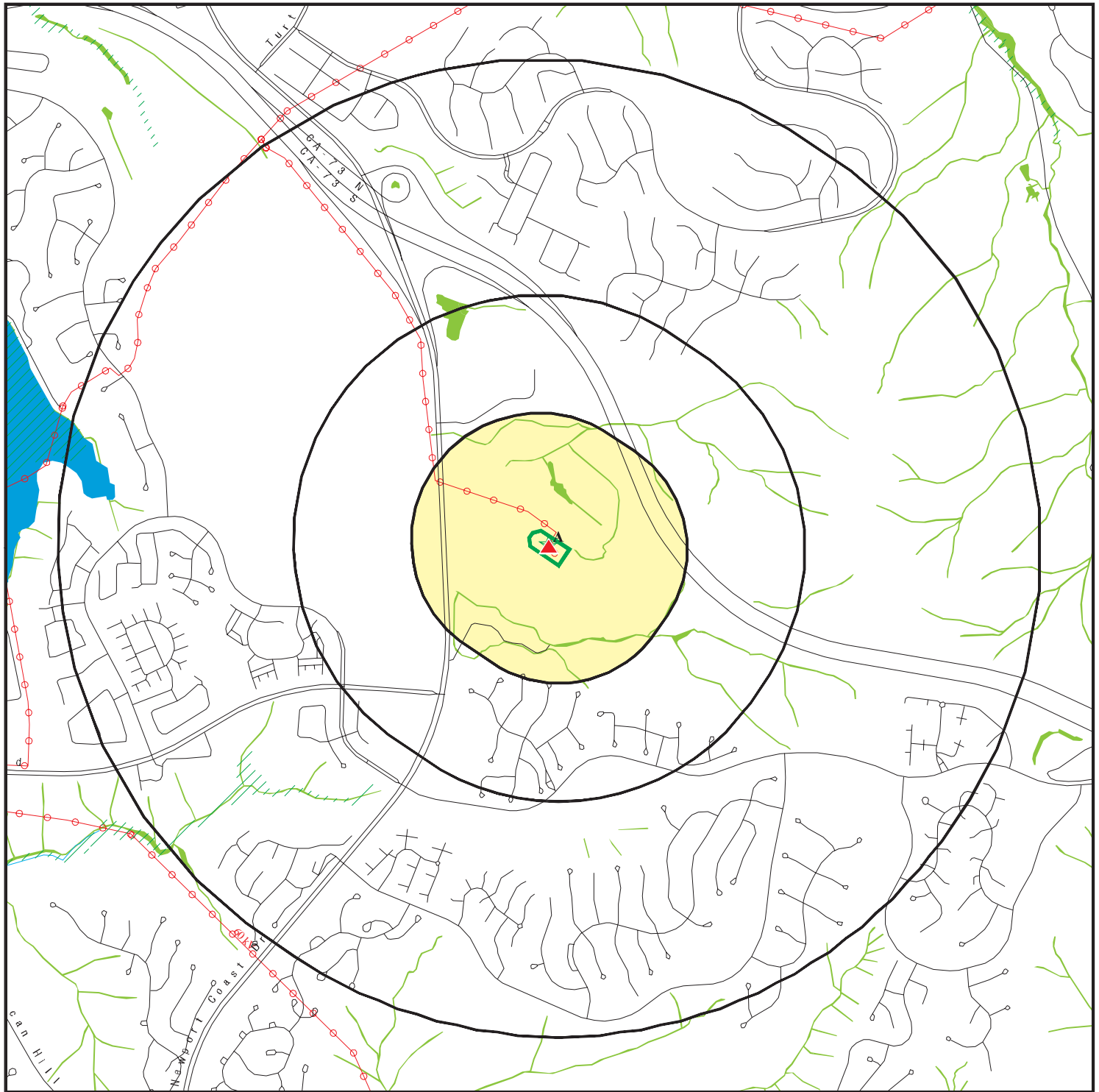
Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY


Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.


<u>Site Name</u>	<u>Database(s)</u>
L'OCCITANE - L039	CERS HAZ WASTE, HWTS
SUNNY FRESH CLEANERS	CDL
	DRYCLEANERS

OVERVIEW MAP - 7470886.2S



 Target Property

 Sites at elevations higher than or equal to the target property

 Sites at elevations lower than the target property


 Manufactured Gas Plants

 National Priority List Sites

 Dept. Defense Sites

0 1/4 1/2 1 Miles

 Indian Reservations BIA

 Areas of Concern

 Power transmission lines

 Special Flood Hazard Area (1%)

 0.2% Annual Chance Flood Hazard

 National Wetland Inventory

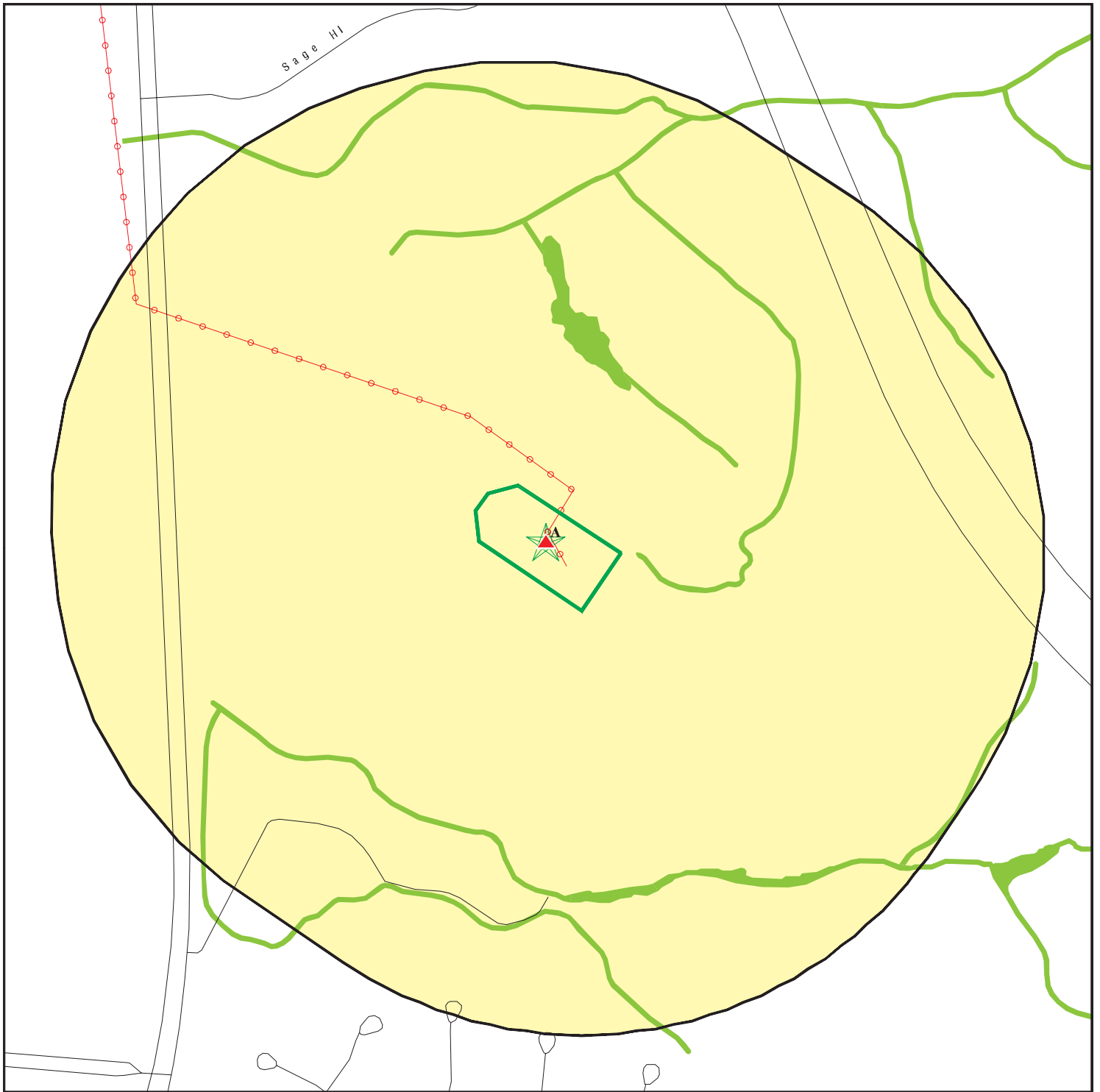
 State Wetlands








This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.




SITE NAME: Proposed Landfill Gas To Energy Plant
ADDRESS: 20662 Newport Coast Drive
Newport Coast CA 92657
LAT/LONG: 33.613102 / 117.821959


CLIENT: PlaceWorks
CONTACT: Isabel Vega
G-1 INQUIRY #: 7470886.2S
DATE: October 17, 2023 7:07 am

DETAIL MAP - 7470886.2S



-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  Sensitive Receptors
-  National Priority List Sites
-  Dept. Defense Sites

-  Indian Reservations BIA
-  Power transmission lines
-  Special Flood Hazard Area (1%)
-  0.2% Annual Chance Flood Hazard
-  National Wetland Inventory
-  State Wetlands

-  Areas of Concern

0 1/16 1/8 1/4 Miles



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Proposed Landfill Gas To Energy Plant
 ADDRESS: 20662 Newport Coast Drive
 Newport Coast CA 92657
 LAT/LONG: 33.613102 / 117.821959

CLIENT: PlaceWorks
 CONTACT: Isabel Vega
 G-1 INQUIRY #: 7470886.2s
 DATE: October 17, 2023 7:08 am

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Lists of Federal NPL (Superfund) sites</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<i>Lists of Federal Delisted NPL sites</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Lists of Federal sites subject to CERCLA removals and CERCLA orders</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Lists of Federal CERCLA sites with NFRAP</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Lists of Federal RCRA facilities undergoing Corrective Action</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Lists of Federal RCRA TSD facilities</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Lists of Federal RCRA generators</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	0.001		0	NR	NR	NR	NR	0
<i>Lists of state- and tribal (Superfund) equivalent sites</i>								
RESPONSE	1.000		0	0	0	0	NR	0
<i>Lists of state- and tribal hazardous waste facilities</i>								
ENVIROSTOR	1.000		0	0	0	0	NR	0
<i>Lists of state and tribal landfills and solid waste disposal facilities</i>								
SWF/LF	0.500	1	0	0	0	NR	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<i>Lists of state and tribal leaking storage tanks</i>								
LUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500	2	0	0	0	NR	NR	2
<i>Lists of state and tribal registered storage tanks</i>								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250	1	0	0	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
<i>Lists of state and tribal voluntary cleanup sites</i>								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal brownfield sites</i>								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<u>ADDITIONAL ENVIRONMENTAL RECORDS</u>								
<i>Local Brownfield lists</i>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Landfill / Solid Waste Disposal Sites</i>								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Hazardous waste / Contaminated Sites</i>								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
<i>Local Lists of Registered Storage Tanks</i>								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
<i>Local Land Records</i>								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001	1	0	NR	NR	NR	NR	1
MCS	0.001		0	NR	NR	NR	NR	0
Orange Co. Industrial Site	0.001	1	0	NR	NR	NR	NR	1
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250	1	0	0	NR	NR	NR	1
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
FINDS	0.001	3	0	NR	NR	NR	NR	3
ECHO	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAINING	0.250		0	0	NR	NR	NR	0
PFAS PART 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	0.001		0	NR	NR	NR	NR	0
PFAS	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
CHROME PLATING	0.500		0	0	0	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001	3	0	NR	NR	NR	NR	3
ENF	0.001	1	0	NR	NR	NR	NR	1
Financial Assurance	0.001	1	0	NR	NR	NR	NR	1
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWTS	0.001	2	0	NR	NR	NR	NR	2
HAZNET	0.001	2	0	NR	NR	NR	NR	2
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001	1	0	NR	NR	NR	NR	1
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
HAZMAT	0.250		0	0	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001	2	0	NR	NR	NR	NR	2
CERS	0.001	3	0	NR	NR	NR	NR	3
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
<u>EDR RECOVERED GOVERNMENT ARCHIVES</u>								
<i>Exclusive Recovered Govt. Archives</i>								
RGA LF	0.001	1	0	NR	NR	NR	NR	1
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		26	0	0	0	0	0	26

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

A1
Target
Property

COYOTE CANYON LANDFILL
NEWPORT COAST DRIVE
IRVINE, CA

RGA LF

S114726902
N/A

Site 1 of 12 in cluster A

Actual:
812 ft.

RGA LF:

Name: COYOTE CANYON LANDFILL
Address: NEWPORT COAST DRIVE
City: IRVINE
State: IRVINE
1996 COYOTE CANYON LANDFILL NEWPORT COAST DRIVE
Name: COYOTE CANYON LANDFILL
Address: NEWPORT COAST DRIVE
City: IRVINE
State: IRVINE
1995 COYOTE CANYON LANDFILL NEWPORT COAST DRIVE

A2
Target
Property

COYOTE CANYON ENERGY LLC
20662 NEWPORT COAST DR
NEWPORT COAST, CA 92657

FINDS

1023266105
N/A

Site 2 of 12 in cluster A

Actual:
812 ft.

FINDS:

Registry ID: 110065556614

[Click Here for FRS Facility Detail Report:](#)

Environmental Interest/Information System:

The California Environmental Protection Agency (CalEPA) has recently implemented a new data warehouse system (nSite). This data warehouse combines and merges facility and site information from five different systems managed within CalEPA. The five systems are: California Environmental Reporting System (CERS), EnviroStor, GeoTracker, California Integrated Water Quality System (CIWQS), and Toxic Release Inventory (TRI).

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A3
Target
Property

GAS RECOVERY SYSTEMS LLC COYOTE CANYON FACILITY
20662 NEWPORT COAST DR
NEWPORT BEACH, CA 92657

CPS-SLIC
HWTS
HAZNET

S113144318
N/A

Site 3 of 12 in cluster A

Actual:
812 ft.

CPS-SLIC:

Name: GAS RECOVERY SYSTEMS LLC
Address: 20662 NEWPORT COAST DR
City, State, Zip: NEWPORT BEACH, CA 92657
Region: STATE
Facility Status: Completed - Case Closed
Status Date: 08/16/2013
Global Id: T10000017782
Lead Agency: ORANGE COUNTY LOP
Lead Agency Case Number: 06IC028
Latitude: 33.6135212
Longitude: -117.8222364
Case Type: Cleanup Program Site
Case Worker: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC COYOTE CANYON FACILITY (Continued)

S113144318

Local Agency:	ORANGE COUNTY LOP
RB Case Number:	Not reported
File Location:	All Files are on GeoTracker or in the Local Agency Warehouse
Potential Media Affected:	Not reported
Potential Contaminants of Concern:	Not reported
EPA Region:	9
Coordinate Source:	Not reported
Cuf Case:	NO
Quantity Released Gallons:	Not reported
Begin Date:	08/16/2013
Leak Reported Date:	Not reported
How Discovered:	Not reported
How Discovered Description:	Not reported
Discharge Source:	Not reported
Discharge Cause:	Not reported
Stop Method:	Not reported
Stop Description:	Not reported
No Further Action Date:	08/16/2013
CA Water Watershed Name:	Not reported
Dwr Groundwater Subbasin Name:	Not reported
Disadvantaged Community:	Not reported
CA Enviroscreen 3 Score:	Not reported
CA Enviroscreen 4 Score:	Not reported
Military DOD Site:	No
Facility Project Subtype:	Not reported
RWQCB Region:	Not reported
Site History:	Please refer to recent Site Documents or Monitoring Reports for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.

[Click here to access the California GeoTracker records for this facility:](#)

HWTS:

Name:	GAS RECOVERY SYSTEMS LLC COYOTE CANYON FACILITY
Address:	20662 NEWPORT COAST DR
Address 2:	Not reported
City,State,Zip:	NEWPORT BEACH, CA 92657
EPA ID:	CAL000311304
Inactive Date:	01/23/2014
Create Date:	09/06/2006
Last Act Date:	Not reported
Mailing Name:	Not reported
Mailing Address:	5087 LOCKPORT JUNCTION RD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	LOCKPORT, NY 140949601
Owner Name:	GAS RECOVERY SYSTEMS LLC
Owner Address:	5087 LOCKPORT JUNCTION RD
Owner Address 2:	Not reported
Owner City,State,Zip:	LOCKPORT, NY 140949601
Owner Phone:	Not reported
Owner Fax:	Not reported
Contact Name:	SUPARNA CHAKLADAR
Contact Address:	5087 JUNCTION ROAD
Contact Address 2:	Not reported
City,State,Zip:	LOCKPORT, NY 14094
Contact Phone:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC COYOTE CANYON FACILITY (Continued)

S113144318

Contact Fax: Not reported
Facility Status: Inactive
Facility Type: PERMANENT
Category: STATE
Latitude: 33.609922
Longitude: -117.825564

NAICS:

EPA ID: CAL000311304
Create Date: 2006-09-06 14:30:01.073
NAICS Code: 221122
NAICS Description: Electric Power Distribution
Issued EPA ID Date: 2006-09-06 14:30:01.02700
Inactive Date: 2014-01-23 00:00:00
Facility Name: GAS RECOVERY SYSTEMS LLC COYOTE CANYON FACILITY
Facility Address: 20662 NEWPORT COAST DR
Facility Address 2: Not reported
Facility City: NEWPORT BEACH
Facility County: Not reported
Facility State: CA
Facility Zip: 926570301

HAZNET:

Name: GAS RECOVERY SYSTEMS LLC COYOTE CANYON FACILITY
Address: 20662 NEWPORT COAST DR
Address 2: Not reported
City,State,Zip: NEWPORT BEACH, CA 926570301
Contact: SUPARNA CHAKLADAR
Telephone: 9518334153
Mailing Name: Not reported
Mailing Address: 5087 JUNCTION RD

Year: 2013
Gepaid: CAL000311304
TSD EPA ID: CAD981696420
CA Waste Code: 223 - Unspecified oil-containing waste
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 15.012

Year: 2011
Gepaid: CAL000311304
TSD EPA ID: CAD097030993
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.175

Year: 2010
Gepaid: CAL000311304
TSD EPA ID: CAD097030993
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.075

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC COYOTE CANYON FACILITY (Continued)

S113144318

Additional Info:

Year:	2013
Gen EPA ID:	CAL000311304
Shipment Date:	20130404
Creation Date:	6/9/2013 22:15:06
Receipt Date:	20130404
Manifest ID:	010594190JJJ
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSD EPA ID:	CAD981696420
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
TSD EPA ID:	Not reported
TSD Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Recovery (H010-H129) Or (H131-H135)
Quantity Tons:	13.761
Waste Quantity:	3300
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130122
Creation Date:	3/15/2013 22:15:33
Receipt Date:	20130122
Manifest ID:	010596437JJJ
Trans EPA ID:	CAD982413262
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSD EPA ID:	CAD981696420
Trans Name:	EVERGREEN ENVIRONMENTAL SERVICES
TSD EPA ID:	Not reported
TSD Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Recovery (H010-H129) Or (H131-H135)
Quantity Tons:	1.251
Waste Quantity:	300
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2011
-------	------

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC COYOTE CANYON FACILITY (Continued)

S113144318

Gen EPA ID: CAL000311304

Shipment Date: 20110411
Creation Date: 6/16/2011 18:30:32
Receipt Date: 20110414
Manifest ID: 008149661JJK
Trans EPA ID: CAD028277036
Trans Name: ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDf EPA ID: CAD097030993
Trans Name: SIEMENS WATER TECHNOLOGIES CORP
TSDf Alt EPA ID: Not reported
TSDf Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Recovery (H010-H129) Or (H131-H135)

Quantity Tons: 0.175
Waste Quantity: 350
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:

Year: 2010
Gen EPA ID: CAL000311304

Shipment Date: 20100310
Creation Date: 5/27/2010 18:30:45
Receipt Date: 20100318
Manifest ID: 006519513JJK
Trans EPA ID: CAD028277036
Trans Name: ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDf EPA ID: CAD097030993
Trans Name: SIEMENS WATER TECHNOLOGIES CORP
TSDf Alt EPA ID: Not reported
TSDf Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Recovery (H010-H129) Or (H131-H135)

Quantity Tons: 0.075
Waste Quantity: 150
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

A4
Target
Property

COYOTE CANYON LANDFILL (CLOSED)
20661 NEWPORT COAST DRIVE
NEWPORT BEACH, CA 92657

SWF/LF
CPS-SLIC
LDS
ENF

S105964593
N/A

Site 4 of 12 in cluster A

Financial Assurance
CIWQS
CERS

Actual:
812 ft.

SWF/LF (SWIS):

Name:	COYOTE CANYON SANITARY LANDFILL
Address:	20661 NEWPORT COAST DRIVE
City,State,Zip:	NEWPORT BEACH, CA 92657
Region:	STATE
Facility ID:	30-AB-0017
SWIS Number:	30-AB-0017
Point of Contact:	Alfred Worcester
Is Archived:	No
Is Closed Illegal Abandoned:	Yes
Is Site Inert Debris Engineered Fill:	No
Is Financial Assurances Responsible:	Yes
Absorbed On:	Not reported
Operational Status:	Closed
Absorbed By:	Not reported
Closed Illegal Abandoned Category:	C1
EPA Federal Registry ID:	Not reported
ARB District:	South Coast
SWRCB Region:	Santa Ana
Local Government:	Newport Beach
Reporting Agency Legal Name:	County of Orange
Reporting Agency Department:	Health Care Agency, Environmental Health Division
Enforcing Agency Legal Name:	County of Orange
Enforcing Agency Department:	Health Care Agency, Environmental Health Division
Regulation Status:	Permitted

Activity:

SWIS Number:	30-AB-0017
Site Name:	Coyote Canyon Sanitary Landfill
Activity:	Solid Waste Landfill
Activity Is Archived:	No
Category:	Disposal
Activity Classification:	Solid Waste Facility
WDR Number:	Not reported
WDR Landfill Class:	Not reported
Cease Operation:	8/1/1991
Cease Operation Type:	Estimated
Inspection Frequency:	Quarterly
Throughput:	6000
Throughput Units:	Tons per day
Remaining Capacity:	Not reported
Remaining Capacity Date:	Not reported
Capacity:	Not reported
Capacity Units:	Not reported
Total Acreage:	859
Disposal Acreage:	325
Permitted Elevation:	Not reported
Permitted Elevation Type:	Not reported
Permitted Depth:	Not reported
Permitted Depth Type:	Not reported
Point of Contact:	Alfred Worcester
Site Operational Status:	Closed

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Site Regulatory Status:	Permitted
Site Is Archived:	No
Is Closed Illegal Abandoned:	Yes
Is Site Inert Debris Engineered Fill:	No
Is Financial Assurances Responsible:	Yes
Absorbed On:	Not reported
Absorbed By:	Not reported
Closed Illegal Abandoned Category:	C1
EPA Federal Registry ID:	Not reported
County:	Orange
ARB District:	South Coast
SWRCB Region:	Santa Ana
Local Government:	Newport Beach
Street Address:	20661 Newport Coast Drive
City:	Newport Beach
State:	CA
ZIP Code:	92657
Reporting Agency Legal Name:	County of Orange
Reporting Agency Department:	Health Care Agency, Environmental Health Division
Enforcing Agency Legal Name:	County of Orange
Enforcing Agency Department:	Health Care Agency, Environmental Health Division

Operator:

SWIS Number:	30-AB-0017
Site Name:	Coyote Canyon Sanitary Landfill
Site Operational Status:	Closed
Site Type:	Disposal Only
Site Regulatory Status:	Permitted
Latitude:	33.63041
Longitude:	-117.84351
Is Archived:	No
Operator:	OC Waste and Recycling
Started On:	Not reported
Contact Name:	Thomas Koutroulis
Contact Title:	Director
Contact Email:	info@iwmd.ocgov.com
Contact Phone:	(714) 834-4000
Street Address:	601 N Ross St Fl 5
Operator City:	Santa Ana
Operator State:	CA
Operator Zip:	92701

Owner:

SWIS Number:	30-AB-0017
Owner:	OC Waste and Recycling
Owner Address:	601 N Ross St Fl 5
Owner City:	Santa Ana
Owner State:	CA
Owner Zip:	92701
Site Name:	Coyote Canyon Sanitary Landfill
Site Operational Status:	Closed
Site Type:	Disposal Only
Site Regulatory Status:	Permitted
Latitude:	33.63041
Longitude:	-117.84351
Is Archived:	No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Started On: Not reported
Contact Name: Thomas Koutroulis
Contact Title: Director
Contact Email: info@iwmd.ocgov.com
Contact Phone: (714) 834-4000

Waste:

SWIS Number: 30-AB-0017
Site Name: Coyote Canyon Sanitary Landfill
Activity: Solid Waste Landfill
Waste Type: Agricultural
Site Is Archived: No
Site Operational Status: Closed
Site Regulatory Status: Permitted
Site Type: Disposal Only
Point of Contact: Alfred Worcester
Activity Is Archived: No
Activity Operational Status: Closed
Activity Regulatory Status: Permitted
Activity Category: Disposal
Activity Classification: Solid Waste Facility

SWIS Number: 30-AB-0017
Site Name: Coyote Canyon Sanitary Landfill
Activity: Solid Waste Landfill
Waste Type: Construction/demolition
Site Is Archived: No
Site Operational Status: Closed
Site Regulatory Status: Permitted
Site Type: Disposal Only
Point of Contact: Alfred Worcester
Activity Is Archived: No
Activity Operational Status: Closed
Activity Regulatory Status: Permitted
Activity Category: Disposal
Activity Classification: Solid Waste Facility

SWIS Number: 30-AB-0017
Site Name: Coyote Canyon Sanitary Landfill
Activity: Solid Waste Landfill
Waste Type: Mixed Municipal
Site Is Archived: No
Site Operational Status: Closed
Site Regulatory Status: Permitted
Site Type: Disposal Only
Point of Contact: Alfred Worcester
Activity Is Archived: No
Activity Operational Status: Closed
Activity Regulatory Status: Permitted
Activity Category: Disposal
Activity Classification: Solid Waste Facility

SWIS Number: 30-AB-0017
Site Name: Coyote Canyon Sanitary Landfill
Activity: Solid Waste Landfill
Waste Type: Other designated
Site Is Archived: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Site Operational Status: Closed
Site Regulatory Status: Permitted
Site Type: Disposal Only
Point of Contact: Alfred Worcester
Activity Is Archived: No
Activity Operational Status: Closed
Activity Regulatory Status: Permitted
Activity Category: Disposal
Activity Classification: Solid Waste Facility

SWIS Number: 30-AB-0017
Site Name: Coyote Canyon Sanitary Landfill
Activity: Solid Waste Landfill
Waste Type: Sludge (BioSolids)
Site Is Archived: No
Site Operational Status: Closed
Site Regulatory Status: Permitted
Site Type: Disposal Only
Point of Contact: Alfred Worcester
Activity Is Archived: No
Activity Operational Status: Closed
Activity Regulatory Status: Permitted
Activity Category: Disposal
Activity Classification: Solid Waste Facility

SWIS Number: 30-AB-0017
Site Name: Coyote Canyon Sanitary Landfill
Activity: Solid Waste Landfill
Waste Type: Tires
Site Is Archived: No
Site Operational Status: Closed
Site Regulatory Status: Permitted
Site Type: Disposal Only
Point of Contact: Alfred Worcester
Activity Is Archived: No
Activity Operational Status: Closed
Activity Regulatory Status: Permitted
Activity Category: Disposal
Activity Classification: Solid Waste Facility

CPS-SLIC:

Name: COYOTE CANYON LANDFILL
Address: 20661 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA
Region: STATE
Facility Status: Completed - Case Closed
Status Date: 12/31/2018
Global Id: T10000009361
Lead Agency: SANTA ANA RWQCB (REGION 8)
Lead Agency Case Number: Not reported
Latitude: 33.61234
Longitude: -117.82587
Case Type: Cleanup Program Site
Case Worker: JPL
Local Agency: Not reported
RB Case Number: 8 303633001

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

File Location:	All Files are on GeoTracker or in the Local Agency Database
Potential Media Affected:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Tetrachloroethylene (PCE), Trichloroethylene (TCE)
EPA Region:	9
Coordinate Source:	Not reported
Cuf Case:	NO
Quantity Released Gallons:	Not reported
Begin Date:	05/13/2014
Leak Reported Date:	Not reported
How Discovered:	Not reported
How Discovered Description:	Not reported
Discharge Source:	Not reported
Discharge Cause:	Not reported
Stop Method:	Not reported
Stop Description:	Not reported
No Further Action Date:	12/31/2018
CA Water Watershed Name:	Santa Ana River - Lower Santa Ana River - East Coastal Plain (801.11)
Dwr Groundwater Subbasin Name:	Not reported
Disadvantaged Community:	Not reported
CA Enviroscreen 3 Score:	6-10%
CA Enviroscreen 4 Score:	1-5% (lowest scores)
Military DOD Site:	No
Facility Project Subtype:	Not reported
RWQCB Region:	SANTA ANA RWQCB (REGION 8)
Site History:	The Orange County Waste & Recycling has submitted a Report of Waste Discharge (ROWD) application, as part of Joint Technical Document (JTD) Addendum #1, for in-situ bioremediation at the site. A two-year pilot test for in-situ bioremediation is being implemented to collect data and assess the feasibility of a full scale bioremediation to address the release of volatile organics (TCE, cis-1,2-DCE, 1,2-DCA, Vinyl Chloride) at the site. The semi-annual pilot bioremediation project and performance monitoring reports have been included in the regular semi-annual groundwater monitoring reports, required under Board Order R8-2018-0009 (Geotracker Global ID L10004005233) for submittal. A copy each of the semi-annual monitoring reports, which includes the performance monitoring data for the two-year pilot bioremediation project have been uploaded. This pilot bioremediation project has been successfully completed and project coverage under the In-situ bioremediation General Order was rescinded on December 31, 2018. The pilot bioremediation project monitoring wells will continue to be monitored for reductive dechlorination progress under site waste discharge requirements, Order No. R8-2018-0009.

[Click here to access the California GeoTracker records for this facility:](#)

LDS:

Name:	COYOTE CANYON LANDFILL (CLOSED)
Address:	20661 NEWPORT COAST DRIVE
City,State,Zip:	NEWPORT BEACH, CA 92657
Global Id:	L10004005233
Latitude:	33.61817
Longitude:	-117.8317
Case Type:	Land Disposal Site
Status:	Open - Closed/with Monitoring
Status Date:	01/01/1994
Lead Agency:	SANTA ANA RWQCB (REGION 8)

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Caseworker: JPL
Local Agency: Not reported
RB Case Number: 8 300302001
LOC Case Number: Not reported
File Location: Regional Board
Potential Media Affect: Not reported
EDR Link ID: L10004005233
Potential Contaminants of Concern: Not reported
EPA Region: 9
Coordinate Source: Google Map Move
Cuf Case: NO
Quantity Released Gallons: Not reported
Begin Date: Not reported
Leak Reported Date: Not reported
How Discovered: Not reported
How Discovered Description: Not reported
Discharge Source: Not reported
Discharge Cause: Not reported
Stop Method: Not reported
Stop Description: Not reported
No Further Action Date: Not reported
CA Water Watershed Name: Santa Ana River - Lower Santa Ana River - East Coastal Plain (801.11)
Dwr Groundwater Subbasin Name: Not reported
Disadvantaged Community: Not reported
CA Enviroscreen 3 Score: 6-10%
CA Enviroscreen 4 Score: 1-5% (lowest scores)
Military DOD Site: No
Facility Project Subtype: Title 27 - Municipal Solid Waste Landfill
RWQCB Region: SANTA ANA RWQCB (REGION 8)
Site History: The Orange County Waste & Recycling is conducting Corrective Action Program for groundwater monitoring at the site. SITE INFORMATION: The Coyote Canyon Landfill is located in the City of Newport Beach, Orange County. The Coyote Canyon Landfill property is situated in Coyote Creek Canyon, a broad canyon trending north-south, and two smaller tributary side canyons trending east-west. The Coyote Canyon Landfill was operated by OC Waste & Recycling between 1963 and 1990 as a Class III municipal solid waste landfill. OC Waste & Recycling implemented site closure activities between 1990 and 1994. Since 1994, the site has been undergoing post-closure maintenance in accordance with applicable regulatory requirements. The Coyote Canyon Landfill is not equipped with an engineered artificial liner or a leachate collection and removal system (LCRS) because the landfill was designed and developed prior to regulatory requirements for liners. Following the completion of waste disposal operations in 1990, a final landfill cover was installed at the site in compliance with landfill closure requirements. An active gas collection system has been installed at the site to collect and control landfill gas generated in the buried refuse. The gas collection system includes over 430 landfill gas extraction wells and a flare station. Collected landfill gas is burned in the flares. The vadose zone around the landfill is monitored through a network of approximately 150 multiple-depth gas monitoring probes installed at certain locations. A groundwater monitoring network and a deactivated groundwater extraction system (sometimes referred to as the leachate control system) have been installed and operated at the site for groundwater monitoring and control. Information regarding the groundwater monitoring network and the deactivated groundwater extraction system

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

is provided in the April 30, 2019 report.

[Click here to access the California GeoTracker records for this facility:](#)

ENF:

Name:	COYOTE CANYON LANDFILL-CLOSED
Address:	20661 NEWPORT COAST DRIVE
City,State,Zip:	NEWPORT BEACH, CA
Region:	8
Facility Id:	236445
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	33.61235
Place Longitude:	-117.82586
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	245210
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Notice to Comply
Effective Date:	03/17/2003
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	04/15/2003
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 300302001
Description:	The post-rain inspection revealed several eroded areas at Main Canyon:: top deck and sideslope leading to access road just east of the former office trailer location, access road east of Main Canyon near the power station, & area south of the power pole.
Program:	LNDISP
Latest Milestone Completion Date:	4/1/2003
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability \$ Amount:	0
Project \$ Amount:	0
Liability \$ Paid:	0
Project \$ Completed:	0
Total \$ Paid/Completed Amount:	0
Name:	COYOTE CANYON LANDFILL-CLOSED
Address:	20661 NEWPORT COAST DRIVE
City,State,Zip:	NEWPORT BEACH, CA
Region:	8
Facility Id:	236445
Agency Name:	Not reported
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	33.61235
Place Longitude:	-117.82586
SIC Code 1:	4953

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	LNDISP
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	251177
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Notice to Comply
Effective Date:	03/01/2004

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	03/31/2004
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 300302001
Description:	ERODED AREAS WERE FOUND AT: 1) ON ACCESS ROAD ACROSS FROM THE FORMER OFFICE TRAILER AREA, AND 2) WITHIN THE FORMER OFFICE TRAILER AREA. AN NTC WAS ISSUED FOR CORRECTING THESE AREAS.
Program:	LNDISP
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability \$ Amount:	0
Project \$ Amount:	0
Liability \$ Paid:	0
Project \$ Completed:	0
Total \$ Paid/Completed Amount:	0
Name:	COYOTE CANYON LANDFILL-CLOSED
Address:	20661 NEWPORT COAST DRIVE
City,State,Zip:	NEWPORT BEACH, CA
Region:	8
Facility Id:	236445
Agency Name:	Orange Cnty Waste & Recycling
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	County Agency
# Of Agencies:	1
Place Latitude:	33.61235
Place Longitude:	-117.82586
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.0001
Threat To Water Quality:	2
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Solid wastes, NEC
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Program: LFNONOPER
Program Category1: LNDISP
Program Category2: LNDISP
Of Programs: 1
WDID: 8 300302001
Reg Measure Id: 138546
Reg Measure Type: WDR
Region: 8
Order #: 86-192
Npdes# CA#: Not reported
Major-Minor: Not reported
Npdes Type: Not reported
Reclamation: N - No
Dredge Fill Fee: Not reported
301H: Not reported
Application Fee Amt Received: Not reported
Status: Historical
Status Date: 09/14/2018
Effective Date: 12/12/1986
Expiration/Review Date: 12/30/2020
Termination Date: 05/03/2018
WDR Review - Amend: Not reported
WDR Review - Revise/Renew: 9/17/2013
WDR Review - Rescind: Not reported
WDR Review - No Action Required: Not reported
WDR Review - Pending: Not reported
WDR Review - Planned: Not reported
Status Enrollee: N
Individual/General: I
Fee Code: 59 - Land Disposal Site not paying tipping fee
Direction/Voice: Passive
Enforcement Id(EID): 244928
Region: 8
Order / Resolution Number: UNKNOWN
Enforcement Action Type: 13267 Letter
Effective Date: 09/17/2002
Adoption/Issuance Date: Not reported
Achieve Date: Not reported
Termination Date: 01/01/2005
ACL Issuance Date: Not reported
EPL Issuance Date: Not reported
Status: Historical
Title: Enforcement - 8 300302001
Description: 13267 LETTER FOR RADIOACTIVE WASTE INVESTIGATION
Program: LNDISP
Latest Milestone Completion Date: 1/2/2003
Of Programs1: 1
Total Assessment Amount: 0
Initial Assessed Amount: 0
Liability \$ Amount: 0
Project \$ Amount: 0
Liability \$ Paid: 0
Project \$ Completed: 0
Total \$ Paid/Completed Amount: 0

Name: COYOTE CANYON LANDFILL-CLOSED
Address: 20661 NEWPORT COAST DRIVE

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

City,State,Zip:	NEWPORT BEACH, CA
Region:	8
Facility Id:	236445
Agency Name:	Orange Cnty Waste & Recycling
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	County Agency
# Of Agencies:	1
Place Latitude:	33.61235
Place Longitude:	-117.82586
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.0001
Threat To Water Quality:	2
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Solid wastes, NEC
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LFNONOPER
Program Category1:	LNDISP
Program Category2:	LNDISP
# Of Programs:	1
WDID:	8 300302001
Reg Measure Id:	138546
Reg Measure Type:	WDR
Region:	8
Order #:	86-192
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	09/14/2018
Effective Date:	12/12/1986
Expiration/Review Date:	12/30/2020
Termination Date:	05/03/2018
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	9/17/2013
WDR Review - Rescind:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	59 - Land Disposal Site not paying tipping fee
Direction/Voice:	Passive
Enforcement Id(EID):	240696
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Notice to Comply
Effective Date:	10/19/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Active
Title:	Enforcement - 8 300302001
Description:	NONCOMPLIANCE ITEMS: SILT ACCUMULATION IN CHANNELS AND INADEQUATE GROUNDWATER MONITORING PROTECTION.
Program:	LNDISP
Latest Milestone Completion Date:	11/15/2001
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability \$ Amount:	0
Project \$ Amount:	0
Liability \$ Paid:	0
Project \$ Completed:	0
Total \$ Paid/Completed Amount:	0
Name:	COYOTE CANYON LANDFILL-CLOSED
Address:	20661 NEWPORT COAST DRIVE
City,State,Zip:	NEWPORT BEACH, CA
Region:	8
Facility Id:	236445
Agency Name:	Orange Cnty Waste & Recycling
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	County Agency
# Of Agencies:	1
Place Latitude:	33.61235
Place Longitude:	-117.82586
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.0001
Threat To Water Quality:	2
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Solid wastes, NEC
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LFNONOPER
Program Category1:	LNDISP
Program Category2:	LNDISP
# Of Programs:	1
WDID:	8 300302001
Reg Measure Id:	138546
Reg Measure Type:	WDR
Region:	8
Order #:	86-192
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	09/14/2018
Effective Date:	12/12/1986
Expiration/Review Date:	12/30/2020
Termination Date:	05/03/2018
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	9/17/2013
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	59 - Land Disposal Site not paying tipping fee
Direction/Voice:	Passive
Enforcement Id(EID):	236027
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Notice to Comply
Effective Date:	02/28/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	3/30/2001
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 300302001
Description:	Water ponding and erosion occurred at Main Canyon of the site.
Program:	LNDISP
Latest Milestone Completion Date:	3/30/2001

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability \$ Amount:	0
Project \$ Amount:	0
Liability \$ Paid:	0
Project \$ Completed:	0
Total \$ Paid/Completed Amount:	0
Name:	COYOTE CANYON LANDFILL-CLOSED
Address:	20661 NEWPORT COAST DRIVE
City,State,Zip:	NEWPORT BEACH, CA
Region:	8
Facility Id:	236445
Agency Name:	Orange Cnty Waste & Recycling
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	County Agency
# Of Agencies:	1
Place Latitude:	33.61235
Place Longitude:	-117.82586
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.0001
Threat To Water Quality:	2
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Solid wastes, NEC
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LFNONOPER
Program Category1:	LNDISP
Program Category2:	LNDISP
# Of Programs:	1
WDID:	8 300302001
Reg Measure Id:	138546
Reg Measure Type:	WDR
Region:	8
Order #:	86-192
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	09/14/2018
Effective Date:	12/12/1986
Expiration/Review Date:	12/30/2020
Termination Date:	05/03/2018
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	9/17/2013
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	59 - Land Disposal Site not paying tipping fee
Direction/Voice:	Passive
Enforcement Id(EID):	234962
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Notice to Comply
Effective Date:	02/28/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	3/30/2001
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 300302001
Description:	PONDING AND EROSION PROBLEMS AT THE SITE IN VIOLATION OF DISCHARGE SPECIFICATION B.2.A. OF ORDER NO. 98-99. AN NTC WAS ISSUED 2/28/01.
Program:	LNDISP
Latest Milestone Completion Date:	3/30/2001
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability \$ Amount:	0
Project \$ Amount:	0
Liability \$ Paid:	0
Project \$ Completed:	0
Total \$ Paid/Completed Amount:	0
Name:	COYOTE CANYON LANDFILL-CLOSED
Address:	20661 NEWPORT COAST DRIVE
City,State,Zip:	NEWPORT BEACH, CA
Region:	8
Facility Id:	236445
Agency Name:	Orange Cnty Waste & Recycling
Place Type:	Waste Management Unit
Place Subtype:	Land fill
Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	County Agency
# Of Agencies:	1
Place Latitude:	33.61235
Place Longitude:	-117.82586

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.0001
Threat To Water Quality:	2
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Solid wastes, NEC
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LFNONOPER
Program Category1:	LNDISP
Program Category2:	LNDISP
# Of Programs:	1
WDID:	8 300302001
Reg Measure Id:	138546
Reg Measure Type:	WDR
Region:	8
Order #:	86-192
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	09/14/2018
Effective Date:	12/12/1986
Expiration/Review Date:	12/30/2020
Termination Date:	05/03/2018
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	9/17/2013
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	59 - Land Disposal Site not paying tipping fee
Direction/Voice:	Passive
Enforcement Id(EID):	234140
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Effective Date: 01/05/2000
Adoption/Issuance Date: Not reported
Achieve Date: 1/21/2000
Termination Date: 01/05/2000
ACL Issuance Date: Not reported
EPL Issuance Date: Not reported
Status: Historical
Title: Enforcement - 8 300302001
Description: County staff recommended to regrade and replant the
subsidence area. RB staff agreed.
Program: LNDISP
Latest Milestone Completion Date: 1/21/2000
Of Programs1: 1
Total Assessment Amount: 0
Initial Assessed Amount: 0
Liability \$ Amount: 0
Project \$ Amount: 0
Liability \$ Paid: 0
Project \$ Completed: 0
Total \$ Paid/Completed Amount: 0

Name: COYOTE CANYON LANDFILL-CLOSED
Address: 20661 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA
Region: 8
Facility Id: 236445
Agency Name: Orange Cnty Waste & Recycling
Place Type: Waste Management Unit
Place Subtype: Land fill
Facility Type: Solid Waste Class III - nonhazardous solid wastes
Agency Type: County Agency
Of Agencies: 1
Place Latitude: 33.61235
Place Longitude: -117.82586
SIC Code 1: 4953
SIC Desc 1: Refuse Systems
SIC Code 2: Not reported
SIC Desc 2: Not reported
SIC Code 3: Not reported
SIC Desc 3: Not reported
NAICS Code 1: Not reported
NAICS Desc 1: Not reported
NAICS Code 2: Not reported
NAICS Desc 2: Not reported
NAICS Code 3: Not reported
NAICS Desc 3: Not reported
Of Places: 1
Source Of Facility: Reg Meas
Design Flow: 0.0001
Threat To Water Quality: 2
Complexity: B
Pretreatment: X - Facility is not a POTW
Facility Waste Type: Solid wastes, NEC
Facility Waste Type 2: Not reported
Facility Waste Type 3: Not reported
Facility Waste Type 4: Not reported
Program: LFNONOPER

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Program Category1:	LNDISP
Program Category2:	LNDISP
# Of Programs:	1
WDID:	8 300302001
Reg Measure Id:	138546
Reg Measure Type:	WDR
Region:	8
Order #:	86-192
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	09/14/2018
Effective Date:	12/12/1986
Expiration/Review Date:	12/30/2020
Termination Date:	05/03/2018
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	9/17/2013
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	59 - Land Disposal Site not paying tipping fee
Direction/Voice:	Passive
Enforcement Id(EID):	234055
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	10/27/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	10/27/1999
Termination Date:	10/27/1999
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 300302001
Description:	Approximately 200 gallons of spring water overflowed from the sewer manhole. Spill contained on the same day. No discharge to surface waters. Overflow occurred as a result of individual tampering with valves at the sewer manhole.
Program:	LNDISP
Latest Milestone Completion Date:	10/27/1999
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability \$ Amount:	0
Project \$ Amount:	0
Liability \$ Paid:	0
Project \$ Completed:	0
Total \$ Paid/Completed Amount:	0

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Name: COYOTE CANYON LANDFILL-CLOSED
Address: 20661 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA
Region: 8
Facility Id: 236445
Agency Name: Orange Cnty Waste & Recycling
Place Type: Waste Management Unit
Place Subtype: Land fill
Facility Type: Solid Waste Class III - nonhazardous solid wastes
Agency Type: County Agency
Of Agencies: 1
Place Latitude: 33.61235
Place Longitude: -117.82586
SIC Code 1: 4953
SIC Desc 1: Refuse Systems
SIC Code 2: Not reported
SIC Desc 2: Not reported
SIC Code 3: Not reported
SIC Desc 3: Not reported
NAICS Code 1: Not reported
NAICS Desc 1: Not reported
NAICS Code 2: Not reported
NAICS Desc 2: Not reported
NAICS Code 3: Not reported
NAICS Desc 3: Not reported
Of Places: 1
Source Of Facility: Reg Meas
Design Flow: 0.0001
Threat To Water Quality: 2
Complexity: B
Pretreatment: X - Facility is not a POTW
Facility Waste Type: Solid wastes, NEC
Facility Waste Type 2: Not reported
Facility Waste Type 3: Not reported
Facility Waste Type 4: Not reported
Program: LFNONOPER
Program Category1: LNDISP
Program Category2: LNDISP
Of Programs: 1
WDID: 8 300302001
Reg Measure Id: 138546
Reg Measure Type: WDR
Region: 8
Order #: 86-192
Npdes# CA#: Not reported
Major-Minor: Not reported
Npdes Type: Not reported
Reclamation: N - No
Dredge Fill Fee: Not reported
301H: Not reported
Application Fee Amt Received: Not reported
Status: Historical
Status Date: 09/14/2018
Effective Date: 12/12/1986
Expiration/Review Date: 12/30/2020
Termination Date: 05/03/2018
WDR Review - Amend: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

WDR Review - Revise/Renew: 9/17/2013
WDR Review - Rescind: Not reported
WDR Review - No Action Required: Not reported
WDR Review - Pending: Not reported
WDR Review - Planned: Not reported
Status Enrollee: N
Individual/General: I
Fee Code: 59 - Land Disposal Site not paying tipping fee
Direction/Voice: Passive
Enforcement Id(EID): 234050
Region: 8
Order / Resolution Number: UNKNOWN
Enforcement Action Type: Oral Communication
Effective Date: 08/25/1999
Adoption/Issuance Date: Not reported
Achieve Date: 9/14/1999
Termination Date: 08/25/1999
ACL Issuance Date: Not reported
EPL Issuance Date: Not reported
Status: Historical
Title: Enforcement - 8 300302001
Description: Approximately 150 gallons of spring water were discharged from a damaged sewer line. No discharge to surface waters. Affected soil was sampled and analyzed for VOCs. No soil contamination. Affected soil was left in place.

Program: LNDISP
Latest Milestone Completion Date: 9/14/1999
Of Programs1: 1
Total Assessment Amount: 0
Initial Assessed Amount: 0
Liability \$ Amount: 0
Project \$ Amount: 0
Liability \$ Paid: 0
Project \$ Completed: 0
Total \$ Paid/Completed Amount: 0

Name: COYOTE CANYON LANDFILL-CLOSED
Address: 20661 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA
Region: 8
Facility Id: 236445
Agency Name: Orange Cnty Waste & Recycling
Place Type: Waste Management Unit
Place Subtype: Land fill
Facility Type: Solid Waste Class III - nonhazardous solid wastes
Agency Type: County Agency
Of Agencies: 1
Place Latitude: 33.61235
Place Longitude: -117.82586
SIC Code 1: 4953
SIC Desc 1: Refuse Systems
SIC Code 2: Not reported
SIC Desc 2: Not reported
SIC Code 3: Not reported
SIC Desc 3: Not reported
NAICS Code 1: Not reported
NAICS Desc 1: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.0001
Threat To Water Quality:	2
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Solid wastes, NEC
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LFNONOPER
Program Category1:	LNDISP
Program Category2:	LNDISP
# Of Programs:	1
WDID:	8 300302001
Reg Measure Id:	138546
Reg Measure Type:	WDR
Region:	8
Order #:	86-192
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	09/14/2018
Effective Date:	12/12/1986
Expiration/Review Date:	12/30/2020
Termination Date:	05/03/2018
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	9/17/2013
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	59 - Land Disposal Site not paying tipping fee
Direction/Voice:	Passive
Enforcement Id(EID):	233353
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	11/23/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	1/5/2000
Termination Date:	11/23/1999
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 300302001

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Description: During the 11/23/99 site inspection, County staff was notified to repair the damaged drainage v-ditch at South Canyon.
Program: LNDISP
Latest Milestone Completion Date: 1/5/2000
Of Programs1: 1
Total Assessment Amount: 0
Initial Assessed Amount: 0
Liability \$ Amount: 0
Project \$ Amount: 0
Liability \$ Paid: 0
Project \$ Completed: 0
Total \$ Paid/Completed Amount: 0

Name: COYOTE CANYON LANDFILL-CLOSED
Address: 20661 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA
Region: 8
Facility Id: 236445
Agency Name: Orange Cnty Waste & Recycling
Place Type: Waste Management Unit
Place Subtype: Land fill
Facility Type: Solid Waste Class III - nonhazardous solid wastes
Agency Type: County Agency
Of Agencies: 1
Place Latitude: 33.61235
Place Longitude: -117.82586
SIC Code 1: 4953
SIC Desc 1: Refuse Systems
SIC Code 2: Not reported
SIC Desc 2: Not reported
SIC Code 3: Not reported
SIC Desc 3: Not reported
NAICS Code 1: Not reported
NAICS Desc 1: Not reported
NAICS Code 2: Not reported
NAICS Desc 2: Not reported
NAICS Code 3: Not reported
NAICS Desc 3: Not reported
Of Places: 1
Source Of Facility: Reg Meas
Design Flow: 0.0001
Threat To Water Quality: 2
Complexity: B
Pretreatment: X - Facility is not a POTW
Facility Waste Type: Solid wastes, NEC
Facility Waste Type 2: Not reported
Facility Waste Type 3: Not reported
Facility Waste Type 4: Not reported
Program: LFNONOPER
Program Category1: LNDISP
Program Category2: LNDISP
Of Programs: 1
WDID: 8 300302001
Reg Measure Id: 138546
Reg Measure Type: WDR
Region: 8

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Order #:	86-192
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	09/14/2018
Effective Date:	12/12/1986
Expiration/Review Date:	12/30/2020
Termination Date:	05/03/2018
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	9/17/2013
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	59 - Land Disposal Site not paying tipping fee
Direction/Voice:	Passive
Enforcement Id(EID):	233223
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	02/01/2000
Adoption/Issuance Date:	Not reported
Achieve Date:	2/2/2000
Termination Date:	02/01/2000
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 300302001
Description:	The OCIWMD has failed to submit written notification within five days after verbal notification of previous spills (08/25/99 and 10/27/99).
Program:	LNDISP
Latest Milestone Completion Date:	2/2/2000
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability \$ Amount:	0
Project \$ Amount:	0
Liability \$ Paid:	0
Project \$ Completed:	0
Total \$ Paid/Completed Amount:	0
Name:	COYOTE CANYON LANDFILL-CLOSED
Address:	20661 NEWPORT COAST DRIVE
City,State,Zip:	NEWPORT BEACH, CA
Region:	8
Facility Id:	236445
Agency Name:	Orange Cnty Waste & Recycling
Place Type:	Waste Management Unit
Place Subtype:	Land fill

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Facility Type:	Solid Waste Class III - nonhazardous solid wastes
Agency Type:	County Agency
# Of Agencies:	1
Place Latitude:	33.61235
Place Longitude:	-117.82586
SIC Code 1:	4953
SIC Desc 1:	Refuse Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.0001
Threat To Water Quality:	2
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Solid wastes, NEC
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LFNONOPER
Program Category1:	LNDISP
Program Category2:	LNDISP
# Of Programs:	1
WDID:	8 300302001
Reg Measure Id:	138546
Reg Measure Type:	WDR
Region:	8
Order #:	86-192
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	09/14/2018
Effective Date:	12/12/1986
Expiration/Review Date:	12/30/2020
Termination Date:	05/03/2018
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	9/17/2013
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	59 - Land Disposal Site not paying tipping fee

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Direction/Voice: Passive
Enforcement Id(EID): 233222
Region: 8
Order / Resolution Number: UNKNOWN
Enforcement Action Type: Oral Communication
Effective Date: 08/03/1999
Adoption/Issuance Date: Not reported
Achieve Date: 8/10/1999
Termination Date: 08/03/1999
ACL Issuance Date: Not reported
EPL Issuance Date: Not reported
Status: Historical
Title: Enforcement - 8 300302001
Description: A minor spill of extracted groundwater occurred at the site as a result of damage to a sewer line caused by a contractor working on adjacent property. An estimated 2,100 gallons of water had been released. No discharge to surface waters.

Program: LNDISP
Latest Milestone Completion Date: 8/10/1999
Of Programs1: 1
Total Assessment Amount: 0
Initial Assessed Amount: 0
Liability \$ Amount: 0
Project \$ Amount: 0
Liability \$ Paid: 0
Project \$ Completed: 0
Total \$ Paid/Completed Amount: 0

Name: COYOTE CANYON LANDFILL-CLOSED
Address: 20661 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA
Region: 8
Facility Id: 236445
Agency Name: Orange Cnty Waste & Recycling
Place Type: Waste Management Unit
Place Subtype: Land fill
Facility Type: Solid Waste Class III - nonhazardous solid wastes
Agency Type: County Agency
Of Agencies: 1
Place Latitude: 33.61235
Place Longitude: -117.82586
SIC Code 1: 4953
SIC Desc 1: Refuse Systems
SIC Code 2: Not reported
SIC Desc 2: Not reported
SIC Code 3: Not reported
SIC Desc 3: Not reported
NAICS Code 1: Not reported
NAICS Desc 1: Not reported
NAICS Code 2: Not reported
NAICS Desc 2: Not reported
NAICS Code 3: Not reported
NAICS Desc 3: Not reported
Of Places: 1
Source Of Facility: Reg Meas
Design Flow: 0.0001

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Threat To Water Quality:	2
Complexity:	B
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Solid wastes, NEC
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	LFNONOPER
Program Category1:	LNDISP
Program Category2:	LNDISP
# Of Programs:	1
WDID:	8 300302001
Reg Measure Id:	138546
Reg Measure Type:	WDR
Region:	8
Order #:	86-192
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	09/14/2018
Effective Date:	12/12/1986
Expiration/Review Date:	12/30/2020
Termination Date:	05/03/2018
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	9/17/2013
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	59 - Land Disposal Site not paying tipping fee
Direction/Voice:	Passive
Enforcement Id(EID):	233121
Region:	8
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	01/10/2000
Adoption/Issuance Date:	Not reported
Achieve Date:	3/24/2000
Termination Date:	01/10/2000
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 8 300302001
Description:	Letter sent to GRS, Inc. to request the submittal of as-built drawings of the gas condensate system to determine compliance with waste discharge requirements in Order No. 98-99, and to propose any improvements to comply with WDRs in Order No. 98-99.
Program:	LNDISP
Latest Milestone Completion Date:	3/24/2000

Map ID
Direction
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Of Programs1: 1
Total Assessment Amount: 0
Initial Assessed Amount: 0
Liability \$ Amount: 0
Project \$ Amount: 0
Liability \$ Paid: 0
Project \$ Completed: 0
Total \$ Paid/Completed Amount: 0

Financial Assurance 2:

Name: COYOTE CANYON SANITARY LANDFILL
Address: 20661 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA 92657
SWIS Number: 30-AB-0017
Review Date: 06/02/2021
Log Type: Corrective Action
Coverage: 1010000
Adequate Mechanism: Yes
Mechanism: Enterprise Fund
Disbursements: 0
Inflation Estimate: 822946
Inflation Estimate Date: 05/31/2022
Plan Cost Estimate: 750830
Plan Cost Date: 12/11/2018
Responsible Party: OC Waste and Recycling
Financial Assurances Provider Name: Not reported

Contact Info:

SWIS Number: 30-AB-0017
Company Name: Not reported
Contact Name: Not reported
Title: Not reported
Email: Not reported
Phone: Not reported

Name: COYOTE CANYON SANITARY LANDFILL
Address: 20661 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA 92657
SWIS Number: 30-AB-0017
Review Date: 06/02/2021
Log Type: Postclosure
Coverage: 41634247
Adequate Mechanism: Yes
Mechanism: Pledge of Revenue
Disbursements: 0
Inflation Estimate: 41634247
Inflation Estimate Date: 05/31/2022
Plan Cost Estimate: 1266192
Plan Cost Date: 12/01/2018
Responsible Party: OC Waste and Recycling
Financial Assurances Provider Name: Not reported

Contact Info:

SWIS Number: 30-AB-0017
Company Name: Not reported
Contact Name: Not reported
Title: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

Email: Not reported
Phone: Not reported

Name: COYOTE CANYON SANITARY LANDFILL
Address: 20661 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA 92657
SWIS Number: 30-AB-0017
Review Date: 06/02/2021
Log Type: Closure
Coverage: 0
Adequate Mechanism: Yes
Mechanism: Not reported
Disbursements: 0
Inflation Estimate: Not reported
Inflation Estimate Date: Not reported
Plan Cost Estimate: 0
Plan Cost Date: 04/01/2018
Responsible Party: OC Waste and Recycling
Financial Assurances Provider Name: Not reported

Contact Info:

SWIS Number: 30-AB-0017
Company Name: Not reported
Contact Name: Not reported
Title: Not reported
Email: Not reported
Phone: Not reported

CIWQS:

Name: COYOTE CANYON LANDFILL-CLOSED
Address: 20661 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA 92657
Agency: Orange Cnty Waste & Recycling
Agency Address: 601 North Ross Street 5th Floor, Santa Ana, CA 92701
Place/Project Type: Land fill
SIC/NAICS: 4953
Region: 8
Program: LFNONOPER
Regulatory Measure Status: Active
Regulatory Measure Type: WDR
Order Number: R8-2018-0009
WDID: 8 300302001
NPDES Number: Not reported
Adoption Date: 05/04/2018
Effective Date: 05/04/2018
Termination Date: Not reported
Expiration/Review Date: 05/04/2028
Design Flow: 0.0001
Major/Minor: Not reported
Complexity: B
TTWQ: 2
Enforcement Actions within 5 years: 0
Violations within 5 years: 0
Latitude: 33.61235
Longitude: -117.82586

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL (CLOSED) (Continued)

S105964593

CERS:

Name: COYOTE CANYON LANDFILL
Address: 20661 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA
Site ID: 648359
CERS ID: T10000009361
CERS Description: Cleanup Program Site

Affiliation:

Affiliation Type Desc: Regional Board Caseworker
Entity Name: JOANNE LEE - SANTA ANA RWQCB (REGION 8)
Entity Title: Not reported
Affiliation Address: 3737 MAIN STREET, SUITE 500
Affiliation City: RIVERSIDE
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Name: COYOTE CANYON LANDFILL (CLOSED)
Address: 20661 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA 92657
Site ID: 648360
CERS ID: L10004005233
CERS Description: Land Disposal Site

Affiliation:

Affiliation Type Desc: Regional Board Caseworker
Entity Name: JOANNE LEE - SANTA ANA RWQCB (REGION 8)
Entity Title: Not reported
Affiliation Address: 3737 MAIN STREET, SUITE 500
Affiliation City: RIVERSIDE
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

A5
Target
Property
GAS RECOVERY SYSTEMS LLC
20662 NEWPORT COAST DR
NEWPORT BEACH, CA 92657

AST
Orange Co. Industrial Site
EMI
NPDES
CIWQS
CERS

S108431980
N/A

Site 5 of 12 in cluster A

Actual:
812 ft.

AST:

Name: COYOTE CANYON ENERGY LLC
Address: 20662 NEWPORT COAST DR
City/Zip: NEWPORT COAST,92657
Certified Unified Program Agencies: Not reported
Owner: Coyote Canyon Landfill
Total Gallons: Not reported
CERSID: 10398700
Facility ID: Not reported
Business Name: OC Waste and Recycling
Phone: (716) 439-1004
Fax: (716)439-1000

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Mailing Address: 5087 Junction Road
Mailing Address City: Lockport
Mailing Address State: NY
Mailing Address Zip Code: 14094
Operator Name: Coyote Canyon Landfill
Operator Phone: (949) 721-4151
Owner Phone: (716) 439-1004
Owner Mail Address: 5087 Junction Road
Owner State: NY
Owner Zip Code: 14094
Owner Country: United States
Property Owner Name: Orange County Waste & Recycling
Property Owner Phone: Not reported
Property Owner Mailing Address: Not reported
Property Owner City: Not reported
Property Owner Stat : Not reported
Property Owner Zip Code: Not reported
Property Owner Country: United States
EPAID: CAL000311304

Orange Co. Industrial Site:

Name: GAS RECOVERY SYSTEMS LLC
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT BEACH, CA 92657
Case ID: 06IC028
Record ID: RO0003426
Current Status: CLOSED
Closure Type: Voluntary Cleanup Program Termination
Released Chemical: WASTE (OR SLOP) OIL; ARSENIC; ZINC COMPOUNDS; LEAD COMPOUNDS
Closed Date: 8/16/2013
File Location: Not reported

EMI:

Name: GAS RECOVERY SYST LLC (COYOTE CANYON)
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657
Year: 2005
County Code: 30
Air Basin: SC
Facility ID: 45448
Air District Name: SC
SIC Code: 4911
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1.229185
Reactive Organic Gases Tons/Yr: .834057907
Carbon Monoxide Emissions Tons/Yr: 1.93707
NOX - Oxides of Nitrogen Tons/Yr: 14.8171
SOX - Oxides of Sulphur Tons/Yr: 13.84603
Particulate Matter Tons/Yr: 1.98614
Part. Matter 10 Micrometers and Smllr Tons/Yr:1.947615

Name: GAS RECOVERY SYST LLC (COYOTE CANYON)
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Year: 2006
County Code: 30
Air Basin: SC
Facility ID: 45448
Air District Name: SC
SIC Code: 4911
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 7.756936353589631723
Reactive Organic Gases Tons/Yr: 3.764
Carbon Monoxide Emissions Tons/Yr: 28.131
NOX - Oxides of Nitrogen Tons/Yr: 16.591
SOX - Oxides of Sulphur Tons/Yr: 12.294
Particulate Matter Tons/Yr: 7.097
Part. Matter 10 Micrometers and Smllr Tons/Yr: 6.24026

Name: GAS RECOVERY SYST LLC (COYOTE CANYON)
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657
Year: 2007
County Code: 30
Air Basin: SC
Facility ID: 45448
Air District Name: SC
SIC Code: 4911
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 7.756936353589631723
Reactive Organic Gases Tons/Yr: 3.764
Carbon Monoxide Emissions Tons/Yr: 28.131
NOX - Oxides of Nitrogen Tons/Yr: 16.591
SOX - Oxides of Sulphur Tons/Yr: 12.294
Particulate Matter Tons/Yr: 7.097
Part. Matter 10 Micrometers and Smllr Tons/Yr: 6.24026

Name: GAS RECOVERY SYST LLC (COYOTE CANYON)
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657
Year: 2008
County Code: 30
Air Basin: SC
Facility ID: 45448
Air District Name: SC
SIC Code: 1389
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 2.435469472145760328
Reactive Organic Gases Tons/Yr: 1.59541405
Carbon Monoxide Emissions Tons/Yr: 24.78173
NOX - Oxides of Nitrogen Tons/Yr: 9.05
SOX - Oxides of Sulphur Tons/Yr: 11.470521
Particulate Matter Tons/Yr: .9873371
Part. Matter 10 Micrometers and Smllr Tons/Yr: .9873371

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Name: GAS RECOVERY SYST LLC (COYOTE CANYON)
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657
Year: 2012
County Code: 30
Air Basin: SC
Facility ID: 45448
Air District Name: SC
SIC Code: 1389
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 2.361362621
Reactive Organic Gases Tons/Yr: 1.45039
Carbon Monoxide Emissions Tons/Yr: 16.91915
NOX - Oxides of Nitrogen Tons/Yr: 14.21695
SOX - Oxides of Sulphur Tons/Yr: 13.69008
Particulate Matter Tons/Yr: 1.16076
Part. Matter 10 Micrometers and Smlr Tons/Yr:1.16076

Name: COYOTE CANYON ENERGY LLC
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657
Year: 2013
County Code: 30
Air Basin: SC
Facility ID: 45448
Air District Name: SC
SIC Code: 1389
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1.97378258
Reactive Organic Gases Tons/Yr: 1.29636
Carbon Monoxide Emissions Tons/Yr: 11.85941
NOX - Oxides of Nitrogen Tons/Yr: 10.25575
SOX - Oxides of Sulphur Tons/Yr: 8.56086
Particulate Matter Tons/Yr: 4.0215
Part. Matter 10 Micrometers and Smlr Tons/Yr:4.0215

Name: COYOTE CANYON ENERGY LLC
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657
Year: 2014
County Code: 30
Air Basin: SC
Facility ID: 176967
Air District Name: SC
SIC Code: 1389
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 16.889010835
Reactive Organic Gases Tons/Yr: 8.75142
Carbon Monoxide Emissions Tons/Yr: 13.87103
NOX - Oxides of Nitrogen Tons/Yr: 9.2002
SOX - Oxides of Sulphur Tons/Yr: 6.97429

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Particulate Matter Tons/Yr: 2.10637
Part. Matter 10 Micrometers and Smllr Tons/Yr: 2.10624952

Name: COYOTE CANYON ENERGY LLC
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657
Year: 2015
County Code: 30
Air Basin: SC
Facility ID: 176967
Air District Name: SC
SIC Code: 1389
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 2.6062970973
Reactive Organic Gases Tons/Yr: 1.56621062
Carbon Monoxide Emissions Tons/Yr: 28.35601223
NOX - Oxides of Nitrogen Tons/Yr: 14.32667434
SOX - Oxides of Sulphur Tons/Yr: 4.8343336
Particulate Matter Tons/Yr: 4.433714
Part. Matter 10 Micrometers and Smllr Tons/Yr: 4.4326688

NPDES:

Name: COYOTE CANYON FLARE STATION VIEWSHED
Address: 20662 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA 92657
Facility Status: Not reported
NPDES Number: Not reported
Region: Not reported
Agency Number: Not reported
Regulatory Measure ID: Not reported
Place ID: Not reported
Order Number: Not reported
WDID: 8 30C382156
Regulatory Measure Type: Construction
Program Type: Not reported
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported
Expiration Date Of Regulatory Measure: Not reported
Discharge Address: Not reported
Discharge Name: Not reported
Discharge City: Not reported
Discharge State: Not reported
Discharge Zip: Not reported
Status: Terminated
Status Date: 06/06/2018
Operator Name: Orange Cnty OC Waste & Recycling
Operator Address: 601 North Ross Street 5th Floor
Operator City: Santa Ana
Operator State: California
Operator Zip: 92701

NPDES as of 03/2018:

NPDES Number: CAS000002
Status: Active

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Agency Number: 0
Region: 8
Regulatory Measure ID: 493774
Order Number: 2009-0009-DWQ
Regulatory Measure Type: Enrollee
Place ID: Not reported
WDID: 8 30C382156
Program Type: Construction
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: 01/08/2018
Expiration Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported
Discharge Name: Orange Cnty OC Waste & Recycling
Discharge Address: 300 N Flower St Ste 400
Discharge City: Santa Ana
Discharge State: California
Discharge Zip: 92703
Received Date: Not reported
Processed Date: Not reported
Status: Not reported
Status Date: Not reported
Place Size: Not reported
Place Size Unit: Not reported
Contact: Not reported
Contact Title: Not reported
Contact Phone: Not reported
Contact Phone Ext: Not reported
Contact Email: Not reported
Operator Name: Not reported
Operator Address: Not reported
Operator City: Not reported
Operator State: Not reported
Operator Zip: Not reported
Operator Contact: Not reported
Operator Contact Title: Not reported
Operator Contact Phone: Not reported
Operator Contact Phone Ext: Not reported
Operator Contact Email: Not reported
Operator Type: Not reported
Developer: Not reported
Developer Address: Not reported
Developer City: Not reported
Developer State: Not reported
Developer Zip: Not reported
Developer Contact: Not reported
Developer Contact Title: Not reported
Constype Linear Utility Ind: Not reported
Emergency Phone: Not reported
Emergency Phone Ext: Not reported
Constype Above Ground Ind: Not reported
Constype Below Ground Ind: Not reported
Constype Cable Line Ind: Not reported
Constype Comm Line Ind: Not reported
Constype Commercial Ind: Not reported
Constype Electrical Line Ind: Not reported
Constype Gas Line Ind: Not reported
Constype Industrial Ind: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Constype Other Description: Not reported
Constype Other Ind: Not reported
Constype Recons Ind: Not reported
Constype Residential Ind: Not reported
Constype Transport Ind: Not reported
Constype Utility Description: Not reported
Constype Utility Ind: Not reported
Constype Water Sewer Ind: Not reported
Dir Discharge Uswater Ind: Not reported
Receiving Water Name: Not reported
Certifier: Not reported
Certifier Title: Not reported
Certification Date: Not reported
Primary Sic: Not reported
Secondary Sic: Not reported
Tertiary Sic: Not reported

Name: COYOTE CANYON ENERGY LLC
Address: 20662 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT COAST, CA 92657
Facility Status: Not reported
NPDES Number: Not reported
Region: Not reported
Agency Number: Not reported
Regulatory Measure ID: Not reported
Place ID: Not reported
Order Number: Not reported
WDID: 8 30C377873
Regulatory Measure Type: Construction
Program Type: Not reported
Adoption Date Of Regulatory Measure: Not reported
Effective Date Of Regulatory Measure: Not reported
Termination Date Of Regulatory Measure: Not reported
Expiration Date Of Regulatory Measure: Not reported
Discharge Address: Not reported
Discharge Name: Not reported
Discharge City: Not reported
Discharge State: Not reported
Discharge Zip: Not reported
Status: Terminated
Status Date: 03/28/2017
Operator Name: Coyote Canyon Energy LLC
Operator Address: 5087 Junction Road
Operator City: Lockport
Operator State: New York
Operator Zip: 14094

NPDES as of 03/2018:
NPDES Number: Not reported
Status: Not reported
Agency Number: Not reported
Region: 8
Regulatory Measure ID: 479054
Order Number: Not reported
Regulatory Measure Type: Construction
Place ID: Not reported
WDID: 8 30C377873

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	02/28/2017
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
Received Date:	10/11/2016
Processed Date:	10/19/2016
Status:	Terminated
Status Date:	03/28/2017
Place Size:	4.14
Place Size Unit:	Acres
Contact:	Suparna Chakladar
Contact Title:	Not reported
Contact Phone:	951-833-4153
Contact Phone Ext:	Not reported
Contact Email:	SChakladar@fortistar.com
Operator Name:	Coyote Canyon Energy LLC
Operator Address:	5087 Junction Road
Operator City:	Lockport
Operator State:	New York
Operator Zip:	14094
Operator Contact:	Suparna Chakladar
Operator Contact Title:	Not reported
Operator Contact Phone:	951-833-4153
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	SChakladar@fortistar.com
Operator Type:	Private Business
Developer:	Coyote Canyon Energy LLC
Developer Address:	5087 Junction Road
Developer City:	Lockport
Developer State:	New York
Developer Zip:	14094
Developer Contact:	Suparna Chakladar
Developer Contact Title:	Not reported
Constype Linear Utility Ind:	N
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	N
Constype Below Ground Ind:	N
Constype Cable Line Ind:	N
Constype Comm Line Ind:	N
Constype Commercial Ind:	N
Constype Electrical Line Ind:	N
Constype Gas Line Ind:	N
Constype Industrial Ind:	Y
Constype Other Description:	Not reported
Constype Other Ind:	N
Constype Recons Ind:	N
Constype Residential Ind:	N
Constype Transport Ind:	N
Constype Utility Description:	Not reported
Constype Utility Ind:	N

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Constype Water Sewer Ind:	N
Dir Discharge Uswater Ind:	N
Receiving Water Name:	Newport Bay
Certifier:	Suparna Chakladar
Certifier Title:	Vice President
Certification Date:	11-OCT-16
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported
NPDES Number:	CAS000002
Status:	Terminated
Agency Number:	0
Region:	8
Regulatory Measure ID:	479054
Order Number:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place ID:	Not reported
WDID:	8 30C377873
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	10/19/2016
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	02/28/2017
Discharge Name:	Coyote Canyon Energy LLC
Discharge Address:	5087 Junction Road
Discharge City:	Lockport
Discharge State:	New York
Discharge Zip:	14094
Received Date:	Not reported
Processed Date:	Not reported
Status:	Not reported
Status Date:	Not reported
Place Size:	Not reported
Place Size Unit:	Not reported
Contact:	Not reported
Contact Title:	Not reported
Contact Phone:	Not reported
Contact Phone Ext:	Not reported
Contact Email:	Not reported
Operator Name:	Not reported
Operator Address:	Not reported
Operator City:	Not reported
Operator State:	Not reported
Operator Zip:	Not reported
Operator Contact:	Not reported
Operator Contact Title:	Not reported
Operator Contact Phone:	Not reported
Operator Contact Phone Ext:	Not reported
Operator Contact Email:	Not reported
Operator Type:	Not reported
Developer:	Not reported
Developer Address:	Not reported
Developer City:	Not reported
Developer State:	Not reported
Developer Zip:	Not reported
Developer Contact:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Developer Contact Title:	Not reported
Constype Linear Utility Ind:	Not reported
Emergency Phone:	Not reported
Emergency Phone Ext:	Not reported
Constype Above Ground Ind:	Not reported
Constype Below Ground Ind:	Not reported
Constype Cable Line Ind:	Not reported
Constype Comm Line Ind:	Not reported
Constype Commercial Ind:	Not reported
Constype Electrical Line Ind:	Not reported
Constype Gas Line Ind:	Not reported
Constype Industrial Ind:	Not reported
Constype Other Description:	Not reported
Constype Other Ind:	Not reported
Constype Recons Ind:	Not reported
Constype Residential Ind:	Not reported
Constype Transport Ind:	Not reported
Constype Utility Description:	Not reported
Constype Utility Ind:	Not reported
Constype Water Sewer Ind:	Not reported
Dir Discharge Uswater Ind:	Not reported
Receiving Water Name:	Not reported
Certifier:	Not reported
Certifier Title:	Not reported
Certification Date:	Not reported
Primary Sic:	Not reported
Secondary Sic:	Not reported
Tertiary Sic:	Not reported

CIWQS:

Name:	GAS RECOVERY SYSTEMS COYOTE CA
Address:	20662 NEWPORT COAST DR
City,State,Zip:	NEWPORT COAST, CA 92657
Agency:	Gas Recovery Systems
Agency Address:	20662 Newport Coast Dr, Newport Coast, CA 92657
Place/Project Type:	Industrial - Electric Services
SIC/NAICS:	4911
Region:	8
Program:	INDSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water industrial
Order Number:	2014-0057-DWQ
WDID:	8 30I000316
NPDES Number:	CAS000001
Adoption Date:	Not reported
Effective Date:	03/06/1992
Termination Date:	01/17/2014
Expiration/Review Date:	Not reported
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	33.60988
Longitude:	-117.8256

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Name: COYOTE CANYON FLARE STATION VIEWSHED
Address: 20662 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT BEACH, CA 92657
Agency: Orange Cnty OC Waste & Recycling
Agency Address: 601 North Ross Street, 5th Floor, Santa Ana, CA 92701
Place/Project Type: Construction - Other: Grading and Planting
SIC/NAICS: Not reported
Region: 8
Program: CONSTW
Regulatory Measure Status: Terminated
Regulatory Measure Type: Storm water construction
Order Number: 2009-0009-DWQ
WDID: 8 30C382156
NPDES Number: CAS000002
Adoption Date: Not reported
Effective Date: 01/08/2018
Termination Date: 04/25/2018
Expiration/Review Date: Not reported
Design Flow: Not reported
Major/Minor: Not reported
Complexity: Not reported
TTWQ: Not reported
Enforcement Actions within 5 years: 0
Violations within 5 years: 0
Latitude: 33.613055
Longitude: -117.82194

Name: COYOTE CANYON ENERGY LLC
Address: 20662 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT COAST, CA 92657
Agency: Coyote Canyon Energy LLC
Agency Address: 5087 Junction Road, Lockport, NY 14094
Place/Project Type: Industrial - Electric Services
SIC/NAICS: 4911
Region: 8
Program: INDSTW
Regulatory Measure Status: Terminated
Regulatory Measure Type: Storm water industrial
Order Number: 2014-0057-DWQ
WDID: 8 30I024656
NPDES Number: CAS000001
Adoption Date: Not reported
Effective Date: 01/27/2014
Termination Date: 01/07/2016
Expiration/Review Date: Not reported
Design Flow: Not reported
Major/Minor: Not reported
Complexity: Not reported
TTWQ: Not reported
Enforcement Actions within 5 years: 0
Violations within 5 years: 0
Latitude: 33.61227
Longitude: -117.82566

Name: COYOTE CANYON ENERGY LLC
Address: 20662 NEWPORT COAST DRIVE
City,State,Zip: NEWPORT COAST, CA 92657

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Agency: Coyote Canyon Energy LLC
Agency Address: 5087 Junction Road, Lockport, NY 14094
Place/Project Type: Construction - Industrial
SIC/NAICS: Not reported
Region: 8
Program: CONSTW
Regulatory Measure Status: Terminated
Regulatory Measure Type: Storm water construction
Order Number: 2009-0009-DWQ
WDID: 8 30C377873
NPDES Number: CAS000002
Adoption Date: Not reported
Effective Date: 10/19/2016
Termination Date: 02/28/2017
Expiration/Review Date: Not reported
Design Flow: Not reported
Major/Minor: Not reported
Complexity: Not reported
TTWQ: Not reported
Enforcement Actions within 5 years: 0
Violations within 5 years: 0
Latitude: 33.61352
Longitude: -117.82225

CERS:

Name: VERIZON WIRELESS: NEWPORT RIDGE
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT BEACH, CA 92657
Site ID: 82694
CERS ID: 10163717
CERS Description: Chemical Storage Facilities

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-28-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Email report to: myrna.allende@verizonwireless.com Reportable materials on site: Lead acid batteries (24 batteries) approximately 65 gallons Documents have been electronically submitted on CERS.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 03-04-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: CERS 2017 - Accepted - filed prior to 3/1/17
Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-17-2022
Violations Found: No
Eval Type: Routine done by local agency

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Eval Notes: On site for a routine hazardous materials inspection. Consent to inspect and enter was granted by Steven Rossi. The Hazardous Materials Business Plan submitted on CERS on 1/25/2022 was reviewed/verified this date. Emergency Response Plan, inspection logs and employee training are kept electronically. No violations were observed on this date. E-mailed copy of report wilson.rodriquez@verizonwireless.com.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS,

Affiliation:

Affiliation Type Desc: Operator
Entity Name: Verizon Wireless
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (949) 286-7000,

Affiliation Type Desc: Parent Corporation
Entity Name: Verizon Wireless [Southern California]
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Affiliation Type Desc: Document Preparer
Entity Name: Steve Skanderson, Stantec
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 15505 Sand Canyon Avenue
Affiliation City: Irvine
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92618
Affiliation Phone: ,

Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6406,

Affiliation Type Desc: Identification Signer
Entity Name: Wilson Rodriguez
Entity Title: Engr III Spec-RE/Regulatory
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Affiliation Type Desc: Environmental Contact
Entity Name: Environmental Compliance
Entity Title: Not reported
Affiliation Address: 15505 Sand Canyon Avenue
Affiliation City: Irvine
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92618
Affiliation Phone: ,

Affiliation Type Desc: Legal Owner
Entity Name: Verizon Wireless
Entity Title: Not reported
Affiliation Address: 15505 Sand Canyon Avenue
Affiliation City: Irvine
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92618
Affiliation Phone: (949) 286-7000,

Name: COYOTE CANYON LANDFILL
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT BEACH, CA 92657
Site ID: 32608
CERS ID: 10398700
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 32608
Site Name: Coyote Canyon Landfill
Violation Date: 04-20-2023
Citation: HSC 6.95 25508(a)(3) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(3)
Violation Description: Failure to establish and electronically submit an adequate emergency response plan and procedures for a release or threatened release of a hazardous material.
Violation Notes: Returned to compliance on 04/28/2023. The owner/operator did not include the most up to date local UPA number on the emergency response plan on the facility's annual submittal in CERS.
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS,

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Site ID: 32608
Site Name: Coyote Canyon Landfill
Violation Date: 04-20-2023
Citation: HSC 6.95 25508(a)(3) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(3)
Violation Description: Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes: Returned to compliance on 04/28/2023. The following hazardous materials were observed on-site and were not reported correctly under Hazardous Materials Inventory section of CERS: -Liquefied petroleum gas -Sodium hypochlorite
Violation Division: Orange County Environmental Health
Violation Program: HMRRP
Violation Source: CERS,

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-11-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site for a routine hazardous waste inspection. Consent to inspect and take any necessary photos was given by Samir Kaleem, site manager. Walked throughout the facility. No hazardous waste was observed during on site inspection. Facility manager stated that the facility does not create hazardous waste from use of hazardous materials or other processes, and therefore does not ship off waste on manifests. No manifests were available for review. Will file document to remove facility from hazardous waste program. No hazardous waste violations were observed this inspection.

Eval Division: Orange County Environmental Health
Eval Program: HW
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 12-18-2015
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: CERS review: add APST program 7112 - 1,100 gal diesel tank, 500 gal oil tank

Eval Division: Orange County Environmental Health
Eval Program: APSA
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-20-2023
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: On site for a routine hazardous materials inspection. Consent to enter and inspect was granted by Brian Song. Observed the following disclosable materials: -Diesel -Liquefied petroleum gas -Sodium Hydroxide -Sodium Hypochlorite Hazardous Materials submittal in CERS has been reviewed/verified. Employee training was verified. E-mailed copy of report to brian.song@tetrattech.com, farrokh.shoaei@ocwr.ocgov.com, and sami.ayass@tetrattech.com.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 03-16-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: HMBEP declined in CERS. The following notes were included in the review: "The facility name and ownership information has changed. Please contact this agency directly to confirm these changes and to provide a date of ownership change. Email Jonathan Alaniz at alaniz@ochca.com. The provided HMBEP still contains references and contact information for Newport Beach Fire. Orange County Environmental Health is now your regulating agency. Please use the contingency plan template available from CERS on the emergency/contingency upload page and provide the phone number 714-433-6000 for the local unified program agency."

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 04-28-2023
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: The purpose of this off-site inspection is to follow up on violations that were noted on a previous inspection report dated 04/20/23. Violations 1010004 and 1010010 have been corrected. No further action required. E-mailed copy of report to farrokh.shoaei@ocwr.ocgov.com.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Other/Unknown
Eval Date: 05-05-2017
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: 2017 HMBEP Annual Certification Approval. The following documents were received and ACCEPTED on CERS: Business Activities Business Ownership Information Chemical Inventory Facility Site Map Emergency Plan

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-11-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: On site for routine hazardous materials and business emergency plan inspection. The inspection was conducted with Samir Kaleem, site manager. Observed the facility and inspected hazardous materials storage. The following materials were observed in amounts that meet or exceed the minimum volumes required for disclosure: - Diesel - Propane - Diesel Fuel - Sodium Hypochlorite Assisted manager with creating CERS account and updating business and inventory information while on site. CERS updated and complete for 2019. Business emergency plan available for review. Plan accepted. Training records available for review as HAZWOPER annual training refresher certificates. Records

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

accepted. No hazardous materials violations observed during inspection.

Eval Division: Orange County Environmental Health
Eval Program: HMRRP
Eval Source: CERS,

Affiliation:

Affiliation Type Desc: Document Preparer
Entity Name: Farrokh Shoa'ei
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Affiliation Type Desc: Legal Owner
Entity Name: OC WASTE & RECYCLING
Entity Title: Not reported
Affiliation Address: 601 North Ross Street, 5th Floor
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92701
Affiliation Phone: (714) 834-4000,

Affiliation Type Desc: Property Owner
Entity Name: OC Waste & Recycling
Entity Title: Not reported
Affiliation Address: 601 North Ross Street, 5th Floor
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92701
Affiliation Phone: (714) 834-4000,

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 601 North Ross Street, 5th Floor
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92701
Affiliation Phone: ,

Affiliation Type Desc: Identification Signer
Entity Name: Farrokh Shoa'ei
Entity Title: Civil Engineer
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GAS RECOVERY SYSTEMS LLC (Continued)

S108431980

Affiliation Type Desc: CUPA District
Entity Name: Orange County Env Health
Entity Title: Not reported
Affiliation Address: 1241 East Dyer RoadSuite 120
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92705-5611
Affiliation Phone: (714) 433-6406,

Affiliation Type Desc: Operator
Entity Name: Coyote Canyon Landfill
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (949) 721-4151,

Affiliation Type Desc: Parent Corporation
Entity Name: OC Waste and Recycling
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Affiliation Type Desc: Environmental Contact
Entity Name: Farrokh Shoaee, Ph.D., P.E.
Entity Title: Not reported
Affiliation Address: 601 North Ross Street, 5th Floor
Affiliation City: Santa Ana
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92701
Affiliation Phone: ,

Name: GAS RECOVERY SYSTEMS LLC
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT BEACH, CA 92657
Site ID: 657078
CERS ID: T10000017782
CERS Description: Cleanup Program Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: IC SUPERVISOR - ORANGE COUNTY LOP
Entity Title: Not reported
Affiliation Address: 1241 E. DYER RD., SUITE 120
Affiliation City: SANTA ANA
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

A6
Target
Property
COYOTE CANYON ENERGY LLC
20662 NEWPORT COAST DR
NEWPORT BEACH, CA 92657

HWTS
HAZNET
S118235391
N/A

Site 6 of 12 in cluster A

Actual:
812 ft.

HWTS:

Name: COYOTE CANYON ENERGY LLC
Address: 20662 NEWPORT COAST DR
Address 2: Not reported
City,State,Zip: NEWPORT BEACH, CA 92657
EPA ID: CAL000393667
Inactive Date: 06/30/2018
Create Date: 01/29/2014
Last Act Date: Not reported
Mailing Name: Not reported
Mailing Address: 5087 LOCKPORT JUNCTION RD
Mailing Address 2: Not reported
Mailing City,State,Zip: LOCKPORT, NY 140949601
Owner Name: COYOTE CANYON ENERGY LLC
Owner Address: 5087 LOCKPORT JUNCTION RD
Owner Address 2: Not reported
Owner City,State,Zip: LOCKPORT, NY 140949601
Owner Phone: Not reported
Owner Fax: Not reported
Contact Name: ANDREW ZALENSKI
Contact Address: 5087 LOCKPORT JUNCTION RD
Contact Address 2: Not reported
City,State,Zip: LOCKPORT, NY 14094
Contact Phone: Not reported
Contact Fax: Not reported
Facility Status: Inactive
Facility Type: PERMANENT
Category: STATE
Latitude: 33.61718524
Longitude: -117.82587209

NAICS:

EPA ID: CAL000393667
Create Date: 2014-01-29 08:28:36.920
NAICS Code: 221122
NAICS Description: Electric Power Distribution
Issued EPA ID Date: 2014-01-29 08:28:36.89000
Inactive Date: 2018-06-30 00:00:00
Facility Name: COYOTE CANYON ENERGY LLC
Facility Address: 20662 NEWPORT COAST DR
Facility Address 2: Not reported
Facility City: NEWPORT BEACH
Facility County: Not reported
Facility State: CA
Facility Zip: 926570301

HAZNET:

Name: COYOTE CANYON ENERGY LLC
Address: 20662 NEWPORT COAST DR
Address 2: Not reported
City,State,Zip: NEWPORT BEACH, CA 926570301
Contact: ANDREW ZALENSKI

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON ENERGY LLC (Continued)

S118235391

Telephone:	9493555260
Mailing Name:	Not reported
Mailing Address:	5087 LOCKPORT JUNCTION RD
Year:	2021
Gepaid:	CAL000393667
TSD EPA ID:	CAD099452708
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	11.6888
Year:	2017
Gepaid:	CAL000393667
TSD EPA ID:	CAT000646117
CA Waste Code:	352 - Other organic solids
Disposal Method:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	0.6
Year:	2016
Gepaid:	CAL000393667
TSD EPA ID:	CAT080013352
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	H061 - Fuel Blending Prior To Energy Recovery At Another Site
Tons:	0.187
Year:	2016
Gepaid:	CAL000393667
TSD EPA ID:	CAD097030993
CA Waste Code:	491 - Unspecified sludge waste
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.1251
Year:	2016
Gepaid:	CAL000393667
TSD EPA ID:	CAT080013352
CA Waste Code:	222 - Oil/water separation sludge
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	13.344
Year:	2015
Gepaid:	CAL000393667
TSD EPA ID:	CAD028409019
CA Waste Code:	181 - Other inorganic solid waste
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	5
Year:	2015
Gepaid:	CAL000393667
TSD EPA ID:	CAD044429835
CA Waste Code:	213 - Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

Map ID
Direction
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON ENERGY LLC (Continued)

S118235391

Tons: 0.125

Year: 2015
Gepaid: CAL000393667
TSD EPA ID: CAD044429835
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No
Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 1.35

Year: 2014
Gepaid: CAL000393667
TSD EPA ID: CAD044429835
CA Waste Code: 352 - Other organic solids
Disposal Method: H141 - Storage, Bulking, And/Or Transfer Off Site--No
Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.05

Additional Info:

Year: 2017
Gen EPA ID: CAL000393667

Shipment Date: 20170328
Creation Date: 5/9/2018 18:31:51
Receipt Date: 20170407
Manifest ID: 016798400JJK
Trans EPA ID: CAR000188201
Trans Name: ENVIROSERV
Trans 2 EPA ID: CAD982030173
Trans 2 Name: ECOLOGY CONTROL INDUSTRIES INC
TSDF EPA ID: CAT000646117
Trans Name: CHEMICAL WASTE MANAGEMENT
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H132 - Landfill Or Surface Impoundment That Will Be Closed As
Landfill(To Include On-Site Treatment And/Or Stabilization)

Quantity Tons: 0.6
Waste Quantity: 1200
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:

Year: 2016
Gen EPA ID: CAL000393667

Shipment Date: 20151120
Creation Date: 3/5/2016 22:15:15
Receipt Date: 20151204
Manifest ID: 005113390SKS

Map ID
Direction
Distance
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON ENERGY LLC (Continued)

S118235391

Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	1
Waste Quantity:	2000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20151112
Creation Date:	1/11/2016 22:16:40
Receipt Date:	20151119
Manifest ID:	005113330SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.225
Waste Quantity:	450
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150312
Creation Date:	5/20/2015 22:15:07
Receipt Date:	20150312
Manifest ID:	011252111JJK
Trans EPA ID:	CAR000075622
Trans Name:	KM INDUSTRIAL
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON
TSDf Alt EPA ID:	Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON ENERGY LLC (Continued)

S118235391

TSDf Alt Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	5
Waste Quantity:	10000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150107
Creation Date:	3/26/2015 22:15:06
Receipt Date:	20150119
Manifest ID:	004713210SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	213 - Hydrocarbon solvents (benzene, hexane, Stoddard, etc.
RCRA Code:	D018
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	D008
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150107
Creation Date:	3/26/2015 22:15:06
Receipt Date:	20150119
Manifest ID:	004713210SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDf EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSDf Alt EPA ID:	Not reported
TSDf Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.125
Waste Quantity:	250

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON ENERGY LLC (Continued)

S118235391

Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:

Year: 2015
Gen EPA ID: CAL000393667

Shipment Date: 20151120
Creation Date: 3/5/2016 22:15:15
Receipt Date: 20151204
Manifest ID: 005113390SKS
Trans EPA ID: TXR000081205
Trans Name: SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD044429835
Trans Name: CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

Quantity Tons: 1
Waste Quantity: 2000
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Shipment Date: 20151112
Creation Date: 1/11/2016 22:16:40
Receipt Date: 20151119
Manifest ID: 005113330SKS
Trans EPA ID: TXR000081205
Trans Name: SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD044429835
Trans Name: CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

Quantity Tons: 0.225
Waste Quantity: 450
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported

Map ID
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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON ENERGY LLC (Continued)

S118235391

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150312
Creation Date:	5/20/2015 22:15:07
Receipt Date:	20150312
Manifest ID:	011252111JJJ
Trans EPA ID:	CAR000075622
Trans Name:	KM INDUSTRIAL
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSD EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON
TSD EPA ID:	Not reported
TSD EPA Name:	Not reported
Waste Code Description:	181 - Other inorganic solid waste Organics
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Recovery (H010-H129) Or (H131-H135)
Quantity Tons:	5
Waste Quantity:	10000
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150107
Creation Date:	3/26/2015 22:15:06
Receipt Date:	20150119
Manifest ID:	004713210SKS
Trans EPA ID:	TXR000081205
Trans Name:	SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSD EPA ID:	CAD044429835
Trans Name:	CLEAN HARBORS WILMINGTON LLC
TSD EPA ID:	Not reported
TSD EPA Name:	Not reported
Waste Code Description:	213 - Hydrocarbon solvents (benzene, hexane, Stoddard, etc.
RCRA Code:	D018
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Recovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.125
Waste Quantity:	250
Quantity Unit:	P
Additional Code 1:	D008
Additional Code 2:	D001
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150107
Creation Date:	3/26/2015 22:15:06
Receipt Date:	20150119

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON ENERGY LLC (Continued)

S118235391

Manifest ID: 004713210SKS
Trans EPA ID: TXR000081205
Trans Name: SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD044429835
Trans Name: CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

Quantity Tons: 0.125
Waste Quantity: 250
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Additional Info:

Year: 2014
Gen EPA ID: CAL000393667

Shipment Date: 20140523
Creation Date: 8/17/2014 22:15:06
Receipt Date: 20140615
Manifest ID: 004274755SKS
Trans EPA ID: TXR000081205
Trans Name: SAFETY-KLEEN SYSTEMS INC
Trans 2 EPA ID: Not reported
Trans 2 Name: Not reported
TSDF EPA ID: CAD044429835
Trans Name: CLEAN HARBORS WILMINGTON LLC
TSDF Alt EPA ID: Not reported
TSDF Alt Name: Not reported
Waste Code Description: 352 - Other organic solids
RCRA Code: Not reported
Meth Code: H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

Quantity Tons: 0.05
Waste Quantity: 100
Quantity Unit: P
Additional Code 1: Not reported
Additional Code 2: Not reported
Additional Code 3: Not reported
Additional Code 4: Not reported
Additional Code 5: Not reported

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

A7
Target
Property
COYOTE CANYON ENERGY LLC
20662 NEWPORT COAST DR
NEWPORT BEACH, CA 92657

RCRA NonGen / NLR
1024842861
CAL000393667

Site 7 of 12 in cluster A

Actual:
812 ft.

RCRA Listings:
Date Form Received by Agency: 20140129
Handler Name: Coyote Canyon Energy Llc
Handler Address: 20662 NEWPORT COAST DR
Handler City,State,Zip: NEWPORT BEACH, CA 92657-0301
EPA ID: CAL000393667
Contact Name: ANDREW ZALENSKI
Contact Address: 5087 LOCKPORT JUNCTION RD
Contact City,State,Zip: LOCKPORT, NY 14094
Contact Telephone: 949-355-5260
Contact Fax: 716-439-0135
Contact Email: AZALENSKI@FORTISTAR.COM
Contact Title: Not reported
EPA Region: 09
Land Type: Not reported
Federal Waste Generator Description: Not a generator, verified
Non-Notifier: Not reported
Biennial Report Cycle: Not reported
Accessibility: Not reported
Active Site Indicator: Handler Activities
State District Owner: Not reported
State District: Not reported
Mailing Address: 5087 LOCKPORT JUNCTION RD
Mailing City,State,Zip: LOCKPORT, NY 14094-9601
Owner Name: Coyote Canyon Energy Llc
Owner Type: Other
Operator Name: Andrew Zalenski
Operator Type: Other
Short-Term Generator Activity: No
Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility Activity: No
Recycler Activity with Storage: No
Small Quantity On-Site Burner Exemption: No
Smelting Melting and Refining Furnace Exemption: No
Underground Injection Control: No
Off-Site Waste Receipt: No
Universal Waste Indicator: Yes
Universal Waste Destination Facility: Yes
Federal Universal Waste: No
Active Site State-Reg Handler: ---
Federal Facility Indicator: Not reported
Hazardous Secondary Material Indicator: N
Sub-Part K Indicator: Not reported
2018 GPRA Permit Baseline: Not on the Baseline
2018 GPRA Renewals Baseline: Not on the Baseline
202 GPRA Corrective Action Baseline: No
Subject to Corrective Action Universe: No
Non-TSDFs Where RCRA CA has Been Imposed Universe: No
Corrective Action Priority Ranking: No NCAPS ranking
Environmental Control Indicator: No
Institutional Control Indicator: No

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON ENERGY LLC (Continued)

1024842861

Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20180906
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	COYOTE CANYON ENERGY LLC
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	5087 LOCKPORT JUNCTION RD
Owner/Operator City,State,Zip:	LOCKPORT, NY 14094-9601
Owner/Operator Telephone:	716-439-1004
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	ANDREW ZALENSKI
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	5087 LOCKPORT JUNCTION RD
Owner/Operator City,State,Zip:	LOCKPORT, NY 14094
Owner/Operator Telephone:	949-355-5260
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20140129
Handler Name:	COYOTE CANYON ENERGY LLC
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON ENERGY LLC (Continued)

1024842861

List of NAICS Codes and Descriptions:

NAICS Code: 221122
NAICS Description: ELECTRIC POWER DISTRIBUTION

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

**A8
Target
Property**

**OC WASTE & RECYCLING, COYOTE
20662 NEWPORT COAST DR
NEWPORT COAST, CA 92657**

**EMI S124453701
N/A**

Site 8 of 12 in cluster A

**Actual:
812 ft.**

EMI:

Name: OC WASTE & RECYCLING, COYOTE
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657
Year: 2017
County Code: 30
Air Basin: SC
Facility ID: 181426
Air District Name: SC
SIC Code: 4953
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1.9606408651
Reactive Organic Gases Tons/Yr: 0.980563
Carbon Monoxide Emissions Tons/Yr: 5.18153
NOX - Oxides of Nitrogen Tons/Yr: 10.88704
SOX - Oxides of Sulphur Tons/Yr: 4.70000315
Particulate Matter Tons/Yr: 3.390503
Part. Matter 10 Micrometers and Smlr Tons/Yr: 3.390490928

Name: OC WASTE & RECYCLING, COYOTE
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657
Year: 2020
County Code: 30
Air Basin: SC
Facility ID: 181426
Air District Name: SC
SIC Code: 9999
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1.8427660785
Reactive Organic Gases Tons/Yr: 0.93
Carbon Monoxide Emissions Tons/Yr: 5.26
NOX - Oxides of Nitrogen Tons/Yr: 15.44
SOX - Oxides of Sulphur Tons/Yr: 6.520161
Particulate Matter Tons/Yr: 3.67

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

OC WASTE & RECYCLING, COYOTE (Continued)

S124453701

Part. Matter 10 Micrometers and Smlr Tons/Yr:3.64798

Name: OC WASTE & RECYCLING, COYOTE
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657
Year: 2021
County Code: 30
Air Basin: SC
Facility ID: 181426
Air District Name: SC
SIC Code: 9199
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 4.3208195088
Reactive Organic Gases Tons/Yr: 2.16048246
Carbon Monoxide Emissions Tons/Yr: 11.387355344
NOX - Oxides of Nitrogen Tons/Yr: 17.407061685
SOX - Oxides of Sulphur Tons/Yr: 8.09208277
Particulate Matter Tons/Yr: 4.8697047
Part. Matter 10 Micrometers and Smlr Tons/Yr:4.8404864718

A9
Target
Property

LANDFILLNACOYOTE CANYON-CLOSED
20661 NEWPORT COAST DRIVE
NEWPORT BEACH, CA 92657

FINDS **1023379979**
N/A

Site 9 of 12 in cluster A

Actual:
812 ft.

FINDS:
Registry ID: 110066785009

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:

The California Environmental Protection Agency (CalEPA) has recently implemented a new data warehouse system (nSite). This data warehouse combines and merges facility and site information from five different systems managed within CalEPA. The five systems are: California Environmental Reporting System (CERS),EnviroStor, GeoTracker, California Integrated Water Quality System (CIWQS), andToxic Release Inventory (TRI).

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A10
Target
Property

OC WASTE & RECYCLING, COYOTE
20662 NEWPORT COAST DR
NEWPORT COAST, CA 92657

FINDS **1025450563**
N/A

Site 10 of 12 in cluster A

Actual:
812 ft.

FINDS:
Registry ID: 110070521085

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:

THE EMISSION INVENTORY SYSTEM (EIS) MAINTAINS AN INVENTORY OF LARGE

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

OC WASTE & RECYCLING, COYOTE (Continued)

1025450563

STATIONARY SOURCES AND VOLUNTARILY-REPORTED SMALLER SOURCES OF AIR POINT POLLUTANT EMITTERS. IT CONTAINS INFORMATION ABOUT FACILITY SITES AND THEIR PHYSICAL LOCATION, EMISSIONS UNITS, EMISSIONS PROCESSES, RELEASE POINTS, CONTROL APPROACHES, AND REGULATIONS. FACILITY INVENTORY DATA ARE KEPT SEPARATE FROM THE EMISSIONS DATA AND HAVE STABLE IDENTIFIERS TO IMPROVE CONTINUITY FROM YEAR TO YEAR AND TO HELP IDENTIFY DUPLICATE OR MISSING FACILITIES

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

**A11
Target
Property**

**COYOTE CANYON LANDFILL-CLOSED
20661 NEWPORT COAST
NEWPORT BEACH, CA 92657**

**CERS S123499039
N/A**

Site 11 of 12 in cluster A

**Actual:
812 ft.**

CERS:

Name: COYOTE CANYON LANDFILL-CLOSED
Address: 20661 NEWPORT COAST
City,State,Zip: NEWPORT BEACH, CA 92657
Site ID: 108583
CERS ID: 236445
CERS Description: Land Disposal

Evaluation:

Eval General Type: Other/Unknown
Eval Date: 01-05-2000
Violations Found: No
Eval Type: Miscellaneous Inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-14-1994
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-27-2019
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Sampling Inspection
Eval Date: 02-28-2001
Violations Found: No
Eval Type: RWQCB Type A compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL-CLOSED (Continued)

S123499039

Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Sampling Inspection
Eval Date:	03-01-2004
Violations Found:	No
Eval Type:	RWQCB Type A compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Sampling Inspection
Eval Date:	03-17-2003
Violations Found:	No
Eval Type:	RWQCB Type A compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-03-2012
Violations Found:	No
Eval Type:	RWQCB Type B compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Other/Unknown
Eval Date:	08-16-1999
Violations Found:	No
Eval Type:	Miscellaneous Inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-21-1998
Violations Found:	No
Eval Type:	RWQCB Type B compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-03-1994
Violations Found:	No
Eval Type:	RWQCB Type B compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL-CLOSED (Continued)

S123499039

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-19-1989
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-17-1995
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-03-1999
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-04-1998
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-27-2013
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 03-27-2018
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Other/Unknown
Eval Date: 04-27-1998
Violations Found: No

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL-CLOSED (Continued)

S123499039

Eval Type:	Miscellaneous Inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-08-1996
Violations Found:	No
Eval Type:	RWQCB Type B compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2002
Violations Found:	No
Eval Type:	RWQCB Type B compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-19-1988
Violations Found:	No
Eval Type:	RWQCB Type B compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-22-1995
Violations Found:	No
Eval Type:	RWQCB Type B compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	01-26-2010
Violations Found:	No
Eval Type:	RWQCB Type B compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-01-1993
Violations Found:	No
Eval Type:	RWQCB Type B compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards

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Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL-CLOSED (Continued)

S123499039

Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Followup Inspection
Eval Date:	03-07-1994
Violations Found:	No
Eval Type:	Follow-up Inspection (noncompliance)
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Followup Inspection
Eval Date:	04-09-1991
Violations Found:	No
Eval Type:	Follow-up Inspection (noncompliance)
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-11-1992
Violations Found:	No
Eval Type:	RWQCB Type B compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Sampling Inspection
Eval Date:	05-13-1987
Violations Found:	No
Eval Type:	RWQCB Type A compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-31-2011
Violations Found:	No
Eval Type:	RWQCB Type B compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-14-1990
Violations Found:	No
Eval Type:	RWQCB Type B compliance inspection
Eval Notes:	Not reported
Eval Division:	Water Boards
Eval Program:	LFNONOPER
Eval Source:	CIWQS,

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL-CLOSED (Continued)

S123499039

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-27-2004
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-23-1999
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-01-2000
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-21-1997
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 01-23-1996
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-15-2017
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 02-22-1996
Violations Found: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL-CLOSED (Continued)

S123499039

Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Sampling Inspection
Eval Date: 02-23-2000
Violations Found: No
Eval Type: RWQCB Type A compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-17-2000
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-21-1992
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Sampling Inspection
Eval Date: 10-19-2001
Violations Found: No
Eval Type: RWQCB Type A compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-01-2000
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Sampling Inspection
Eval Date: 12-05-2001
Violations Found: No
Eval Type: RWQCB Type A compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL-CLOSED (Continued)

S123499039

Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-09-1997
Violations Found: No
Eval Type: RWQCB Type B compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Sampling Inspection
Eval Date: 12-10-2007
Violations Found: No
Eval Type: RWQCB Type A compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Eval General Type: Compliance Sampling Inspection
Eval Date: 12-28-2005
Violations Found: No
Eval Type: RWQCB Type A compliance inspection
Eval Notes: Not reported
Eval Division: Water Boards
Eval Program: LFNONOPER
Eval Source: CIWQS,

Enforcement Action:

Site ID: 108583
Site Name: Coyote Canyon Landfill-Closed
Site Address: 20661 NEWPORT COAST
Site City: NEWPORT BEACH
Site Zip: 92657
Enf Action Date: 01-05-2000
Enf Action Type: Oral Communication
Enf Action Description: Oral Communication
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: LFNONOPER
Enf Action Source: CIWQS,

Site ID: 108583
Site Name: Coyote Canyon Landfill-Closed
Site Address: 20661 NEWPORT COAST
Site City: NEWPORT BEACH
Site Zip: 92657
Enf Action Date: 01-10-2000
Enf Action Type: Staff Enforcement Letter (Informal)
Enf Action Description: Staff Enforcement Letter (Informal)
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: LFNONOPER
Enf Action Source: CIWQS,

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL-CLOSED (Continued)

S123499039

Site ID: 108583
Site Name: Coyote Canyon Landfill-Closed
Site Address: 20661 NEWPORT COAST
Site City: NEWPORT BEACH
Site Zip: 92657
Enf Action Date: 02-01-2000
Enf Action Type: Staff Enforcement Letter (Informal)
Enf Action Description: Staff Enforcement Letter (Informal)
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: LFNONOPER
Enf Action Source: CIWQS,

Site ID: 108583
Site Name: Coyote Canyon Landfill-Closed
Site Address: 20661 NEWPORT COAST
Site City: NEWPORT BEACH
Site Zip: 92657
Enf Action Date: 02-28-2001
Enf Action Type: Notice to Comply (Minor Violations)
Enf Action Description: Notice to Comply for Minor Violations
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: LFNONOPER
Enf Action Source: CIWQS,

Site ID: 108583
Site Name: Coyote Canyon Landfill-Closed
Site Address: 20661 NEWPORT COAST
Site City: NEWPORT BEACH
Site Zip: 92657
Enf Action Date: 03-01-2004
Enf Action Type: Notice to Comply (Minor Violations)
Enf Action Description: Notice to Comply for Minor Violations
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: LFNONOPER
Enf Action Source: CIWQS,

Site ID: 108583
Site Name: Coyote Canyon Landfill-Closed
Site Address: 20661 NEWPORT COAST
Site City: NEWPORT BEACH
Site Zip: 92657
Enf Action Date: 03-17-2003
Enf Action Type: Notice to Comply (Minor Violations)
Enf Action Description: Notice to Comply for Minor Violations
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: LFNONOPER
Enf Action Source: CIWQS,

Site ID: 108583
Site Name: Coyote Canyon Landfill-Closed
Site Address: 20661 NEWPORT COAST
Site City: NEWPORT BEACH
Site Zip: 92657

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL-CLOSED (Continued)

S123499039

Enf Action Date: 08-03-1999
Enf Action Type: Oral Communication
Enf Action Description: Oral Communication
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: LFNONOPER
Enf Action Source: CIWQS,

Site ID: 108583
Site Name: Coyote Canyon Landfill-Closed
Site Address: 20661 NEWPORT COAST
Site City: NEWPORT BEACH
Site Zip: 92657
Enf Action Date: 08-25-1999
Enf Action Type: Oral Communication
Enf Action Description: Oral Communication
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: LFNONOPER
Enf Action Source: CIWQS,

Site ID: 108583
Site Name: Coyote Canyon Landfill-Closed
Site Address: 20661 NEWPORT COAST
Site City: NEWPORT BEACH
Site Zip: 92657
Enf Action Date: 09-17-2002
Enf Action Type: Enforcement Letter (Formal)
Enf Action Description: Enforcement Letter Citing Violations and with Required Actions (Formal)
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: LFNONOPER
Enf Action Source: CIWQS,

Site ID: 108583
Site Name: Coyote Canyon Landfill-Closed
Site Address: 20661 NEWPORT COAST
Site City: NEWPORT BEACH
Site Zip: 92657
Enf Action Date: 10-19-2001
Enf Action Type: Notice to Comply (Minor Violations)
Enf Action Description: Notice to Comply for Minor Violations
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: LFNONOPER
Enf Action Source: CIWQS,

Site ID: 108583
Site Name: Coyote Canyon Landfill-Closed
Site Address: 20661 NEWPORT COAST
Site City: NEWPORT BEACH
Site Zip: 92657
Enf Action Date: 10-27-1999
Enf Action Type: Oral Communication
Enf Action Description: Oral Communication
Enf Action Notes: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COYOTE CANYON LANDFILL-CLOSED (Continued)

S123499039

Enf Action Division: Water Boards
Enf Action Program: LFNONOPER
Enf Action Source: CIWQS,

Site ID: 108583
Site Name: Coyote Canyon Landfill-Closed
Site Address: 20661 NEWPORT COAST
Site City: NEWPORT BEACH
Site Zip: 92657
Enf Action Date: 11-23-1999
Enf Action Type: Oral Communication
Enf Action Description: Oral Communication
Enf Action Notes: Not reported
Enf Action Division: Water Boards
Enf Action Program: LFNONOPER
Enf Action Source: CIWQS,

A12
Target
Property
OC WASTE & RECYCLING, COYOTE
20662 NEWPORT COAST DR
NEWPORT COAST, CA 92657

EMI **S122412666**
N/A

Site 12 of 12 in cluster A

Actual:
812 ft.

EMI:
Name: OC WASTE & RECYCLING, COYOTE
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657
Year: 2016
County Code: 30
Air Basin: SC
Facility ID: 181426
Air District Name: SC
SIC Code: 1389
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1.8713830393
Reactive Organic Gases Tons/Yr: 0.94
Carbon Monoxide Emissions Tons/Yr: 5.33
NOX - Oxides of Nitrogen Tons/Yr: 14.73
SOX - Oxides of Sulphur Tons/Yr: 4.2200935
Particulate Matter Tons/Yr: 3.69
Part. Matter 10 Micrometers and Smlr Tons/Yr: 3.68976

Name: OC WASTE & RECYCLING, COYOTE
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657
Year: 2018
County Code: 30
Air Basin: SC
Facility ID: 181426
Air District Name: SC
SIC Code: 4953
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 2.0776120074

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

OC WASTE & RECYCLING, COYOTE (Continued)

S122412666

Reactive Organic Gases Tons/Yr: 1.0423605
Carbon Monoxide Emissions Tons/Yr: 2.991145
NOX - Oxides of Nitrogen Tons/Yr: 13.0676
SOX - Oxides of Sulphur Tons/Yr: 6.3450262
Particulate Matter Tons/Yr: 3.992755
Part. Matter 10 Micrometers and Smllr Tons/Yr:3.96879847

Name: OC WASTE & RECYCLING, COYOTE
Address: 20662 NEWPORT COAST DR
City,State,Zip: NEWPORT COAST, CA 92657
Year: 2019
County Code: 30
Air Basin: SC
Facility ID: 181426
Air District Name: SC
SIC Code: 9199
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1.8391374189
Reactive Organic Gases Tons/Yr: 0.9463485
Carbon Monoxide Emissions Tons/Yr: 5.0031435
NOX - Oxides of Nitrogen Tons/Yr: 14.33116
SOX - Oxides of Sulphur Tons/Yr: 6.860763075
Particulate Matter Tons/Yr: 4.188056
Part. Matter 10 Micrometers and Smllr Tons/Yr:4.162927664

Count: 3 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
IRVINE	S112138481		HIGHWAY 73 & NEWPORT COAST DR	92603	CDL
NEWPORT BEACH	S128861713	L'OCCITANE - L039	1047 NEWPORT CENTER DR	92660	CERS HAZ WASTE, HWTS
NEWPORT BEACH	S121695072	SUNNY FRESH CLEANERS	306 N NEWPORT AVE	92660	DRYCLEANERS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 06/22/2023	Source: EPA
Date Data Arrived at EDR: 07/06/2023	Telephone: N/A
Date Made Active in Reports: 07/24/2023	Last EDR Contact: 10/03/2023
Number of Days to Update: 18	Next Scheduled EDR Contact: 01/08/2024
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 06/22/2023	Source: EPA
Date Data Arrived at EDR: 07/06/2023	Telephone: N/A
Date Made Active in Reports: 07/24/2023	Last EDR Contact: 10/03/2023
Number of Days to Update: 18	Next Scheduled EDR Contact: 01/08/2024
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 06/22/2023
Date Data Arrived at EDR: 07/06/2023
Date Made Active in Reports: 07/24/2023
Number of Days to Update: 18

Source: EPA
Telephone: N/A
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 06/23/2023
Date Data Arrived at EDR: 06/23/2023
Date Made Active in Reports: 09/20/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 09/26/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 06/22/2023
Date Data Arrived at EDR: 07/06/2023
Date Made Active in Reports: 07/24/2023
Number of Days to Update: 18

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 06/22/2023	Source: EPA
Date Data Arrived at EDR: 07/06/2023	Telephone: 800-424-9346
Date Made Active in Reports: 07/24/2023	Last EDR Contact: 10/03/2023
Number of Days to Update: 18	Next Scheduled EDR Contact: 01/22/2024
	Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 07/24/2023	Source: EPA
Date Data Arrived at EDR: 07/31/2023	Telephone: 800-424-9346
Date Made Active in Reports: 08/14/2023	Last EDR Contact: 09/20/2023
Number of Days to Update: 14	Next Scheduled EDR Contact: 01/01/2024
	Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 07/24/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/31/2023	Telephone: (415) 495-8895
Date Made Active in Reports: 08/14/2023	Last EDR Contact: 09/20/2023
Number of Days to Update: 14	Next Scheduled EDR Contact: 01/01/2024
	Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 07/24/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/31/2023	Telephone: (415) 495-8895
Date Made Active in Reports: 08/14/2023	Last EDR Contact: 09/20/2023
Number of Days to Update: 14	Next Scheduled EDR Contact: 01/01/2024
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/03/2023
Date Data Arrived at EDR: 08/07/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 64

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/02/2023
Next Scheduled EDR Contact: 11/20/2023
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 05/22/2023
Date Data Arrived at EDR: 05/23/2023
Date Made Active in Reports: 07/24/2023
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/21/2023
Next Scheduled EDR Contact: 12/04/2023
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 05/22/2023
Date Data Arrived at EDR: 05/23/2023
Date Made Active in Reports: 07/24/2023
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/21/2023
Next Scheduled EDR Contact: 12/04/2023
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/12/2023

Date Data Arrived at EDR: 06/20/2023

Date Made Active in Reports: 08/14/2023

Number of Days to Update: 55

Source: National Response Center, United States Coast Guard

Telephone: 202-267-2180

Last EDR Contact: 09/20/2023

Next Scheduled EDR Contact: 01/01/2024

Data Release Frequency: Quarterly

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity.

These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 07/24/2023

Date Data Arrived at EDR: 07/25/2023

Date Made Active in Reports: 10/11/2023

Number of Days to Update: 78

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Last EDR Contact: 07/25/2023

Next Scheduled EDR Contact: 11/06/2023

Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 07/24/2023

Date Data Arrived at EDR: 07/25/2023

Date Made Active in Reports: 10/11/2023

Number of Days to Update: 78

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Last EDR Contact: 07/25/2023

Next Scheduled EDR Contact: 11/06/2023

Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/08/2023

Date Data Arrived at EDR: 05/08/2023

Date Made Active in Reports: 07/31/2023

Number of Days to Update: 84

Source: Department of Resources Recycling and Recovery

Telephone: 916-341-6320

Last EDR Contact: 08/08/2023

Next Scheduled EDR Contact: 11/20/2023

Data Release Frequency: Quarterly

Lists of state and tribal leaking storage tanks

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003

Date Data Arrived at EDR: 05/19/2003

Date Made Active in Reports: 06/02/2003

Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)

Telephone: 805-542-4786

Last EDR Contact: 07/18/2011

Next Scheduled EDR Contact: 10/31/2011

Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004

Date Data Arrived at EDR: 10/20/2004

Date Made Active in Reports: 11/19/2004

Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)

Telephone: 510-622-2433

Last EDR Contact: 09/19/2011

Next Scheduled EDR Contact: 01/02/2012

Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/05/2023

Date Data Arrived at EDR: 06/05/2023

Date Made Active in Reports: 08/28/2023

Number of Days to Update: 84

Source: State Water Resources Control Board

Telephone: see region list

Last EDR Contact: 09/06/2023

Next Scheduled EDR Contact: 12/18/2023

Data Release Frequency: Quarterly

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005

Date Data Arrived at EDR: 06/07/2005

Date Made Active in Reports: 06/29/2005

Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)

Telephone: 760-241-7365

Last EDR Contact: 09/12/2011

Next Scheduled EDR Contact: 12/26/2011

Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001

Date Data Arrived at EDR: 02/28/2001

Date Made Active in Reports: 03/29/2001

Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)

Telephone: 707-570-3769

Last EDR Contact: 08/01/2011

Next Scheduled EDR Contact: 11/14/2011

Data Release Frequency: No Update Planned

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/26/2023

Date Data Arrived at EDR: 05/09/2023

Date Made Active in Reports: 07/14/2023

Number of Days to Update: 66

Source: EPA Region 6

Telephone: 214-665-6597

Last EDR Contact: 10/11/2023

Next Scheduled EDR Contact: 01/29/2024

Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/14/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/19/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/19/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/05/2023

Date Data Arrived at EDR: 06/05/2023

Date Made Active in Reports: 08/28/2023

Number of Days to Update: 84

Source: State Water Resources Control Board

Telephone: 866-480-1028

Last EDR Contact: 09/06/2023

Next Scheduled EDR Contact: 12/18/2023

Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003

Date Data Arrived at EDR: 04/07/2003

Date Made Active in Reports: 04/25/2003

Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)

Telephone: 707-576-2220

Last EDR Contact: 08/01/2011

Next Scheduled EDR Contact: 11/14/2011

Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004

Date Data Arrived at EDR: 10/20/2004

Date Made Active in Reports: 11/19/2004

Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)

Telephone: 510-286-0457

Last EDR Contact: 09/19/2011

Next Scheduled EDR Contact: 01/02/2012

Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006

Date Data Arrived at EDR: 05/18/2006

Date Made Active in Reports: 06/15/2006

Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)

Telephone: 805-549-3147

Last EDR Contact: 07/18/2011

Next Scheduled EDR Contact: 10/31/2011

Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004

Date Data Arrived at EDR: 11/18/2004

Date Made Active in Reports: 01/04/2005

Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)

Telephone: 213-576-6600

Last EDR Contact: 07/01/2011

Next Scheduled EDR Contact: 10/17/2011

Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005

Date Data Arrived at EDR: 04/05/2005

Date Made Active in Reports: 04/21/2005

Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)

Telephone: 916-464-3291

Last EDR Contact: 09/12/2011

Next Scheduled EDR Contact: 12/26/2011

Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 03/08/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 05/30/2023
Number of Days to Update: 82

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 05/31/2023
Date Data Arrived at EDR: 06/02/2023
Date Made Active in Reports: 08/23/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 06/05/2023
Date Data Arrived at EDR: 06/05/2023
Date Made Active in Reports: 08/28/2023
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/05/2023
Date Data Arrived at EDR: 06/05/2023
Date Made Active in Reports: 08/28/2023
Number of Days to Update: 84

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 09/07/2023
Next Scheduled EDR Contact: 12/25/2023
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/11/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/20/2023	Source: EPA Region 8
Date Data Arrived at EDR: 05/09/2023	Telephone: 303-312-6137
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 10/11/2023
Number of Days to Update: 66	Next Scheduled EDR Contact: 01/29/2024
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/26/2023	Source: EPA Region 6
Date Data Arrived at EDR: 05/09/2023	Telephone: 214-665-7591
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 10/11/2023
Number of Days to Update: 66	Next Scheduled EDR Contact: 01/29/2024
	Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations).

Date of Government Version: 04/20/2023	Source: EPA Region 4
Date Data Arrived at EDR: 05/09/2023	Telephone: 404-562-9424
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 10/11/2023
Number of Days to Update: 66	Next Scheduled EDR Contact: 01/29/2024
	Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2023	Source: EPA Region 5
Date Data Arrived at EDR: 05/09/2023	Telephone: 312-886-6136
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 10/11/2023
Number of Days to Update: 66	Next Scheduled EDR Contact: 01/29/2024
	Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/20/2023	Source: EPA, Region 1
Date Data Arrived at EDR: 05/09/2023	Telephone: 617-918-1313
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 10/11/2023
Number of Days to Update: 66	Next Scheduled EDR Contact: 01/29/2024
	Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/19/2023	Source: EPA Region 9
Date Data Arrived at EDR: 05/09/2023	Telephone: 415-972-3368
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 10/11/2023
Number of Days to Update: 66	Next Scheduled EDR Contact: 01/29/2024
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Lists of state and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/25/2023
Date Made Active in Reports: 10/11/2023
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/25/2023
Next Scheduled EDR Contact: 11/06/2023
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/12/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Considered Brownfields Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 06/14/2023
Date Data Arrived at EDR: 06/14/2023
Date Made Active in Reports: 09/06/2023
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 04/06/2023
Date Data Arrived at EDR: 04/13/2023
Date Made Active in Reports: 04/19/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 08/30/2023
Next Scheduled EDR Contact: 12/25/2023
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 07/19/2023
Next Scheduled EDR Contact: 11/06/2023
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 06/02/2023
Date Data Arrived at EDR: 06/02/2023
Date Made Active in Reports: 08/23/2023
Number of Days to Update: 82

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 11/16/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/13/2023
Number of Days to Update: 83

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/29/2023
Next Scheduled EDR Contact: 11/20/2023
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/19/2023
Next Scheduled EDR Contact: 11/06/2023
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Services, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/27/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 05/22/2023
Date Data Arrived at EDR: 05/23/2023
Date Made Active in Reports: 07/10/2023
Number of Days to Update: 48

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2023
Next Scheduled EDR Contact: 12/04/2023
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/25/2023
Date Made Active in Reports: 10/11/2023
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/25/2023
Next Scheduled EDR Contact: 11/06/2023
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2022
Date Made Active in Reports: 02/09/2023
Number of Days to Update: 71

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 09/15/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CERS HAZ WASTE: California Environmental Reporting System Hazardous Waste

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 07/17/2023	Source: CalEPA
Date Data Arrived at EDR: 07/18/2023	Telephone: 916-323-2514
Date Made Active in Reports: 10/06/2023	Last EDR Contact: 07/18/2023
Number of Days to Update: 80	Next Scheduled EDR Contact: 10/30/2023
	Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/22/2023	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 05/23/2023	Telephone: 202-307-1000
Date Made Active in Reports: 07/10/2023	Last EDR Contact: 08/21/2023
Number of Days to Update: 48	Next Scheduled EDR Contact: 12/04/2023
	Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/07/2005	Telephone: N/A
Date Made Active in Reports: 08/11/2005	Last EDR Contact: 06/03/2005
Number of Days to Update: 35	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990	Source: State Water Resources Control Board
Date Data Arrived at EDR: 01/25/1991	Telephone: 916-341-5851
Date Made Active in Reports: 02/12/1991	Last EDR Contact: 07/26/2001
Number of Days to Update: 18	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 04/28/2023	Source: San Francisco County Department of Public Health
Date Data Arrived at EDR: 04/28/2023	Telephone: 415-252-3896
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 07/26/2023
Number of Days to Update: 77	Next Scheduled EDR Contact: 11/13/2023
	Data Release Frequency: Varies

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 07/17/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 10/06/2023
Number of Days to Update: 80

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/18/2023
Next Scheduled EDR Contact: 10/30/2023
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 06/06/2023
Date Data Arrived at EDR: 06/07/2023
Date Made Active in Reports: 08/25/2023
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/22/2023
Next Scheduled EDR Contact: 12/11/2023
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 06/22/2023
Date Data Arrived at EDR: 07/06/2023
Date Made Active in Reports: 07/24/2023
Number of Days to Update: 18

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 05/25/2023
Date Data Arrived at EDR: 05/25/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 81

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 08/29/2023
Next Scheduled EDR Contact: 12/11/2023
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/19/2023	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 06/23/2023	Telephone: 202-366-4555
Date Made Active in Reports: 09/20/2023	Last EDR Contact: 09/20/2023
Number of Days to Update: 89	Next Scheduled EDR Contact: 01/01/2024
	Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 06/01/2023	Source: Office of Emergency Services
Date Data Arrived at EDR: 07/18/2023	Telephone: 916-845-8400
Date Made Active in Reports: 10/05/2023	Last EDR Contact: 07/18/2023
Number of Days to Update: 79	Next Scheduled EDR Contact: 10/30/2023
	Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/05/2023	Source: State Water Quality Control Board
Date Data Arrived at EDR: 06/05/2023	Telephone: 866-480-1028
Date Made Active in Reports: 08/25/2023	Last EDR Contact: 09/06/2023
Number of Days to Update: 81	Next Scheduled EDR Contact: 12/18/2023
	Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/05/2023	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/05/2023	Telephone: 866-480-1028
Date Made Active in Reports: 08/25/2023	Last EDR Contact: 09/06/2023
Number of Days to Update: 81	Next Scheduled EDR Contact: 12/18/2023
	Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012	Source: FirstSearch
Date Data Arrived at EDR: 01/03/2013	Telephone: N/A
Date Made Active in Reports: 02/22/2013	Last EDR Contact: 01/03/2013
Number of Days to Update: 50	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 08/07/2023
Date Data Arrived at EDR: 08/15/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 56

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/15/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/09/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/01/2023
Next Scheduled EDR Contact: 11/20/2023
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/19/2023
Date Data Arrived at EDR: 06/20/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 55

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014	Telephone: 617-520-3000
Date Made Active in Reports: 06/17/2014	Last EDR Contact: 07/31/2023
Number of Days to Update: 88	Next Scheduled EDR Contact: 11/13/2023
	Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/08/2018	Telephone: 703-308-4044
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 08/03/2023
Number of Days to Update: 73	Next Scheduled EDR Contact: 11/13/2023
	Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020	Source: EPA
Date Data Arrived at EDR: 06/14/2022	Telephone: 202-260-5521
Date Made Active in Reports: 03/24/2023	Last EDR Contact: 09/15/2023
Number of Days to Update: 283	Next Scheduled EDR Contact: 12/25/2023
	Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2021	Source: EPA
Date Data Arrived at EDR: 02/16/2023	Telephone: 202-566-0250
Date Made Active in Reports: 05/02/2023	Last EDR Contact: 08/18/2023
Number of Days to Update: 75	Next Scheduled EDR Contact: 11/27/2023
	Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 07/17/2023	Source: EPA
Date Data Arrived at EDR: 07/18/2023	Telephone: 202-564-4203
Date Made Active in Reports: 10/10/2023	Last EDR Contact: 07/18/2023
Number of Days to Update: 84	Next Scheduled EDR Contact: 10/30/2023
	Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 06/22/2023
Date Data Arrived at EDR: 07/06/2023
Date Made Active in Reports: 07/24/2023
Number of Days to Update: 18

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 12/11/2023
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/09/2023
Date Data Arrived at EDR: 06/29/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 09/26/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 06/22/2023
Date Data Arrived at EDR: 07/06/2023
Date Made Active in Reports: 07/24/2023
Number of Days to Update: 18

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2023
Date Data Arrived at EDR: 04/04/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 66

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/06/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-2501
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 09/27/2023
Number of Days to Update: 79	Next Scheduled EDR Contact: 01/15/2024
	Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/20/2023	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 09/01/2023	Telephone: 301-415-0717
Date Made Active in Reports: 09/20/2023	Last EDR Contact: 10/10/2023
Number of Days to Update: 19	Next Scheduled EDR Contact: 01/29/2024
	Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2021	Source: Department of Energy
Date Data Arrived at EDR: 04/14/2023	Telephone: 202-586-8719
Date Made Active in Reports: 07/10/2023	Last EDR Contact: 09/01/2023
Number of Days to Update: 87	Next Scheduled EDR Contact: 12/11/2023
	Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/05/2019	Telephone: N/A
Date Made Active in Reports: 11/11/2019	Last EDR Contact: 08/28/2023
Number of Days to Update: 251	Next Scheduled EDR Contact: 12/11/2023
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/06/2019	Telephone: 202-566-0517
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 08/03/2023
Number of Days to Update: 96	Next Scheduled EDR Contact: 11/13/2023
	Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/01/2019	Telephone: 202-343-9775
Date Made Active in Reports: 09/23/2019	Last EDR Contact: 09/22/2023
Number of Days to Update: 84	Next Scheduled EDR Contact: 01/08/2024
	Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020	Source: Department of Transportation, Office of Pipeline Safety
Date Data Arrived at EDR: 01/28/2020	Telephone: 202-366-4595
Date Made Active in Reports: 04/17/2020	Last EDR Contact: 10/04/2023
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/06/2023
	Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/30/2023
Date Data Arrived at EDR: 07/19/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 83

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/02/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/26/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/10/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 06/22/2023
Date Data Arrived at EDR: 07/06/2023
Date Made Active in Reports: 07/24/2023
Number of Days to Update: 18

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 82

Source: DOL, Mine Safety & Health Admini
Telephone: 202-693-9424
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 11/20/2023
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/01/2023
Date Data Arrived at EDR: 05/24/2023
Date Made Active in Reports: 07/24/2023
Number of Days to Update: 61

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/22/2023
Next Scheduled EDR Contact: 12/04/2023
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/07/2022
Date Data Arrived at EDR: 02/24/2023
Date Made Active in Reports: 05/17/2023
Number of Days to Update: 82

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/24/2023
Next Scheduled EDR Contact: 12/04/2023
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011	Source: USGS
Date Data Arrived at EDR: 06/08/2011	Telephone: 703-648-7709
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 08/24/2023
Number of Days to Update: 97	Next Scheduled EDR Contact: 12/04/2023
	Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System Mineral Resources Data System

Date of Government Version: 08/23/2022	Source: USGS
Date Data Arrived at EDR: 11/22/2022	Telephone: 703-648-6533
Date Made Active in Reports: 02/28/2023	Last EDR Contact: 08/24/2023
Number of Days to Update: 98	Next Scheduled EDR Contact: 12/04/2023
	Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 06/13/2023	Source: Department of Interior
Date Data Arrived at EDR: 06/14/2023	Telephone: 202-208-2609
Date Made Active in Reports: 08/14/2023	Last EDR Contact: 09/12/2023
Number of Days to Update: 61	Next Scheduled EDR Contact: 12/18/2023
	Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 05/04/2023	Source: EPA
Date Data Arrived at EDR: 05/25/2023	Telephone: (415) 947-8000
Date Made Active in Reports: 07/24/2023	Last EDR Contact: 09/28/2023
Number of Days to Update: 60	Next Scheduled EDR Contact: 12/11/2023
	Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/24/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/29/2023	Telephone: 202-564-2280
Date Made Active in Reports: 09/25/2023	Last EDR Contact: 10/03/2023
Number of Days to Update: 88	Next Scheduled EDR Contact: 01/15/2024
	Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/15/2023
Next Scheduled EDR Contact: 12/04/2023
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 11/09/2021
Date Data Arrived at EDR: 10/20/2022
Date Made Active in Reports: 01/10/2023
Number of Days to Update: 82

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 09/13/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/15/2023
Date Data Arrived at EDR: 05/17/2023
Date Made Active in Reports: 07/10/2023
Number of Days to Update: 54

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/15/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 07/05/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/05/2023	Telephone: 202-566-0250
Date Made Active in Reports: 10/02/2023	Last EDR Contact: 10/03/2023
Number of Days to Update: 89	Next Scheduled EDR Contact: 01/15/2024
	Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 07/05/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/05/2023	Telephone: 202-272-0167
Date Made Active in Reports: 10/02/2023	Last EDR Contact: 10/03/2023
Number of Days to Update: 89	Next Scheduled EDR Contact: 01/15/2024
	Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020	Source: Department of Health & Human Services
Date Data Arrived at EDR: 03/17/2021	Telephone: 202-741-5770
Date Made Active in Reports: 11/08/2022	Last EDR Contact: 07/19/2023
Number of Days to Update: 601	Next Scheduled EDR Contact: 11/06/2023
	Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 09/23/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/03/2023	Telephone: 202-272-0167
Date Made Active in Reports: 10/10/2023	Last EDR Contact: 10/03/2023
Number of Days to Update: 7	Next Scheduled EDR Contact: 01/15/2024
	Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 10/02/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS ECHO FIRE TRAINING: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facility's name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PFAS PART 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration's document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/05/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/06/2023
Date Made Active in Reports: 09/25/2023
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: No Update Planned

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 07/16/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 08/28/2023
Number of Days to Update: 41

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 10/03/2023
Next Scheduled EDR Contact: 10/30/2023
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 06/02/2023
Date Data Arrived at EDR: 06/02/2023
Date Made Active in Reports: 08/23/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

AQUEOUS FOAM: Former Fire Training Facility Assessments Listing

Airports shown on this list are those believed to use Aqueous Film Forming Foam (AFFF), and certified by the Federal Aviation Administration (FAA) under Title 14, Code of Federal Regulations (CFR), Part 139 (14 CFR Part 139). This list was created by SWRCB using information available from the FAA. Location points shown are from the latitude and longitude listed on the FAA airport master record.

Date of Government Version: 06/02/2023
Date Data Arrived at EDR: 06/02/2023
Date Made Active in Reports: 08/23/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CHROME PLATING: Chrome Plating Facilities Listing

This listing represents chrome plating facilities the California State Water Resources Control Board staff identified as possibly being a source of Per- and polyfluoroalkyl substance (PFAS) contamination. Sites and locations were identified by staff with the Division of Water Quality in the California State Water Board. Data was collected from the CA Air Resources Board 2013 and 2018 - Cr VI emission survey, CA Emission Inventory, CA HAZ Waste discharge database and by reviewing storm water permits. Former chrome plating sites are also included that are open site investigation or remediation cases with the Regional Water Quality Control Boards and the Department of Toxic Substances Control.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 06/08/2023
Date Made Active in Reports: 09/26/2023
Number of Days to Update: 110

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 06/14/2023
Date Data Arrived at EDR: 06/14/2023
Date Made Active in Reports: 09/06/2023
Number of Days to Update: 84

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 03/31/2023
Date Data Arrived at EDR: 05/08/2023
Date Made Active in Reports: 07/31/2023
Number of Days to Update: 84

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 08/10/2023
Next Scheduled EDR Contact: 11/20/2023
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 08/27/2021
Date Data Arrived at EDR: 09/01/2021
Date Made Active in Reports: 11/19/2021
Number of Days to Update: 79

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 08/22/2023
Next Scheduled EDR Contact: 12/11/2023
Data Release Frequency: Annually

DRYCLEAN SAN LUIS OB CO DIST: San Luis Obispo County Air Pollution Control District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the San Luis Obispo County Air Pollution Control District.

Date of Government Version: 07/26/2023
Date Data Arrived at EDR: 07/27/2023
Date Made Active in Reports: 10/13/2023
Number of Days to Update: 78

Source: San Luis Obispo County Air Pollution Control District
Telephone: 805-781-5756
Last EDR Contact: 07/25/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SACRAMENTO METO DIST: Sacramento Metropolitan Air Quality Management District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Sacramento Metropolitan Air Quality Management District.

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 04/28/2023
Date Made Active in Reports: 07/19/2023
Number of Days to Update: 82

Source: Sacramento Metropolitan Air Quality Management District
Telephone: 916-874-3958
Last EDR Contact: 08/15/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DRYCLEAN SAN DIEGO CO DIST: San Diego County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the San Diego County Air Pollution Control District.

Date of Government Version: 02/01/2019	Source: San Diego County Air Pollution Control District
Date Data Arrived at EDR: 05/01/2019	Telephone: 858-586-2616
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 08/08/2023
Number of Days to Update: 1461	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN SAN JOAQ VAL DIST: San Joaquin Valley Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the San Joaquin Valley Air Pollution Control District.

Date of Government Version: 05/24/2023	Source: San Joaquin Valley Air Pollution Control District
Date Data Arrived at EDR: 05/30/2023	Telephone: 559-230-6001
Date Made Active in Reports: 08/21/2023	Last EDR Contact: 05/11/2023
Number of Days to Update: 83	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN FEATHER RIVER DIST: Feather River Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Feather River Air Quality Management District.

Date of Government Version: 03/08/2023	Source: Feather River Air Quality Management District
Date Data Arrived at EDR: 03/09/2023	Telephone: 530-634-7659
Date Made Active in Reports: 06/05/2023	Last EDR Contact: 06/08/2023
Number of Days to Update: 88	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN GLENN CO DIST: Glenn County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Glenn County Air Pollution Control District.

Date of Government Version: 05/02/2023	Source: Glenn County Air Pollution Control District
Date Data Arrived at EDR: 05/03/2023	Telephone: 530-934-6500
Date Made Active in Reports: 07/25/2023	Last EDR Contact: 05/03/2023
Number of Days to Update: 83	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN EAST KERN DIST: Eastern Kern Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Eastern Kern Air Pollution Control District.

Date of Government Version: 01/12/2023	Source: Eastern Kern Air Pollution Control District
Date Data Arrived at EDR: 04/26/2023	Telephone: 661-862-9684
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 04/25/2023
Number of Days to Update: 79	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN IMPERIAL CO DIST: Imperial County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Imperial County Air Pollution Control District

Date of Government Version: 04/25/2023	Source: Imperial County Air Pollution Control District
Date Data Arrived at EDR: 04/26/2023	Telephone: 442-265-1800
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 04/25/2023
Number of Days to Update: 79	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN MENDO CO DIST: Mendocino County Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Mendocino County Air Quality Management District.

Date of Government Version: 04/27/2023	Source: Mendocino County Air Quality Management District
Date Data Arrived at EDR: 04/28/2023	Telephone: 707-463-4354
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 04/25/2023
Number of Days to Update: 77	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DRYCLEAN MOJAVE DESERT DIST: Mojave Desert Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Mojave Desert Air Quality Management District.

Date of Government Version: 04/26/2023	Source: Mojave Desert Air Quality Management District
Date Data Arrived at EDR: 04/27/2023	Telephone: 760-245-1661
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 04/25/2023
Number of Days to Update: 78	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN MONTEREY BAY DIST: Monterey Bay Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Monterey Bay Air Quality Management District.

Date of Government Version: 04/25/2023	Source: Monterey Bay Air Quality Management District
Date Data Arrived at EDR: 04/26/2023	Telephone: 831-647-9411
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 04/25/2023
Number of Days to Update: 79	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN SHASTA CO DIST: Shasta County Air Quality Management District District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Shasta County Air Quality Management District.

Date of Government Version: 04/26/2023	Source: Shasta County Air Quality Management District
Date Data Arrived at EDR: 04/27/2023	Telephone: 530-225-5674
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 04/25/2023
Number of Days to Update: 78	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN YOLO-SOLANO DIST: Yolo-Solano Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Yolo-Solano Air Quality Management District.

Date of Government Version: 04/25/2023	Source: Yolo-Solano Air Quality Management District
Date Data Arrived at EDR: 04/27/2023	Telephone: 530-757-3650
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 04/25/2023
Number of Days to Update: 78	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 05/22/2023	Source: Antelope Valley Air Quality Management District
Date Data Arrived at EDR: 05/24/2023	Telephone: 661-723-8070
Date Made Active in Reports: 08/14/2023	Last EDR Contact: 08/22/2023
Number of Days to Update: 82	Next Scheduled EDR Contact: 12/11/2023
	Data Release Frequency: Varies

DRYCLEAN PLACER CO DIST: Placer County Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Placer County Air Quality Management District.

Date of Government Version: 05/15/2023	Source: Placer County Air Quality Management District
Date Data Arrived at EDR: 05/17/2023	Telephone: 530-745-2335
Date Made Active in Reports: 08/14/2023	Last EDR Contact: 05/11/2023
Number of Days to Update: 89	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN BAY AREA DIST: Bay Area Air Quality Management District Drycleaner Facility Listing
Bay Area Air Quality Management District Drycleaner Facility Listing.

Date of Government Version: 02/20/2019	Source: Bay Area Air Quality Management District
Date Data Arrived at EDR: 05/30/2019	Telephone: 415-516-1916
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 07/25/2023
Number of Days to Update: 1432	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DRYCLEAN BUTTE CO DIST: Butte County Air Quality Management District Drycleaner Facility Listing
Butte County Air Quality Management District Drycleaner Facility Listing.

Date of Government Version: 12/31/2018	Source: Butte County Air Quality Management District
Date Data Arrived at EDR: 04/23/2019	Telephone: 530-332-9400
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 10/03/2023
Number of Days to Update: 1469	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN CALAVERAS CO DIST: Calaveras County Environmental Management Agency Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Calaveras County Environmental Management Agency.

Date of Government Version: 06/17/2019	Source: Calaveras County Environmental Management Agency
Date Data Arrived at EDR: 06/19/2019	Telephone: 209-754-6399
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 04/24/2023
Number of Days to Update: 1412	Next Scheduled EDR Contact: 09/16/2019
	Data Release Frequency: Varies

DRYCLEAN GRANT: Grant Recipients List

Assembly Bill 998 (AB 998) established the Non-Toxic Dry Cleaning Incentive Program to provide financial assistance to the dry cleaning industry to switch from systems using perchloroethylene (Perc), an identified toxic air contaminant and potential human carcinogen, to non-toxic and non-smog forming alternatives.

Date of Government Version: 12/31/2020	Source: California Air Resources Board
Date Data Arrived at EDR: 02/04/2021	Telephone: 916-323-0006
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 07/24/2023
Number of Days to Update: 816	Next Scheduled EDR Contact: 11/06/2023
	Data Release Frequency: Varies

DRYCLEAN LAKE CO DIST: Lake County Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Lake County Air Quality Management District,

Date of Government Version: 04/29/2019	Source: Lake County Air Quality Management District
Date Data Arrived at EDR: 05/07/2019	Telephone: 707-263-7000
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 05/11/2023
Number of Days to Update: 1455	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN NO COAST UNIFIED DIST: North Coast Unified Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the North Coast Unified Air Quality Management District.

Date of Government Version: 11/30/2016	Source: North Coast Unified Air Quality Management District
Date Data Arrived at EDR: 04/19/2019	Telephone: 707-443-3093
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 04/25/2023
Number of Days to Update: 1473	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN NO SIERRA DIST: Northern Sierra Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Northern Sierra Air Quality Management District,

Date of Government Version: 05/07/2019	Source: Northern Sierra Air Quality Management District
Date Data Arrived at EDR: 05/07/2019	Telephone: 530-274-9350
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 04/25/2023
Number of Days to Update: 1455	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN NO SONOMA CO DIST: Northern Sonoma County County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Northern Sonoma County Air Pollution Control District.,

Date of Government Version: 04/17/2019	Source: Santa Barbara County Air Pollution Control District
Date Data Arrived at EDR: 04/17/2019	Telephone: 707-433-5911
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 04/25/2023
Number of Days to Update: 1475	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DRYCLEAN SANTA BARB CO DIST: Santa Barbara County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Santa Barbara County Air Pollution Control District.

Date of Government Version: 02/19/2019	Source: Santa Barbara County Air Pollution Control District
Date Data Arrived at EDR: 04/17/2019	Telephone: 805-961-8867
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 04/25/2023
Number of Days to Update: 1475	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN TEHAMA CO DIST: Tehama County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Tehama County Air Pollution Control District.

Date of Government Version: 04/24/2019	Source: Tehama County Air Pollution Control District
Date Data Arrived at EDR: 04/24/2019	Telephone: 530-527-3717
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 04/25/2023
Number of Days to Update: 1468	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN VENTURA CO DIST: Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Ventura County Air Pollution Control District.

Date of Government Version: 04/16/2019	Source: Ventura County Air Pollution Control District
Date Data Arrived at EDR: 04/17/2019	Telephone: 805-645-1421
Date Made Active in Reports: 05/01/2023	Last EDR Contact: 10/11/2023
Number of Days to Update: 1475	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 05/17/2023	Source: South Coast Air Quality Management District
Date Data Arrived at EDR: 05/18/2023	Telephone: 909-396-3211
Date Made Active in Reports: 08/09/2023	Last EDR Contact: 08/15/2023
Number of Days to Update: 83	Next Scheduled EDR Contact: 12/04/2023
	Data Release Frequency: Varies

DRYCLEAN AMADOR: Amador Air District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Amador Air Quality Management District

Date of Government Version: 04/26/2023	Source: Amador Air Quality Management District
Date Data Arrived at EDR: 04/27/2023	Telephone: 209-257-0112
Date Made Active in Reports: 07/13/2023	Last EDR Contact: 04/24/2023
Number of Days to Update: 77	Next Scheduled EDR Contact: 09/11/2023
	Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2021	Source: California Air Resources Board
Date Data Arrived at EDR: 06/09/2023	Telephone: 916-322-2990
Date Made Active in Reports: 08/30/2023	Last EDR Contact: 09/15/2023
Number of Days to Update: 82	Next Scheduled EDR Contact: 12/25/2023
	Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 07/17/2023	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/18/2023	Telephone: 916-445-9379
Date Made Active in Reports: 10/05/2023	Last EDR Contact: 07/18/2023
Number of Days to Update: 79	Next Scheduled EDR Contact: 10/30/2023
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 09/13/2023
Date Data Arrived at EDR: 09/14/2023
Date Made Active in Reports: 09/21/2023
Number of Days to Update: 7

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 09/13/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/04/2023
Date Data Arrived at EDR: 05/25/2023
Date Made Active in Reports: 08/16/2023
Number of Days to Update: 83

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/15/2023
Next Scheduled EDR Contact: 11/20/2023
Data Release Frequency: Varies

ICE: Inspection, Compliance and Enforcement

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/15/2023
Date Data Arrived at EDR: 05/16/2023
Date Made Active in Reports: 08/09/2023
Number of Days to Update: 85

Source: Department of Toxic Substances Control
Telephone: 877-786-9427
Last EDR Contact: 08/14/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/15/2023
Date Data Arrived at EDR: 05/16/2023
Date Made Active in Reports: 08/09/2023
Number of Days to Update: 85

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/14/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 06/29/2023
Date Data Arrived at EDR: 06/29/2023
Date Made Active in Reports: 09/19/2023
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HWTS: Hazardous Waste Tracking System

DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 04/13/2023
Date Data Arrived at EDR: 04/18/2023
Date Made Active in Reports: 07/10/2023
Number of Days to Update: 83

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 09/27/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 07/05/2022
Date Made Active in Reports: 09/19/2022
Number of Days to Update: 76

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/05/2022
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Annually

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 06/02/2023
Date Data Arrived at EDR: 06/02/2023
Date Made Active in Reports: 08/23/2023
Number of Days to Update: 82

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 05/08/2023
Date Data Arrived at EDR: 05/25/2023
Date Made Active in Reports: 08/16/2023
Number of Days to Update: 83

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 08/29/2023
Next Scheduled EDR Contact: 12/11/2023
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 05/08/2023
Date Data Arrived at EDR: 05/08/2023
Date Made Active in Reports: 07/31/2023
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/08/2023
Next Scheduled EDR Contact: 11/20/2023
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 05/25/2023
Date Data Arrived at EDR: 05/25/2023
Date Made Active in Reports: 08/16/2023
Number of Days to Update: 83

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 08/29/2023
Next Scheduled EDR Contact: 12/11/2023
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 06/02/2023
Date Data Arrived at EDR: 06/02/2023
Date Made Active in Reports: 08/23/2023
Number of Days to Update: 82

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 06/06/2023
Date Data Arrived at EDR: 06/07/2023
Date Made Active in Reports: 08/25/2023
Number of Days to Update: 79

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 09/07/2023
Next Scheduled EDR Contact: 12/25/2023
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 07/26/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: Annually

SANTA CRUZ CO SITE MITI: Site Mitigation Listing

Sites may become contaminated with toxic chemicals through illegal dumping or disposal, from leaking underground storage tanks, or through industrial or commercial activities. The goal of the site mitigation program is to protect the public health and the environment while facilitating completion of contaminated site clean-up projects in a timely manner.

Date of Government Version: 12/03/2018
Date Data Arrived at EDR: 06/23/2023
Date Made Active in Reports: 07/13/2023
Number of Days to Update: 20

Source: Santa Cruz Environmental Health Services
Telephone: 831-454-2761
Last EDR Contact: 08/09/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Varies

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 06/02/2023
Date Data Arrived at EDR: 06/02/2023
Date Made Active in Reports: 08/23/2023
Number of Days to Update: 82

Source: Department of Conservation
Telephone: 916-445-2408
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)

Underground control injection sites

Date of Government Version: 06/05/2023
Date Data Arrived at EDR: 06/05/2023
Date Made Active in Reports: 08/28/2023
Number of Days to Update: 84

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 02/11/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/29/2021
Number of Days to Update: 90

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 10/06/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/09/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 09/12/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)

Military privatized sites

Date of Government Version: 06/05/2023
Date Data Arrived at EDR: 06/05/2023
Date Made Active in Reports: 08/28/2023
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)

Projects sites

Date of Government Version: 06/05/2023
Date Data Arrived at EDR: 06/05/2023
Date Made Active in Reports: 08/28/2023
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 06/02/2023
Date Data Arrived at EDR: 06/02/2023
Date Made Active in Reports: 08/23/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/25/2023
Date Data Arrived at EDR: 05/25/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 81

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 08/29/2023
Next Scheduled EDR Contact: 12/11/2023
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 07/17/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 10/06/2023
Number of Days to Update: 80

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/18/2023
Next Scheduled EDR Contact: 10/30/2023
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 06/05/2023
Date Data Arrived at EDR: 06/05/2023
Date Made Active in Reports: 08/28/2023
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 06/05/2023
Date Data Arrived at EDR: 06/05/2023
Date Made Active in Reports: 08/28/2023
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 06/05/2023
Date Data Arrived at EDR: 06/05/2023
Date Made Active in Reports: 08/28/2023
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 06/05/2023
Date Data Arrived at EDR: 06/05/2023
Date Made Active in Reports: 08/28/2023
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)

Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/05/2023
Date Data Arrived at EDR: 06/05/2023
Date Made Active in Reports: 08/28/2023
Number of Days to Update: 84

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A

Source: Department of Resources Recycling and Recovery

Date Data Arrived at EDR: 07/01/2013

Telephone: N/A

Date Made Active in Reports: 01/13/2014

Last EDR Contact: 06/01/2012

Number of Days to Update: 196

Next Scheduled EDR Contact: N/A

Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A

Source: State Water Resources Control Board

Date Data Arrived at EDR: 07/01/2013

Telephone: N/A

Date Made Active in Reports: 12/30/2013

Last EDR Contact: 06/01/2012

Number of Days to Update: 182

Next Scheduled EDR Contact: N/A

Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019

Source: Alameda County Environmental Health Services

Date Data Arrived at EDR: 01/11/2019

Telephone: 510-567-6700

Date Made Active in Reports: 03/05/2019

Last EDR Contact: 09/27/2023

Number of Days to Update: 53

Next Scheduled EDR Contact: 01/15/2024

Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 06/27/2023

Source: Alameda County Environmental Health Services

Date Data Arrived at EDR: 06/28/2023

Telephone: 510-567-6700

Date Made Active in Reports: 09/14/2023

Last EDR Contact: 09/27/2023

Number of Days to Update: 78

Next Scheduled EDR Contact: 01/15/2024

Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List

Cupa Facility List

Date of Government Version: 04/27/2023

Source: Amador County Environmental Health

Date Data Arrived at EDR: 04/27/2023

Telephone: 209-223-6439

Date Made Active in Reports: 07/13/2023

Last EDR Contact: 07/26/2023

Number of Days to Update: 77

Next Scheduled EDR Contact: 11/13/2023

Data Release Frequency: Varies

BUTTE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA BUTTE: CUPA Facility Listing Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 09/27/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing Cupa Facility Listing

Date of Government Version: 06/27/2023
Date Data Arrived at EDR: 06/28/2023
Date Made Active in Reports: 09/14/2023
Number of Days to Update: 78

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 09/12/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 07/26/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/20/2023
Date Made Active in Reports: 10/05/2023
Number of Days to Update: 77

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/19/2023
Next Scheduled EDR Contact: 11/06/2023
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List Cupa Facility list

Date of Government Version: 05/10/2023
Date Data Arrived at EDR: 05/10/2023
Date Made Active in Reports: 07/31/2023
Number of Days to Update: 82

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 08/02/2023
Next Scheduled EDR Contact: 11/06/2023
Data Release Frequency: Varies

EL DORADO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA EL DORADO: CUPA Facility List CUPA facility list.

Date of Government Version: 08/08/2022
Date Data Arrived at EDR: 08/09/2022
Date Made Active in Reports: 09/01/2022
Number of Days to Update: 23

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 07/19/2023
Next Scheduled EDR Contact: 11/06/2023
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/28/2021
Date Data Arrived at EDR: 12/21/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 72

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 09/28/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List CUPA facility list.

Date of Government Version: 08/12/2021
Date Data Arrived at EDR: 08/12/2021
Date Made Active in Reports: 11/08/2021
Number of Days to Update: 88

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/09/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List Cupa facility list.

Date of Government Version: 07/11/2023
Date Data Arrived at EDR: 07/12/2023
Date Made Active in Reports: 09/26/2023
Number of Days to Update: 76

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

INYO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA INYO: CUPA Facility List Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/09/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List

A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 07/26/2023
Date Data Arrived at EDR: 07/27/2023
Date Made Active in Reports: 08/09/2023
Number of Days to Update: 13

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 07/26/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing Kern County Sites and Tanks Listing.

Date of Government Version: 07/26/2023
Date Data Arrived at EDR: 07/27/2023
Date Made Active in Reports: 08/03/2023
Number of Days to Update: 7

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 07/26/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/14/2021
Number of Days to Update: 78

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/09/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List Cupa facility list

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 05/31/2023
Number of Days to Update: 34

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

LASSEN COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA LASSEN: CUPA Facility List Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 09/07/2023
Next Scheduled EDR Contact: 12/25/2023
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 06/21/2023
Date Data Arrived at EDR: 06/28/2023
Date Made Active in Reports: 09/14/2023
Number of Days to Update: 78

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 09/27/2023
Next Scheduled EDR Contact: 01/15/2024
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/10/2023
Date Data Arrived at EDR: 07/10/2023
Date Made Active in Reports: 09/27/2023
Number of Days to Update: 79

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/09/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 01/12/2023
Date Made Active in Reports: 03/29/2023
Number of Days to Update: 76

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory

A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 09/19/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/13/2023
Date Data Arrived at EDR: 07/13/2023
Date Made Active in Reports: 09/27/2023
Number of Days to Update: 76

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/20/2023
Date Data Arrived at EDR: 06/22/2023
Date Made Active in Reports: 08/09/2023
Number of Days to Update: 48

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/20/2023
Date Data Arrived at EDR: 06/22/2023
Date Made Active in Reports: 09/12/2023
Number of Days to Update: 82

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 09/20/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/02/2023
Date Data Arrived at EDR: 04/18/2023
Date Made Active in Reports: 07/07/2023
Number of Days to Update: 80

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/20/2023
Next Scheduled EDR Contact: 10/30/2023
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/12/2023
Date Data Arrived at EDR: 05/02/2023
Date Made Active in Reports: 06/13/2023
Number of Days to Update: 42

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/09/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 09/21/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Semi-Annually

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/22/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 11/22/2021
Number of Days to Update: 4

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 08/15/2023
Next Scheduled EDR Contact: 12/04/2023
Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/15/2022
Date Data Arrived at EDR: 02/17/2022
Date Made Active in Reports: 05/11/2022
Number of Days to Update: 83

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 07/25/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Varies

MONO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA MONO: CUPA Facility List CUPA Facility List

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 08/15/2023
Next Scheduled EDR Contact: 12/04/2023
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing CUPA Program listing from the Environmental Health Division.

Date of Government Version: 10/04/2021
Date Data Arrived at EDR: 10/06/2021
Date Made Active in Reports: 12/29/2021
Number of Days to Update: 84

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/15/2023
Next Scheduled EDR Contact: 12/04/2023
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites

Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/15/2023
Next Scheduled EDR Contact: 12/04/2023
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List CUPA facility list.

Date of Government Version: 07/21/2023
Date Data Arrived at EDR: 07/25/2023
Date Made Active in Reports: 10/11/2023
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/19/2023
Next Scheduled EDR Contact: 11/06/2023
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups Petroleum and non-petroleum spills.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/15/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/09/2023
Number of Days to Update: 9

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/15/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/09/2023
Number of Days to Update: 9

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 04/01/2023
Date Data Arrived at EDR: 05/18/2023
Date Made Active in Reports: 06/14/2023
Number of Days to Update: 27

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/03/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 08/26/2022
Date Data Arrived at EDR: 08/29/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 78

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 07/31/2023
Next Scheduled EDR Contact: 12/11/2023
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List

Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/10/2023
Date Data Arrived at EDR: 07/11/2023
Date Made Active in Reports: 09/26/2023
Number of Days to Update: 77

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/07/2023
Next Scheduled EDR Contact: 12/25/2023
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST RIVERSIDE: Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 07/10/2023

Date Data Arrived at EDR: 07/11/2023

Date Made Active in Reports: 09/26/2023

Number of Days to Update: 77

Source: Department of Environmental Health

Telephone: 951-358-5055

Last EDR Contact: 09/07/2023

Next Scheduled EDR Contact: 12/25/2023

Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/07/2022

Date Data Arrived at EDR: 12/21/2022

Date Made Active in Reports: 03/16/2023

Number of Days to Update: 85

Source: Sacramento County Environmental Management

Telephone: 916-875-8406

Last EDR Contact: 09/25/2023

Next Scheduled EDR Contact: 01/08/2024

Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/07/2022

Date Data Arrived at EDR: 12/09/2022

Date Made Active in Reports: 03/01/2023

Number of Days to Update: 82

Source: Sacramento County Environmental Management

Telephone: 916-875-8406

Last EDR Contact: 09/25/2023

Next Scheduled EDR Contact: 01/08/2024

Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List

Cupa facility list

Date of Government Version: 05/02/2023

Date Data Arrived at EDR: 05/04/2023

Date Made Active in Reports: 07/25/2023

Number of Days to Update: 82

Source: San Benito County Environmental Health

Telephone: N/A

Last EDR Contact: 07/26/2023

Next Scheduled EDR Contact: 11/13/2023

Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 05/09/2023

Date Data Arrived at EDR: 05/10/2023

Date Made Active in Reports: 08/01/2023

Number of Days to Update: 83

Source: San Bernardino County Fire Department Hazardous Materials Division

Telephone: 909-387-3041

Last EDR Contact: 07/26/2023

Next Scheduled EDR Contact: 11/13/2023

Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 05/25/2023
Date Data Arrived at EDR: 05/25/2023
Date Made Active in Reports: 08/16/2023
Number of Days to Update: 83

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 08/29/2023
Next Scheduled EDR Contact: 12/11/2023
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 04/04/2023
Date Data Arrived at EDR: 04/05/2023
Date Made Active in Reports: 06/27/2023
Number of Days to Update: 83

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/22/2021
Date Data Arrived at EDR: 10/19/2021
Date Made Active in Reports: 01/13/2022
Number of Days to Update: 86

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 10/10/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 08/22/2023
Next Scheduled EDR Contact: 12/11/2023
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 04/28/2023
Date Data Arrived at EDR: 04/28/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 77

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 07/26/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversight Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 07/26/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 04/28/2023
Date Data Arrived at EDR: 04/28/2023
Date Made Active in Reports: 05/03/2023
Number of Days to Update: 5

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 07/26/2023
Next Scheduled EDR Contact: 11/13/2023
Data Release Frequency: Quarterly

SAN FRANCISCO COUNTY:

SAN FRANCISCO MAHER: Maher Ordinance Property Listing

a listing of properties that fall within a Maher Ordinance, for all of San Francisco

Date of Government Version: 07/17/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 10/05/2023
Number of Days to Update: 79

Source: San Francisco Planning
Telephone: 628-652-7483
Last EDR Contact: 07/18/2023
Next Scheduled EDR Contact: 10/30/2023
Data Release Frequency: Varies

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 09/07/2023
Next Scheduled EDR Contact: 12/25/2023
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List Cupa Facility List.

Date of Government Version: 05/10/2023
Date Data Arrived at EDR: 05/11/2023
Date Made Active in Reports: 07/31/2023
Number of Days to Update: 81

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/09/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/08/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST SAN MATEO: Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 08/29/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/09/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List

Cupa facility list

Date of Government Version: 05/10/2023
Date Data Arrived at EDR: 05/11/2023
Date Made Active in Reports: 07/31/2023
Number of Days to Update: 81

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/09/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 08/15/2023
Next Scheduled EDR Contact: 12/04/2023
Data Release Frequency: No Update Planned

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List

CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/09/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Varies

SHASTA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA SHASTA: CUPA Facility List Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/09/2023
Next Scheduled EDR Contact: 11/27/2023
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 08/22/2023
Next Scheduled EDR Contact: 12/11/2023
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 09/15/2021
Date Data Arrived at EDR: 09/16/2021
Date Made Active in Reports: 12/09/2021
Number of Days to Update: 84

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 08/22/2023
Next Scheduled EDR Contact: 12/11/2023
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List Cupa Facility list

Date of Government Version: 07/02/2021
Date Data Arrived at EDR: 07/06/2021
Date Made Active in Reports: 07/14/2021
Number of Days to Update: 8

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 09/12/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 06/30/2021
Date Made Active in Reports: 09/24/2021
Number of Days to Update: 86

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/12/2023
Next Scheduled EDR Contact: 01/01/2024
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List Cupa facility list

Date of Government Version: 02/08/2022
Date Data Arrived at EDR: 02/10/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 83

Source: Stanislaus County Department of Environmental Protection
Telephone: 209-525-6751
Last EDR Contact: 10/04/2023
Next Scheduled EDR Contact: 01/22/2024
Data Release Frequency: Varies

SUTTER COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST SUTTER: Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 08/03/2023

Date Data Arrived at EDR: 08/24/2023

Date Made Active in Reports: 09/12/2023

Number of Days to Update: 19

Source: Sutter County Environmental Health Services

Telephone: 530-822-7500

Last EDR Contact: 08/22/2023

Next Scheduled EDR Contact: 12/11/2023

Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List

Cupa facilities

Date of Government Version: 05/11/2023

Date Data Arrived at EDR: 05/11/2023

Date Made Active in Reports: 07/31/2023

Number of Days to Update: 81

Source: Tehama County Department of Environmental Health

Telephone: 530-527-8020

Last EDR Contact: 07/26/2023

Next Scheduled EDR Contact: 11/13/2023

Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List

Cupa facility list

Date of Government Version: 07/11/2023

Date Data Arrived at EDR: 07/12/2023

Date Made Active in Reports: 09/26/2023

Number of Days to Update: 76

Source: Department of Toxic Substances Control

Telephone: 760-352-0381

Last EDR Contact: 10/10/2023

Next Scheduled EDR Contact: 01/29/2024

Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List

Cupa program facilities

Date of Government Version: 10/07/2022

Date Data Arrived at EDR: 10/07/2022

Date Made Active in Reports: 12/21/2022

Number of Days to Update: 75

Source: Tulare County Environmental Health Services Division

Telephone: 559-624-7400

Last EDR Contact: 07/26/2023

Next Scheduled EDR Contact: 11/13/2023

Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List

Cupa facility list

Date of Government Version: 04/23/2018

Date Data Arrived at EDR: 04/25/2018

Date Made Active in Reports: 06/25/2018

Number of Days to Update: 61

Source: Division of Environmental Health

Telephone: 209-533-5633

Last EDR Contact: 10/10/2023

Next Scheduled EDR Contact: 01/29/2024

Data Release Frequency: Varies

VENTURA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 06/26/2023
Date Data Arrived at EDR: 07/20/2023
Date Made Active in Reports: 10/03/2023
Number of Days to Update: 75

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/16/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/21/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/02/2023
Next Scheduled EDR Contact: 11/20/2023
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 06/26/2023
Date Data Arrived at EDR: 07/25/2023
Date Made Active in Reports: 10/13/2023
Number of Days to Update: 80

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 10/16/2023
Next Scheduled EDR Contact: 01/29/2024
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 05/26/2023
Date Data Arrived at EDR: 06/02/2023
Date Made Active in Reports: 06/14/2023
Number of Days to Update: 12

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/06/2023
Next Scheduled EDR Contact: 12/18/2023
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 04/03/2023
Date Data Arrived at EDR: 04/18/2023
Date Made Active in Reports: 06/13/2023
Number of Days to Update: 56

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 09/21/2023
Next Scheduled EDR Contact: 01/08/2024
Data Release Frequency: Annually

YUBA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA YUBA: CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 07/24/2023

Date Data Arrived at EDR: 07/26/2023

Date Made Active in Reports: 10/11/2023

Number of Days to Update: 77

Source: Yuba County Environmental Health Department

Telephone: 530-749-7523

Last EDR Contact: 07/19/2023

Next Scheduled EDR Contact: 11/06/2023

Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 11/16/2022

Date Data Arrived at EDR: 11/16/2022

Date Made Active in Reports: 02/06/2023

Number of Days to Update: 82

Source: Department of Energy & Environmental Protection

Telephone: 860-424-3375

Last EDR Contact: 08/08/2023

Next Scheduled EDR Contact: 11/20/2023

Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018

Date Data Arrived at EDR: 04/10/2019

Date Made Active in Reports: 05/16/2019

Number of Days to Update: 36

Source: Department of Environmental Protection

Telephone: N/A

Last EDR Contact: 09/28/2023

Next Scheduled EDR Contact: 01/15/2024

Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019

Date Data Arrived at EDR: 10/29/2021

Date Made Active in Reports: 01/19/2022

Number of Days to Update: 82

Source: Department of Environmental Conservation

Telephone: 518-402-8651

Last EDR Contact: 07/27/2023

Next Scheduled EDR Contact: 11/06/2023

Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018

Date Data Arrived at EDR: 07/19/2019

Date Made Active in Reports: 09/10/2019

Number of Days to Update: 53

Source: Department of Environmental Protection

Telephone: 717-783-8990

Last EDR Contact: 10/05/2023

Next Scheduled EDR Contact: 01/22/2024

Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2020

Date Data Arrived at EDR: 11/30/2021

Date Made Active in Reports: 02/18/2022

Number of Days to Update: 80

Source: Department of Environmental Management

Telephone: 401-222-2797

Last EDR Contact: 08/10/2022

Next Scheduled EDR Contact: 11/27/2023

Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018

Date Data Arrived at EDR: 06/19/2019

Date Made Active in Reports: 09/03/2019

Number of Days to Update: 76

Source: Department of Natural Resources

Telephone: N/A

Last EDR Contact: 08/30/2023

Next Scheduled EDR Contact: 12/18/2023

Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities

Source: Department of Social Services

Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

PROPOSED LANDFILL GAS TO ENERGY PLANT
20662 NEWPORT COAST DRIVE
NEWPORT COAST, CA 92657

TARGET PROPERTY COORDINATES

Latitude (North):	33.613102 - 33° 36' 47.17"
Longitude (West):	117.821959 - 117° 49' 19.05"
Universal Transverse Mercator:	Zone 11
UTM X (Meters):	423748.8
UTM Y (Meters):	3719368.5
Elevation:	812 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	12014842 LAGUNA BEACH, CA
Version Date:	2018
North Map:	12014866 TUSTIN, CA
Version Date:	2018

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

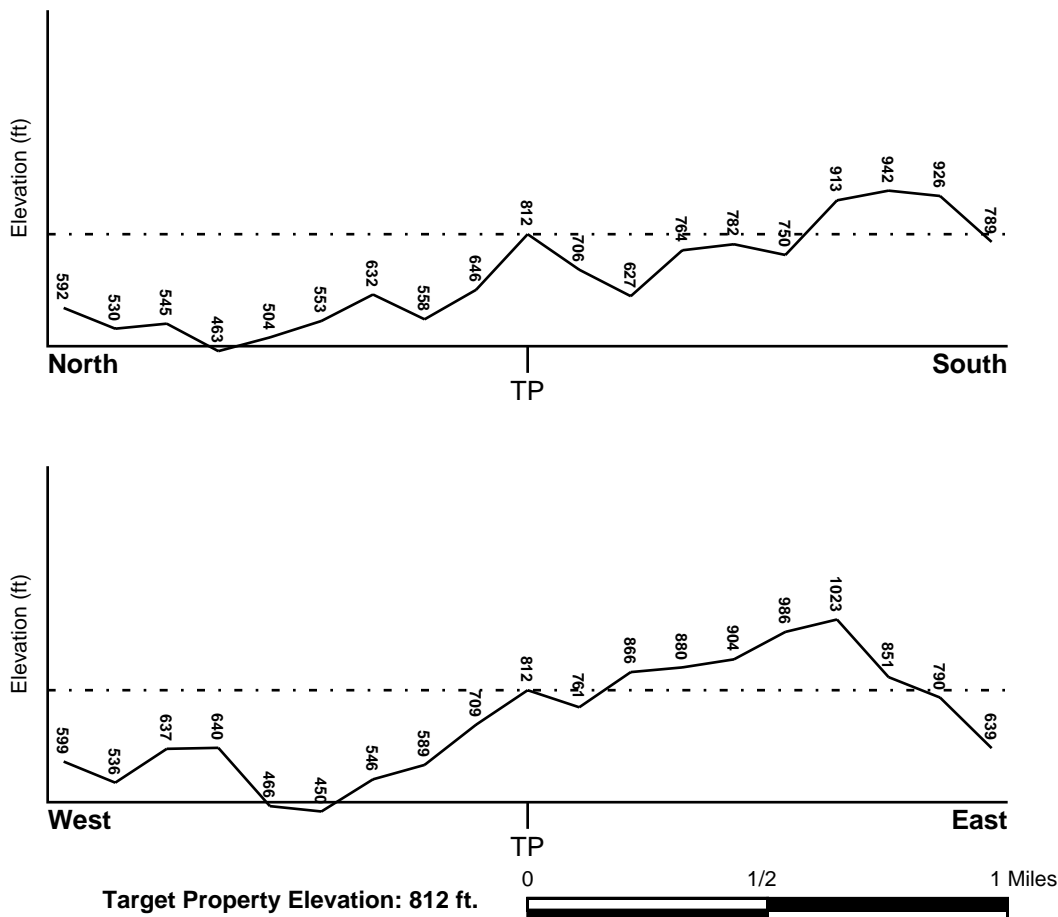
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General WNW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
06059C0402J	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
06059C0289J	FEMA FIRM Flood data
06059C0293J	FEMA FIRM Flood data
06059C0056E	FEMA Q3 Flood data
06059C0063E	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
LAGUNA BEACH	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

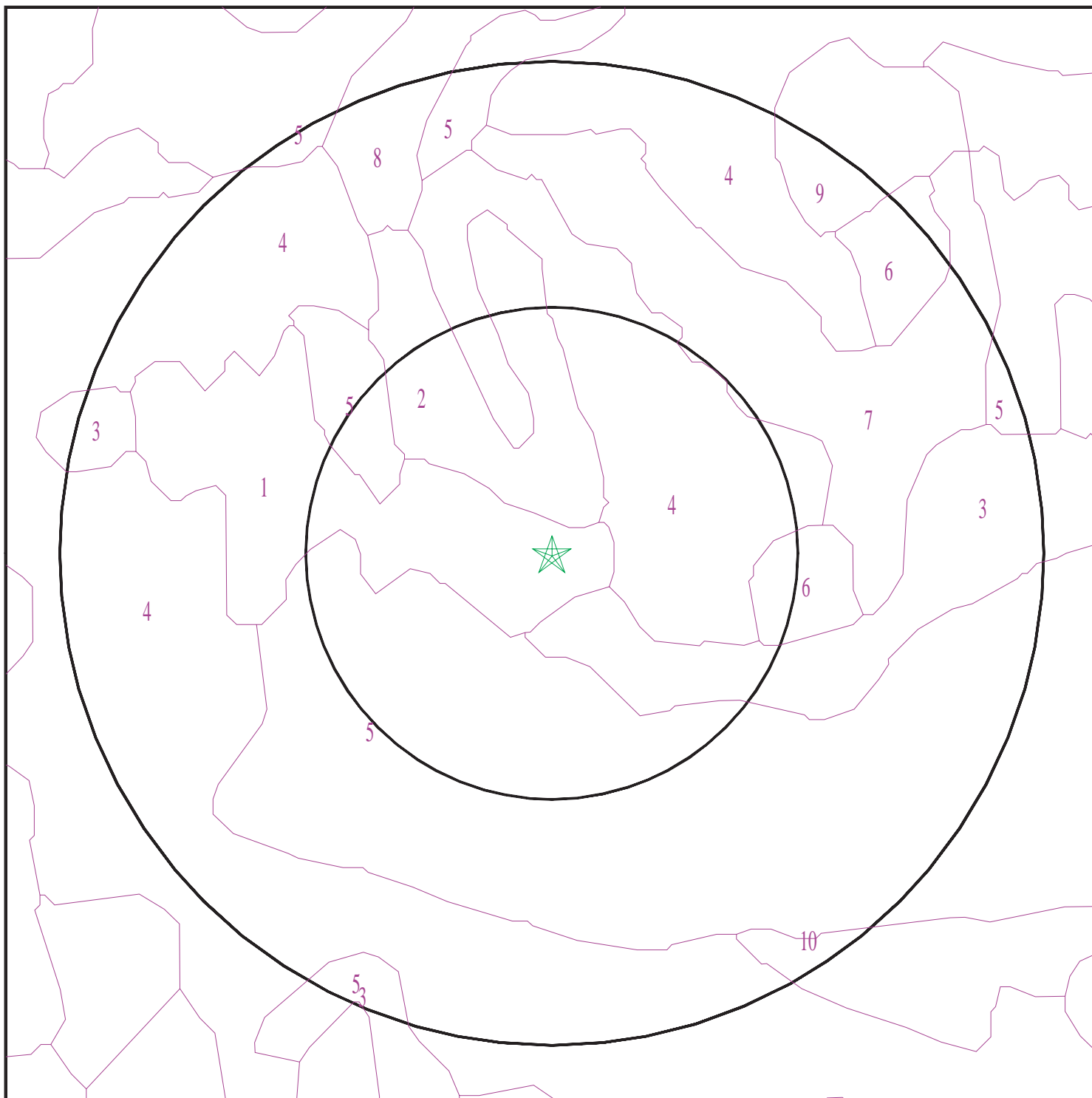
Era:	Cenozoic
System:	Tertiary
Series:	Miocene
Code:	Tm (decoded above as Era, System & Series)

GEOLOGIC AGE IDENTIFICATION

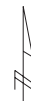
Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 7470886.2s



- ★ Target Property
- ∕ SSURGO Soil
- ∕ Water



SITE NAME: Proposed Landfill Gas To Energy Plant
 ADDRESS: 20662 Newport Coast Drive
 Newport Coast CA 92657
 LAT/LONG: 33.613102 / 117.821959

CLIENT: PlaceWorks
 CONTACT: Isabel Vega
 INQUIRY #: 7470886.2s
 DATE: October 17, 2023 7:08 am

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: ANAHEIM

Soil Surface Texture: clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	25 inches	clay loam	Not reported	Not reported	Max: Min:	Max: Min:
2	25 inches	29 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 2

Soil Component Name: ALO

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0	Max: Min:
2	14 inches	22 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0	Max: Min:
3	22 inches	25 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 1.4 Min: 0	Max: Min:

Soil Map ID: 3

Soil Component Name: MYFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
2	11 inches	18 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
3	18 inches	27 inches	sandy clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
4	27 inches	70 inches	sandy clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
5	70 inches	79 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 4

Soil Component Name: CIENEBA

Soil Surface Texture: sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	7 inches	11 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 5

Soil Component Name: ROCK OUTCROP

Soil Surface Texture: unweathered bedrock

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	3 inches	unweathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 6

Soil Component Name: ALO

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	14 inches	22 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.1
2	22 inches	25 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
3	0 inches	14 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.1

Soil Map ID: 7

Soil Component Name: MYFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
2	11 inches	18 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
3	18 inches	27 inches	sandy clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
4	27 inches	70 inches	sandy clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
5	70 inches	79 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1

Soil Map ID: 8

Soil Component Name: MYFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
2	7 inches	11 inches	sandy clay	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
3	11 inches	20 inches	sandy clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1
4	20 inches	64 inches	sandy clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
5	64 inches	79 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 6.1

Soil Map ID: 9

Soil Component Name: SAN ANDREAS

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	31 inches	sandy loam	Not reported	Not reported	Max: Min:	Max: Min:
2	31 inches	35 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 10

Soil Component Name: CAPISTRANO

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	27 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 5.6
2	27 inches	64 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 5.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

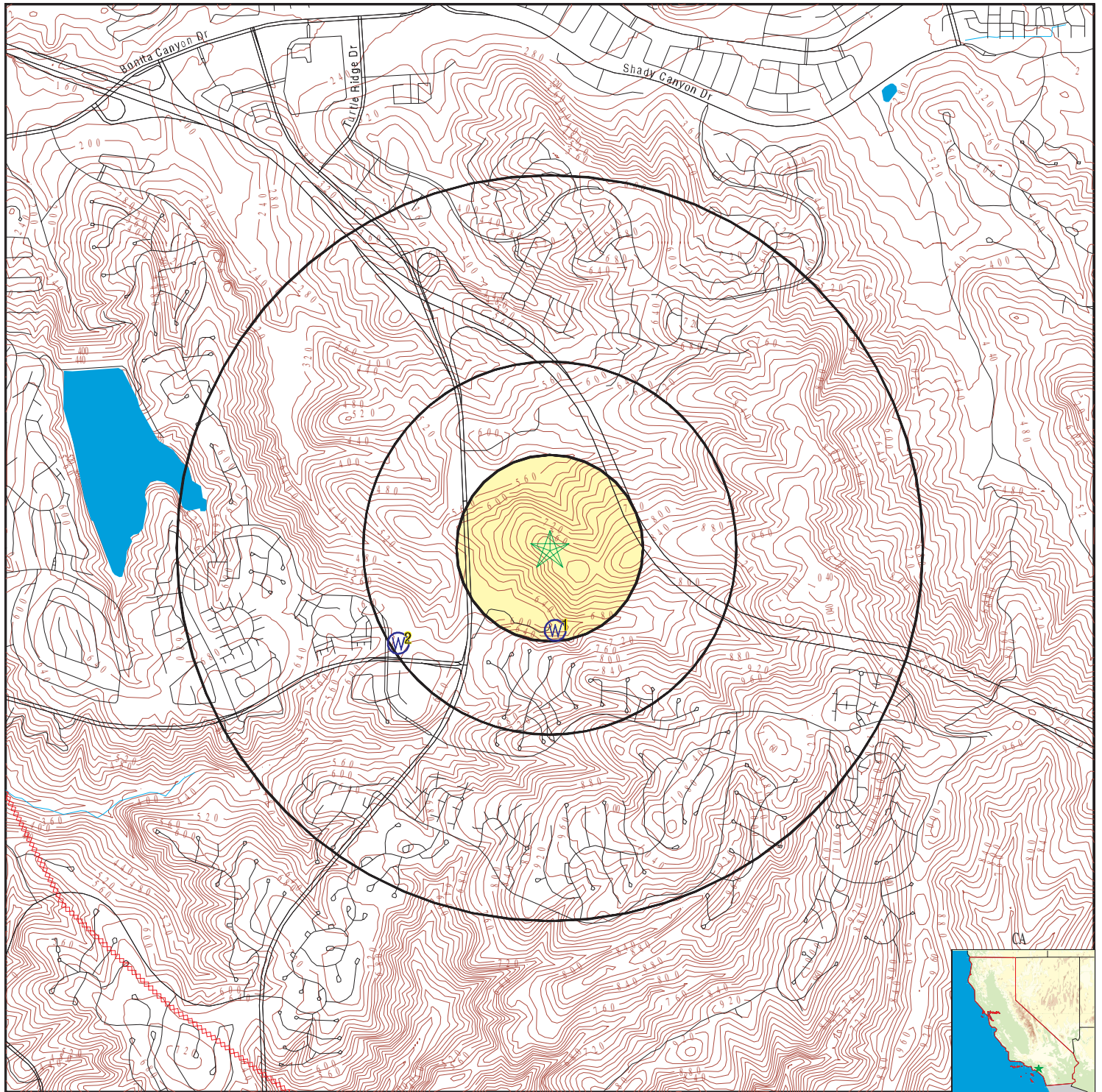
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	CAEDF0000140443	1/8 - 1/4 Mile South
2	CAEDF0000124313	1/4 - 1/2 Mile WSW

PHYSICAL SETTING SOURCE MAP - 7470886.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME: Proposed Landfill Gas To Energy Plant
 ADDRESS: 20662 Newport Coast Drive
 Newport Coast CA 92657
 LAT/LONG: 33.613102 / 117.821959

CLIENT: PlaceWorks
 CONTACT: Isabel Vega
 G-1 INQUIRY #: 7470886.2s
 DATE: October 17, 2023 7:08 am

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

1
South
1/8 - 1/4 Mile
Lower

CA WELLS CAEDF0000140443

Well ID:	L10004005233-MW-2	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-2
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10004005233&assigned_name=MW-2&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10004005233&assigned_name=MW-2		

2
WSW
1/4 - 1/2 Mile
Lower

CA WELLS CAEDF0000124313

Well ID:	L10004005233-MW-1	Well Type:	MONITORING
Source:	EDF	Other Name:	MW-1
GAMA PFAS Testing:	Not Reported		
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=EDF&samp_date=&global_id=L10004005233&assigned_name=MW-1&store_num=		
GeoTracker Data:	https://geotracker.waterboards.ca.gov/profile_report.asp?cmd=MWEDFResults&global_id=L10004005233&assigned_name=MW-1		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92657	19	0

Federal EPA Radon Zone for ORANGE County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
 : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for ORANGE COUNTY, CA

Number of sites tested: 30

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.763 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Department of Fish and Wildlife

Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program

State Water Resources Control Board

Telephone: 916-341-5577

The GAMA Program is California's comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Health Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database

Source: Department of Water Resources

Telephone: 916-651-9648

California Drinking Water Quality Database

Source: Department of Public Health

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations

Source: Dept of Conservation, Geologic Energy Management Division

Telephone: 916-323-1779

Oil and Gas well locations in the state.

California Earthquake Fault Lines

Source: California Division of Mines and Geology

The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United States Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon

Source: Department of Public Health

Telephone: 916-210-8558

Radon Database for California

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRRA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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Appendix H Preparedness, Prevention, and Contingency (PPC) Plan/Emergency Action Plan (EAP)/Spill Prevention Control and Countermeasure (SPCC) Plan

Appendix

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Preparedness, Prevention, and Contingency (PPC) Plan/Emergency Action Plan (EAP)/Spill Prevention Control and Countermeasure (SPCC) Plan

**Biofuels Coyote Canyon Biogas, LLC
Renewable Natural Gas Facility**

20661 Newport Coast Drive
Newport Beach, CA 92660

Issued: April 9, 2024

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APPENDIX I – Briefing and Training Records

1 INTRODUCTION

The purpose of the Preparedness, Prevention and Contingency (PPC) Plan, Emergency Action Plan (EAP), & Spill Prevention, Control, and Countermeasure (SPCC) Plan is to consolidate the State and Federal pollution incident prevention and emergency response programs into one overall plan.

- The purpose of the PPC Plan is to prevent/control accidental discharge of polluting materials to surface or groundwater.
- The purpose of the SPCC Plan is prevent/control accidental discharge of oil and hazardous substances into the waters of the United States.

1.1 Five-Year Review and Technical Amendment Log [40 CFR 112.5(b)]

A review and evaluation of this Plan is conducted at least once every five years as is required by 40 CFR Part 112.5(b). As a result of this review and evaluation, Archaea Energy, Inc. will amend this Plan within six months of the review to include more effective prevention and control technology if: (1) such a technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proven at the time of review.

The Designated Responsible Person, or his/her designee, will review this Plan for conformance with current PPC/SPCC regulations. A technical amendment to this Plan will be made within six months after a change in the facility design, construction, operation, or maintenance which materially affects the facility's potential for the discharge of oil into or upon navigable waters of the United States or adjoining shorelines.

Date of Original Plan: April 9, 2024

A review and evaluation of Biofuels Coyote Canyon Biogas, LLC PPC/SPCC Plan was performed on the following date(s). The reviewer has indicated below whether or not the Plan was (or will be) amended as a result of the review.

Table 1-1
Five-Year Review and Technical Amendments

Review Date	Plan Amended? (Y or N)	Description of Amendment	Name and Signature of Plan Reviewer and/or Certifying Amender

CERTIFICATION INFORMATION

Name of Facility	Biofuels Coyote Canyon Biogas, LLC (Coyote Canyon RNG)
Type of Facility	Renewable Natural Gas (RNG)
Date of Initial Operation	TBD
Location of Facility	20661 Newport Coast Drive Newport Beach, CA 92660
Name/Address of Owner	Biofuels Coyote Canyon Biogas, LLC 201 Helios Way, Floor 6 Houston, TX 77079

DESIGNATED PERSONS RESPONSIBLE FOR ENVIRONMENTAL EMERGENCY RESPONSE PLANS

Name:	Emily Zambuto Executive Director of Environmental Compliance
Management Approval:	Full approval is extended by Management at a level with authority to commit the necessary resources.
Signature:	<hr/>

1.2 SPCC Self-Certification Statement [40 CFR §112.6]

I, Emily Zambuto, Executive Director of Environmental Compliance, certify that the following is accurate:

1. I am familiar with the applicable requirements of 40 CFR §112;
2. I will visit the facility, once constructed;
3. This Plan was prepared in accordance with accepted and sound industry practices and standards;
4. Procedures for required inspections and testing have been established in accordance with industry inspection and testing standards or recommended practices;
5. I will fully implement the Plan;
6. The facility meets the following qualification criteria (under §112.3(g)(1)):
7. The aggregate aboveground oil storage capacity of the facility is 10,000 gallons or less;
8. The facility has had no single discharge as described in §112.1(b) exceeding 1,000 gallons and no two discharges as described in §112.1(b) each exceeding 42 gallons within any twelve-month period in the three years prior to the SPCC Plan self-certification date, or since becoming subject to 40 CFR Part 112 if the facility has been in operation for less than three years (not including oil discharges as described in §112.1(b) that are the result of natural disaster, acts of war, or terrorism);
9. There is no oil storage container at the facility with an aboveground capacity greater than 5,000 gallons;
10. This Plan does not deviate from any requirement of 40 CFR Part 112 as allowed by §112.7(a)(2) (environmental equivalence) and §112.7(d) (impracticability of secondary containment) or include any measures pursuant to §112.9(c)(6) for produced water containers and any associated piping; and
11. This Plan and individual(s) responsible for implementing this Plan have the full approval of Management, which has committed the necessary resources to fully implement this Plan.

I also understand my other obligations relating to the storage of oil at this facility, including, among others:

1. To report any oil discharge to navigable waters or adjoining shorelines to the appropriate authorities. Notification information is included in this Plan.
2. To review and amend this Plan whenever there is a material change at the facility that affects the potential for an oil discharge and at least once every five years. Reviews

and amendments are recorded in a log [See Five-Year Review and Technical Amendment Log].

3. Optional use of a contingency plan. A contingency plan:
4. May be used in lieu of secondary containment for qualified oil-filled operational equipment, in accordance with the requirements under §112.7(k);
5. Must be prepared for flowlines and/or intra-facility gathering lines which do not have secondary containment at an oil production facility; and
6. Must include an established and documented inspection or monitoring program; must follow the provisions of 40 CFR §109; and must include a written commitment of manpower, equipment, and materials to expeditiously remove any quantity of oil discharged that may be harmful. If applicable, a copy of the contingency plan and any additional documentation will be attached to this Plan.

I certify that I have satisfied the requirement to prepare and implement a Plan under §112.3 and all of the requirements under §112.6(a). I certify that the information contained in this Plan is true and accurate to the best of my knowledge.

Signature: _____ Date: _____

Emily Zambuto, Executive Director of Environmental Compliance

2 PREPAREDNESS, PREVENTION, AND CONTINGENCY (PPC) PLAN

2.1 Description of Facility

Facility Address/Phone: 20661 Newport Coast Drive
Newport Beach, CA 92660
XXX-XXX-XXXX

Facility Owner/Operator: Biofuels Coyote Canyon Biogas, LLC
201 Helios Way, Floor 6
Houston, TX 77079

Table 2-1
Facility Contacts / Critical Call List / Emergency Phone Numbers

Name	Title	Telephone
TBD	Lead Operator	
TBD	Regional Operations Manager	
Dustin Shutter	Vice President of RNG Operations	315-406-8516
Emily Zambuto	Exec. Director of Environmental Compliance	585-278-4773
Sam Gilley	Sr. Field Safety Manager	979-220-7651
Archaea Emergency	Emergency Call Service	855-595-5319

AMBULANCE, FIRE, POLICE, RESCUE: 911

Clinic/Hospital: Hoag Hospital
1 Haog Drive
Newport Beach, CA 92663
949-764-4624

Poison Control Center: 800-222-1222

SPILL NOTIFICATION TELEPHONE NUMBERS

National Response Center: 800-424-8802
California OES: 800-852-7550
Anaheim City Fire Dept. 714-765-4072
Orange Co. Env. Health 714-433-6406

Note: Notifying the State Warning Center (800) 852-7550 and the UPA or 911 constitutes compliance with the requirements of section 11004 of title 42 of the United States Code regarding verbal notification of the SERC and LEPC (California Code of Regulations, Title 19 Section 2631 (e)).

EMERGENCY SPILL RESPONSE

Clean Harbors: 800-OIL-TANK

2.2 Site Information

The Facility will be staffed full-time Monday through Friday, 7:00 AM to 3:00 PM by a Lead Operator and an Operations Technician.

Although the Facility is on leased property within the landfill, it is a completely separate facility with separate ownership and operational personnel/control.

The site is approximately a 2-acre, irregularly shaped parcel (see Figure 1). The site is accessible through the Orange County Waste & Recycling (OCWR) Coyote Canyon Landfill main entrance.

The Facility consists of equipment skids used to process landfill gas into renewable natural gas. There are vessels filled with air filter media which are periodically cleaned (spent media removed & replaced). There are three Envirotamp fluid transformers (BioTran-35), and other ancillary equipment, that are located at the Facility on concrete pads. Equipment skids are equipped with secondary containment.

2.3 Process Description

The Biofuels Coyote Canyon Biogas, LLC Facility (the Facility) will receive landfill gas (LFG) from the Orange County Waste & Recycling (OCWR) Coyote Canyon Landfill and, through an extensive treatment and refining process, will produce RNG for sale and injection into a nearby pipeline. The Facility and the landfill are separately owned and operated.

The Facility will be designed to process up to 3,200 standard cubic feet per minute (scfm) of raw LFG, at an assumed methane content up to 50 percent. The raw LFG received at the Facility will be initially treated in accordance with applicable EPA New Source Performance Standards (NSPS) requirements, as follows:

- Filtration: LFG will pass through a series of filters designed to remove particulates and free moisture in the raw LFG.
- Dewatering: LFG will pass through a series of moisture knockout vessels as well as mechanical chiller for dewatering.
- Compression: Gas blowers/compressors will pressurize the gas necessary for the subsequent RNG refining process.

Following treatment, gas will undergo extensive processes designed to generally capture/retain the methane portion of the gas, while separating out the other gas constituents (i.e. CO₂, VOCs, N₂, O₂). The end result is pipeline-quality methane such that it can be transferred to a natural gas pipeline for distribution to end users.

The refining process involves the following key steps:

- Initial LFG Treatment: Compression, filtration and dewatering.
- Bulk hydrogen sulfide removal: After the LFG is initially treated and is around 30 psig, the LFG will flow through a vessel filled with non-regenerative H₂S removal media. The H₂S concentration of the process gas leaving the H₂S removal vessels will have a maximum outlet concentration of 25 ppm.
- Carbon Dioxide (CO₂) Removal: This step involves in-line gas processing to remove impurities from the process gas (water & VOCs) followed by membrane system removal of CO₂ from the gas stream.
- Nitrogen/Oxygen (N₂/O₂) Removal: This step involves pressure swing adsorption (PSA) separation of N₂ and O₂ from the gas stream.
- Supplemental gas compression and gas dryer for final delivery.

The final product gas is monitored for gas quality as stipulated by the gas tariff and is then transferred to the natural gas pipeline for distribution to end users.

The Facility will include a Tier 4 natural gas-fired generator, to be used only in emergency situations.

The LFG condensate will not contain oil as it will be routed through the OWS before being stored in two (2) 15,000 gal. Condensate Tanks (CST-01 and CST-02).

Table 2-2 provides a summary of the material storage at the Facility.

Table 2-2
Material Storage

Description	Contents	Location	Design Capacity	Volume & Release Rate (gal/hr)	Predicted Direction of Flow	Leak Prevention and/or Spill Containment	Overfill Prevention
Bulk Storage Containers							
Two Hydrogen Sulfide (H₂S) Removal Vessels (Single-wall tanks)	LFG (Does not contain oil)	Outside	4,800 scfm LFG (max H ₂ S 25 ppm)	Gradual to Instantaneous (4,800 scfm LFG – max H ₂ S 25 ppm)	Failure resulting in pressure relief valve lifting would result in release of LFG to atmosphere.	N/A	N/A
Condensate Storage (Coated carbon steel double-wall tank)	Waste Condensate (Does not contain oil)	Outside	15,000 gal.	Gradual to Instantaneous (15,000 gal.)	Captured in secondary containment. Failure would result in flow to concrete pad and gravel area, and ultimately to stormwater pond to northwest.	Interstitial space of double-wall tank	Level transmitter with HH & H-level alarm in HMI & manual level indication
Air Compressor Condensate Tote	Condensate (Does not contain oil)	Outside on concrete pad	250 gal.	Gradual to Instantaneous (250 gal.)		Secondary containment	Operator inspection/Daily Rounds
Two New Oil Storage Totes (Dual IBC storage tote)	New Oil	Outside under cover on spill pallet	330 gal. each (660 gal. total)	Gradual to Instantaneous (330 gal.)		Under cover on spill pallet	N/A

Description	Contents	Location	Design Capacity	Volume & Release Rate (gal/hr)	Predicted Direction of Flow	Leak Prevention and/or Spill Containment	Overfill Prevention
Oil/Water Separator (Coated carbon steel double-wall tank)	Oily Water	Underground	550 gal.	Gradual to Instantaneous (550 gal.)	Captured in secondary containment. Failure would result in flow to subsurface soils.	Double-wall tank	Tank is equipped with a level gauge (on HMI) and high level alarm.
Oil-Filled Equipment							
Three (3) Recycle Compressors and Two (2) Stage 1 & 2 Feed Compressors	Compressor Oil	Outside	192 gal. each (960 gal. total)	Gradual to Instantaneous (192 gal.)	Captured in secondary containment. Failure would result in flow to concrete pad and gravel area to northwest.	Secondary containment; Daily visual inspection	Level gauge and high-level audible alarm; Overflows piped to OWS
Mechanical Chiller	Propylene Glycol (50%)	Outside	136 gal. est.	Gradual to Instantaneous (136 gal.)	Release to flat concrete pad and pool under equipment.	Daily visual inspection	Level sight glass
	Oil		1.43 gal. Circuit 1 & 2 each (2.86 gal. total)	Gradual to Instantaneous (up to 1.43 gal.)			
	Refrigerant (R410A)		25.5 lb Circuit 1 & 2 each	Gradual to Instantaneous (up to 25.5 lbs)	Release to atmosphere		
T1 & T2 – Transformers (Single wall oil-filled equipment)	Envirotemp. Fluid (Vegetable Oil)	Outside	1,300 gal. each (2,600 gal. total)	Gradual to Instantaneous (1,300 gal.)	On flat concrete pad, will pool under equipment.		Level gauge

Description	Contents	Location	Design Capacity	Volume & Release Rate (gal/hr)	Predicted Direction of Flow	Leak Prevention and/or Spill Containment	Overfill Prevention
tanks)							
Total Oil Storage Subject to SPCC Rule (gal.):			4,222	(Includes tanks, containers, and equipment \geq 55 gallons. Does not include OWS, condensate tanks, or empty totes/drums.)			

3 EMERGENCY ACTION PLAN (EAP)

In the event of an emergency, all personnel are to immediately evacuate the Facility and proceed to the designated evacuation area as instructed within this EAP.

3.1 Emergency Notification

Emergencies are communicated via fire alarm pull stations and verbal communications. Verbal communications are to be made in person by cellular phone or, in the event of a fire, the alarm will ring.

3.2 Emergency Assembly Area

Refer to the PPC site map in Figure 2. Upon hearing the alarm or being notified of an emergency, all personnel will evacuate and assemble at a predetermined area unless otherwise directed by the lead operator or management. The Facility's emergency assembly areas are described on the enclosed PPC site map.

3.3 Potential Off-Site Exposure

Shelter in place.

3.4 Key Roles

The following roles at the Facility are designated as key roles.

Table 3-1
Key Roles

Key Role	Primary Position	Secondary Position
Emergency Coordinator	Lead Operator	Operations Technician
Communications Coordinator	Lead Operator	Operations Technician
Evacuation Coordinator	Lead Operator	Operations Technician
Qualified First Aid/CPR Administrator	Lead Operator	Operations Technician

Responsibilities for the above positions are defined as follows.

Emergency Coordinator

Upon notification of an incident, the emergency coordinator will assess the event and initiate the appropriate actions based on the current situation, interface with emergency response personnel (if applicable) as the subject matter expert, and direct actions of key personnel initiating the EAP.

Communications Coordinator

Responsibilities for this person will include interfacing with the media, notification of the local municipal emergency response organizations (if applicable), followed by Green Meadows' local management; activate the company Crisis Communication Process by initiating the Critical Call List procedure and working with their local Emergency Planning Committee to ensure proper response criteria and community notification protocols.

Evacuation Coordinator

Following the notification of the incident and, if safe to do so, the evacuation coordinator is to assure that all persons have vacated the Facility by physically inspecting the Facility without subjecting themselves to the incident. Upon arrival at the assembly area, the evacuation coordinator shall conduct a head count of plant personnel, contractors, and visitors checking them against the Facility roster and visitor sign in log. Once completed, the evacuation coordinator is to report to the emergency coordinator the status of evacuation.

First Aid Administrator

The first aid administrator is to be currently certified in performing first aid & CPR. Their primary responsibility is to render medical assistance (while awaiting professional help) to anyone who has been injured or becomes ill as the result of the incident, so long as they are not subjecting themselves to potential harm while performing these services.

3.5 Process Control Coordinators

Both the Lead Operator and the Operations Technician shall act as process control coordinators. See Table 3-2 for additional information.

These positions only act in a defensive posture from outside of the hot zone whenever possible and are not to engage in any direct activity involving the incident. If the incident precludes the ability to perform an assigned function safely, the designated person shall withdraw from the involved area and report to the emergency coordinator.

Table 3-2
Process Control Coordinators

Process Controls	Primary Position	Secondary Position
Securing inbound/outbound pipeline block valves	Operations Technician	Lead Operator
Securing bulk tank block valves	Operations Technician	Lead Operator
Securing tube trailers block valves	Operations Technician	Lead Operator
Securing plant electrical power	Operations Technician	Lead Operator
Removing trucks from the immediate danger area	N/A	N/A
Traffic control – securing front gate and directing incoming responders	Lead Operator	Operations Technician

3.6 Major Site Hazards

Only trained personnel will attempt to control or extinguish an incipient stage fire using portable fire extinguishers or perform designated process control activities from outside of the hot zone, whenever possible, when mitigating an event without endangering themselves or other personnel. See Table 3-3 for major hazards at the site.

Table 3-3
Major Site Hazards

Hazards	Mitigation Technique	Location
Electrical Fire	E-Stop / Kill Power / CO ₂ Fire Extinguisher	Motor Control Centers (MCC), Electrical Equipment, Switchgear, Substation
Oil Spills	Pig Mats/ Absorbents	Within Process Skid or at the Used Oil Aboveground Storage Tank (AST)
Combustible /Flammable Storage Areas	E-Stop, Fire Alarm, Fire Extinguishers, Evacuation to Muster Location	In gas processing area (air filter medias/activated carbon used for H ₂ S removal)
Methane Leak	E-Stop, Fire Alarm, Evacuation to Muster Location	In gas processing area
H ₂ S/SO ₂ Leak	E-Stop, Fire Alarm, Evacuation to Muster Location	In gas processing area

3.7 Emergency Contact List

Emergency contacts are provided in Table 2-1.

3.8 Emergency Scenarios

3.8.1 Emergency Evacuation & Response Procedures

1. Initiate the EAP notification system (fire alarm, E-stop, verbal communications).
2. Determine the type of emergency (fire, liquid spill, personnel injury, etc.).
3. Notify emergency responders if required (ambulance, fire, police, etc.).
4. Evacuate visitors, customers, contractors, and non-essential company personnel.
5. Proceed to designated assembly area – staying up-wind of any vapor cloud and keeping roadway open for clear access by emergency personnel.
6. Designate a person to report to the main gate to secure, direct, and inform incoming emergency responders.
7. Evacuation coordinator to conduct head count, brief personnel on the emergency actions, and report back to the incident coordinator.
8. Begin internal notification of management and support personnel as directed by Facility protocol.

3.8.2 Injury/Illness

1. Initiate the Emergency Evacuation and Response Procedure (if necessary).
2. Assess environment:
3. If safe to enter, evaluate if it is safe for the victim to stay.
4. If it is safe for the victim to remain, then leave them where they are.
5. If they are not safe and in immediate danger, remove the victim if possible. Otherwise, wait for assistance from emergency services.
6. Administer first aid (if trained) as necessary until trained medical help arrives.
7. Personnel needing immediate medical attention but not needing an ambulance should be taken to the local hospital accompanied by plant management.
8. Regardless of the severity of treatment, emergency services must be provided information pertaining to potential allergic reactions of the injured party.

3.8.3 Fire/Explosion

Only trained personnel will attempt to perform designated process control activities necessary in mitigating an event involving a release of hazardous materials, if doing so will not endanger themselves or other personnel. Only attempt to extinguish an incipient stage fire using a portable fire extinguisher using the following procedure:

1. Initiate the Emergency Evacuation and Response Procedure.
2. Shut down, disconnect power, and isolate affected equipment if required and can be done so safely.
3. If the fire involves flammable or oxidizing gases, do not attempt to extinguish the flame if the gas source cannot be shut off safely.
4. If the fire involves electrical systems, disconnect the power source and extinguish without using water.
5. If the explosion or fire involves MCCs or transformers, notify the utility company.

Actions Required: Securing inbound/out-bound pipeline block valves, securing bulk tank block valves, securing tube trailers block valve, securing plant electrical power, removing trucks from the immediate danger area, and traffic control – securing front gate and directing incoming responders.

3.8.4 Inert Cryogenic (N₂) Liquid Spill & Vapor Cloud

Only trained personnel will attempt to perform designated process control activities necessary in mitigating an event involving a release of hazardous materials, if doing so will not endanger themselves or other personnel.

*****WARNING: Inert cryogenic liquids displace oxygen and will cause asphyxiation if exposed. Avoid contact with the liquid or vapor phase, stay up-wind, and do not walk through any vapor cloud.*****

1. Initiate the Emergency Evacuation and Response Procedure.
2. Isolate the area and identify the cryogenic liquid involved, if possible.
3. Isolate and shut down affected equipment if required and can be done so safely.
4. Shut off the flow of liquid, if possible, by approaching up-wind of the leak while avoiding contact with cryogenic liquids.
5. Determine the direction of the vapor cloud movement. If vapor cloud will drift outside the property, contact appropriate law enforcement agencies for possible evacuation of areas outside the Facility and blocking of necessary roadways.
6. If the cloud reaches a public roadway where local authorities are not available, send personnel to flag down traffic to prevent entry into the cloud. Hazards include an oxygen deficient atmosphere and loss of visibility when entering the vapor cloud.

7. Use of an analyzer to determine the percent oxygen concentration at fringes of the vapor cloud. Concentrations below 19.5% should be treated as potentially oxygen deficient atmospheres and should be avoided.
8. Allow vapor cloud to dissipate. If the release is indoors or in poorly ventilated areas, ventilate the area utilizing mechanical or natural ventilation.

3.8.5 Pipeline Break, Explosion, or Fire

Only trained personnel will attempt to perform designated process control activities necessary in mitigating an event involving a release of hazardous materials, if doing so will not endanger themselves or other personnel. Only attempt to extinguish an incipient state fire using a portable fire extinguisher.

1. Immediately isolate the area.
2. Establish a safe zone up-wind of the affected area.
3. Follow instructions given by the utility pipeline owner/operator.

3.8.6 Flammable or Oxidizing Gas Leak – No Fire

1. Initiate the Emergency Evacuation and Response Procedure.
2. Isolate and shut down affected equipment, if it can be done so safely.
3. Shut off all electrical power and other ignition sources in the immediate area.
4. No smoking or open flame within one hundred (100) feet of the affected area.
5. Approach up-wind of the leak, and shut off the flow of gas.
6. If a flammable gas cylinder is leaking, move it to an open area away from sources of ignition, oxygen, or other flammables, if this can be done safely.
7. If personnel are exposed to gas vapors, instruct them to get out into fresh air and abstain from smoking for at least one-half hour from being exposed.
8. Use an analyzer to determine the % lower explosive limit (LEL) or oxygen (O₂) concentration, as appropriate, at fringes of the affected area.
9. Concentrations above 10% of the LEL should be treated as though flammable vapors are present.
10. Concentrations above 23.5% oxygen should be treated as enriched atmospheres.

3.8.7 Oil, Fuel, or Hazardous Liquid Spill

Only trained personnel will attempt to perform designated process control activities necessary in mitigating an event involving a release of hazardous materials, if in doing so will not endanger themselves or other personnel.

This applies to spills involving large quantities of liquids such as fuels or other hazardous liquids that could present health hazards and environmental concerns.

1. Initiate the Emergency Evacuation and Response Procedure.
2. Determine what the spilled material is and if it has a Reportable Quantity (RQ) threshold.
3. Isolate and contain the spilled material, if possible to do so safely.
4. If a flammable material is involved, isolate all possible sources of ignition (heat, electrical, etc.).
5. Cover and protect material from discharge to drains and sewers.
6. Initiate the site SPCC Plan.
7. Contact Clean Harbors and ensure environmental cleanup is performed.

Spills involving quantities equal to or exceeding the RQ value require reporting the spill to the state Office of Emergency Management, Local Emergency Planning Committee, and National Response Center. For an oil spill exceeding 55 gallons, or if the spill reaches a navigable waterway, the spill must be reported to the National Response Center immediately upon knowing of the release.

3.8.8 Natural Disasters/Severe Weather: Earthquakes/Hurricanes/Tornados/Wild Fires

1. Initiate the Severe Weather Plan and initiate the Emergency Evacuation and Response Procedures, as necessary.
2. Turn on emergency radio.
3. Stop process. Evacuate if there is time; otherwise, move to an interior wall of the control room.
4. Wait for the storm to pass and prepare to initiate the EAP/SPCC Plan.
5. After the event has occurred, investigate the plant.
6. Be sure to wear proper PPE and personal gas monitors.
7. Report findings to management, as necessary.

3.9 Material and Waste Inventory

Refer to the Facility's Waste Stream Management Plan.

3.10 Pollution Incident History

Table 3-4
Pollution Incident History

Date	Description (Cause/Magnitude/Action/Impact)
4/9/2024	No releases within the past five years.

Release Certification

I hereby certify that I have knowledge of the daily operations of the Facility and attest that there have been no releases of hazardous substances from this Facility for the period indicated below.

Signature of Responsible Official

Start Date

to

End Date

Name of Responsible Official

Title

Date

3.11 Implementation Schedule for Plan Elements Not Currently in Place

Does not apply.

3.12 Description of How Plan is Implemented by Organization

Facility personnel will participate in annual training to allow site personnel to perform their duties in such a way as to prevent the discharge of harmful quantities of oil and other materials. This training will include familiarization with the PPC & SPCC Plan, safety data sheets (SDSs) appropriate to the job assignment, and emergency response procedures, equipment, and systems.

Annually, at a minimum, Facility personnel will be given a discharge prevention briefing which includes their responsibilities for compliance with the requirements of the spill laws and emergency response regulations applicable to the Facility.

The Compliance Department will be responsible for periodically reviewing and evaluating the Plan and instituting appropriate changes at regular intervals. The Compliance Department shall also be responsible for the review of new construction and process changes at an installation relative to the Plan (as required by the company's MOC process).

3.13 Spill Leak Prevention and Response

The Facility will provide appropriate containment and/or diversionary structures or secondary containment to prevent a discharge of oil from the Facility. Personnel will monitor these containment structures to prevent a discharge of oils to waters of the United States. Accumulated waters in the containment curbs will be inspected for the presence of oils and will be allowed to evaporate or will be manually pumped from the containment curbing to the oil-water separator (OWS).

The on-site drainage is designed to carry uncontaminated stormwater runoff from the Facility. The runoff is collected and then conveyed to a dry detention basin directly northeast of the Facility.

3.14 Pre-Release Planning/Spill Prediction

A summary is provided in Table 2-2.

All liquid storage areas have containment capacity sufficient to hold the volume of the largest single container or tank plus a reasonable allowance for precipitation based on local weather conditions and plant operations. Containment systems are impervious to contain spilled material or waste until it can be removed or treated. Tank or container materials are compatible with the material or waste stored.

All piping, gas processing, material handling equipment, and material handling areas are designed and operated so as to prevent spills.

3.14.1 Material Compatibility

All tanks and oil-filled equipment are constructed with materials that are compatible with specified contents. The AST storing condensate has been designed, manufactured, and installed in accordance with UL 142.

Piping systems will be designed and installed in accordance with (i) ULC-C107.7; and/or (ii) ASTM D2996-88.

Adequate provisions must be made to protect all exposed piping from physical damage that might result from moving machinery such as forklifts, automobiles, and trucks.

Inspection and Monitoring Program

All ASTs, oil-filled equipment, connected piping, and secondary containment must be periodically inspected for proper operation, damage, leaks, and suitability for continued service. All steel ASTs must be inspected and maintained in accordance with STI SP001 – Standard for the Inspection of Aboveground Storage Tanks, or API Standard 653 – Tank Inspection, Repair, Alteration, and Reconstruction.

Daily walkthroughs for inspection of all pipes, pumps, valves, and fittings for leaks; tanks for corrosion; tanks supports and foundations for deterioration; evidence of spilled materials along drainage ditches; effectiveness of housekeeping practices; damage to shipping containers; leaks, seeps, or overflows at waste storage areas will be conducted. Monthly and annual documented inspections will be conducted following company procedures.

Preventative Maintenance

Archaea Energy, Inc. has developed a standardized preventative maintenance program. The program identifies the equipment and systems; periodic inspection of identified equipment and systems; periodic testing of equipment and systems (such as routine calibration); appropriate adjustment, repair or replacement of parts; and complete recordkeeping of the preventative maintenance activities, inspection and test results, calibration dates, repairs, replacement, and adjustment to the applicable equipment and systems.

Housekeeping/Safe Work Practices

Housekeeping is of utmost priority. Employees will be trained to maintain clean, orderly, and safe work areas; material storage areas; and eliminate or control employee exposure to hazardous conditions.

3.14.1.1 Working Surfaces/Floors

- Keep all walking and working surfaces clean and orderly.
- Keep work surfaces dry and swept.
- Clean up small spills immediately, report large spills to a supervisor.
- Promptly remove scraps, debris, and waste, and discard them according to the waste stream management disposal procedures.

3.14.1.2 Concrete Pads

- Where wet processes are used and/or ponding may occur from precipitation events, ensure that drainage channels are kept clear.

3.14.1.3 *Aisles*

- Keep walkways clear and marked as appropriate.
- Maintain fire extinguishers unobstructed.
- Store materials or equipment in such a way that sharp projections will not interfere with or protrude into aisles or passageways.

3.14.1.4 *Elevated Surfaces*

- Pile, stack, or rack material on elevated surfaces in a manner that will prevent the material from tipping, falling, collapsing, rolling, or spreading.

3.14.1.5 *Entryways and Exits*

- All entryways and exits will be kept clean, dry, and clear of all obstructions.

3.14.1.6 *Lighting*

- Lighting shall be adequate to help reduce accidents and identify spills during nighttime hours.
- Replace lightbulbs and/or fixtures as necessary to maintain adequate lighting at all times.

Fire and Explosion Prevention

Flammable and combustible materials and residues will be controlled so that they do not cause or contribute to a fire emergency.

3.14.1.7 *Waste Management*

Dry combustibles and used rag containers are emptied daily.

3.14.1.8 *Containers*

Any flammable and combustible liquids stored onsite will be stored within approved fire-resistant containers with self-closing lids.

3.14.1.9 *Electrical Equipment*

Maintain a clear access to electrical panels at all times so that they can be opened quickly in case of an emergency.

3.14.1.10 Fire Exits

Always keep evacuation routes clear. Do not store boxes or other items in aisles or near gates to emergency pathways and exits. Ensure that existing doors on containers and the control room are kept clear on both sides so that they can be easily opened in an emergency. Emergency lights are checked monthly.

3.14.1.11 Fire Extinguishers

Access to extinguishers shall be kept clear at all times. Extinguishers will always be kept visible. They shall not be blocked by stacks of boxes, forklifts, or other items.

Security

The RNG Facility is located within the Coyote Canyon Landfill, which is a secured landfill (fencing and natural barriers). In addition, the RNG Facility is surrounded by a 10' perimeter wall, which prevents security threats and vandalism.

- The landfill entrance gate is fully staffed during operating hours.
- The landfill entrance gate is locked when the landfill is not in operation.

Within the secured landfill, the Facility is designed to be in constant production and will be physically staffed during normal operating hours each day. Contractors, including vendors providing petroleum products to the Facility, will check in at the Facility's office and will not have unsupervised access.

Lighting is adequate to detect spills during nighttime hours.

External Factor Planning

If there are any major storms/severe weather forecasted (earthquakes, hurricanes, flooding, landslides, wildfires), management will take necessary precautions and arrange for the safe shutdown of the Facility.

Employee Training Program

Appropriate Facility personnel will be trained annually in spill and emergency response procedures. This training will include preventing, reporting, stopping, containing, cleaning up, and disposing of spill materials; emergency communications; etc. New personnel with responsibilities related to management of petroleum products will be trained within two months after entering the Facility.

Personnel shall also be trained in daily walkthrough/visual inspections and formally documented monthly inspections. Typical inspections include the following: pipes, pumps, valves, and fittings for leaks; tanks for corrosion; tank supports and foundations for deterioration; evidence of spilled materials along drainage ditches; effectiveness of housekeeping practices; etc. Areas that shall be inspected include the following: storage,

loading and unloading, transfer pipelines, material storage areas, and waste storage areas. Routine monitoring shall also be performed to determine the physical conditions and liquid levels in tanks, the quality of plant site runoff in diked areas, etc.

Personnel shall also be instructed in good housekeeping practices, including the following: neat and orderly storage of chemicals; prompt removal of small spillage; regular refuse pickup and disposal; maintenance of dry, clean floors by use of brooms, vacuum cleaners, or cleaning machines; and provisions for the storage of containers or drums to keep them from protruding into open walkways, pathways, or roads.

The site will have a Safety Program in place. This will outline Company Safety Policies, Procedures, Qualifications, and Inspections. Operating Procedures/Job Hazard Analyses (JHAs) will be prepared for potentially dangerous activities performed on-site. The Company provides on-going safety programs/weekly toolbox talks.

Emergency telephone numbers and basic first-aid procedures will be posted throughout the Facility.

Facility personnel shall take immediate action upon discovery of a release to protect human health, safety, and the environment. Immediate actions which may be necessary include, but are not limited to, the following: signaling alarms, mitigation of fire and safety hazards, contacting emergency response officials, evacuation of personnel from the site, isolation of the impact zone, preventing the migration of the release, and stopping, plugging, or containing the release. Corrective actions shall be undertaken to clean up and remove the release material and restore the site to protect public health, safety, and the environment. The list of emergency contacts and spill reporting procedures is also maintained in the Facility's SPCC Plan.

Countermeasures

3.14.1.12 *Discovery of a Release*

The person discovering a release of material from a container, tank, or operating equipment should initiate the following immediately:

- **Extinguish any sources of ignition.** Until the material is identified as nonflammable and noncombustible, all potential sources of ignition in the area should be removed. Vehicles should be turned off. If the ignition source is stationary, attempt to move spilled material away from ignition source. Avoid sparks and movement creating static electricity.

- **Attempt to stop the release at its source.** Assure that no danger to human health exists first. Simple procedures (turning valves, plugging leaks, etc.) may be attempted by the discoverer if there is no health or safety hazard, and there is a reasonable certainty of the origin of the leak. All efforts to control leaks must be under the supervision of the Emergency Coordinator or Assistant Emergency Coordinator.
- **Initiate spill notification and reporting procedures.** Report the incident immediately to the Supervisor and the Emergency Coordinator. If there is an immediate threat to human life (e.g. a fire in progress or fumes overcoming workers), an immediate alarm should be sounded to evacuate the building, and the fire department should be called. Request the assistance of the fire department's hazardous materials response team if an uncontrollable spill has occurred and/or if the spill has migrated beyond the site boundaries.

3.14.1.13 *Containment of a Release*

If material is released outside the containment areas, it is critical that the material is accurately identified, and appropriate control measures are taken in the safest possible manner. Consult SDS file for petroleum products used at the Facility. To contain a release, the following procedures should be followed:

- **Attempt to stop the release at the source.** If the source of the release has not been found, if special protective equipment is necessary to approach the release area, or if assistance is required to stop the release, the fire department should be called to halt the discharge at its source. Facility personnel should be available to guide the fire department's efforts, as needed.
- **Contain the material released into the environment.** Following proper safety procedures, the spill should be contained by absorbent materials and dikes using shovels and brooms. A spill kit that includes adsorbent material, containment socks, rags, plastic, and a salvage drum is located in the Facility. Consult applicable SDSs for material compatibility, safety, and environmental precautions.
- **Continue the notification procedure.** Inform the Emergency Coordinator of the release. Obtain outside contractors to clean up the spill, if necessary.

3.14.1.14 *Spill Cleanup*

Appropriate personal protective equipment and cleanup procedures can be found on SDSs. Care must be taken when cleaning up spills in order to minimize the generation of waste. The Facility Emergency Coordinator or their designated representative can provide assistance for the issues discussed below. The management personnel listed in the Critical Call List must be made aware of all cleanups of spills over 5 gallons and spills of any size if they release to the ground surface outside.

- **Recover or cleanup the material spilled.** As much material as possible should be recovered and reused where appropriate. Material which cannot be reused must be declared waste. Liquids absorbed by solid materials shall be shoveled into open-top, 55-gallon drums; or if the size of the spill warrants, into a roll-off container(s). When drums are filled after a cleanup, the drum lids shall be secured, and the drums shall be appropriately labeled (or relabeled) identifying the substance(s), the date of the spill/cleanup, and the Facility name and location. Combining non-compatible materials can cause potentially dangerous chemical and/or physical reactions and may severely limit disposal options. Compatibility information can be found on SDSs.
- **Cleanup of the spill area.** Surfaces that are contaminated by the release shall be cleaned using an appropriate substance or water. Cleanup water must be minimized, contained, and properly disposed of. Occasionally, porous materials (such as wood, soil, etc.) may be contaminated. Such materials will require special handling for disposal.
- **Decontaminate tools and equipment used in cleanup.** Even if dedicated to cleanup efforts, tools and equipment that have been used must be decontaminated before replacing them in the spill control kit.

3.14.1.15 *Post Cleanup*

- **Notification and reports to outside agencies.** The Emergency Coordinator shall determine if a reportable spill has occurred. Verbal notifications to government agencies and emergency planning committees shall be executed, if necessary. Where verbal notification is given, a written report shall be sent to the same entity.
- **Arrange for proper disposal of any waste materials.** The waste material from the cleanup must be characterized. The Manager of Environmental Programs or their designated representative must approve the disposal. Representative sampling and analysis may be necessary to make this determination. In any case, the Emergency Coordinator shall assure that the waste is transported and disposed of in compliance with applicable laws and regulations. When manifests are needed, the Emergency Coordinator shall see that they are prepared and, when appropriate, returned in the allotted time by the disposal site.
- **Review the contingency and spill plans.** Management and operating personnel shall review spill response efforts, notification procedures, and cleanup equipment usage to evaluate their adequacy during the episode. Where deficiencies are found, the PPC and SPCC Plan shall be revised and amended.

3.14.1.16 *Internal Reporting via EHS Insight*

Spills that are regulated per this Plan must be documented using the company's incident reporting system. The report shall be prepared by the Emergency Coordinator or their designated representative. At a minimum, the report will document the following items:

- Date/time/duration of release;
- Source and total volume(s) of the release;
- Spill cleanup procedures;
- Personnel who discovered and/or participated in the spill remediation;
- Equipment used during the cleanup;
- Waste disposal methods; and
- Unusual events, injuries, or agency inspections.

3.14.1.17 Communications

In the event of a fire, spill, or other emergency, verbal communications can be used to contact personnel.

3.14.1.18 Spill, Fire, and Safety Equipment

E-stops, fire detection, LEL and hydrogen sulfide (H₂S) detection sensors are located throughout the Facility.

Portable fire extinguishers are located throughout the Facility, are well marked, and are easily accessible. Records are kept on fire equipment in service, and regular inspection/testing is performed in accordance with established good procedures.

Oil-only and universal spill kits are located at the Facility. Spill kits are inspected monthly, and supplies are replenished as necessary.

For added safety, personnel are required to wear personal 4-gas monitors while on-site.

3.14.1.19 Liaison with Local Authorities

Copies of this Plan will be submitted to the local fire department, police department, and hospital as requested or needed by them. In addition, familiarization sessions will be held with personnel from these organizations, as they feel necessary. It is important that personnel responding to an emergency be familiar with chemicals used, the possibilities for releases of hazardous materials, and the location of the firefighting equipment.

Emergency Spill Control Network

As previously discussed, Archaea Energy Operating, LLC will ensure efforts to familiarize police, fire departments, emergency response teams, and the County Emergency Management Coordinator with the layout of the installation, the properties and dangers

associated with the hazardous materials handled, places where personnel would normally be working, entrances to roads inside the Facility, and the possible evacuation routes.

4 SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN

4.1 SPCC Plan Introduction

A non-transportation related facility is subject to Spill Prevention, Control, and Countermeasure (SPCC) regulations if the total aboveground storage capacity of oil exceeds 1,320 gallons; and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. Each section heading in this Plan is followed by the corresponding regulatory citation from the Code of Federal Regulations (CFR). Each section then includes a discussion of the facility's conformance with the requirements of the referenced citation. A copy of this SPCC Plan will be kept on-site in the operations building, as well as maintained in electronic files in accordance with 40 CFR §112.3(e).

The Oil Pollution Act requires facilities that “could reasonably be expected to cause substantial harm to the environment by discharging into or on navigable waters” to prepare a facility-specific response plan. Archaea Energy, Inc. has determined (using published federal guidelines) that its facility does not meet the criteria of a facility that poses substantial harm (primarily based on the limited oil storage capacity).

The Certification of Substantial Harm Determination is included in Appendix A.

4.2 SPCC Plan Requirements Conformance [40 CFR §112.7(a)(1)]

This SPCC Plan was prepared in accordance with 40 CFR Part 112 and follows the specified sequence presented in 40 CFR Part 112.7 and 40 CFR Part 112.8.

4.3 SPCC Facility Requirements Conformance [40 CFR §112.7(a)(2)]

The Facility is in compliance with the requirements of 40 CFR Part 112. This SPCC Plan does not deviate from the requirements of 40 CFR Part 112.7(g), h(2), h(3), and (i) or from the requirements of 40 CFR Part 112 subparts B or C. See Table 4-1 for the SPCC regulation cross-reference table.

Table 4-1
SPCC Regulation Cross-Reference

Regulation	Description	Document Section
§112.3(d)	Professional Engineer Certification	N/A
§112.3(e)	Location of SPCC Plan	Section 4.1
§112.5(a)	Amendment of SPCC Plan	Section 1.1
§112.5(b)	Review of Plan	Section 1.1
§112.6	Self-Certification Statement	Section 1.2
§112.7	Management approval of Plan	Section 1.1
§112.7	Discussion of facilities, procedures, methods, or equipment not yet fully operational with details of installation and operational start-up	N/A
§112.7(a)(1)	General requirements; discussion of facility's conformance with rule requirements	Section 4.2
§112.7(a)(3)	Facility description and diagram, type of oil and capacity of each container, transfer stations and piping, buried containers on diagram	Section 4.3-4.4, Figure 1
§112.7(a)(3)(ii)	Discharge prevention measures	Section 4.6
§112.7(a)(3)(iii)	Discharge drainage controls	Section 4.6.1
§112.7(a)(3)(iv)	Countermeasures for discharge discovery, response, and cleanup	Section 4.7
§112.7(a)(3)(v)	Methods of disposal of recovered materials in accordance with legal requirements	Section 4.8
§112.7(a)(3)(vi)	Contact list and phone numbers for facility response coordinator, National Response Center, cleanup contractors, all Federal, State, and local agencies who must be contacted in case of a discharge	Section 4.9
§112.7(a)(4)	Spill reporting information	Section 4.10
§112.7(a)(5)	Discharge procedures	Section 4.7 & 4.11
§112.7(b)	Failure prediction (sources, quantities, rates, and directions)	Table 2-2, Section 4.12
§112.7(c)	Secondary containment for all areas from which a discharge of oil could occur (i.e. mobile refuelers, loading/unloading areas, transformers, oil-filled operational equipment, etc.) other than bulk containers	Table 2-2, Section 4.13
§112.7(e)	Written procedures for inspections and tests	Section 4.15
§112.7(e)	Records of inspections and tests signed and kept 3 years	Section 4.15
§112.7(f)(1)	Employee training	Section 4.16
§112.7(f)(2)	Designated individual accountable for discharge prevention	Section 4.16
§112.7(f)(3)	Discharge prevention briefings scheduled and conducted annually	Section 4.16
§112.7(g)	Security: How oil handling, processing and storage areas are secured, and access is controlled	Section 4.17

Regulation	Description	Document Section
§112.7(g)	Security: How master flow and drain valves of containers are secured	Section 4.17.2
§112.7(g)(3)	Security: How unauthorized access to starter controls on oil pumps is prevented	Section 4.17.3
§112.7(g)(4)	Security: How tank loading/unloading connections are secured	Section 4.17.4
§112.7(g)(5)	Security: Appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges is addressed	Section 4.17.5
§112.7(h)(1)	Containment for contents of largest compartment	Section 4.18
§112.7(i)	Brittle fracture or catastrophic failure evaluation requirements	Section 4.19
§112.7(j)	Conformance with State requirements	Section 4.20
§112.8(a), §112.12(a)	Meet general and specific requirements	Section 4.22
§112.8(b)(1), §112.12(b)(1)	Facility drainage: Restrain drainage from diked areas; inspect accumulation	Section 4.23 & 4.24.3
§112.8(c), §112.12(c)	Bulk storage containers	Section 4.24
§112.8(d), §112.12(d)	Facility transfers operations, pumping and facility process	Section 4.25- 4.29
§112.20(e)	Completed and signed certification of substantial harm form	Appendix A

Note: If a provision is not listed, then the provision is not applicable to this facility.

4.4 SPCC Facility Diagram and Physical Layout [40 CFR §112.7(a)(3)]

The Facility is located at 20661 Newport Coast Drive, Newport, Beach, Orange County, CA within the OCWR Coyote Canyon Landfill property. The Facility will consist of gas processing skids and equipment used to beneficially recover the methane portion of LFG to produce RNG. The Facility has bulk oil storage containers (above ground tanks) and operational oil storage as described in the following section.

Figure 1 contains a site diagram of the Facility that marks the location and contents of each oil storage container and the location of all transfer stations and connecting pipes.

4.5 Oil Type and Storage Capacity [40 CFR §112.7(a)(3)(i)]

This section describes the bulk oil storage containers and oil-filled equipment located at the Facility.

4.5.1 Bulk Oil Storage Containers

The locations of oil storage at the site are shown in Figure 1. The Facility maintains the following oil storage regulated by SPCC, as listed in Table 2-2.

4.5.2 Operational Oil Storage

See Table 2-2.

4.6 SPCC Discharge Prevention Measures [40 CFR §112.7(a)(3)(ii)]

This section presents those measures that have and will be taken to prevent the discharge of oil to navigable waters as defined in 40 CFR 112.1. Discharge prevention measures are comprised of operational procedures/practices and structural type controls (e.g. secondary containment structures) used to minimize the possibility of a discharge. Activities performed to prevent the discharge of oil to navigable waters once oil has been released from containers/equipment (emergency spill response) is not a discharge prevention measure, but a discharge countermeasure as discussed in Section 4.7.

4.6.1 Oil Storage Containment [40 CFR §112.7(a)(3)(iii)]

All oil stored in containers and equipment regulated under 40 CFR 112 must have some form of physical containment that precludes the discharge of oil to navigable waters. If providing containers/equipment with containment is impracticable, the plan must explain why and include an oil spill contingency plan following the provisions of 40 CFR 109.

At the Facility, all equipment/containers that use or store oil have secondary containment, and each is discussed in the following sections. Secondary containment system requirements vary between bulk oil storage (e.g. new and used oil) and operational oil storage (e.g. engine oil reservoirs). All operational and bulk storage containers must meet the general requirements specified in 40 CFR 112.7(c). Additionally, bulk storage containers are subject to 40 CFR 112.8(c) (presented in Section 4.24 of this Plan).

4.6.1.1 Bulk Storage Tanks/Secondary Containment

For the initial design and installation of the Facility, no bulk storage tanks are being proposed. Any totes/drums and containers onsite greater than 55-gallons will be situated within secondary containment.

4.6.1.2 Operational Oil Storage Containment

The oil-filled compressors are situated on secondary containment skids. Spills/releases from the compressors would be contained in the secondary containment below the compressor. If a spill escaped the containment, it would be contained on the concrete pad

and appropriately managed using active spill containment. Containments will be visually checked and cleaned during operator rounds.

The oil-filled transformers are situated on a concrete pad. Operators will provide the appropriate spill response in the event of a leak or release.

4.6.2 Aboveground Piping Protection from Vehicular Traffic

All aboveground piping is within the protection of the containment area. No bumpers or other means of protection are required.

4.6.3 New Oil Receiving

New compressor oil is delivered in IBC totes or drums. Warning signs are posted, and wheel chocks are used to prevent vehicle movement. Personnel are present during deliveries, and totes/drums are inspected for damage/leaks. A spill kit is available in the immediate area of the delivery.

4.6.4 Used Oil Loadout

Warning signs are posted, and wheel chocks are used to prevent vehicles from departing before complete disconnection of flexible oil transfer lines. Proper flexible hose hookups are made to connect the vacuum truck to the used oil storage tank. Prior to beginning the transfer, site personnel inspect the tank level gauge to ensure that adequate space is available within the tanker truck to accept the used oil pickup and inspect the hose connections to verify that they are secure. Personnel are present throughout all transfer operations to maintain communication with the tanker delivery driver and monitor the storage tank sight glass while filling. Once the transfer is complete, personnel verify that all isolation valves have been returned to the closed position before disconnecting the transfer hoses. Prior to departure, the vehicle outlets and drains are examined to verify caps are in place. A spill kit is available in the immediate area of the used oil loadout.

Warning signs will be used at the Facility to prevent vehicles from departing prior to completely disconnecting from transfer lines. The signage shall instruct the attendant loading or unloading to examine valves, hoses, connections, fittings, and lowermost drain and outlets of their vehicles for leakage prior to loading, unloading or departure. See Appendix B.

4.7 SPCC Oil Release Countermeasures [40 CFR §112.7(a)(3)(iv)]

This section presents the countermeasures (discovery, response, and cleanup procedures) that the Facility personnel must take in the event of an oil release. In accordance with 40 CFR Part 112.7(a)(5), this portion of the Plan is organized in a way that will make procedures

readily usable in an emergency. Supporting materials are included as appendices. The basic components are listed below:

1. Spill discovery and notification;
2. Immediate response actions;
3. Cleanup activities; and
4. Waste disposal.

Except for a catastrophic event, it is not anticipated that an oil spill at the Facility will require the assistance of an emergency response contractor. It is the responsibility of the Facility operators and Plant Manager to determine if outside assistance is required.

4.7.1 Discharge Discovery and Notification

Facility personnel routinely inspect the tanks and surrounding area for any discharge from the tanks. Walking past the storage tanks provides the Facility personnel with an opportunity for discharge discovery multiple times per week.

Once a discharge is detected (or suspected) the Lead Operator/Emergency Coordinator shall be notified immediately. Landfill personnel will be notified if the discharge leaves the leased parcel or threatens the landfill's on-site stormwater or leachate containment ponds. Federal, state, and local agencies shall be contacted if the discharge leaves the Landfill property. Additional contact information is provided in Sections 4.9 and 4.10 of this Plan.

4.7.2 Discharge Response

Immediate response activities are performed from the time of spill detection (or if a release is suspected) to the time the leak is stopped (if possible) and the spill is contained. The Lead Operator/Emergency Coordinator is in charge of implementing spill containment procedures by providing oversight and guidance during response. If required, the services of a spill response contractor (see Appendix C) should be obtained. To the extent feasible, all oil spills must be prevented from leaving the property and entering the stormwater drainage system.

If a spill does reach the stormwater drainage system, immediately set up a series of downstream booms using on-site spill response equipment to skim oil from the surface of the water. If larger booms are required than those maintained on-site, contact a spill response contractor designated in Appendix C.

4.7.3 Discharge Cleanup

Cleanup activities begin following spill containment and conclude with full site remediation. Cleanup objectives include the following:

- Removal of oil from storm drainage system and waterways;

- Removal of free product; and
- Removal of contaminated materials.

Expedite cleanup activities to minimize adverse environmental impacts caused by the release. Attempt to recover as much free product as possible, thus minimizing the amount of oil infiltrating into underlying soils. Oil can impair (i.e. soften) an asphalt surface if left in contact with it too long. Stormwater drainage systems need to be thoroughly cleaned to prevent further migration of oil during subsequent rainfall events. A list of equipment and supplies to utilize in the cleanup activities that are available at the Facility are listed in Appendix D. Other equipment needed may be available from local equipment rental companies or from spill response contractors (Appendix C).

4.7.3.1 Removal of Product

Removal of oil as a liquid may be required as part of cleanup efforts. Oil requiring removal may be in diked areas, stormwater drains, or atop water.

For small volumes of oil recovered, a closed-top, 55-gallon drum can be used to temporarily store the recovered oil. Larger volumes may require a tanker for storage of the oil. Appendix C provides a listing of local companies that supply tankers. Additionally, vacuum truck services are available from a limited number of the companies identified.

Close attention should be paid to the filling operations to minimize any spillage that may occur. Oil absorbent booms and granules should be available to clean up minor spills. Spent cleanup material should be immediately placed in open-top, 55-gallon drums or other suitable containers and then sealed.

4.7.3.2 Removal of Contaminated Media

The Lead Operator/Emergency Coordinator will determine the magnitude of the cleanup activities governed by current regulations. Remediation may involve the excavation of soils either manually or with the use of heavy equipment. Develop waste type and quantity estimates for obtaining proper disposal approvals. Waste characterization sampling may be required. The Lead Operator/Emergency Coordinator may coordinate water and/or soil sampling to verify that applicable cleanup standards have been met.

Contain oil-contaminated materials (i.e. excavated soils, absorbent materials, etc.) in drums or placed directly into plastic lined dump trucks (or other containers determined to be appropriate for transportation and disposal). Avoid stockpiling materials in open areas since this requires additional material handling and could spread the contamination. If temporary stockpiling cannot be avoided, line the temporary storage area with heavy gauge plastic sheeting, and berm around the edges of the area. Cover the material with plastic sheeting and secure with sandbags.

Ensure that materials destined for disposal as solid waste are void of free liquids. If necessary, place drier soil and/or absorbent material into the drums/trucks to soak up any free liquids that may drain from saturated materials. If possible, mix the materials in the drums or truck to alleviate this situation. Cover dump trucks after filling to avoid exposure to precipitation. Dump trucks containing contaminated materials shall not be left uncovered overnight.

4.7.3.3 *Removal of Oil from Stormwater Drainage System and Waterways*

Releasing oil into a waterway in sufficient amounts to cause a visible sheen or bottom sludge is a violation of state and federal water quality standards. Remediation is not complete until all visible indications of oil have been removed. Small areas may be soaked up using oil absorbent mats. Oil booms can be used to contain oil on water surfaces. Large surface areas may require the use of an oil skimmer.

Remove oil released into dry stormwater drains to prevent the migration and contamination of waterways during future precipitation events. Future stormwater discharges from these conveyances should be monitored for signs of oil.

4.8 Recovered Material Disposal Methods [40 CFR §112.7(a)(3)(v)]

All oil-contaminated material will be disposed of in accordance with federal, state, and local regulations. Anticipated waste streams generated from the cleanup of an oil spill may include liquid oil, water-contaminated oil, oily water, and oil-contaminated solids (e.g. soils, gravel, absorbent materials, and personal protective equipment) that do not contain free liquids.

The Facility maintains a list of waste oil disposal companies (Appendix C) that provide transportation and disposal of waste oil and oily water. Oil, which after recovery can no longer be used as originally intended, will be disposed of as waste oil under all current and applicable regulations. Waste disposal companies can provide guidance on oil disposal or recycling of collected oil.

Oil-contaminated solids (i.e. soils, absorbent materials, clothing, etc.) which do not contain any free liquids may be allowed to be disposed of at the GFL Hickory Meadows Landfill pending approval from landfill representatives.

4.9 Discharge Contact List [40 CFR §112.7(a)(3)(vi)]

Appendix E presents a contact list with phone numbers for the National Response Center, and other federal, state, and local agencies that must be contacted in case of a discharge of oil (as described in §112.1(b)) from a facility into or upon the navigable waters of the United States or adjoining shorelines (which is generally defined as any lake, river, or stream

utilized for travelling, recreation, or other purpose) that causes a film or sheen upon, or discoloration of, the surface of the water or adjoining shorelines or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

4.10 Discharge Reporting Procedure [40 CFR §112.7(a)(4)]

This section provides information and procedures (i.e. emergency notification requirements) that will enable a person reporting a discharge as described in §112.1(b) to relate the information required in §112.7(a)(4).

4.10.1 Internal Notification

Except for minor releases, Facility personnel shall immediately notify the Plant Manager when there is an oil release. Minor releases are those that can quickly be cleaned up by on-site employees using custodial supplies/equipment. Small spills within containment structures or on asphalt or concrete are considered minor. Employees must immediately report to the Plant Manager if oil is released to a stormwater culvert or gravel, soil, or vegetated area.

The Lead Operator/Emergency Coordinator shall notify landfill personnel if a release leaves the leased property or threatens the landfill's on-site stormwater and leachate collection ponds.

4.10.2 Notification of Regulatory Agencies

The Lead Operator/Emergency Coordinator is responsible for determining whether a particular spill event is reportable (based on information known to him/her) and for notifying the appropriate regulatory agency. In ascertaining whether (and to whom) a spill is reportable, the Lead Operator/Emergency Coordinator will use the following guidelines:

1. If the oil has the potential to reach navigable waters that causes a film or sheen upon, or discoloration of, the surface of the water or adjoining shorelines or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines, immediately notify the National Response Center at 1-800-424-8802.
2. The Lead Operator/Emergency Coordinator shall be prepared to report the following information to the regulatory agency contacted:
3. Address and phone number of Facility;
4. Spill date/time;
5. Type of material spilled;
6. Estimates of total quantity spilled;
7. Estimated of total quantity spilled into navigable water;

8. Source of the spill;
9. Description of affected medium;
10. Cause of the spill;
11. Damages or injuries caused by spill;
12. Actions being used to mitigate effects of discharge;
13. Whether an evacuation may be needed; and
14. Individuals/organizations who have been contacted.

Contact names and phone numbers are provided in Appendix E and Section 2.1 of this Plan. Appendix F contains a discharge notification form for collecting information that will need to be provided to the National Response Center.

4.11 Discharge Response Procedure [40 CFR §112.7(a)(5)]

Discharge response procedures (i.e. countermeasures) that the Facility personnel must take in the event of an oil release are specified in Section 4.7 of this Plan.

4.12 Equipment Failure Discharge Prediction [40 CFR §112.7(b)]

The probability of an oil discharge reaching off-site navigable water is extremely remote. The off-site release of oil would most likely occur as the result of oil being transported by stormwater during a heavy rainfall event, coupled with the failure of on-site spill control procedures or failure of secondary containment. To date there have been no discharges from the Facility.

The most probable equipment failure discharge scenarios are the following:

- An uncontrolled release during the removal of the oily layer from the OWS;
- Sudden rupture or equipment failure (i.e. a compressor, releasing oil content);
- Tote overfill or transfer hose break (tanks filled infrequently, but could release around 15 gal.);
- Leaks at the compressors, or oil coolers;
- The complete emptying of one tanker truck compartment, typically 1,000 gallons or less of condensate (a worst-case scenario). This situation would occur only if operational equipment or secondary containment systems experienced failure.

Unless secondary containment is provided, overflows and leaking equipment will flow onto the concrete pad underneath and/or beside the equipment. Spill response includes active containment with spill kit materials. Operators are trained to provide appropriate spill response.

See Table 2-2 for container-specific release volumes, predicted directions for flow, leak prevention/spill containment measures, and overfill prevention information.

4.13 Discharge Containment Structures [40 CFR §112.7(c)]

The Facility utilizes discharge containment structures as described in Section 4.6 of this Plan. The structures are capable of containing oil and are constructed so that any discharge will not escape the containment system before cleanup occurs.

4.14 Oil Spill Contingency Plan [40 CFR §112.7(d)]

Discharge containment structures utilized at the Facility are described in Section 4.6 of this Plan and are not deemed impractical. Therefore, an oil spill contingency plan and a written commitment of manpower, equipment, and materials to control and remove a discharge (as described in §112.7(d)(1) and §112.7(d)(2), respectively) are not required.

4.15 Facility Inspections, Tests, and Records [40 CFR §112.7(e)]

Facility operators will conduct inspections and tests and maintain equipment/containers as specified in this section. Written procedures and records of inspections and tests, signed by the appropriate supervisor or inspector, will be maintained on file for a period of at least three years.

4.15.1 Inspections and Tests

The oil storage containers included in this Plan shall be inspected or tested on a regular schedule and whenever material repairs are made. Integrity testing of aboveground storage tanks shall be in accordance with the Consensus Code Steel Tank Institute (STI) SP001, an accepted industry testing and inspection practice. The testing schedule, as recreated from Table 5.5 of the 5th Edition (2011) of SP001, shall be as follows:

**Table 4-2
SP001 Testing Schedule**

AST Type and Size (gallons)		Category 1
Shop Fabricated ASTs	0 - 1,100	P
	1,105 – 5,000	P
	5,001-30,000	P, E(20)
Portable Container (drums, totes)		P
Where: P = Periodic AST inspection by owner E = Formal exterior inspection by certified inspector (20) = Maximum inspection interval in years		

The tank categories are defined in SP001 and are based on the ability to detect releases and provide spill control. Double walled tanks and single walled tanks located within secondary containment dike/berm are considered Category 1, as they provide both a means to detect releases and control spills. See Appendix G for a copy of the STI SP001.

Per SP001, all oil tanks require periodic inspection by the owner.

The Facility is required to perform monthly visual inspections of all aboveground tanks and aboveground piping included in this SPCC Plan. Monthly inspection forms are provided in Appendix H. Monthly inspections are conducted in accordance with the requirements of 40 CFR 112(c)(6) and 40 CFR 112.8(d) and typically involve a visual inspection to identify any oil staining, spills or leaks, and corrosion of tanks and associated piping. Adjustments and repairs are performed as necessary and recorded with inspection records. Inspections of leak detection equipment and spill response materials must also be conducted monthly. Piping inspections include observation of the condition of each item such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. A facility inspection summary is included in Table 4-3.

Table 4-3
Facility Inspection Summary

Inspection Item	Inspection Method	Inspection Schedule
Aboveground bulk storage containers	Visual inspection	Monthly and whenever material repairs are made
Container supports and foundations	Visual inspection	Monthly and whenever material repairs are made
Liquid level sensing devices	Test for proper operation	Monthly
Dike containment areas, double wall tank interstices, secondary containment basins and transfer areas	Visual inspection of container integrity and signs of release or accumulation of oil or water inside diked areas	Monthly
Liquid accumulated within containment areas	Visual inspection	Prior to and following all transfer events
Aboveground valves, piping, hoses, dispensers, and appurtenances	Visually inspect the condition of items such as flange joints, valve glands and bodies, spill buckets, pipeline supports, locking of valves, and metal surfaces	Monthly
Overall Facility compliance and in-depth aboveground bulk storage container	Visual inspection	Annually

*Monthly and annual inspections are documented for recordkeeping.

4.15.2 Records

Maintaining records required by this SPCC Plan is the direct responsibility of Archaea Energy, Inc. All records, reports, inspections, checklists, etc. specified in this SPCC Plan are to be kept on file for at least a period of three years. Records of inspections, testing, and maintenance activities required by this Plan may be kept using plant recordkeeping systems already in place. Use of the log sheets provided in the appendices is not required. However, any alternate recordkeeping system should include the items specified in the Appendix H and I logs.

4.16 Discharge Prevention Training [40 CFR §112.7(f)]

The Facility is responsible for properly instructing its personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and the contents of the SPCC Plan.

Facility personnel whose job requirements relate to oil handling are properly trained in equipment use, maintenance, operation, and inspection. A record of all personnel qualified to handle oil shall be maintained by the Facility.

The Facility is responsible for ensuring that spill prevention briefings are conducted for respective operating personnel at intervals frequent enough to assure adequate understanding of this SPCC Plan. Such briefings highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

Briefings and/or training shall be conducted as necessary and annually at a minimum. The records of these meetings (content of training and/or sign-in sheets) will be filed in Appendix I.

The Lead Operator/Emergency Coordinator is responsible for discharge prevention in accordance with the requirement of 40 CFR 112.7(f)(2).

4.17 Security [40 CFR §112.7(g)]

This section describes the security in place at the Facility. Facility personnel are on call twenty-four hours per day. 24-hr phone numbers are provided in Appendix E. Strict security of the oil handling and storage equipment is maintained. The buildings are locked when unoccupied. The site is fenced, and gates are locked when the site is unoccupied. All operators have keys to the fence gates and buildings. A set of keys is provided to landfill personnel.

4.17.1 Fencing [40 CFR §112.7(g)(1)]

The Facility is enclosed by fencing that is kept in good repair. The fencing is gated and locked from the hours of 4:00 p.m. to 7:00 a.m. Monday through Friday and on weekends.

4.17.2 Master Flow and Drain Valves [40 CFR §112.7(g)(2)]

The Facility is either occupied by employees or locked during non-working hours; therefore, access to the flow control valves on the condensate tanks is limited.

4.17.3 Oil Pump Starter Control [40 CFR §112.7(g)(3)]

Oil is pumped from storage totes using a pneumatic diaphragm pump. The pump secured when not in use. The Facility is either occupied by employees or locked during non-working hours; therefore, access to the pump controls is limited.

4.17.4 Piping and Loading/Unloading Connections [40 CFR §112.7(g)(4)]

The loading/unloading connections to the storage tanks are physically capped when not in use.

4.17.5 Facility Lighting [40 CFR §112.7(g)(5)]

Outdoor lighting is adequate for all nighttime operations conducted at the Facility to aid in the discovery of discharges and the prevention of vandalism.

4.18 Tank Loading/Unloading Rack [40 CFR §112.7(h)]

This Facility does not have a loading rack, and thus a secondary containment structure for a tank truck unloading area is not required.

4.19 Post Repair/Failure Container Evaluation [40 CFR §112.7(i)]

The ASTs at this Facility are not field-constructed.

4.20 Discharge Prevention Conformance [40 CFR §112.7(j)]

To the best of its knowledge, the Facility is in conformance with all applicable discharge prevention and containment requirements and procedures contained in 40 CFR Part 112 and all other state regulations.

4.21 Qualified Oil-Filled Equipment [40 CFR §112.7(k)]

Except for the transformers, secondary containment is provided for oil-filled operational equipment as described in Section 4.6.1.2 of this Plan. Therefore, alternative requirements for qualified oil-filled equipment are not necessary.

4.22 General Requirements [40 CFR §112.8(a)]

This SPCC Plan meets the general requirements listed in 40 CFR Part 112.7 and the special requirements listed in 40 CFR Part 112.8.

4.23 Drainage of Diked Areas [40 CFR §112.8(b)]

Secondary containment and drainage controls are described in Section 4.6 of this Plan. The diaphragm pumps are manually activated, and the drain valves are not of flapper-type design. The accumulated material is inspected for oil before discharge.

4.24 Bulk Storage Containers [40 CFR §112.8(c)]

This section describes compliance with the requirements specified in §112.8(c) that are specific to bulk storage containers.

4.24.1 Storage Container Material Compatibility [40 CFR §112.8(c)(1)]

All bulk storage containers, piping, valves, fittings, etc. at the Facility are made of materials that are compatible with the product stored (new or used lube/compressor oils). The piping, valves, and fittings are coated steel.

The exposed exterior surfaces of all aboveground tanks, piping, and ancillary equipment at the Facility shall sandblasted and protected from corrosion. Protection must be provided by the following:

- Paints, consisting of an inhibitive primer coat, intermediate inhibitive, and two or more final coats applied to a properly prepared surface or an equivalent or better surface coating.
- For any spot corrosion, the area should be sanded by hand (wire wheel or similar) and re-coated with two or more topcoats of PPG Amerlock 2 Epoxy in white. This paint has built in inhibitors/rust protection and UV protection. It is part number AK2-3.

The two condensate tanks were built to UL-142 standards and were commercially blasted and lined with Phenicon (an epoxy lining).

4.24.2 Secondary Containment of Storage Containers [40 CFR §112.8(c)(2)]

Secondary containment for the two bulk storage oil containers at the Facility is described in Section 4.6 of this Plan.

4.24.3 Drainage of Rainwater from Diked Areas [40 CFR §112.8(c)(3)]

The inspection of and procedure for drainage of rainwater from diked areas is described in Section 4.6 of this Plan.

4.24.4 Buried Tank Corrosion Protection [40 CFR §112.8(c)(4)]

The Facility will have an underground OWS (550 gal.). It is a HighGuard, double-walled tank. HighGuard Tanks feature a strong dielectric coating of high solids polyurethane for protection. The HighGuard protective coating is a dense, solvent-free, tar-free, two-component coating system with high impact properties and tensile strength. The superior strength coating resists surface damage during transportation and/or installation. HighGuard does not require cathodic protection or corrosion monitoring. The finished tank is quality checked by a spark test to ensure coating integrity and effective corrosion protection.

4.24.5 Partially Buried Tank Corrosion Protection [40 CFR §112.8(c)(5)]

N/A

4.24.6 Container Integrity Testing [40 CFR §112.8(c)(6)]

EPA suggests adhering to industry standards for integrity testing when applicable. For shop-built storage tanks, the most current version of Steel Tank Institute (STI) “Standard for Inspection of In-Service Shop Fabricated Above Ground Tanks for Storage of Combustible and Flammable Liquids, SP001-05” (Appendix G), is a widely used and accepted industry standard.

Periodic visual inspections of the tanks are performed by Facility personnel as discussed in Section 4.15 to detect any unusual corrosion or tank deformation between the integrity testing events.

4.24.7 Heating Coil Leakage Control [40 CFR §112.8(c)(7)]

N/A

4.24.8 Container Discharge Avoidance Engineering [40 CFR §112.8(c)(8)]

Both condensate tanks are equipped with a level indicator that quickly responds to liquid level changes in the tank. The gauges are clearly visible during tank filling operations. When unloading/loading occurs, personnel are always present to monitor the liquid level by observing the gauges.

Totes and oil-filled equipment can be visually checked for level, and monitored during filling/emptying activities.

4.24.9 Treatment Facility Observation [40 CFR §112.8(c)(9)]

N/A

4.24.10 Visible Discharge Correction [40 CFR §112.8(c)(10)]

Any visible evidence of leaks that occurring from the containment structure (e.g. seams, gaskets, piping, pumps, valves, rivets, bolts) will be promptly cleaned and corrected.

4.24.11 Portable Storage Containment [40 CFR §112.8(c)(11)]

Site operators and any outside contractors will ensure that mobile or temporary oil storage containers brought on-site are equipped with secondary containment.

4.25 Buried Pipeline Corrosion Protection [40 CFR §112.8(d)(1)]

N/A.

4.26 Terminal Connection Capping [40 CFR §112.8(d)(2)]

The loading/unloading connections to the storage tanks are capped and locked when not in use.

4.27 Pipe Support Design [40 CFR §112.8(d)(4)]

The pipe supports at the Facility are designed to minimize abrasion and corrosion, and allow for thermal expansion and contraction.

4.28 Pipe System Inspections [40 CFR §112.8(d)(4)]

As stipulated in Section 4.15, Facility personnel conduct monthly inspections of all above ground valves, piping, dispensers and other oil transfer appurtenances. Inspection results are recorded on the log sheet in Appendix H.

4.29 Vehicle Damage to Piping Warning [40 CFR §112.8(d)(5)]

Piping is overhead on pipe supports. Tanks and piping are protected from vehicle damage.

FIGURES

Site Layout Map – Oil Storage Locations

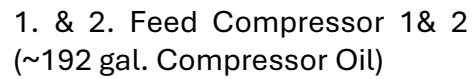


Figure 2
Site Safety Map –

(To be updated or supplemented after construction with locations of online Methane and Hydrogen Sulfide Leak Detection Sensors, and locations of Fire Extinguishers, First Aid Kits, Eye Wash Bottles/Station.)



APPENDIX A

Applicability of the Substantial Harm Criteria Checklist

Facility Name: Biofuels Cayote Canyon Biogas

- Yes: No: **X**

- Yes: No: **X**

- Yes: ☐ No: **X**

- Yes: ☐ No: ☒

- Yes: _____ No: **X**

Certification: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature: _____ Date: _____

Emily Zambuto, Executive Director of Environmental Compliance

APPENDIX B

Notice to Petroleum Vendors/Fuel & Oil Transfer Checklist

NOTICE TO PETROLEUM PRODUCT VENDORS

November 2024

To: All Bulk Petroleum Product Vendors
From: Coyote Canyon Biogas, LLC • Lead Operator #: TBD
204 884 1822

Petroleum product vendors who deliver, load, unload, or pick up petroleum/oil-based products or used oil to or from our facility are required to comply with the following:



Exercise caution when maneuvering vehicles to avoid damage to secondary containment structures.



Drivers are to be present and alert while monitoring the transfer of petroleum product full time while product is being transferred to or from on-site storage containers.



Chock the tank truck wheels while loading or unloading tanks and do not remove the wheel chocks until after the transfer is complete and the transfer hose is disconnected to prevent an accidental drive-off without removing the transfer hose.



Prior to filling and departure, closely inspect for discharges at the lowermost drain and all outlets of the tank truck, and if necessary, ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit.



Continuously monitor for potential tank overfills while loading or unloading storage containers. Check the freeboard capacity of containers prior to filling to estimate the volume to fill the tank and visually monitor the filling process to ensure the tank does not overfill. For tanks with audible air vent alarms, continuously listen for the audible air vent overfill warning whistle.



Promptly stop and clean up any petroleum product leaks or spills that occur while loading or unloading containers.



Immediately report leakage or spillage requiring assistance of site personnel to clean up to Hickory Meadows Landfill site management.



Prior to loading/unloading, place an empty container under the hose end to be disconnected first with enough capacity to catch the remaining liquid in the transfer hose. Verify that appropriate valves are closed before disconnecting loading/unloading lines. Prior to disconnecting the transfer hose, gravity drain remaining product in the hose to the lowest container.

This notice is provided for your information to make you aware of these requirements to help us limit the potential for spills at this facility during transfer operations.

APPENDIX C

Tanker Supplier/Oil Spill Cleanup Services

LOCAL REMEDIATION SERVICES	
Clean Harbors / Safety Kleen	
SPILL CLEANUP SERVICES	VACUUM TRUCK SERVICES/CLEANUP
MSA & Emergency Response Services Provided by Clean Harbors / Safety Kleen ariaenergy@cleanharbors.com 1-800-OIL-TANK	Clean Harbors / Safety Kleen ariaenergy@cleanharbors.com
USED OIL RECYCLING	
Clean Harbors / Safety Kleen ariaenergy@cleanharbors.com	

APPENDIX D

Spill Response Equipment/Supplies

Spill Response Equipment/Supplies	
Expendable Materials/Supplies	Quantity
PIG® Spill Kit in 50 Gallon Wheeled Overpack Salvage Drum, Item # KIT272 which contains:	1
3" x 48" L PIG® Blue Absorbent Sock (4048)	5
3" x 10" L PIG® Blue Absorbent Sock (PIG202)	5
PIG® Absorbent Mat Pad (MAT203)	40
PIG® Absorbent Pillow (PIL201)	4
PIG® PR40 All-Purpose Wipers (WIP310)	56
2" x 6" L Tamperproof Seal Label (LBL100)	6
36" x 60" H Polyethylene Disposable Bags (BAG201-L)	5
PIG® Spill Kit in 50 Gallon Wheeled Overpack Salvage Drum, Item # KIT402	2
Nitrile Gloves, Apron, Goggles	1
Fire Extinguisher	10
Equipment	Quantity
Broom & Dustpan	1
Shovel	1

APPENDIX E

Spill Notification Call-Out List

Critical Call List / Emergency Phone Numbers

Facility Address/Phone: Coyote Canyon Biogas Facility
20661 Newport Coast Drive
Newport Beach, CA 92660

Facility Owner/Operator: Biofuels Coyote Canyon Biogas, LLC
c/o Archaea Energy Operating
201 Helios Way, Floor 6
Houston, TX 77079

Facility Contacts / Critical Call List / Emergency Phone Numbers

Name	Title	Telephone
TBD	Operator Technician	
Steven Henry	Regional Operations Manager	858-357-1256
JP McNeil	Interim Vice President of RNG Operations	404-862-3782
Emily Zambuto	Exec. Director of Environmental Compliance	585-278-4773
TBD	Field Safety Manager	
Sam Gilley	Sr. Field Safety Manager	979-220-7651
Archaea Emergency	Emergency Call Service	855-595-5319

AMBULANCE, FIRE, POLICE, RESCUE: 911

Hoag Hospital
1 Haog Drive
Newport Beach, CA 92663
p. 949-764-4624

Poison Control Center: 800-222-1222

Medcore (non-emergency injuries/illness): 877-222-1222

SPILL NOTIFICATION TELEPHONE NUMBERS

National Response Center: 800-424-8802
California OES: 800-52-7550
Anaheim City Fire Dept. 714-765-4072
Orange Co. Env. Health 714-433-6406

Note: Notifying the State Warning Center (800) 852-7550 and the UPA or 911 constitutes compliance with the requirements of section 11004 of title 42 of the United States Code regarding verbal notification of the SERC and LEPC (California Code of Regulations, Title 19 Section 2631 (e)).

EMERGENCY SPILL RESPONSE

Clean Harbors: 800-OIL-TANK



APPENDIX F

Discharge Notification Form

In the event of a discharge of oil to navigable waters or adjoining shorelines, the following information will be provided to the National Response Center **(also see the notification information provided in Section 4.9 of the Plan)**:

DISCHARGE NOTIFICATION FORM (information provided to the National Response Center in the event of a discharge)			
Discharge/Discovery Date		Time	
Facility Name			
Facility Location (Address/Lat-Long/Section Township Range)			
Name of reporting individual		Telephone #	
Type of material discharged		Estimated total quantity discharged	Gallons/Barrels
Source of the discharge		Media affected	<input type="checkbox"/> Soil
			<input type="checkbox"/> Water (specify)
			<input type="checkbox"/> Other (specify)
Actions taken			
Damage or injuries	<input type="checkbox"/> No <input type="checkbox"/> Yes (specify)	Evacuation needed?	<input type="checkbox"/> No <input type="checkbox"/> Yes (specify)
Organizations and individuals contacted	<input type="checkbox"/> National Response Center 800-424-8802 Time		
	<input type="checkbox"/> Cleanup contractor (Specify) Time		
	<input type="checkbox"/> Facility personnel (Specify) Time		
	<input type="checkbox"/> State Agency (Specify) Time		
	<input type="checkbox"/> Other (Specify) Time		

APPENDIX G

Steel Tank Institute Standard for Inspection of In-Service Aboveground Tanks (SP001)



STANDARD FOR THE INSPECTION OF ABOVEGROUND STORAGE TANKS

SP001

**February 2024
7th Edition**

Steel Tank Institute
A Division of STI/SPFA
944 Donata Court
Lake Zurich, IL 60047
847-438-8265
www.stispfa.org
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PREFACE

The Steel Tank Institute (STI), formed in 1916, is a not-for-profit organization whose purpose is to secure co-operative action in advancing by all lawful means the common purposes of its members and to promote activities designed to enable the industry to conduct itself with the greatest economy and efficiency. It is further the purpose of STI to cooperate with other industries, organizations, and government bodies in the development of reliable standards which advance industry manufacturing techniques to solve market-related problems.

This Standard was developed by the Steel Tank Institute AST Inspection Standards Committee. STI published the first edition of SP001 in September 2000, and the document has been updated on a regular basis since.

Previous editions include:

- ☐ 1st Edition – September 2000
- ☐ 2nd Edition – Unpublished
- ☐ 3rd Edition – January 2003
- ☐ 4th Edition – July 2006
- ☐ 5th Edition – September 2011
- ☐ 6th Edition – January 2018

This 7th Edition was prepared by the AST Inspection Standards Committee which was comprised of the following members and alternates:

Sonny Underwood, Chair
Mid-South Steel Products, Inc.
Cape Girardeau, MO

Jeff Burton
AGI Envirotank Ltd.
Biggar, SK, Canada

Tim Woofter, Co-Chair
Stanwade Metal Products, Inc.
Hartford, OH

Kimberly Churchill
US EPA Region 5
Chicago, IL

Steve Allwein
Morrison Bros. Co.
Severna Park, MD

E. Alex Eckman
Department of Environmental Protection
Harrisburg, PA

Greg Bareta
Storage Tank Regulation/Bureau of
Weights & Measures/Wisconsin DATCP
Madison, WI

Craig Fletcher
Fletcher Consultants, Inc.
Oakland, CA

Matt Bjornson
Bjornson Oil Company
Cavalier, ND

Jennifer LaCroix
AST Program Coordinator Virginia DEQ
Virginia Beach, VA

Charlie Frey, Jr.

Highland Tank
Manheim, PA

Jason Greer, Co-Chair

Greer Tank & Welding Inc.
Fairbank, AK

Rich Hart

JD2 Environmental, Inc
Washington, PA

Bill Hickman

CO Division of Oil & Public Safety
Denver, CO

Carl Horstmann

Mass Tank Sales Corp.
Middleborough, MA

Mark Howard

USEPA Office of Emergency
Management
Washington, DC

Kevin Kupitz

Qi2 Elements
Kent, WA

David Kwasny

General Motors LLC
Columbiaville, MI

Mike Lattner

Morrison Bros. Co.
Dubuque, IA

Brian Laine

Kinder Morgan, Inc.
Houston, TX

Tim Laughlin

North Carolina Petroleum Marketers
Association
Raleigh, NC

John Lieb

Tank Industry Consultants
Bolingbrook, IL

Chris Long

Newberry Tanks
West Memphis, AR

John Loucks

Modern Welding Company
Owensboro, KY

Brian Lunsford

Pond & Co., Inc.
Norcross, GA

Joe Mentzer, Staff Liaison

STI/SPFA
Lake Zurich, IL

Marshall T. Mott-Smith

Mott-Smith Consulting Group
Tallahassee, FL

Jeanne Murphy Murck

Core Engineered Solutions, Inc.
Herndon, VA

Phil Myers

PEMY Consulting
Pleasant Hill, CA

Tim O'Toole

STI/SPFA
Lake Zurich, IL

Darren T. Painter

Oscar W. Larson Co.
Clarkston, MI

David Piercey

JD2 Environmental, Inc.
West Chester, PA

Steve Pollock
STI/SPFA
Lake Zurich, IL

Troy Swackhammer
USEPA Office of Emergency
Management
Washington, DC

Randall Tomic
Growmark, Inc.
Bloomington, IL

Daniel Yniguez
Los Angeles County Fire Dept
Sylmar, CA

Ric Young
Tanknology
Lake Wylie, SC

Corri Zilio
General Motors
Detroit, MI

1 GENERAL

1.1 Introduction

- 1.1.1 This Standard provides inspection and evaluation criteria required to determine the suitability for continued service of aboveground storage tanks (AST), as defined in this Standard, until the next scheduled inspection. The purpose of conducting inspections is to identify the condition of and changes to the AST.
- 1.1.2 This Standard is intended for use by organizations and/or individuals who are knowledgeable and experienced in aboveground tank inspection.
- 1.1.3 The inspection requirements included in this Standard are minimum requirements. When applicable federal, state, or local laws, codes, or regulations concerning tank inspection are more stringent than the requirements of this Standard, then these applicable federal, state, or local laws, codes, or regulations shall apply.
- 1.1.4 Other standards, recommended practices, and equivalent engineering and best practices exist that provide alternative inspection requirements for tanks defined both within and outside the scope of this Standard. For example, see API Standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction*, for additional information pertaining to tanks built to API Standard 650 and API Specification 12C tanks; and API 12R1, *Recommended Practice for Setting, Maintenance, Inspection, Operation, and Repair of Tanks in Production Service*, for tanks employed in production service or other similar service.

1.2 Owner's Responsibility

- 1.2.1 The owner is responsible for compliance with this Standard, fire codes, ordinances, and other rules and regulations applicable to owner's tanks. The owner may choose to retain assistance from specialists to aid in inspection, regulatory compliance, safe operations, and installations, in accordance with recognized industry standards.
- 1.2.2 The owner shall verify that persons working on ASTs understand and address all hazards associated with the contents of the ASTs, as well as safe entry and hot work procedures associated with those ASTs.
- 1.2.3 The owner's inspector is responsible for completing and/or updating the STI SP001 AST Record for each AST being inspected and for performing the periodic AST inspections and documenting the results in accordance with Section 6.0 of this Standard.
- 1.2.4 The owner is responsible for assuring that the tank is appropriately designed, constructed, repaired (if necessary), and maintained to operate safely in the intended service conditions, in accordance with accepted good engineering practice at the time of design, construction or repair.
- 1.2.5 The owner has the responsibility to address corrective actions identified in inspection reports.

1.3 Scope

- 1.3.1 This Standard provides the minimum inspection requirements of aboveground storage tanks. These storage tanks include shop-fabricated tanks, field-erected tanks, and portable containers as defined in this Standard, as well as their containment systems. This Standard applies to ASTs storing stable, flammable, and combustible liquids at atmospheric pressure. Further, this Standard applies to ASTs storing liquids with operating temperatures between ambient temperature and 200 degrees F (93.3° C).
- 1.3.2 This Standard may be applied to ASTs containing other types of liquids as long as an individual with the appropriate training, education, and/or experience has evaluated such use and approved the application of this Standard or a modification of the Standard, including assessing the compatibility of the liquid with the AST materials to address potential failure mechanisms.
- 1.3.3 The requirements for heated thermoplastic tanks are covered separately in Appendix D.
- 1.3.4 At a minimum, the following tank components shall be inspected (as applicable):
- ☐ Primary tank
 - ☐ Secondary tank
 - ☐ Tank supports
 - ☐ Tank anchors
 - ☐ Tank foundation and external supports
 - ☐ Tank gauges and alarms
 - ☐ Overfill valves and alarms
 - ☐ Insulation covering
 - ☐ Tank appurtenances
 - ☐ Normal vents
 - ☐ Emergency vents
 - ☐ Release prevention barriers
 - ☐ Spill control systems
 - ☐ Tank valves and connections
 - ☐ Manways

2 DEFINITIONS

ABOVEGROUND STORAGE TANK (AST) – A tank or container designed to operate at pressures ranging from atmospheric pressure through a gauge pressure of one psig measured at the top of the tank. The tank may be sitting on the ground or set on supports such as saddles, skids, or legs, etc., and may be installed in a vault. Included are shop-fabricated tanks, field-erected tanks, and portable containers.

CAPACITY – The amount of liquid that the AST is capable of holding. For the purposes of Table 5.5, the capacity of a compartment in a multi-compartmented AST shall be considered a separate and distinct capacity, provided that the bulkhead between compartments is fully welded around its perimeter and compartments are not manifolded. The capacity of an AST shall be determined by one of the following sources:

- ☐ A label on the AST that indicates its capacity;
- ☐ AST documentation, such as drawings or packing lists;
- ☐ Consulting the tank manufacturer, if known; OR
- ☐ Measuring the AST to determine its capacity. In the case of double-wall tanks, the dimensions of the inner tank will determine the capacity.

CERTIFIED INSPECTOR – A tank inspector who meets the certification requirements identified in Section 4.2 of this Standard.

COATING FAILURE – Significant peeling, cracking, spalling, blistering, pitting, chipping, etc. of the coating, paint or lining on an AST, resulting in the exposure of the metal surface and corrosion of the tank shell.

CONCRETE EXTERIOR ABOVEGROUND STORAGE TANK (CE-AST) – A shop-fabricated aboveground storage tank that includes a concrete exterior. A CE-AST with a UL 2085 label has integral secondary containment that allows monitoring for leakage in the interstice between the primary tank and the secondary containment.

CONTINUOUS RELEASE DETECTION METHOD (CRDM) – A means of detecting a release of liquid through inherent design. CRDM is passive because it does not require sensors or power to operate. Liquid releases are visually detected by facility operators (See Appendix A for additional information). The system shall be designed in accordance with good engineering practice. Several acceptable and commonly used CRDM systems are:

- ☐ Release prevention barrier (RPB) (described in definition of “Release prevention barrier”)
- ☐ Double-wall AST or double-bottom AST
- ☐ Elevated AST, with or without release prevention barrier
- ☐ Steel diked AST, open or closed top
- ☐ Concrete exterior AST (CE-AST) with an integral secondary containment and interstitial monitoring opening

CONNECTION - A method or fitting for fastening a pipe to the AST or an appurtenance. Examples are flanges, pipe threads, pipe welds, expansion joints, and flexible fittings.

CORROSION RATE – The rate of degradation of a material due to a chemical reaction with its environment.

DOUBLE-BOTTOM AST – An AST with a bottom plate integral to the primary container and a second bottom plate designed to provide an interstice. The interstice allows testing of both bottoms for tightness, or monitoring for leakage into the space.

DOUBLE-WALL AST – An AST manufactured as a tank-within-a-tank. The second tank provides integral secondary containment. An interstitial space between the two tanks is formed, which allows testing of both tanks for tightness, as well as monitoring for leakage into the space. A tank insulation system or insulating jacket placed on a tank does not constitute a double wall tank.

DYE PENETRANT TESTING (DT) – a method for nondestructively testing the surface of a material. A liquid dye is applied to the surface and excess is removed. A developing solution is then applied which indicates cracks in the material.

ELEVATED AST – An AST, which is not in contact with the ground, and which is raised above the surface of the ground or bottom of a vault using tank supports. An elevated AST allows for a visual, external inspection of the bottom of the tank.

FIELD-ERECTED AST – A welded carbon steel or stainless steel AST erected on the site where it will be used. For the purpose of this Standard, ASTs meeting either of the following descriptions are to be inspected as field erected ASTs:

- a. The AST's nameplate (or other identifying means, such as accurate drawings) indicates that it is a field-erected AST with a maximum shell height of 50 feet (15.24 meters) and a maximum diameter of 30 feet (9.14 meters).
- b. The AST has no nameplate (or other identifying means such as accurate drawings) and is more than 75,000 U.S. gallons (283,906 liters) with a maximum shell height of 50 feet (15.24 meters) and a maximum diameter of 30 feet (9.14 meters).

FORMAL EXTERNAL INSPECTION (FEI) – A documented external inspection conducted by a Certified Inspector to assess the condition of the AST and determine its suitability for continued service, without entry into the AST interior.

FORMAL INTERNAL INSPECTION (FII) – A documented inspection conducted by a Certified Inspector to assess both the internal and external conditions of the AST and determine its suitability for continued service. A FII includes the inspection requirements of a FEI, therefore, a FII satisfies the requirements of a FEI and shall be considered equivalent to or better than a FEI for the purposes of inspection scheduling. Requires entry into the AST interior following emptying and cleaning. See Section 3 for guidance on cleaning and entry safety considerations.

INSPECTION PLAN – A written plan developed by the owner/operator, Certified Inspector or a Professional Engineer that details the inspection requirements for a facility.

INTERSTICE – In a double-wall AST, the space between the primary tank and secondary tank; in a double-bottom AST, the space or void between the two bottoms. This space may be open or closed to the atmosphere and may be monitored or tested by vacuum or leak detection equipment or by visual inspection.

INITIAL SERVICE DATE – The date on which liquid was originally placed in the AST, regardless of the ASTs current location and/or ownership. If the initial service date is not known (e.g., rented, or repurposed AST), see Section 5.1.

LEAK TESTING METHOD (LTM) – A point-in-time test method to determine if an AST is liquid-tight. Leak testing is not preventative: it provides an indication only of whether the AST’s integrity has already been breached. Therefore, it may only be used as a tank integrity measure or as a supplement to other inspection procedures. LTMs may include the following technologies:

- ☐ Gas pressure decay (includes vacuum decay)
- ☐ Gas pressure soap bubble testing
- ☐ Gas tracers (e.g., helium tracer)
- ☐ Soil tracers (chemical marker)
- ☐ Mass measurement
- ☐ Level measurement
- ☐ Hydrostatic test

LOCKOUT/TAGOUT – A procedure for affixing lockout or tagout devices to energy-isolating equipment and otherwise disabling machines or equipment to prevent unexpected energization, startup, or release of stored energy. The intent of the procedure is to prevent injury to employees and to comply with the following Occupational Safety & Health Administration (OSHA) regulations or their equivalent:

- ☐ 29 CFR 1910.146 Permit Required Confined Space
- ☐ 29 CFR Part 1910.147, *The Control of Hazardous Energy (Lockout/Tagout)*
- ☐ 29 CFR Part 1910.331 to 1910.333, *Electrical Lockout/Tagout*

MAGNETIC FLUX LEAKAGE (MFL) – A method used to nondestructively inspect ferromagnetic materials, such as a carbon steel floor plate. A magnetic field is applied to steel to near-saturation, so that it cannot hold any additional field. In the presence of a flaw (wall thinning), some of the magnetic flux escapes or “leaks” into the surrounding environment, where magnetic sensors detect it and qualitatively report a flaw signal. This method is commonly used on AST floors (MFL floor scan) to determine the underside condition of the tank floor.

MAGNETIC PARTICLE TESTING (MT) – A method used to nondestructively inspect ferromagnetic materials, such as carbon steel. It is used for detecting surface and subsurface linear discontinuities by inducing a magnetic field into the material and applying iron oxide particles.

MANWAY – An opening designed to allow personnel entry into an AST.

MICROBIAL-INFLUENCED/INDUCED CORROSION (MIC) – Corrosion caused or accelerated by certain microbes. Depending on the type of bacteria, the degree of microbial activity, and the thickness and type of AST material, MIC is characterized by a high rate of corrosion. It sometimes penetrates tank walls and bottoms in two years or less. It is typically characterized by a ring-like pattern of crater-shaped or channel-like penetrations.

NONDESTRUCTIVE TESTING (NDT) – The development and application of technical methods to examine materials and/or components in ways that do not impair future usefulness and serviceability, in order to detect, locate, measure, interpret, and evaluate flaws.

OVERFILL PREVENTION – Systems, procedures or devices used to prevent liquid in ASTs from running over or spilling out of the AST during the filling process. A person who is physically present and in control of a shutoff device during the entire tank filling process is an acceptable procedure to achieve overfill prevention.

OWNER – The legal entity having control and responsibility for the operation of the existing AST and storage facilities.

OWNER'S INSPECTOR – The owner or owner's designee responsible for conducting owner's periodic AST inspections.

PERIODIC AST INSPECTION – A visual, documented inspection conducted by an owner's inspector to assess the AST's general condition without suspending AST operations or removing the AST from service.

PERMIT-REQUIRED CONFINED SPACE – A confined space that has one or more of the following characteristics:

- ☐ Contains or has a potential to contain a hazardous atmosphere.
- ☐ Contains a material that has the potential for engulfing an entrant, or has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls, or by a floor which slopes downward and tapers to a smaller cross-section.
- ☐ Contains any other recognized serious safety or health hazard.

PORTABLE CONTAINER – A closed AST having a liquid capacity equal to or greater than 55 U.S. gallons and not intended for fixed installation. This definition does not include a mobile storage container on a vehicle, or one being towed, that is used to store and transport liquids for transfer into or from vehicles, mobile equipment, or another storage container. This definition also does not include storage containers used for onboard propulsion of a vehicle.

PRIMARY TANK – The tank in direct contact with the liquid stored.

PROFESSIONAL ENGINEER (PE) – A person who has fulfilled specific education and/or experience requirements under state licensure laws and has received a license to practice engineering.

RELEASE PREVENTION BARRIER (RPB) – A liquid containment barrier that is installed under the AST. Its purpose is to divert leaks toward the perimeter of the AST where they can be easily detected, as well as to prevent liquid from contaminating the environment. RPBs are composed of materials compatible with the liquid stored in the AST and meet appropriate engineering standards. Examples are steel (as in steel double-bottom tanks), concrete, elastomeric liners, or other suitable materials, provided the above criteria are met.

REMOTE IMPOUNDING – A spill control system that uses a sloped spillway or drainage system to channel liquid releases away from an AST to a contained collection area that is remote from important facilities, adjoining property, or waterways. The containment area is sized for the capacity of the largest AST, plus sufficient freeboard to allow for precipitation. For the purposes of this Standard, remote impounding is equivalent to secondary containment. Remote impounding is further defined in NFPA 30.

SECONDARY CONTAINMENT DIKE/BERM – A spill control system consisting of walls and a floor completely surrounding single or multiple ASTs. It provides a secondary means of containment for the entire capacity of the largest single AST within a dike, berm, or other engineered secondary containment system (such as a pond, lagoon, or catchment basin), plus sufficient freeboard to contain precipitation and the displacement volume present below the dike wall of other ASTs in the containment area. The secondary containment dike/berm is to be constructed according to accepted good engineering practices. (Note: See NFPA 30, 40 CFR Part 112, and/or other local requirements for additional requirements.)

SECONDARY CONTAINMENT SYSTEM – Provides a secondary means of containment for the entire volumetric capacity of the largest single AST within a dike, berm, or other engineered secondary containment system (such as a pond, lagoon, or catchment basin) plus sufficient freeboard to contain precipitation. The secondary containment system is to be designed to contain a spill until it can be discovered and cleaned up. It must be constructed according to accepted good engineering practices. (Note: See NFPA 30 and/or 40 CFR Part 112, and/or other local requirements for additional requirements.)

STEEL DIKED AST – An AST with an integral steel secondary containment dike. These dikes may be pans, boxes, or containers, and are designed to contain the contents of the primary tank if it fails. A steel diked AST may be open or closed to the atmosphere. Closed-top steel dike ASTs have welded covers or movable rain shields to keep precipitation from collecting in the dike, but open-top dike ASTs do not have such covers. The secondary containment of steel diked ASTs must be sized to contain the primary tank volume, plus sufficient freeboard to contain precipitation as necessary.

SECONDARY TANK – The outer wall of a double-wall AST.

SHELL – For the purposes of this Standard, the AST shell includes the roof, bottom, head, and wall of the AST. Refer to Appendix A for more information.

SHOP-FABRICATED AST – A welded carbon steel or stainless steel AST fabricated in a manufacturing facility, or an AST not otherwise identified as field-erected, with a volume less than or equal to 75,000 U.S. gallons (283,906 liters).

SINGLE-WALL AST – An AST with only one wall or shell.

SPILL CONTROL – A means of preventing a release of liquid to the environment, including adjoining property and waterways. Spill control methods include:

- ☐ Remote impounding
- ☐ Secondary containment system
- ☐ Secondary containment dike/berm
- ☐ Open top steel diked AST
- ☐ Closed top steel diked AST with overfill prevention
- ☐ Double-wall AST with overfill prevention
- ☐ CE-AST with overfill prevention

A tank insulation system or insulating jacket does not constitute spill control.

SUITABILITY FOR CONTINUED SERVICE – The determination that an AST's condition is adequate for continued use, based on the criteria presented in this Standard.

TANK SUPPORTS – Structures designed to elevate an AST above the ground. These include saddles, skids, beams, legs, and similar structures.

THERMOPLASTIC – substances, such as asphalt cement, that are solid at ambient temperature and become molten upon heating. The application of this Standard is for thermoplastics stored in a liquid form.

ULTRASONIC TESTING SCAN (UTS) – An ultrasonic scan which scans 100% of a designated surface area. The designated surface area can be any size depending on the corrosion damage suspected or found while performing the UTS. A UTS will detect all thinned areas due to material loss on the opposite side of the inspection surface using an ultrasonic flaw detector. This inspection is to be performed by an NDT examiner certified in accordance with ASNT-TC-1A (or equivalent), per paragraph 4.3.2 of this Standard.

ULTRASONIC THICKNESS TESTING (UTT) – A point thickness reading taken by a person trained, per paragraph 4.3.3.1 of this Standard, utilizing a digital ultrasonic thickness meter.

VACUUM BOX EXAMINATION (VB) – A weld-testing method used to check for leaks in the welds of the shell of an AST.

3 SAFETY CONSIDERATIONS

- 3.1 The hazards associated with cleaning, entry, inspection, testing, maintenance, or other aspects of ASTs are significant. Safety considerations and controls should be established prior to undertaking physical activities associated with ASTs.
- 3.2 This Standard does not address all applicable health and safety risks and precautions with respect to particular materials, conditions, or procedures. Information concerning safety and health risks and precautions should be obtained from applicable standards, regulations, suppliers of materials, and suppliers of safety data sheets.
- 3.3 The following activities may be regulated. Consideration of the relevant requirements and best management practices shall be included in an inspection, such as:
- ☐ Breaking lines, isolating, and release of equipment
 - ☐ General work permit
 - ☐ Hot work
 - ☐ Lockout/tagout
 - ☐ Gas testing
 - ☐ Contractor safety
 - ☐ Respiratory protection
 - ☐ Tank cleaning, repair, and dismantling
 - ☐ Confined space entry
- 3.4 Plans to enter an AST require development and use of appropriate safety procedures, precautions and requirements. The owner, the contractors, and all persons associated with the AST inspection, cleaning, or entry shall review these safety procedures prior to the start of work.
- 3.4.1 Before the inspection begins, check for accumulation of harmful vapors around and in the AST. Refer to the following documents for additional information:
- ☐ NFPA 326, *Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning or Repair*
 - ☐ API Standard 2015, *Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks*
- 3.4.2 Each AST entry requires an Emergency Action Plan (EAP). The owner and contractor must develop the EAP together. The EAP describes the actions required for personal safety from fire and other emergencies and includes the following requirements, as well as others:
- ☐ Confined space entry plan as necessary
 - ☐ Appropriate personal protection equipment
 - ☐ Establishment and review of emergency escape routes and procedures with authorized entrants.

- ☐ Establishment of an assembly area and procedures to account for all authorized entrants after emergency evacuation is complete.
 - ☐ Establishment of rescue and first-aid duties for those authorized and assigned to perform them.
- 3.4.3 After plans, procedures, and administrative controls are in place and before entering the AST, isolate the AST by locking out and tagging all energy sources associated with the AST. Line isolation shall be at the closest practical flange to the equipment or space.
- 3.4.4 The atmosphere inside the space must be tested and confirmed safe before authorized entrants may enter without wearing supplied-air respiratory protection or SCBA. Continuous atmospheric monitoring is best. At minimum, test the space for the following, and in the following order:
 - ☐ Oxygen
 - ☐ Flammable vapors
 - ☐ Toxics
- 3.5 In addition to entry hazards, there are hazards associated with the access to AST roofs. Corrosion may first attack the deck plate at the edge of a fixed roof and at the rafters in the center of the roof. Inspect the roof and support structures for soundness. Inspect stairs, ladders and platforms to determine that they can safely support equipment and people before accessing them. For AST roofs where one side is not visible, it may be necessary to check the plate thickness with ultrasonic instrument or hammer test it to verify its adequacy. If there is a doubt, place planks that span structural members on the roof and walk on the planks instead of directly on the roof. These same hazards may also apply to other AST walking surfaces, such as the surfaces of floating roofs. Guidance for these hazards is covered in API Standard 2015, *Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks*.
- 3.6 A safety analysis shall be conducted prior to a leak test. Some leak testing scenarios may be hazardous. For example, the leak test methods referenced in 9.1.1 require that either an inert gas be used or that the tank be thoroughly cleaned and gas-free prior to testing and pressurizing an AST. Combining hydrocarbons with air generates a potentially hazardous atmosphere. Each test method may have unique hazards; these shall be considered and addressed in a pre-test safety plan prior to testing activities. A competent person shall review the safety plan.

4 AST INSPECTOR QUALIFICATIONS

4.1 Owner's Inspector Qualifications

- 4.1.1 Periodic Inspections are to be performed by an owner's inspector.
- 4.1.2 The personnel performing these inspections shall be knowledgeable about storage facility operations, the type of AST and its associated components, the spill control system for the facility, and characteristics of the liquid stored. Owner's inspectors must also be familiar with pumping, piping, and valve operations of the AST system.

NOTE: STI/SPFA has developed an online *Tank Integrity Management* program to educate owner's inspectors in tank inspection requirements. See the website www.stispfa.org and refer to the "Education" section for more information about this voluntary educational program.

4.2 Certified Inspector Qualifications

- 4.2.1 FEI and FII are to be performed by a Certified Inspector.
- 4.2.2 A Certified Inspector shall be certified by one or more of the following (Additional certifications may be required by individual states or other governing bodies.):
 - 4.2.2.1 American Petroleum Institute (API) Standard 653 Authorized Inspector Certification with STI SP001 Adjunct Certification.
 - 4.2.2.2 Steel Tank Institute (STI) Certified SP001 AST Tank System Inspector.

4.3 NDT Examiner Qualifications

- 4.3.1 Non-destructive test (NDT) examiner personnel performing non-destructive examinations shall meet the qualifications described below, but need not be certified in accordance with paragraph 4.2. The results of NDT work, however, must be considered in the evaluation of the tank by the Certified Inspector.
- 4.3.2 NDT personnel referenced within this Standard shall be qualified in accordance with their employer's written practices, which must be in accordance with the American Society for Nondestructive Testing's (ASNT) document SNT-TC-1A Personnel Qualification and Certification in Nondestructive Testing, unless otherwise noted within this Standard.
 - 4.3.2.1 Referenced within this Standard are the following nondestructive techniques. All inspectors performing the following inspection methods shall be certified per 4.3.2:
 - ☐ MT – Magnetic particle testing
 - ☐ UT – Ultrasonic testing (refer to definition of UTS in Section 2)
 - ☐ MFL – Magnetic flux leakage
 - ☐ PT – Penetrant testing
 - ☐ VB – Vacuum box testing

4.3.3 Testing personnel performing ultrasonic thickness testing (UTT) point readings are required to have the minimum training described in this paragraph (Section 4.3.3.1) to operate a digital ultrasonic thickness meter. A digital ultrasonic thickness meter is an ultrasonic unit which is only used to obtain a point thickness reading and display the resulting specimen thickness. The training does not cover the use of ultrasonic flaw detectors or interpretation of A, B or C scan unit readout.

4.3.3.1 The operator of the digital ultrasonic thickness meter must be trained for a minimum of one hour by a person competent in the operation, calibration, and set-up of the meter. Training is usually performed by the manufacturer or manufacturer's representative upon delivery of the meter. This training shall be documented and specifically state that the trainee has received at least one hour of training in the proper operation, calibration, and set-up of the meter. The meter manufacturer and model shall be noted on the documentation. The trainer shall sign his name on the documentation to attest that the training has been completed and the trainee is now proficient in the use of that ultrasonic digital meter. At the time of training, the trainee shall have all of the tools and materials needed to carry out the proper function of the meter. These tools and materials are:

- ☐ Step wedge of the correct thickness range and material for the desired application.
- ☐ Ultrasonic couplant appropriate for the desired application.
- ☐ Ultrasonic transducer of the correct type, frequency, and diameter for the desired application.

4.3.3.2 Testing personnel shall be aware of the many factors that affect performance and accuracy of a digital thickness meter, such as:

- ☐ Equipment calibration
- ☐ Surface roughness of test specimen
- ☐ Coupling technique
- ☐ Couplant
- ☐ Curvature of test specimen
- ☐ Taper or eccentricity of the test specimen
- ☐ Acoustic properties of the material to be tested
- ☐ Temperature of the test specimen

4.3.3.3 Surface coatings may have a significant effect on the performance and accuracy of the thickness reading. Where possible, UTT test equipment and procedures shall be selected to avoid the removal of coating from the tank. It may be necessary to remove the coating prior to taking a thickness reading, depending on the inspection equipment used, the type of coating applied, and the thickness of the coating. If the coating is removed during the thickness reading process, it must be properly repaired.

5 INSPECTION SCHEDULE

- 5.1 The owner shall use the AST's type, capacity, installation characteristics, and previous inspection history, if any, to develop a schedule of applicable types of inspections for each AST, per Table 5.5. The interval for the initial inspection shall begin from the AST's initial service date. If the initial service date is not known, the owner shall be responsible for establishing and documenting the initial service date (for example, from nameplates, as-built drawings, manufacturer cut-sheets, due diligence reports, fire marshal inspection records, state operating permits, building code permits, etc.).
- 5.2 Owners who have an inspection plan shall use this Standard to establish inspection criteria for ASTs described in this Standard, using the AST's type, capacity, and installation characteristics.
- 5.3 Certified Inspectors using this Standard to conduct inspections shall use the AST's type, capacity, installation characteristics, corrosion rate, and the schedule determined by the owner.
- 5.4 AST categories used in Table 5.5 (Appendix A includes further explanation of some typical tank types and their corresponding AST category.):
 - 5.4.1 Category 1 - ASTs with spill control and CRDM. If it is determined that, during an inspection, that the integrity of the CRDM or spill control has been compromised the tank category and inspection timetable should be re-evaluated.
 - 5.4.2 Category 2 - ASTs with spill control, and without CRDM If it is determined that, during an inspection, that the integrity of the spill control has been compromised the tank category and inspection timetable should be re-evaluated.
 - 5.4.3 Category 3 - ASTs without spill control (note Category 3 ASTs may not meet regulatory requirements)
- 5.5 In Table 5.5, use the following designations:
 - 5.5.1 P – Periodic AST inspection by a qualified party designated by the owner.
Refer to Section 6
 - 5.5.2 E – Formal External Inspection by Certified Inspector
Refer to Section 7
 - 5.5.3 I – Formal Internal Inspection by Certified Inspector
Refer to Section 8
 - 5.5.4 L – Leak test by a qualified party designated by the owner or owner's designee
Refer to Section 9

5.5.5 Numbers included in parentheses, for example (5), indicate the maximum inspection interval in years. Thus, E (5) indicates Formal External Inspection every 5 years.

TABLE 5.5 TABLE OF INSPECTION SCHEDULES

AST Type and Capacity in U.S. gallons (liters)		Category 1	Category 2	Category 3
Shop-Fabricated Welded Steel ASTs	0 – 1100 (0-4164 liters)	P	P	P, E&L(10)
	1101 - 5,000 (4168-18,927 liters)	P	P, E&L(10)	[P, E&L(5), I(10)] or [P, L(2), E(5)]
	5,001 - 30,000 (18,931-113,562 liters)	P, E(20)	[P, E(10), I(20)] or [P, E(5), L(10)]	[P, E&L(5), I(10)] or [P, L(1), E(5)]
	30,001 - 75,000 (113,566-283,906 liters)	P, E(20)	P, E&L(5), I(15)	P, E&L(5), I(10)
Portable Containers*		P	P	P**

* Portable containers can be constructed of metallic (steel, stainless steel) or non-metallic (plastic) materials and should be constructed to a recognized standard for the purpose they are being used.

** In addition to periodic Portable Container Monthly Inspections described in Appendix C, Owners shall either discontinue use of portable container for storage or have the portable container DOT (Department of Transportation) tested and recertified per the following schedule (refer to Section 9.2):

- ☐ Plastic portable container – every 7 years
- ☐ Steel portable container – every 12 years
- ☐ Stainless Steel portable container – every 17 years

6 PERIODIC AST INSPECTIONS

- 6.1 Periodic AST inspections are to be conducted by owner's inspector. Sample checklists for periodic AST inspections are found in Appendix C of this Standard. These are to be used as a guide for recording inspection data and can be adapted to the specific operational parameters for the AST to be inspected.
- 6.2 The owner's inspector must meet the requirements of paragraph 4.1.
- 6.3 Review prior inspection, repair, and alteration data before each inspection. Note special conditions for a particular AST.
- 6.4 The owner's inspector is to complete or update the *STI SP001 AST Record* for each AST or tank site as designated in the checklists. Note special conditions and changes or alterations to the tank.
- 6.5 The owner's inspector is to complete or update the *STI SP001 Monthly Inspection Checklist* or equivalent each month. Take note of instructions on the checklist. Note special conditions.
- 6.6 The owner's inspector is to complete the *STI SP001 Annual Inspection Checklist* or equivalent each year. Take note of instructions on the checklist. Note special conditions.
- 6.7 For portable containers, the owner's inspector is to complete only the *STI SP001 Portable Container Monthly Inspection Checklist* or equivalent each month. Take note of the instructions on the checklist. Note special conditions.
 - 6.7.1 As an alternative, if documentation is kept on-site for each portable container that indicates how long each has been kept at the facility, then the owner's inspector is to complete only the *STI SP001 Portable Container Monthly Inspection Checklist* each month for containers onsite for 91 days or more. Take note of the instructions on the checklist. Note special conditions.
- 6.8 Additional requirements for field-erected tanks are included in Appendix B.
- 6.9 Refer to Section 10.0 for conditions that warrant immediate action.
- 6.10 The functional life of an AST can be significantly extended by regularly checking for the presence of water inside a tank and in the interstice of a double-wall AST (or double-bottom AST or CE-AST). Water should be removed from storage tanks and the owner or operator should take corrective action. Water affects the quality of some stored liquids. Microbes are ubiquitous and, in the presence of water, can create colonies on surfaces and suspended in stored liquids such as petroleum. Microbial activity can cause the formation of undesirable by-products, such as sludge, biological mats, filter-clogging granular material, and organic acids. Such activity can corrode metals, deteriorate plastics, and may affect product quality. If signs of microbiological activity or corrosion due to MIC are found (such as filter clogging, slow flow, or accumulations of sludge), treat the AST with a proper biocide, emulsifier or other water control additive, or otherwise sterilize the

AST. In addition, take necessary steps to repair or remove the AST from service if warranted by the extent of corrosion found.

- 6.10.1 Monitor for water accumulation monthly, except as described in paragraphs 6.10.2 through 6.10.6 and 6.11.
- 6.10.2 If no measurable amounts of free-standing water are found during four consecutive months of monitoring a category 1 AST, the frequency of monitoring for water may be reduced to annually.
 - 6.10.2.1 If measurable amounts of free-standing water are found during annual monitoring, one of the following actions shall be taken:
 - a. The AST shall be tested for the presence of bacteria that could cause MIC. If bacteria that could cause MIC are present, remediation of the stored product should be conducted and the monitoring frequency shall be increased to monthly. The monitoring frequency of a Category 1 AST may again be reduced to annually after four consecutive months if no measurable amounts of free standing water are found. If bacteria that could cause MIC are not present, the monitoring frequency may remain at annual; OR
 - b. The source of water should be investigated and any repairs to the system initiated. Monthly monitoring should continue until the water ingress is eliminated.
 - 6.10.2.2 If a reduced frequency for water monitoring in Category 1 ASTs is allowed and utilized as described above, documentation demonstrating no measurable amounts of free-standing water are present during monthly and annual checks shall be kept on file for as long as the reduced water monitoring frequency is used and three years thereafter.
- 6.10.3 Category 1 ASTs containing liquids that are miscible with water, for example, gasoline with ethanol, and where water is known or expected to be present do not require monthly monitoring for water. However, such ASTs should be monitored for possible phase separation.
 - 6.10.3.1 Tanks storing waste materials, where water is known or otherwise expected to be present (such as waste oil), do not require monthly monitoring for water if they are holding liquids that are drained from the lowest point in the tank AND (1) entirely emptied every 180 days or less, or (2) where the tank throughput during the 180-day period is greater than or equal to the tank capacity.
- 6.10.4 Category 1 ASTs that are drained from the lowest point in the tank do not need to be monitored for water if the tank is entirely emptied at least every 120 days. If the 120-day throughput of a bottom draining tank is greater than or equal to the tank capacity, water monitoring is not required.
- 6.10.5 Category 1 ASTs containing liquids which are agitated on a schedule to prevent the formation of a water layer that could support MIC do not require monitoring for water.

- 6.10.6 ASTs containing thermoplastics covered in Appendix D do not require monitoring for water.
- 6.11 For Category 1 tanks, as an alternative to checking for water in accordance with 6.10, the tank owner may follow a written program to ensure water is removed or treated on a regular basis to prevent damage due to MIC. The STI publication *Keeping Water Out of Your Storage System* is a good source of information when developing a written program. However, it is highly recommended to check for water periodically, even if there is a program to remove water regularly.

7 FORMAL EXTERNAL INSPECTION (FEI) GUIDELINES

7.1 General

- 7.1.1 FEI are to be performed by Certified Inspectors, per paragraph 4.2.
- 7.1.2 The following paragraphs describe minimum inspection guidelines. There are numerous AST configurations and components, and it is the responsibility of the Certified Inspector to identify and properly inspect them to conform to the owner's requirements, industry standards and regulatory requirements, as applicable. The inspector or the inspection company shall develop detailed checklists that identify, record, and document all aspects of each inspection.
- 7.1.3 Review prior formal and periodic inspections, repair alteration data, and records of functionality testing of alarms and equipment before each inspection.
- 7.1.4 Record AST nameplate data, if available, and check the information included for accuracy against actual conditions. Verify that the properties of the contents of the AST conform to the standard to which it was built. Verify the accuracy of owner's STI SP001 AST Record data as marked on the record form (e.g., spill control, CRDM, tank category, etc.). Record AST data, inspection findings, and problems identified.
- 7.1.5 Inspect the fabrication of the AST against applicable industry standards.
- 7.1.6 Inspect the AST foundations for indications of settlement, cracking, exposed rebar, or general disrepair. Inspect for areas of wash-out and voids under the AST. Inspect for vegetation growing alongside/against the AST or the foundation. Confirm that the ground is sloped away from the AST and that there is no soil resting against the side of the AST, covering parts of the shell or bottom extension. Inspect for standing water against the AST or the indication of drainage problems.
- 7.1.7 Visually inspect the condition of the AST's supports. Severe cracking or spalling of concrete supports shall be noted and evaluated. If there are pad plates between the supports and the shell, inspect their condition. Inspect the supports to be sure that they are sitting securely on the foundation or grade. If the supports are welded to the shell, inspect the welds for visible signs of stress or deterioration.
- 7.1.8 Identify and record the type and condition of the secondary containment, spill control, and CRDM, if present.
 - 7.1.8.1 Visually inspect the general condition of the containment area to ensure that it is in good condition and that there is not a breach in the containment structure. Note changes from the original design and installation information if available.
 - 7.1.8.2 Inspect for foreign materials, including excessive vegetation, in the secondary containment system. Inspect for liquid in the secondary containment system and CRDM. If liquid is present, find the source and

report findings. Record other ASTs or containers within the same secondary containment system.

- 7.1.8.3 Verify that the drain valves are operable and in good condition. Report penetrations through the secondary containment systems that may compromise the integrity of the secondary containment system. Report penetrations that are likely to lead to failure of the secondary containment system should the liquid level of water or liquid rise to these penetrations.
- 7.1.9 Inspect and verify the operability of ancillary equipment, including the following items:
 - 7.1.9.1 Visually inspect accessible piping, piping supports and piping connections for signs of stress or leakage, due to severe corrosion, rusted bolted connections, or other severe degradation.
 - 7.1.9.2 Inspect normal and emergency vents and pressure/vacuum devices. Verify that the devices are of adequate size and capacity, operable, and in good condition. Refer to the device manufacturer's literature, typical industry venting requirements, and other appropriate resources. Record the types and locations of these devices.
 - 7.1.9.3 Inspect primary tank level gauge and secondary tank interstitial gauge for free movement and determine if the floats, guides, and attachments are in working order. Verify the liquid level gauge length is sized correctly for the tank diameter.
 - 7.1.9.4 Inspect the secondary tank interstitial monitoring equipment where present. Where possible verify free movement of floats and attachments and external alarms. Note that prior to triggering any alarm, proper warnings need to be made to the tank owner.
 - 7.1.9.5 Verify and inspect tank overfill prevention devices including high level alarms and high level shut off valves. It may not be possible to verify operability of all devices, but where possible verify equipment is functional and calibrated to the appropriate liquid levels within the tank.
- 7.1.10 Inspect the bonding and grounding system of the AST, if present. (Refer to NFPA 780 *Standard for the Installation of Lightning Protection Systems*, NFPA 77 *Standard Practice on Static Electricity* or other applicable standard.)
- 7.1.11 Inspect stairways, handrails, and platforms for broken welds, bent members, and corrosion.
- 7.1.12 Inspect the coating on the AST shell and supports for coating failure.
- 7.2 Determine the original shell thickness of the AST. Suggested methods are:
 - 7.2.1 Review the original tank documentation, such as drawings and packing lists.
 - 7.2.2 Consult the tank manufacturer.

- 7.2.3 Examine the tank labels for evidence of a widely accepted tank standard, such as Underwriters Laboratories Standard UL 142, etc. Consult the referenced standard to determine the minimum design shell thickness.
- 7.2.4 Measure the tank thickness of several areas of the tank that have no visible corrosion or pitting. The average of these measurements will result in a shell thickness measurement that can be used as the original shell thickness measurement.
- 7.3 Horizontal AST Requirements - in addition to the applicable items in 7.1:
 - 7.3.1 Inspect shell plates and welds for indications of exterior corrosion, buckling, or distortion, as well as for cracking, pinholes, or mechanical damage. Inspect the shell of the AST and the ancillary equipment (per paragraph 1.3.5) for signs of distortion and stress.
 - 7.3.1.1 Take and record UTT readings and the location of the reading of each plate or shell course in areas accessible without entering the AST. Readings must be concentrated in areas where corrosion is likely to occur. If significant internal corrosion is detected, further investigation using UTS is required. If applicable, include areas marked from previous readings. Refer to Section 10.0.
 - 7.3.1.2 Existence of external corrosion may require the use of a pit depth measurement device in addition to the UTT to determine the remaining wall thickness.
 - 7.3.2 Inspect shell attachments for changes made after the AST was fabricated. Refer to previous drawings or make new sketches that show all the appurtenances, attachments, and nozzle locations on the AST shell and heads or roof. Record repads (reinforcing plates) and/or insert plates. Inspect attachment welds for signs of stress and corrosion.
- 7.4 Vertical or Rectangular AST Requirements - in addition to the applicable items in 7.1:
 - 7.4.1 Shell surface – Refer to 7.3.1 and 7.3.2
 - 7.4.2 Shell attachments – Refer to 7.3.2
 - 7.4.3 Vertical AST roof - Inspect for low areas on the roof and standing water that may corrode the roof areas. Inspect for coating failure, holes, and corrosion. Take UTT readings on the roof and record results. If possible, measure thicknesses in previously measured areas for corrosion rate determination. If significant corrosion is detected, further investigation using ultrasonic testing scans (UTS) is required. Refer to Section 10.0.
- 7.5 Double-wall and Double-bottom AST Requirements - in addition to the applicable items in 7.1:
 - 7.5.1 Verify that the leak detection equipment or method is operating if the tank is so equipped.

- 7.5.2 Check for leaks or the presence of liquid in the interstice. When liquid is present in the interstitial space of the AST, thickness measurements should be taken on the secondary tank. UTT and UTS shall be of sufficient quantity and location to verify adequate containment integrity of the secondary tank. If product is found in interstitial space, perform a leak test to determine if primary tank is tight.
- 7.5.3 Double-bottom ASTs require UTT readings of areas that are single-wall as described in paragraph 7.3.1.1 above. Double-wall ASTs do not require UTT readings for the primary tank. If corrosion is evident on the outside surface of the secondary tank shell, UTT readings of the corroded areas are required.
- 7.6 Steel Diked AST Requirements - in addition to the applicable items in 7.1 to 7.4:
- 7.6.1 For open-top dikes, inspect the condition of the dike and determine if liquid is present. For closed-top dikes that are fitted with an access port, inspect the condition of the inside of the enclosed diked area and determine if liquid is present. AST modifications may be needed in order to provide access for additional assessment. If liquid has entered the space or conditions indicate corrosion could be causing a problem, further evaluation is required.
- 7.6.2 Ultrasonic thickness measurements shall be taken on the tank shell wherever accessible, such as above the rain shields and by removing rain shields to gain access within the dike area where possible.
- 7.6.3 Ensure tank systems are operated with spill and overfill prevention controls. Ensure an emergency vent is present and functions for closed-top containment structures.
- 7.7 Insulated AST Requirements - in addition to the applicable items in 7.1 through 7.4, except as modified below:
- 7.7.1 Inspect the insulation material and outer jacket for indications of damage where water may be allowed to wick into the insulating layer. Specifically inspect for areas where water may be trapped behind or within the insulation. If any of the following conditions are identified, then remove sections of the insulation to check for corrosion:
- ☐ Evidence that the tank may be compromised,
 - ☐ Evidence that the base of the tank is consistently in contact with standing water, or
 - ☐ Insulation is significantly compromised and has not been repaired or replaced in a timely manner
- 7.7.2 If corrosion under the insulation is suspected, remove sections of the insulation to check for corrosion. Damage done to the insulation for the purpose of inspection shall be repaired.
- 7.7.3 Take UTT readings of the shell where accessible and where insulation is removed per 7.7.1 and record results. In addition, include, if applicable,

areas marked from previous readings. If significant internal corrosion is detected, further investigation using ultrasonic testing scans (UTS) is required. Refer to Section 10.0.

- 7.8 Concrete Exterior ASTs (CE-ASTs) Requirements - in addition to the applicable items in 7.1:
- 7.8.1 Follow the tank manufacturer's instructions for inspection and maintenance.
 - 7.8.2 Inspect concrete exterior body of the tank for cleanliness, need of coating, or rust staining.
 - 7.8.3 Inspect the entire exterior of the tank for cracks in concrete.
 - ☐ Cracks larger than 1/16 of an inch in thickness require repair.
 - ☐ If cracks greater than 1/16 of an inch are present on all four top chamfer edges, then the tank shall be further evaluated and repaired in consultation with the tank manufacturer, due to the possibility of damage or over-pressurization of the secondary containment.
 - 7.8.4 Check for leaks or the presence of liquid in the interstice. If liquid is found, then further investigation is needed to determine the cause.
 - 7.8.5 Check the seal between the pipe nipples (and other tank top appurtenances) and concrete.
 - 7.8.6 CE-ASTs with joints or seams in the concrete exterior require inspection of the joint seal for deterioration, holes, tears, and cracks.
- 7.9 Additional requirements for field-erected ASTs are included in Appendix B.
- 7.10 For each FEI performed in accordance with section 7 the certified inspector shall prepare a written FEI report. In the FEI report, include field data, measurements, pictures, drawings, tables, and an inspection summary. In the FEI report summary, identify unacceptable conditions and recommended and/or mandatory corrective actions. Determine the suitability for continued service of the AST per Section 10.0 and document this in the FEI report. Include the date of the next scheduled FEI or FII, as applicable. Include the inspector's name and certification number in the FEI report.

8 FORMAL INTERNAL INSPECTION (FII) GUIDELINES

8.1 General

- 8.1.1 FII are to be performed by Certified Inspectors per paragraph 4.2.
- 8.1.2 The following paragraphs describe minimum inspection guidelines. There are numerous AST configurations and components; it is the responsibility of the Certified Inspector to identify and properly inspect them to conform to the owner's requirements and/or industry standards. The inspector or the inspection company shall develop detailed checklists that identify, record, and document all aspects of each inspection.
- 8.1.3 An FII includes the requirements of an FEI with the addition of the requirements described below. Refer to paragraphs 7.1 to 7.9 for FEI requirements.
- 8.1.4 For elevated ASTs where all external surfaces are accessible, the internal inspection requirements may be satisfied with an examination from the exterior by using such methods as UTS. For all other situations, entry into the interior of the AST is necessary to assess the condition of all surfaces.

8.2 Horizontal AST Internal Inspection

- 8.2.1 Identify, measure, inspect, and record all AST internal appurtenances. Inspect for mechanical damage, corrosion, cracking, etc. Inspect for deteriorating or corroding internal attachments and piping. Take thickness readings of internal structures and record the readings.
- 8.2.2 Inspect the welds for cracking by visual inspection or, if necessary, by magnetic particle (MT) inspection or equivalent method.
- 8.2.3 Internal NDT Inspection
 - 8.2.3.1 Ultrasonic testing equipment that is capable of scanning the tank (UTS), rather than measuring only individual points (UTT), is the preferred method of testing. Personnel performing UTS are to be qualified per paragraph 4.3.2.
 - 8.2.3.2 If testing methods that are capable of complete floor coverage are not practical, use equipment that tests individual points. For individual point testing, test a grid that measures a 12 inch x 12 inch (0.3 meters x 0.3 meters) square area of the shell and take at least 15 equally spaced UTT measurements per each 12 inches x 12 inches area. Any questionable areas are to be assessed by UTS. The number of 12" x 12" UTT areas shall be determined by the owner/Inspector based on the foundation materials, surrounding environment and any factor that may be a cause of underside shell corrosion. As a minimum, the inspector must take (1) 12" x 12" UTT measurement per plate in contact with the ground and no less than (8) 12" x 12" UTT measurements along the bottom of the tank shell in contact with the ground.

8.2.3.3 Perform a vacuum box (VB) examination of questionable welds to check for leaks.

8.2.3.4 Refer to Section 10.0 for criteria for suitability for continued service.

8.3 Vertical and Rectangular AST Internal Inspection

8.3.1 Identify, record, inspect, and measure all AST internal surfaces and appurtenances. Inspect AST internals to check for mechanical damage, corrosion, cracking, etc. Check for deteriorating or corroding internal attachments and piping. Take thickness readings of internal structures and record the readings.

8.3.2 Inspect the welds for cracking, corrosion or incomplete fusion which may result in a leak by visual inspection. If additional investigation is needed, the weld may be tested using vacuum box (VB), or if necessary magnetic particle (MT) or liquid dye penetrant (DPT) inspection or equivalent method.

8.3.3 Internal NDT Inspection

8.3.3.1 AST floor thickness assessments is required as follows:

Complete coverage of the AST floor is recommended due to random corrosion characteristics of metal in contact with the ground. Inspection of the AST floor is recommended using inspection methods capable of determining the underside floor condition, such as UTS, MFL followed by UTS of questionable areas, or other equivalent methods. If testing methods that are capable of complete floor coverage are not practical, use equipment that tests individual points. For individual point testing, test a grid that measures 12 inches x 12 inches (0.3 meters x 0.3 meters) square area of the shell and take at least 15 equally spaced UTT measurements per each 12 inch x 12 inch area. Any questionable areas are to be assessed by UTS. The number of 12" x 12" UTT areas shall be determined by the owner/Inspector based on the foundation materials, surrounding environment and any factor that may be a cause of underside shell corrosion. As a minimum, the inspector must take (1) 12" x 12" UTT measurement per plate in contact with the ground and no less than (8) 12" x 12" UTT measurements per tank floor.

8.3.3.2 Perform a vacuum box (VB) examination of questionable welds to check for leaks.

8.3.4 Refer to Section 10 for criteria for Suitability for Continued Service.

8.4 Additional requirements for field-erected ASTs are included in Appendix B.

8.5 For each FII performed in accordance with Section 8 the certified Inspector shall prepare a written FII report. In the FII report, include field data, measurements, pictures, drawings, tables, and an inspection summary. Identify in the summary unacceptable conditions and recommended and/or mandatory corrective actions. Determine the suitability for continued service of the AST per Section 10.0 and document this in the FII report. Include the date

of the next scheduled FEI and/or FII, as applicable. Include the inspector's name and certification number in the FII report.

9 LEAK TESTING METHODS (LTM)

9.1 Shop-fabricated AST leak testing procedure

- 9.1.1 Consult the Steel Tank Institute Recommended Practice R912, *Installation Instructions for Shop Fabricated Stationary Aboveground Storage Tanks for Flammable, Combustible Liquids*. Air shall not be used for a pressure test; an inert gas shall be used instead. The introduction of a gas containing oxygen (such as air) to a tank that has previously held petroleum liquid can pose an explosion hazard.
- 9.1.2 Vacuum testing of the interstice of double-wall or double-bottom tanks is an option. Refer to the Steel Tank Institute Recommended Practice R912, *Installation Instructions for Shop Fabricated Stationary Aboveground Storage Tanks for Flammable, Combustible Liquids*.
- 9.1.3 Leak testing of CE-ASTs that are listed and labeled as UL2085 shall be performed in accordance with the specific requirements (or the testing manual) of the manufacturer. The testing, which includes brand-specific vacuum and hydrostatic testing, shall be performed by properly trained personnel.

9.2 Portable containers leak testing procedure – Refer to DOT Sections 49 CFR 173.28 (Reuse, reconditioning and remanufacturing of packagings – mainly for drums) and 49 CFR Part 178 Subpart O – Testing of IBC's [Intermediate Bulk Container] (section 178.803 Testing and certification of IBC's) and 49 CFR 180.605, (Requirements for periodic testing, inspection and repair of portable tank), or equivalent, for portable container testing and recertification. Electronic versions of these documents are available online.

- 9.2.1 See the definition of Leak Testing Methods for more information.

10 SUITABILITY FOR CONTINUED SERVICE

- 10.1 A determination of suitability for continued service of the AST shall be performed and documented in any FEI and FII report prepared by a Certified Inspector based on the results of Formal External and/or Internal Inspections. When the inspection results (refer to Section 7 and 8 of this standard) show that a change has occurred from the original physical conditions of the tank system, this section describes the actions to be taken by the owner. These evaluations may require consultation with other individuals who have the appropriate training, education, and/or experience to evaluate the changes.
- 10.2 Aside from corrosion related tank degradation, a tank is not considered suitable for service if conditions are noted during the inspection that jeopardize the life or safety of personnel working near the tank. These conditions include but are not limited to:
- ☐ Lack of adequate emergency relief venting
 - ☐ Visible signs of leakage from appurtenances which cannot be resolved without removing the tank from service
 - ☐ Damaged or non-compliant electrical systems within the hazardous area which may create an imminent ignition source.
- 10.3 Corrosion related degradation noted during formal external and internal inspections (refer to AST categories in Section 5.0)
- 10.3.1 For all tanks in Table 5.5, if damage that compromises tank integrity (see 10.3.2 through 10.3.4) is found at any time, then repairs to all damaged areas on the AST shall be promptly made. Refer to Steel Tank Institute SP031 Standard for Repair of Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids for alterations or repairs to an AST.
- 10.3.1.1 If MIC is suspected, a sample of liquid from the tank bottom (if available) should be tested for bacteria that could cause MIC.
- 10.3.1.1.1 If MIC is confirmed, mitigation measures shall be taken to eliminate the source of MIC. Mitigation measures shall use good engineering practice appropriate for the tank system design and the material being stored.
- 10.3.2 Category 3 ASTs - If the shell thickness has been reduced to less than 75% of the original shell thickness at any point, then the AST shall be taken out of service and repaired or replaced. Refer to Steel Tank Institute SP031 Standard for Repair of Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids for alterations or repairs to an AST. The Certified Inspector shall document in the FEI or FII report that the next Formal External or FII shall be within 5 years and each subsequent 5 years thereafter, until the condition that caused the tank degradation has been fully corrected. When the tank degradation has been arrested, or is in a

steady-state condition, then follow the inspection intervals shown in Table 5.5 for subsequent inspections.

- 10.3.3 Category 2 ASTs – The AST shall be repaired or replaced if more than 3 square inches of any one square foot of the tank shell (i.e., approximately 2%) is found to be less than 75% of the original shell thickness; or if the remaining shell thickness of an area is less than 50% of the original shell thickness at any point. Refer to Steel Tank Institute SP031 Standard for Repair of Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids for alterations or repairs to an AST. The Certified Inspector shall document in the FEI or FII report that the next Formal External or FII shall be within 5 years and each subsequent 5 years thereafter, until the condition that caused the tank degradation has been fully corrected. When the tank degradation has been arrested, or is in a steady-state condition, then follow the inspection intervals shown in Table 5.5 for subsequent inspections.
- 10.3.4 Category 1 ASTs - The AST shall be repaired or replaced if more than 3 square inches of any one square foot of the tank shell (i.e., approximately 2%) is found to be less than 50% of the original shell thickness; or if the remaining shell thickness of an area is less than 25% of the original shell thickness at any point. Refer to Steel Tank Institute SP031 Standard for Repair of Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids for alterations or repairs to an AST. The Certified Inspector shall document in the FEI or FII report that the next Formal External or FII shall be within 5 years and each subsequent 5 years thereafter, until the condition that caused the tank degradation has been fully corrected. When the tank degradation has been arrested, or is in a steady-state condition, then follow the inspection intervals shown in Table 5.5 for subsequent inspections.
- 10.3.4.1 For Category 1 ASTs, alternatively, if the Certified Inspector establishes and documents a corrosion rate, the inspector may determine the next Formal External Inspection based upon corrosion rates. The calculated time until the next Formal External Inspection may exceed the values listed in Table 5.5 if corrosion rates allow.
- 10.3.4.2 Refer to API 575, *Inspection of Atmospheric and Low-Pressure Storage Tanks*, for some acceptable methods of determining corrosion rates.
- 10.3.4.3 Further, if the shell thickness is reduced anywhere to less than 25% of the original shell thickness, the AST shall be repaired or replaced. Refer to Steel Tank Institute SP031 *Standard for Repair of Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids* for alterations or repairs to an AST.
- 10.3.5 Corrosion in the knuckle area - Corrosion in the knuckle area of a tank is considered a critical condition. The knuckle is the curved portion of the steel that joins the bottom or end of the AST to the shell. The AST is

manufactured with a circular piece of steel with a formed flange and is often found on horizontal or vertical shop-fabricated ASTs. It may not be possible to accurately measure metal loss in the knuckle area from an external inspection alone. If suspected, more evaluation is needed and internal inspection may be justified. The maximum allowable metal loss at any single point is the same as the plate thickness limits shown in the previous paragraphs for each category of tank.

10.3.6 Double wall ASTs - The criteria for suitability for continued service of a double wall AST when corrosion of the secondary tank has been found shall be per paragraph 10.3.4 above (double wall ASTs are to be considered Category 1 for the suitability for continued service). Further, if a leak is found in the primary tank, the tank shall be repaired or replaced. Refer to Steel Tank Institute SP031 Standard for Repair of Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids for alterations or repairs to an AST. When the tank degradation has been arrested, or is in a steady-state condition, then follow the inspection intervals shown in Table 5.5 for subsequent inspections.

10.3.6.1 CE-ASTs shall be repaired or replaced if one of the following is found:

- a. Fuel or other product is found in the interstice.
- b. The CE-AST has failed all published primary and secondary containment testing methods of the manufacturer. The testing, which includes brand specific vacuum and hydrostatic testing, shall be performed by properly trained personnel.
- c. CE-ASTs with joints or seams that show clear signs of failed joint seals shall be taken out of service if the joint seal is below the liquid level. CE-ASTs with joint seals above the liquid level shall have the joint seal repaired.
- d. CE-ASTs with exterior wall damage greater than 3 inches in depth, 6 square inches in size, or showing exposed reinforcing steel shall be taken out of service. Repairs may be possible based on the tank manufacturer's recommendation.
- e. Where corrosion of pipe nipple below surface of concrete has caused a rust-through, the tank shall be taken out of service unless the fitting can be permanently sealed.
- f. If liquid is found in the interstice, the liquid shall be removed and additional investigation is required. Refer to paragraph 7.8. Repair is required per manufacturer's guidelines, and the CE-AST may or may not need to be removed from service.

10.3.6.2 Other tank damage – An AST subjected to damage caused by the following conditions requires evaluation by an engineer experienced in AST design or by a tank manufacturer who will jointly work with the owner determine if an immediate Formal External or Internal Inspection is required:

- ☐ Fire – AST exposed to fire or flame impingement
- ☐ Natural disaster – AST exposed to flooding, hurricane force winds, etc. and has been lifted or damaged
- ☐ Excessive settlement – AST that has experienced excessive settlement
- ☐ Overpressure – AST exposed to excessive internal pressure caused by overfill or failure of venting devices or other reason
- ☐ Damage from cracking – AST with evidence of cracking of welds or of an AST surface

10.4 If a leak is discovered at any time by the owner or the inspector, the tank must be repaired, replaced, or closed and removed from service, in accordance with accepted good engineering practice.

11 RECORDKEEPING

- 11.1 Retain each AST Record for the life of the AST. Refer to Appendix C for example.
- 11.2 Retain each Monthly Inspection Checklist for at least 36 months. Refer to Appendix C for example.
- 11.3 Retain each Annual Inspection Checklist for at least 36 months. Refer to Appendix C for example.
- 11.4 Retain each Portable Container Monthly Inspection Checklist for at least 36 months. Refer to Appendix C for example.
- 11.5 Retain all formal inspection reports developed by certified inspectors for the life of the AST.

REFERENCES

American Petroleum Institute:

- API Publication 341, *A Survey of Diked-area Liner Use at Aboveground Storage Tank Facilities*
- API Recommended Practice 575, *Inspection of Atmospheric and Low Pressure Storage Tanks*
- API Standard 650, *Welded Steel Tanks for Oil Storage*
- API Bulletin D16, *Suggested Procedure for Development of a Spill Prevention Control and Countermeasure Plan*
- API Recommended Practice 12R1, *Recommended Practice for Setting, Maintenance, Inspection, Operation and Repair of Tanks in Production Service*
- API Standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction.*
- API Standard 2015, *Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks*
- API Specification 12D, *Specification for Field Welded Tanks for Storage of Production Liquids*
- API Specification 12F, *Specification for Shop Welded Tanks for Storage of Production Liquids*

American Society for Nondestructive Testing

- ANSI/ASNT Recommended Practice No. SNT-TC-1A, *Guideline to Personnel Qualification and Certification in NDT*

International Code Council

- *International Fire Code*

National Fire Protection Association:

- NFPA 30, *Flammable and Combustible Liquids Code*
- NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*
- NFPA 70, *National Electrical Code*
- NFPA 77: *Recommended Practice on Static Electricity*
- NFPA 326, *Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair*
- NFPA 780, *Standard for the Installation of Lightning Protection Systems*

STI/SPFA:

- SP031, *Standard for Repair of Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids*
- R111 Recommended Practices for Storage Tank Maintenance
- R893, *Recommended Practice for External Corrosion Protection of Shop Fabricated Aboveground Tank Floors*
- R912, *Installation Instructions for Shop Fabricated Stationary Aboveground Storage Tanks for Flammable, Combustible Liquids*

Underwriters Laboratories Inc.

- UL 142, *Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids*
- UL 2085, *Standard for Protected Aboveground Tanks for Flammable and Combustible Liquids*

United States Environmental Protection Agency:

- EPA 40 CFR part 112, *Oil Pollution Prevention and Response; Non-Transportation-Related Onshore and Offshore Facilities*
- EPA 510-K-15-001, *Musts for USTs*

United States Department of Labor, Occupational Safety & Health Administration (OSHA)

- 29 CFR Part 1910.146 Permit Required Confined Space
- 29 CFR Part 1910.147, *The Control of Hazardous Energy (Lockout/Tagout)*
- 29 CFR Part 1910.331 to Part 1910.333, *Electrical Lockout/Tagout*

United States Department of Transportation

- DOT Sections 49 CFR 173.28, *Reuse, Reconditioning and Remanufacturing of Packaging*
- DOT 49 CFR part 178, Subpart O, *Testing of IBC's*
- DOT 49 CFR part 178.803, *Testing and certification of IBC's*
- DOT 49 CFR part 180.605, *Portable container Testing and Recertification*

APPENDIX A SUPPLEMENTAL TECHNICAL INFORMATION

A.1 TYPICAL AST DIAGRAMS

A.1.1 The diagram below shows terms commonly associated with ASTs. For the purposes of this Standard, all of these surfaces are called the “shell” of the AST to avoid confusion.

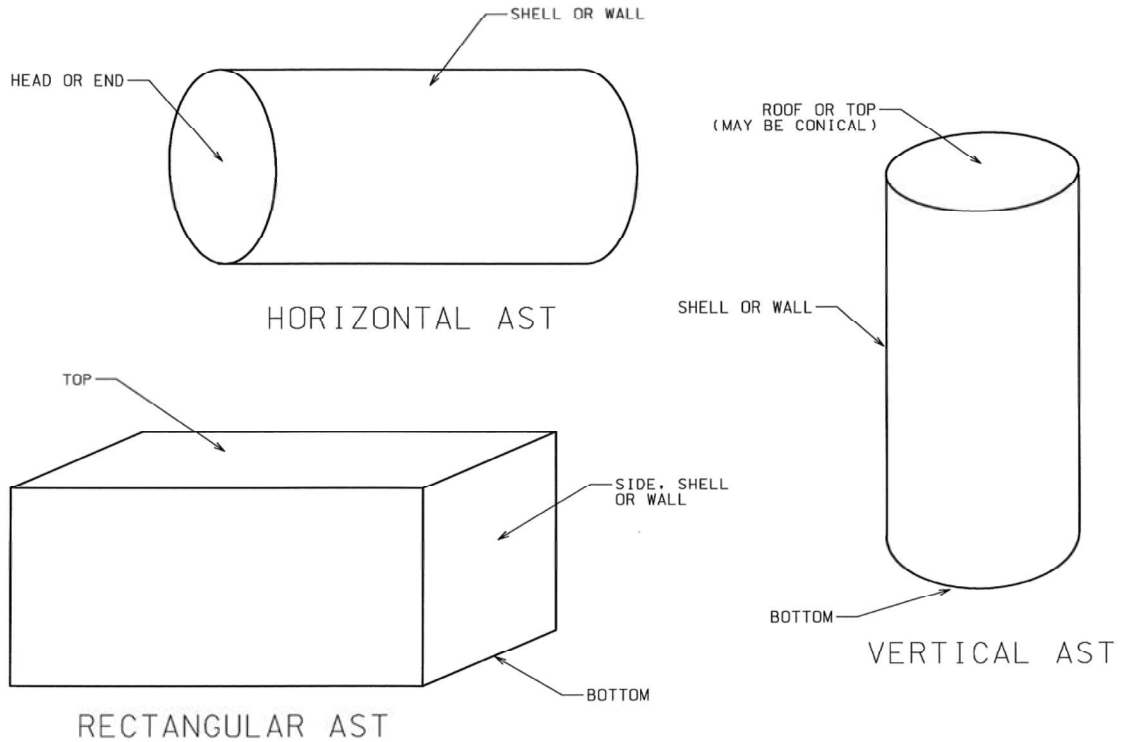


FIGURE A.1.1

A.1.2 The diagram below identifies the appurtenances of an AST. A specific tank may include some or all of these appurtenances.

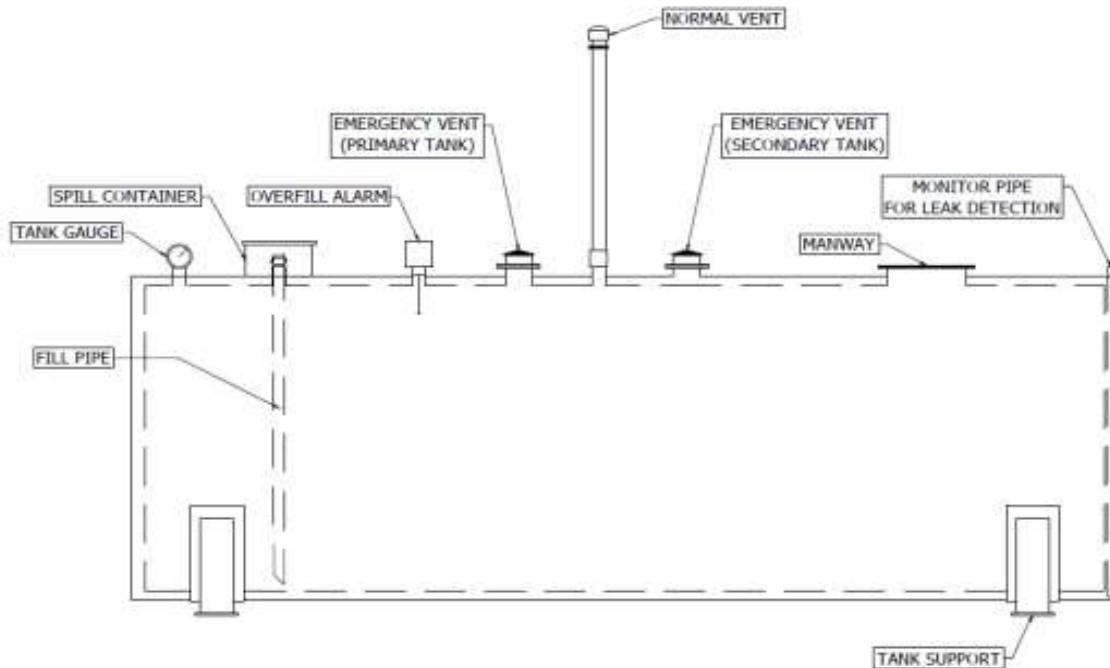


FIGURE A.1.2

A.1.2.1 The purpose of these appurtenances is as follows:

- A.1.2.1.1 Emergency vent (for primary and secondary tank) – These tank accessories prevent damage to the tank by allowing excess pressure to be vented. They are designed to relieve excess pressure in the event of an emergency, such as a fire.
- A.1.2.1.2 Monitor pipe for leak detection – A pipe installed in the air space (Interstice) between the primary tank and secondary tank of a double-wall tank. It is typically used with leak detection equipment to detect a leak in either the primary or the secondary tank.
- A.1.2.1.3 Normal vent – A primary tank accessory that allows air to enter the tank when liquid is being withdrawn and exhausts air when the tank is being filled. This prevents damage to the tank due to excessive pressure or vacuum.
- A.1.2.1.4 Overfill alarm – A device designed to alert personnel who are filling a tank when a predetermined level is reached.
- A.1.2.1.5 Spill container – A tank accessory designed to catch spills during tank filling operations. It typically has a lockable, hinged lid and may allow spilled fluid to drain into the tank.
- A.1.2.1.6 Tank supports – These structures are used to elevate the tank off the ground.
- A.1.2.1.7 Fill Pipe – A pipe attached to the fill connection to reduce product turbulence and generation of vapors during tank filling.
- A.1.2.1.8 Tank Gauge- A mechanical or electrical device that reports the quantity of product in the tank.
- A.1.2.1.9 Manway- A removeable sealed access hatch that is attached to the tank that can allow for access to the tank interior.

A.2 TANK TYPES AND THEIR CORRESPONDING AST CATEGORY

A.2.1 Figure A.2.1 is an aid to determine the Category of the tank (see paragraph 5.4 of the Standard for more information):

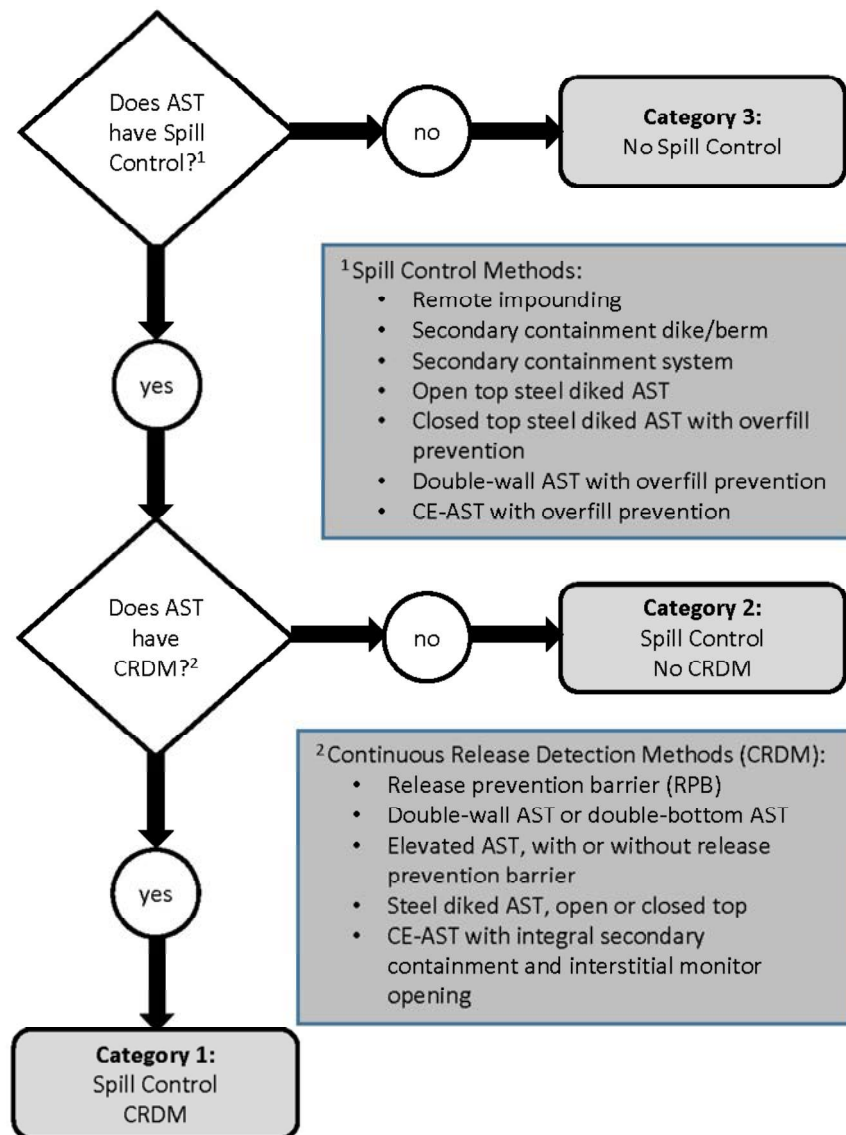


FIGURE A.2.1
TANK CATEGORY DECISION TREE

A.2.2 Table A.2.2 shows some typical tank types, although not an exhaustive list, and their corresponding AST category.

**TABLE A2.2
EXAMPLE TANK CONFIGURATION AND AST CATEGORY**

Tank Configuration	Tank has Spill Control?	Tank has CRDM?	AST Category
Single wall vertical AST in contact with ground and no spill control	No	No	3
Single wall vertical AST in contact with ground in an earthen dike	Yes	No	2
Single wall vertical AST in concrete dike with concrete floor. Concrete floor extends under tank completely	Yes	Yes	1
Single wall vertical AST in dike with elastomeric liner. Liner extends under tank completely	Yes	Yes	1
Single wall vertical AST installed on gravel and no spill control	No	No	3
Single wall vertical AST installed on gravel in an earthen dike	Yes	No	2
Elevated AST with spill control	Yes	Yes	1
Elevated AST without spill control	No	Yes	3
AST with double-bottom and spill control	Yes	Yes	1
Double-wall AST* with overfill prevention	Yes	Yes	1
Double-wall AST* without overfill prevention	No	Yes	3
Concrete exterior AST with overfill prevention	Yes	Yes	1
Concrete exterior AST without overfill prevention	No	Yes	3

*Double wall AST is defined in section 2

A.3 RELEASE MANAGEMENT SYSTEM (RMS)

A.3.1 One of the basic purposes of AST inspection standards is to minimize the likelihood and consequences of leaks. Over extended periods, even small leaks may have considerable impact on the environment. The use of industry standards to prevent leaks is a fundamental principle of pollution prevention. Industry standards cover the tank life cycle from construction, to ongoing inspection and maintenance, to final closure.

A.3.2 Applying RMS can reduce the likelihood and consequences of leaks. Typically, RMS is applied to provide additional integrity assurance against leaks.

A.3.3 In the context of this Standard, RMS specifically refers to two basic methodologies as defined below:

- ☐ Leak Testing Methods (LTM)
- ☐ Continuous Release Detection Methods (CRDM)

A.3.4 Experience has shown that long-term, slow leaks may develop and cause environmental damage from an AST that is in direct contact with the ground. These types of ASTs are subjected to the full hydrostatic pressure of the liquid on one side of the AST surface and are in direct contact with the ground on the other side of the AST surface. These ASTs may allow a slow leak over a long time under full liquid hydrostatic pressure, which may go undetected and cause environmental damage. LTM is a layer of protection beyond conventional AST inspection practices that is most effective when applied to ASTs that are in direct contact with the soil and that do not have CRDMs. An LTM is ordinarily not necessary for tanks that have CRDMs (continuous release detection methods) such as elevated tanks, double-wall tanks, or tanks with release prevention barriers.

A.3.5 Figure A.3.5 shows RMS graphically.

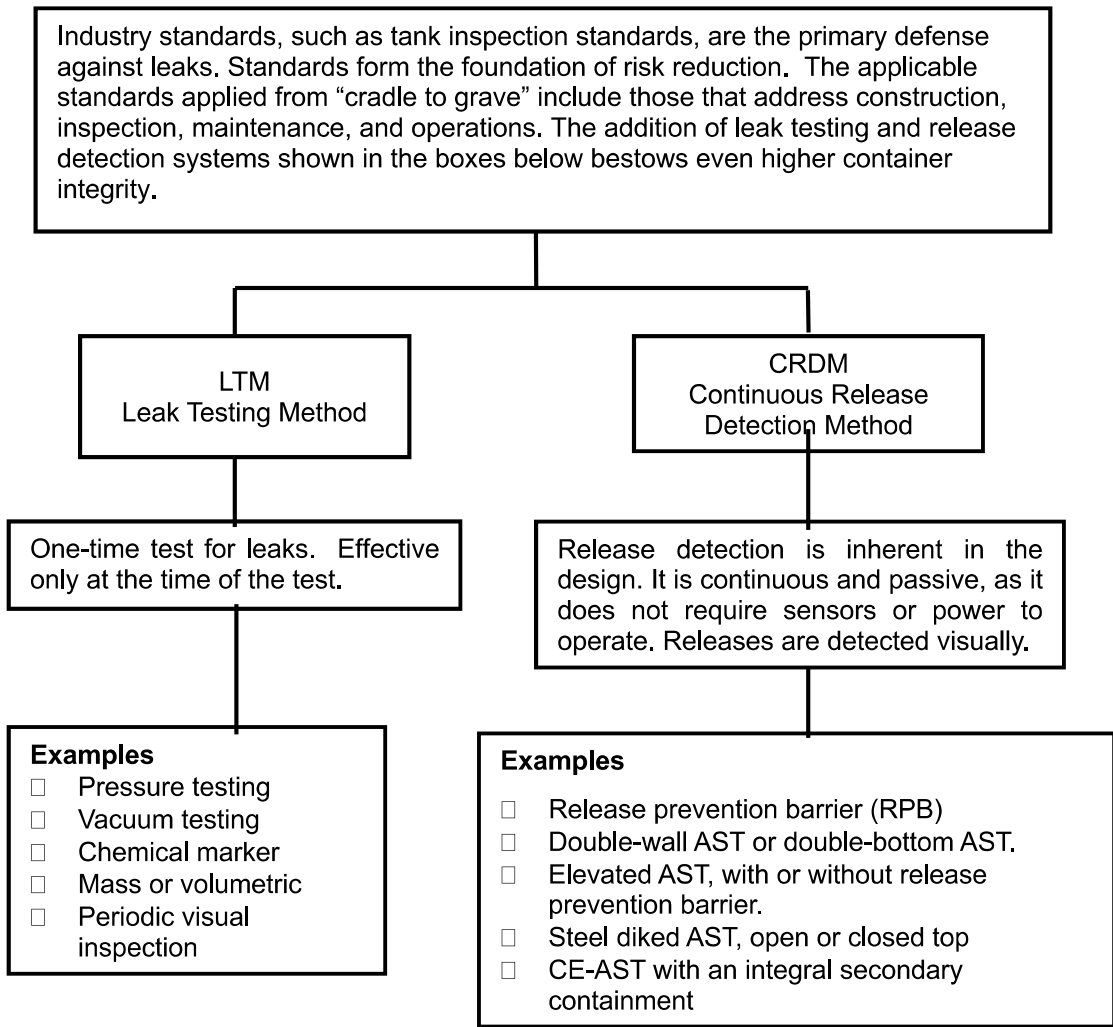


FIGURE A3.5
RELEASE DETECTION SYSTEMS

A.4 REGULATIONS

- A.4.1 The Federal EPA has promulgated regulations regarding the storage and handling of oils, both petroleum and non-petroleum, called the Spill Prevention Control and Countermeasures (SPCC) Rule under the authority of the Clean Water Act (40 CFR part 112). Additionally, some states and localities have developed AST regulatory programs under specific state or local authority. Entities regulated by these sections may use this Standard or others to inspect and determine the fitness of their storage systems. Refer to <https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations> and American Petroleum Institute's (API) Recommended Practice Bulletin D16, *Suggested Procedure for Development of a Spill Prevention Control and Countermeasure Plan* for more information.

APPENDIX B

INSPECTION OF FIELD-ERECTED ASTS

B.1 GENERAL

- B.1.1 Purpose and Applicability – This Appendix addresses additional and special inspection requirements for field-erected tanks. Tanks larger than 30 feet (9.1 meters) in diameter or more than 50 feet (15.2 meters) high should be inspected according to an appropriate field-erected tank inspection standard. This Appendix is applicable only when specifically referenced by written contractual language between the owner and the inspector. Further, it is applicable only when not prohibited by the regulatory authority having jurisdiction. This Appendix specifies only those requirements which modify or exceed the requirements of the main body of the Standard.
- B.1.2 Scope - This Appendix applies to steel ASTs that are:
- B.1.2.1 Welded and flat-bottom, cone-up or cone-down design
 - B.1.2.2 Up to 30 feet (9.1 meters) in diameter and with a height of less than 50 feet (15.2 meters)
 - B.1.2.3 Fabricated with full-fusion, butt-welded shells and with lap-welded or butt-welded bottom plates
 - B.1.2.4 Fabricated with a shell thickness of each course less than ½ inch and with original nominal bottom thickness plates equal to ¼ inch or 6 mm
 - B.1.2.5 Built to a nationally recognized standard
- B.1.3 Brittle Fracture Assessment - Because the tank shells are less than ½ inch thick, the risk of brittle fracture is minimal. Brittle fracture assessments and documentation are not required for tanks that fall within the scope of this Standard.

B.2 INSPECTIONS

- B.2.1 Refer to Table B.2.1 below for the inspection timetable. Category 1, 2, and 3 as well as the P, E, I, and L designations are described in the main body of the SP001 Standard. Note that the internal inspection intervals shown in this table are guiding values when corrosion rates are not determined, in accordance with recognized and accepted industry principles and practice.
- B.2.1.1 When corrosion rates are established, the corrosion rates may govern the internal inspection interval, which may be shorter or longer than the values shown.
 - B.2.1.2 For Category 1 tanks, the maximum internal re-inspection interval is 30 years.

- B.2.1.3 For Category 2 tanks, the maximum internal re-inspection interval is 20 years.
- B.2.1.4 For Category 3 tanks, the maximum internal re-inspection interval may not be longer than shown in Table B.2.1.

TABLE B.2.1
TABLE OF INSPECTION SCHEDULES

AST Type and Capacity	Category 1	Category 2	Category 3
Field-erected AST	P, E(5), I(10)	P, E&L(5), I(10)	P, E&L(5), I(10)

- B.2.2 Follow the requirements found in the main body of the SP001 Standard for Periodic Inspections, FEI and FII and any additional requirements in this Appendix. Also, follow all the requirements of the Safety Section. Leak testing methods for field-erected tanks are currently under research by API and STI, and additional requirements will be added to SP001 in the future.
- B.2.3 Below are additional inspection requirements for field-erected ASTs.
- B.2.3.1 Vertical AST Floating Roof
- B.2.3.1.1 For safety, make sure that the roof pontoons are free of liquid and harmful vapors and that the floating roof is properly stabilized against collapse. (See API 2016, *Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks*.) Inspect the vapor space on top of the floating roof before gaining access.
- B.2.3.1.2 For FII, inspect the seal for deterioration, holes, tears, and cracks to determine the Suitability for Continued Service.
- B.2.3.1.3 For external floating roofs, assess the condition of the outer roof rim plate by visual or ultrasonic methods. It may be necessary to assess the condition by performing ultrasonic inspection from the inside of the pontoon. Inspect that either the roof drain is open, or the drain plug in the roof is open in case of unexpected rain. Inspect the roof legs for their contact with the floor and that the striker plates are present and in position. Inspect the roof legs for corrosion and damage.
- B.2.3.1.4 Inspect for standing water on top of the roof and inspect the roof drainage system operation. Inspect the pontoons for presence of liquid.

B.2.4 Suitability for Continued Service

B.2.4.1 As an alternative to the criteria in the main body of SP001, and if the Certified Inspector is API 653 Certified, then the methods included in API 653 may be used to evaluate the AST.

B.2.4.2 The minimum allowable remaining thickness is 0.1 inch (2.54 mm). In setting the next inspection interval based upon corrosion rates, neither the bottom nor the shell shall be allowed to corrode less than 0.1 inch.

B.2.4.2.1 The minimum required thickness of each shell course shall be according to:

$$t_{min} = \frac{(H - 1)DG}{10,000}$$

t_{min} = the minimum acceptable average thickness, in inches, for each course as calculated from the above formula. However, t_{min} shall not be less than 0.1 inch (2.54 mm) for any tank course.

D = nominal diameter of tank, in feet.

H = height from the bottom of the shell course under consideration to the maximum liquid level when evaluating an entire shell course, in feet.

G = largest specific gravity of the contents.

B.2.4.3 One method of determining the interval between FII required by the tank bottom assessment is as follows (corrosion rates shall be assumed constant for these calculations):

$$MFIII = \frac{\min(RT_{bc}, RT_{ip}) - MRT}{(St\ Pr + U\ Pr)}$$

MRT = minimum allowable remaining tank bottom thickness at the end of inspection interval which is 0.1 inch (2.54 mm).

$MFIII$ = maximum Formal Internal Inspection interval (years to next internal inspection) not to exceed that allowed in paragraph 2.1 of this Appendix.

RT_{bc} = minimum remaining thickness from bottom side corrosion after repairs.

RT_{ip} = minimum remaining thickness from internal corrosion after repairs.

$St\ Pr$ = maximum rate of corrosion not repaired on the top side. This value is zero for coated areas of the bottom. The expected life of the coating must equal or exceed $MFIII$ to use $St\ Pr = 0$.

$U\ Pr$ = maximum rate of corrosion on the bottom side. To calculate the corrosion rate, use the minimum remaining thickness after repairs. For tanks that have proven cathodic protection, the corrosion rate from the underside shall be $U\ Pr = 0.002$ inches per year (0.05 mm per year).

Note: For areas of a bottom that have been scanned by the magnetic flux leakage (or exclusion) process and do not have effective cathodic protection, the thickness used for calculating U_{Pr} must be the lesser of the MFL threshold or the minimum thickness of corrosion areas that are not repaired. The MFL threshold is defined as the minimum remaining thickness to be detected in the areas inspected. This value should be predetermined by the owner based on the desired inspection interval.

B.2.4.4 Widely scattered pitting will not significantly affect the strength of the tank shell and the tank may be allowed to continue operation, provided that both of the following conditions are met:

B.2.4.4.1 Pit depths or thinning with a diameter or maximum dimension of less than 2 inches (50.8 mm) does not result in a remaining wall thickness of less than 0.05 inch (1.27 mm).

B.2.4.4.2 No pit or thinned area results in any area 2 inches (50.8 mm) in diameter or larger with a thickness less than 0.1 inch (2.54 mm).

APPENDIX C

AST RECORDS AND PERIODIC INSPECTION CHECKLISTS

STI SP001 AST Record

Form completed by (Name) _____
 (Title) _____

Date _____

OWNER INFORMATION	FACILITY INFORMATION	INSTALLER INFORMATION
Name	Name	Name
Number and Street	Number and Street	Number and Street
City, State, Zip Code	City, State, Zip Code	City, State, Zip Code
	Regulatory facility ID number (if applicable)	

OWNER'S TANK ID	OTHER ID	INITIAL SERVICE DATE
Manufacturer:	Contents:	Construction Date:
Dimensions:	Capacity:	Last Repair/Reconstruction Date:
Design: <input type="checkbox"/> UL _____	<input type="checkbox"/> SwRI _____	<input type="checkbox"/> API _____ <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown
<input type="checkbox"/> Horizontal	<input type="checkbox"/> Vertical	<input type="checkbox"/> Rectangular
Construction: <input type="checkbox"/> Bare Steel <input type="checkbox"/> Cathodically Protected (Check one: A. <input type="checkbox"/> Galvanic or B. <input type="checkbox"/> Impressed Current) Date Installed: _____ <input type="checkbox"/> Coated Steel <input type="checkbox"/> Concrete encased steel <input type="checkbox"/> Stainless steel <input type="checkbox"/> Other _____ <input type="checkbox"/> Double-Bottom <input type="checkbox"/> Double-Wall <input type="checkbox"/> Lined inside; Date lining installed: _____		
Spill control: <input type="checkbox"/> Earthen Dike <input type="checkbox"/> Steel Dike <input type="checkbox"/> Concrete <input type="checkbox"/> None <input type="checkbox"/> Other _____		CRDM: <input type="checkbox"/> yes <input type="checkbox"/> no If yes, type: <input type="checkbox"/> Release Prevention Barrier <input type="checkbox"/> Elevated tank <input type="checkbox"/> Double bottom tank <input type="checkbox"/> Double wall tank <input type="checkbox"/> CE-AST <input type="checkbox"/> other _____
Tank elevated on supports <input type="checkbox"/> yes <input type="checkbox"/> no Support material: <input type="checkbox"/> steel <input type="checkbox"/> concrete <input type="checkbox"/> other _____		
Release Prevention Barrier: <input type="checkbox"/> yes <input type="checkbox"/> no If yes, Date Installed: _____ If yes, Type: <input type="checkbox"/> concrete <input type="checkbox"/> synthetic liner <input type="checkbox"/> clay liner <input type="checkbox"/> steel <input type="checkbox"/> other _____		AST Category: <input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2 <input type="checkbox"/> Category 3

OWNER'S TANK ID		OTHER ID		INITIAL SERVICE DATE	
Manufacturer:		Contents:		Construction Date:	
Last Repair/Reconstruction Date:		Dimensions:		Capacity:	
Last Change of Product Date:		Design:		<input type="checkbox"/> UL _____ <input type="checkbox"/> Horizontal	
<input type="checkbox"/> SwRI _____ <input type="checkbox"/> Vertical		<input type="checkbox"/> API _____ <input type="checkbox"/> Rectangular		<input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown	
Construction:		<input type="checkbox"/> Bare Steel <input type="checkbox"/> Coated Steel <input type="checkbox"/> Double-Bottom		<input type="checkbox"/> Cathodically Protected (Check one: A. <input type="checkbox"/> Galvanic or B. <input type="checkbox"/> Impressed Current) Date Installed: _____ <input type="checkbox"/> Concrete encased steel <input type="checkbox"/> Stainless steel <input type="checkbox"/> Other _____ <input type="checkbox"/> Double-Wall <input type="checkbox"/> Lined inside; Date lining installed: _____	
Spill control:		<input type="checkbox"/> Earthen Dike <input type="checkbox"/> Steel Dike <input type="checkbox"/> Concrete <input type="checkbox"/> None <input type="checkbox"/> Other _____		CRDM: <input type="checkbox"/> yes <input type="checkbox"/> no If yes, type: <input type="checkbox"/> Release Prevention Barrier <input type="checkbox"/> Elevated tank <input type="checkbox"/> Double bottom tank <input type="checkbox"/> Double wall tank <input type="checkbox"/> CE-AST <input type="checkbox"/> other _____	
Tank elevated on supports		<input type="checkbox"/> yes <input type="checkbox"/> no Support material: <input type="checkbox"/> steel <input type="checkbox"/> concrete <input type="checkbox"/> other _____			
Release Prevention Barrier:		<input type="checkbox"/> yes <input type="checkbox"/> no If yes, Date Installed: _____ If yes, Type: <input type="checkbox"/> concrete <input type="checkbox"/> synthetic liner <input type="checkbox"/> clay liner <input type="checkbox"/> steel <input type="checkbox"/> other _____		AST Category: <input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2 <input type="checkbox"/> Category 3	

OWNER'S TANK ID		OTHER ID		INITIAL SERVICE DATE	
Manufacturer:		Contents:		Construction Date:	
Last Repair/Reconstruction Date:		Dimensions:		Capacity:	
Last Change of Product Date:		Design:		<input type="checkbox"/> UL _____ <input type="checkbox"/> Horizontal	
<input type="checkbox"/> SwRI _____ <input type="checkbox"/> Vertical		<input type="checkbox"/> API _____ <input type="checkbox"/> Rectangular		<input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown	
Construction:		<input type="checkbox"/> Bare Steel <input type="checkbox"/> Coated Steel <input type="checkbox"/> Double-Bottom		<input type="checkbox"/> Cathodically Protected (Check one: A. <input type="checkbox"/> Galvanic or B. <input type="checkbox"/> Impressed Current) Date Installed: _____ <input type="checkbox"/> Concrete encased steel <input type="checkbox"/> Stainless steel <input type="checkbox"/> Other _____ <input type="checkbox"/> Double-Wall <input type="checkbox"/> Lined inside; Date lining installed: _____	
Spill control:		<input type="checkbox"/> Earthen Dike <input type="checkbox"/> Steel Dike <input type="checkbox"/> Concrete <input type="checkbox"/> None <input type="checkbox"/> Other _____		CRDM: <input type="checkbox"/> yes <input type="checkbox"/> no If yes, type: <input type="checkbox"/> Release Prevention Barrier <input type="checkbox"/> Elevated tank <input type="checkbox"/> Double bottom tank <input type="checkbox"/> Double wall tank <input type="checkbox"/> CE-AST <input type="checkbox"/> other _____	
Tank elevated on supports		<input type="checkbox"/> yes <input type="checkbox"/> no Support material: <input type="checkbox"/> steel <input type="checkbox"/> concrete <input type="checkbox"/> other _____			
Release Prevention Barrier:		<input type="checkbox"/> yes <input type="checkbox"/> no If yes, Date Installed: _____ If yes, Type: <input type="checkbox"/> concrete <input type="checkbox"/> synthetic liner <input type="checkbox"/> clay liner <input type="checkbox"/> steel <input type="checkbox"/> other _____		AST Category: <input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2 <input type="checkbox"/> Category 3	

STI SP001 Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____	Prior Inspection Date: _____	Retain until date: _____
Inspector Name (print): _____	Title: _____	
Inspector's Signature _____		
Tank(s) inspected ID _____		
Regulatory facility name and ID number (if applicable) _____		

- This checklist is intended as a model. Locally developed checklists are acceptable as long as they are equivalent and meet all applicable inspection checklist items. Inspections of multiple tanks may be captured on one form as long as the tanks are substantially the same.
- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector per paragraph 4.1.2 of the standard.
- Upon discovery of water in the primary tank, secondary containment area, interstice, or spill container, remove promptly or take other corrective action. Inspect the liquid for regulated products or other contaminants and dispose of properly.
- * designates an item in a non-conformance status. This indicates that action is required to address a problem. Note that some non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- If the inspection finds the integrity of the spill control system and/or the CRDM, such as items 13 and 14, is compromised the tank category and inspection time table should be re-evaluated by someone knowledgeable about the SP001 standard.
- Retain the completed checklists for at least 36 months.
- **After severe weather (snow, ice, wind storms) or maintenance (such as coating) that could affect the operation of critical components (normal and emergency vents, valves), an inspection of these components is required as soon as the equipment is safely accessible after the event.**

ITEM		STATUS	COMMENTS / DATE CORRECTED
Tank and Piping			
1	Is tank exterior (roof, shell, heads, bottom, connections, fittings, valves, etc.) free of visible leaks? Note: If "No", identify tank and describe leak and actions taken.	<input type="checkbox"/> Yes <input type="checkbox"/> No*	
2	Is the tank liquid level gauge legible and in good working condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
3	Is the area around the tank (concrete surfaces, ground, containment, etc.) free of visible signs of leakage?	<input type="checkbox"/> Yes <input type="checkbox"/> No*	

4	Is tank shell or supports free of soil, vegetation, water, or foreign material collected or covering the grade line (tank chime or bottom projection)?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
5	Is the primary tank free of water or has another preventative measure been taken? NOTE: Refer to paragraphs 6.10 and 6.11 of the standard for alternatives for Category 1 tanks. N/A is only appropriate for these alternatives.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
6	For double-wall or double bottom tanks or CE-ASTs, is interstitial monitoring equipment (where applicable) in good working condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
7	For double-wall tanks or double bottom tanks or CE-ASTs, is interstice free of liquid? Remove the liquid if it is found. If tank product is found, investigate possible leak.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
Equipment on tank			
8	If overfill equipment has a "test" button, does it activate the audible horn or light to confirm operation? If battery operated, replace battery if needed.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
9	Is overfill prevention equipment in good working condition? If it is equipped with a mechanical test mechanism, actuate the mechanism to confirm operation.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
10	Is the spill container (spill bucket) empty, free of visible leaks and in good working condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
11	Are piping connections to the tank (valves, fittings, pumps, etc.) free of visible leaks? Note: If "No", identify location and describe leak.	<input type="checkbox"/> Yes <input type="checkbox"/> No*	
12	Do the ladders/platforms/walkways appear to be secure with no sign of severe corrosion or damage?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
Containment (Diking/Impounding)			
13	Is the containment free of excess liquid, debris, cracks, corrosion, erosion, fire hazards and other integrity issues?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
14	Are dike drain valves closed and in good working condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
15	Are containment egress pathways clear and any gates/doors operable?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
Concrete Exterior AST (CE-AST)			
16	Inspect all sides for cracks in concrete. Are there any cracks in the concrete exterior larger than 1/16"?	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	
17	Inspect concrete exterior body of the tank for cleanliness, need of coating, or rusting where applicable. Tank exterior in acceptable condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
18	Visual inspect all tank top openings including nipples, manways, tank top spill containers, and leak detection tubes. Is the sealant between all tank top openings and concrete intact and in good condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
Other Conditions			
19	Is the system free of any other conditions that need to be addressed for continued safe operation?	<input type="checkbox"/> Yes <input type="checkbox"/> No*	

[illegible]

STI SP001 Annual Inspection Checklist

General Inspection Information:

Inspection Date: _____	Prior Inspection Date: _____	Retain until date: _____
Inspector Name (print): _____		Title: _____
Inspector's Signature: _____		
Tank(s) inspected ID _____		
Regulatory facility name and ID number (if applicable) _____		

- This checklist is intended as a model. Locally developed checklists are acceptable as long as they are substantially equivalent and meet all applicable inspection checklist items.
- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector per paragraph 4.1.2 of the standard.
- Promptly remove standing water or liquid discovered in the primary tank, secondary containment area, interstice, or spill container. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and dispose of it properly.
- In order to comply with EPA SPCC (Spill Prevention, Control and Countermeasure) rules, a facility should regularly test liquid level sensing devices to ensure proper operation (40 CFR 112.8(c)(8)(v)).
- * designates an item in a non-conformance status. This indicates that action is required to address a problem. Note that non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for at least 36 months.
- Complete this checklist on an annual basis, supplemental to the owner monthly-performed inspection checklists.
- **Note: If a change has occurred to the tank system or containment that may affect the SPCC plan, the condition should be evaluated against the current plan requirement by a Professional Engineer knowledgeable in SPCC development and implementation.**

ITEM		STATUS	COMMENTS / DATE CORRECTED
Tank Foundation/Supports			
1	Free of tank settlement or foundation washout?	<input type="checkbox"/> Yes <input type="checkbox"/> No*	
2	Concrete pad or ring wall free of cracking and spalling?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	

3	Tank supports in satisfactory condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
4	Is water able to drain away from tank if tank is resting on a foundation or on the ground?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
5	Is the grounding strap between the tank and foundation/supports in good condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
Tank Shell, Heads and Roof			
6	Free of visible signs of coating failure?	<input type="checkbox"/> Yes <input type="checkbox"/> No*	
7	Free of noticeable distortions, buckling, denting, or bulging?	<input type="checkbox"/> Yes <input type="checkbox"/> No*	
8	Free of standing water on roof?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
9	Are all labels and tags intact and legible?	<input type="checkbox"/> Yes <input type="checkbox"/> No*	
Tank Manways and Piping			
10	Are piping system joints, manway covers, gaskets, and attachment bolts tight and in good condition with no sign of wear, damage, leaks or corrosion?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
11	Are piping supports in good condition and free of corrosion and damage?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
12	Is leak or release detection on underground piping being performed and documented if required?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
Tank Equipment			
13	Normal and emergency vents free of obstructions?	<input type="checkbox"/> Yes <input type="checkbox"/> No*	
14	Have the level sensing devices (e.g, level gauges, alarms) been checked for operability, where possible, as per manufacturer's instructions or good engineering practice?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
15	Have flame arrestors been maintained per manufacturer's recommendations?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
16	Is the emergency vent in good working condition and functional, as required by manufacturer? Consult manufacturer's requirements. Verify that components are moving freely (including long-bolt manways).	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	

17	Is interstitial leak detection equipment in good condition? Are windows on sight gauges clear? Are wire connections intact? If equipment has a test function, does it activate to confirm operation?"	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
18	<p>Are all valves free of leaks, corrosion, and other damage? Follow manufacturers' instructions for regular maintenance of these items. Check the following and verify (as applicable):</p> <p><input type="checkbox"/> Anti-siphon valve</p> <p><input type="checkbox"/> Check valve</p> <p><input type="checkbox"/> Gate, ball, or isolation valve</p> <p><input type="checkbox"/> Pressure regulator valve</p> <p><input type="checkbox"/> Expansion relief valve</p> <p><input type="checkbox"/> Solenoid valve</p> <p><input type="checkbox"/> Fire valve</p> <p><input type="checkbox"/> Shear valve</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A</p>	
19	Are strainers and filters clean and in good condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
Insulated Tanks			
20	Free of missing insulation? Insulation free of visible signs of damage? Insulation adequately protected from water intrusion?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
21	Insulation free of noticeable areas of moisture?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
22	Insulation free of mold?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
23	Free of visible signs of coating failure?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
Other Equipment			
24	Are electrical wiring and boxes in good condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
25	Has the cathodic protection system on the tank been tested as required by the designing engineer?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	

[illegible]

STI SP001 Portable Container Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____	Prior Inspection Date: _____	Retain until date: _____
Inspector Name (print): _____		Title: _____
Inspector's Signature (): _____		
Container(s) inspected ID _____		
Regulatory facility name and ID number (if applicable) _____		

- This checklist is intended as a model. Locally developed checklists are acceptable as long as they are equivalent and meet all applicable inspection checklist items.
- This periodic Inspection is intended for monitoring the external condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- * designates an item in a non-conformance status. This indicates that action is required to address a problem. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for at least 36 months.

Item		Area:	Area:	Area:	Area:
Portable Container Containment/Storage Area					
1	Are all portable container(s) within designated storage area?	<input type="checkbox"/> Yes <input type="checkbox"/> No*	<input type="checkbox"/> Yes <input type="checkbox"/> No*	<input type="checkbox"/> Yes <input type="checkbox"/> No*	<input type="checkbox"/> Yes <input type="checkbox"/> No*
2	Is the containment and storage area free of excess liquid, debris, cracks or fire hazards?	<input type="checkbox"/> Yes <input type="checkbox"/> No*	<input type="checkbox"/> Yes <input type="checkbox"/> No*	<input type="checkbox"/> Yes <input type="checkbox"/> No*	<input type="checkbox"/> Yes <input type="checkbox"/> No*
3	Are drain valves closed and in good working condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A
4	Are containment egress pathways clear and any gates/doors operable?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A
Container					
5	Is the container free of leaks? <i>Note: If "No", discontinue use of container</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No*	<input type="checkbox"/> Yes <input type="checkbox"/> No*	<input type="checkbox"/> Yes <input type="checkbox"/> No*	<input type="checkbox"/> Yes <input type="checkbox"/> No*
6	Is the container free of distortions, buckling, denting or bulging? <i>Note: If "No", discontinue use of container</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No*	<input type="checkbox"/> Yes <input type="checkbox"/> No*	<input type="checkbox"/> Yes <input type="checkbox"/> No*	<input type="checkbox"/> Yes <input type="checkbox"/> No*

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

APPENDIX D INSPECTION OF THERMOPLASTIC ASTS

D.1 GENERAL

- D.1.1 This Appendix applies to ASTs storing thermoplastics with operating temperatures between ambient and 500°F (260°C).
- D.1.2 This Appendix applies to portable containers, shop-fabricated ASTs and field-erected ASTs as defined in the main body of this Standard.
- D.1.3 Inspections are to be performed whenever the tank or container contains product.

D.2 INSPECTION SCHEDULE

- D.2.1 AST Categories for thermoplastic ASTs are as follows:
 - D.2.1.1 Category 1A – ASTs with spill control and with CRDM that contain a thermoplastic heated to temperatures greater than 200°F.
 - D.2.1.2 Category 2A – ASTs with spill control and without CRDM that contain a thermoplastic heated to temperatures greater than 200°F.
 - D.2.1.3 Category 3A – ASTs without spill control that contain a thermoplastic heated to temperatures greater than 200°F.
- D.2.2 Refer to Table D2.2 below for the inspection timetable. The P, E, I, and L designations are described in the main body of this Standard in section 5.5.

**TABLE D2.2
TABLE OF INSPECTION SCHEDULES**

AST Type and Size (U.S. gallons)		Category 1A	Category 2A	Category 3A
Shop-Fabricated Welded Steel ASTs	0 – 1100 (0-4164 liters)	P	P	P
	1101 - 5,000 (4168-18,927 liters)	P	P	P, E (35)
	5,001 - 30,000 (18,931-113,562 liters)	P	P	P, E(30)
	30,001 - 50,000 (113,566-189,271 liters)	P	P, E(35)	P, E(25)
Field-erected ASTs		P, E(5), I(10)	P, E(5), I(10)	P, E(5), I(10)
Portable Containers		P	P	P

D.3 INSPECTION GUIDELINES

- D.3.1 Follow the requirements found in the main body of the SP001 Standard for Periodic Inspections and FEI plus any additional requirements in this Appendix.

D.4 SUITABILITY FOR CONTINUED SERVICE

- D.4.1 Evaluation for suitability for continued service is a result of Formal External and/or Internal Inspections performed by a Certified Inspector. This section describes the actions to be taken by the owner as a result of these inspections. These conditions and others found during these inspections may require additional inspections or evaluations.
- D.4.2 For all tanks in Table D2.2, if damage that compromises tank integrity (see D4.4.1 through D4.4.3) is found at any time, then repairs to all damaged areas on the AST shall be promptly made. Refer to Steel Tank Institute SP031 Standard for Repair of Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids for alterations or repairs to an AST.
 - D.4.2.1 If MIC is suspected, a sample of liquid from the tank bottom (if available) should be tested for bacteria that could cause MIC.
 - D.4.2.1.1 If MIC is confirmed, mitigation measures shall be taken to eliminate the source of MIC. Mitigation measures shall use good engineering practice appropriate for the tank system design and the material being stored.
- D.4.3 If the re-inspection confirms that MIC has been mitigated due to measures taken to eliminate it, such as regular and careful water removal and sterilization of the tank and piping systems, then the AST may be inspected according to Table D2.2.
- D.4.4 Shop-fabricated ASTs and Portable Containers containing thermoplastics
 - D.4.4.1 Category 3A ASTs - If the shell thickness has been reduced to less than 75% of the original shell thickness, then the AST shall be taken out of service and repaired or replaced. Refer to Steel Tank Institute SP031 Standard for Repair of Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids for alterations or repairs to an AST. The Certified Inspector shall document in the FEI or FII report that the next Formal External or Formal Internal Inspection shall be within 5 years and each subsequent 5 years thereafter until the condition that caused the tank degradation has been fully corrected. When the tank degradation has been arrested or is in a steady-state condition, then follow the inspection intervals shown in Table D2.2 for subsequent inspections.

D.4.4.2 Category 2A ASTs – The AST shall be repaired or replaced if more than 3 square inches of any one square foot of the tank shell (i.e., approximately 2%) is found to be less than 75% of the original shell thickness or if the remaining shell thickness of an area is less than 50% of the original shell thickness at any point. Refer to Steel Tank Institute SP031 Standard for Repair of Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids for alterations or repairs to an AST. The Certified Inspector shall document in the FEI or FII report that the next Formal External or Formal Internal Inspection shall be within 5 years and each subsequent 5 years thereafter until the condition that caused the tank degradation has been fully corrected. When the tank degradation has been arrested or is in a steady-state condition, then follow the inspection intervals shown in Table D2.2 for subsequent inspections.

D.4.4.3 Category 1A ASTs - The AST shall be repaired or replaced if more than 3 square inches of any one square foot of the tank shell (i.e., approximately 2%) is found to be less than 50% of the original shell thickness or if the remaining shell thickness of an area is less than 25% of the original shell thickness at any point. Refer to Steel Tank Institute SP031 Standard for Repair of Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids for alterations or repairs to an AST. The Certified Inspector shall document in the FEI or FII report that the next Formal External or Formal Internal Inspection shall be within 5 years and each subsequent 5 years thereafter until the condition that caused the tank degradation has been fully corrected. When the tank degradation has been arrested or is in a steady-state condition, then follow the inspection intervals shown in Table D2.2 for subsequent inspections.

D.4.5 Field-erected ASTs containing thermoplastics

D.4.5.1 The minimum allowable remaining thickness is 0.1 inch (2.54 mm). In setting the next inspection interval based upon corrosion rates, neither the bottom nor the shell shall be allowed to corrode less than 0.1 inch.

D.4.5.2 The minimum required thickness of each shell course shall be according to:

$$t_{min} = \frac{(H - 1)DG}{8,000}$$

- t_{min} = the minimum acceptable average thickness, in inches, for each course as calculated from the above formula. However, t_{min} shall not be less than 0.1 inch (2.54 mm) for any tank course.
- D = nominal diameter of tank, feet.
- H = height from the bottom of the shell course under consideration to the maximum liquid level when evaluating an entire shell course, feet.
- G = largest specific gravity of the contents.

- D.4.6 Refer to Table D.2.2 above for the inspection timetable. Note that the internal inspection intervals shown in this table are guiding values when corrosion rates are not determined, in accordance with recognized and accepted industry principles and practice.
- D.4.6.1 When corrosion rates are established, the corrosion rates may govern the internal inspection interval, which may be shorter or longer than the values shown.
 - D.4.6.2 For Category 1A tanks, the maximum internal re-inspection interval is 30 years.
 - D.4.6.3 For Category 2A tanks, the maximum internal re-inspection interval is 20 years.
 - D.4.6.4 For Category 3A tanks, the maximum internal re-inspection interval may not be longer than shown in Table D.2.2.

APPENDIX H

Monthly & Annual Inspection Logs

Audit & Inspection

Scoping

Business Entity	Coyote Canyon
Date Performed	11/21/2024
Question Set / Route	Monthly/Annual Tank Farm Inspection

Details

Instructions	<p>Upon the discovery of any leak, spill or release, please contact your supervisor, your Regional Manager and the Compliance Dept. with the following information:</p> <ol style="list-style-type: none"> 1) The time of discovery; 2) The location and cause of the leak, spill or release; 3) The estimated total amount released (gal); 4) Corrective actions used by personnel to stop the source of the leak, spill or release; 5) Clean up procedures and; 6) The total estimated amount recovered (gal).
Audit Time	3:08 PM
Auditor	Emily Zambuto

Questions

G. General

G.1 Inspection Type:

Guidelines

The Annual Inspection will serve as the monthly for the month that it was conducted.

G.2 Tank ID's:

G.3 Is the tank registration certificate posted onsite?

G.4 3rd Party Certification:

G.4.1 Chemical Storage Tanks have been formally inspected by a Certified Inspector once every 5 years (New York) and the records maintained?

G.4.2 Used Oil Tanks have been formally inspected by a Certified Inspector once every 5 years (California) and the records maintained?

G.4.3 Shop Fabricated Tanks greater than 5000 gal, Formal 20-Year Exterior Inspections must be performed by a Certified Inspector and the records maintained?

G.5 SPCC/SPR Plan:

G.5.1 Is the SPCC Plan current and correct (ensure contact info is current & up to date)?

G.5.2 Any other conditions needing to be addressed, or that may affect the site SPCC and/or SPR Plan?

1.0. Containment Dikes

1.1 Containment General:

1.1.1 Dike Condition: Chips, breaks, peeling, paint, and seam.

1.1.2 Standing water, liquid, debris

1.1.3 Evidence of Spill/Leaks

1.1.4 Stormwater Inspected and removed?

1.1.5 Appropriate Drum Storage (labeled, closed lids, bungs in place)

1.1.6 Containment egress pathways clear/fire extinguishers are maintained?

1.1.7 Debris in tank farm sump?

- 1.2 Valves/Pumps:
 - 1.2.1 Gate Valves/pumps used for emptying containment area are secured.
 - 1.2.2 Valves Operational & Labeled directionally for "Open" and "Close"
- 1.3 Sump:
 - 1.3.1 Evidence of spill, release, discharge?
 - 1.3.2 Any liquid or debris removed appropriately?

2.0. Tanks

- 2.1 Tanks General:
 - 2.1.1 Evidence of Spills/Leaks?
 - 2.1.2 Supports in good condition?
 - 2.1.3 Anchor Bolts tight?
 - 2.1.4 All tanks gauges have been inspected and are operational?
 - 2.1.5 Tank Straps/Chains Damaged or Unsecured (where applicable)?
 - 2.1.6 Double-Wall Tanks, Interstitial Space free from liquids?
 - 2.1.7 Settlement/Cracks/Corrosion/Weeds
 - 2.1.8 Spill Buckets/Containers Clean, Labeled & Locked (top & drain)?
 - 2.1.9 Fill Port API Color Coded?
 - 2.1.10 Fill Port Maintained & Locked?
 - 2.1.11 Cracks/Bulges/Corrosion/Rust Spots/Discoloration?
 - 2.1.12 Paint/Sealant in Good Condition?
- 2.2 Foundation:
 - 2.2.1 Free of tank settlement or foundation washout?
 - 2.2.2 Concrete pad or ring wall free of cracking or spalling?
 - 2.2.3 Water able to drain away from tank?
- 2.3 Tank Shell:
 - 2.3.1 Check tank shell surface for any areas of rust or other deterioration (paint failure, pitting and corrosion). Check welds, rivets/bolts, seams, and foundation.
 - 2.3.2 Free of noticeable shell/head distortion, bucking, denting, or bulging?
 - 2.3.3 Free of visible signs of shell/head corrosion or cracking?
- 2.4 Tank Roof:
 - 2.4.1 Free of standing water on roof?
 - 2.4.2 Free of holes?
- 2.5 Venting:
 - 2.5.1 Normal and emergency vents free of obstructions?
 - 2.5.2 Normal vent on tanks storing gasoline equipped with pressure/vacuum vent cap?
 - 2.5.3 Emergency Vent is good working condition and functional, and tested as required by manufacturer?
- 2.6 Level & Overfill Prevention:
 - 2.6.1 Electronic or mechanical liquid level gauge tested for proper operation?
 - 2.6.2 Electronic or mechanical liquid level gauge calibrated during the previous 12 months?
 - 2.6.3 Is the overfill prevention equipment in good working condition (overfill valve, audible alarm, etc.)?
 - 2.6.4 Is the tank ullage (i.e. fill capacity) being determined and documented before filling the tank?
- 2.7 Electrical Equipment:
 - 2.7.1 Is tank/equipment grounding adequate and in good condition?
 - 2.7.2 Is electrical wiring for control boxes, lights, and other high voltage equipment in good condition?
- 2.8 Release Detection:
 - 2.8.1 Is inventory control being performed and documented as required?
 - 2.8.2 Is release detection being performed and documented on underground piping as required?
- 2.9 Labeling:
 - 2.9.1 Are the tanks properly labeled?

3.0. Piping

3.1 Piping General:

3.1.1 Leaks and Spills

3.1.2 Gaps/Punctures/Cracks/Bulges/Corrosion/Rust Spots/Discoloration?

3.1.3 Paint/Sealant in Good Condition

3.1.4 Inspect for leaks/standing on piping, flanges, manifolds and valves. Were any leaks noted?

3.1.5 Condition: rust, missing bolts, pipe condition.

3.1.6 Fill valves should be secured, caps in place.

3.1.7 Flanged connection bolts tight and fully engages with no signs of wear or corrosion?

3.2 Are the pipes properly labeled?

3.3 Release Detection:

3.3.1 Is inventory control being performed and documented as required?

3.3.2 Is release detection being performed and documented on underground piping as required?

4.0. Unloading Area

4.1 Signs of spills, leaks, or standing water.

4.2 Unloading area condition

5.0. Area Outside of Containment

5.1 Signs of spills, leaks, discolored Soil

5.2 Vegetation around tank area is trimmed, not presenting a fire or other hazard.

5.3 Walking/working surfaces are clean, free of obstructions and hazards.

5.4 Crankcase blowdown barrels have available space?

Guidelines

Applicable to INGENCO Facilities only.

5.5 Area around transformers free of leaks?

6.0. Spill Kit

6.1 Is a spill kit available?

Comments

Comments

Signatures

Auditor's Signature

APPENDIX I

Briefings and Training Records



TRAINING LOG

TRAINING LOGS MUST BE MAINTAINED WITH THIS SPCC PLAN.				
*By signing below, the trainee attests that they have completed the indicated training and fully understand the concepts, intentions, and procedures of this SPCC Plan.				
NAME	TITLE	SIGNATURE*	TRAINING DATE	INSTRUCTOR



October 2024

Annual SPCC Training

FOR INTERNAL PURPOSES ONLY

What is an SPCC?



- In order to meet the requirements of EPA's Oil Pollution Prevention regulation 40 CFR Part 112 the owner or operator of an onshore or offshore facility subject to this section must prepare in writing and implement a Spill Prevention Control and Countermeasure Plan.
- This regulation applies to any facility with a cumulative oil storage capacity of 1,320 gallons or more that stores and/or uses oil, which in the event of a release, could be reasonably expected to discharge oil in harmful quantities into the "Navigable Waters of the United States".
- SPCC Plans outline:
 - Where oil is stored onsite (includes tanks and oil filled equipment with a capacity of 55-gal. or greater)
 - How oil is contained, and prevented from being released
 - Transfer operation considerations, description of overfill prevention and alarms
 - Inspection procedure
 - Spill and emergency response procedures
 - Reporting/Notification Procedures
- **Copy of the Site-Specific SPCC Plan**

FOR INTERNAL PURPOSES ONLY

Add Site's SPCC Figure 1



FOR INTERNAL PURPOSES ONLY

Site Security



- Containers must be located in areas that are accessible to authorized site personnel only.
 - Fill ports and secondary containment should be kept locked.
- Lighting must be sufficient to enable the discovery of a spill during hours of darkness and to prevent spills from occurring due to acts of vandalism.

Roles and Responsibilities



Environmental Advisors:

- Developing SPCC Plans
- Providing Annual Spill Prevention Training and Guidance for Staff
 - Maintaining training records
- Assigning periodic inspections
- Monitoring regulation changes
- Supporting spill incident reporting and follow up
 - Ensure spill equipment is stocked
- Reviewing SPCC/SPR Plans at least once annually

Roles and Responsibilities



Site Operators:

- Attend Spill Prevention Training
- Be familiar with SPCC Plan requirements
- Be familiar with the locations of spill cleanup materials, and inventory at least once month.
- Perform required periodic inspections of bulk storage tanks and containers (daily, weekly, monthly, annually, as assigned by the EA)
- Keep records of inspections, fuel deliveries, secondary containment dike drainage, records of maint. and repairs made to the tank or systems
- Control, contain, cleanup spills. Document spills, provide appropriate notifications of spills.

Daily Inspections



- Check for leaks on all equipment covered by the plan.
- Inspect secondary containments. Drain rainwater from containment, assuming no oily sheen is present.
Remove any vegetation, accumulated dirt or debris.
- Make sure containment valves are closed and locked.
- Ensure all portable containers used onsite have labels and proper secondary containment.

FOR INTERNAL PURPOSES ONLY

Monthly/Annual Inspections



- Documented in EHS Insight: [Monthly Tank Inspection](#)
- ***All components for daily inspection, in addition:***
- Making sure level sensors are working properly, testing high level alarms, if possible.
- Checking interstitial space of double wall tanks (if manual check is required).
- Ensuring proper labeling on tanks / containers
- Ensuring fill ports closed and locked and directional arrow, or open/close is legible on all flow control valves.
- Piping in good condition, with no leaks
- Spill kits present and re-stocked as needed
- Making sure SPCC hard copy is onsite, along with any necessary tank registrations

FOR INTERNAL PURPOSES ONLY

Transfer Operations



Prior to Transfer Operations

- A designated, trained facility employee must be present to observe all oil deliveries/used oil loadout, etc. and to ensure that proper spill prevention procedures are followed.
- Have spill kit materials present in area of planned work.
- Determine the volume needed to fill the tank to the working capacity (90% of design capacity).
- Identify the fill port and receiving tank for oil being delivered.
- Place a drip container under the fill port or hose.
- Verify that the drain valves to the secondary containment structures are in the closed position.

FOR INTERNAL PURPOSES ONLY

Transfer Operations



During Transfer Operations

- Verify driver has placed wheel checks to prevent vehicles from departing before complete disconnection of flexible oil transfer lines.
- Verify that there are no leaks and that the oil is transferring to or from the desired tank.
- Inspect piping and tank, including valves and connections for leaks during the delivery.
- Monitor the liquid level in the receiving tank to prevent overflow.

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Transfer Operations



After Transfer Operations)

- Verify that all isolation valves have been returned to the closed position before disconnecting the transfer hoses.
- Verify that the delivery/vac truck vehicle is disconnected from the tank and piping prior to exiting the facility.
- Prior to the vehicle exiting the facility inspect the loading area to ensure that no oil has been leaked or spilled during the delivery.
- Verify vehicle outlets and drains are in place.
- Document and maintain records of the delivery including – quantity of oil delivered, receiving tank, and any problems encountered during the Transfer Operation.

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Spill Response



- Identify the source of the spill or discharge. If spill response procedures are known and proper PPE is readily available, attempt to stop the release at its source (i.e. close valve, return drum to upright position, plug holes, etc.)
- Remember the 3 C's of handling any accidental spills. These are control, contain, and clean up.
- Controlling the situation is to stop the cause or source of the spill or slowing down the rate of release.
- Containing the spill is minimizing the damage of the oil or hazardous material by preventing the spill from spreading to other areas.
- Clean up is the removal of the contaminants or substance itself from the affected area. The proper disposal of the materials used in the removal of the contamination is the final step in any clean up.

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24/7 Emergency Response



 **ARCHAEA ENERGY**
a bp company

**Waste Transportation & Disposal
& 24-Hour Environmental
Emergency Response**

safety-kleen.

To Schedule Service-
ariaenergy@cleanharbors.com

For 24/7 Emergency Response-
1-800-Oil-Tank (1.800.645.8265)

FOR INTERNAL PURPOSES ONLY

Removal of Product



- Removal of oil or glycol as a liquid may be required as part of cleanup efforts.
- Oil/glycol requiring removal may be in diked areas, storm water drains, or atop water.
- Place the absorbent pads, pillows or rolls directly on the liquid.
- Scatter the absorbent pads or rolls in the different areas to aid in the clean up.
- Continue placing and replacing absorbent pads until the last drop of liquid is absorbed.
- Get ready with your plastic bags found in the Spill Kits for the soiled absorbents.
- Place all the soiled absorbent pads inside the plastic bag and re-bag soiled absorbents to prevent leakage.
- Once you have finished with bagging everything place the bags inside the spill kit overpack drum.
- Label or tag the container.

FOR INTERNAL PURPOSES ONLY

Removal of Contaminated Materials



- EAs will determine the magnitude of the cleanup activities governed by current regulations.
- Remediation may involve the excavation of soils either manually or with the use of heavy equipment.
- Develop waste type and quantity estimates for obtaining proper disposal approvals.
- Waste characterization sampling may be required. The facility manager may coordinate water and/or soil sampling to verify that applicable cleanup standards have been met.
- Contain oil or glycol-contaminated materials (i.e., excavated soils, absorbent materials, etc.) in drums or place directly into plastic lined dump trucks (or other containers determined to be appropriate from transportation and disposal)

FOR INTERNAL PURPOSES ONLY

Removal of Oil from the Storm Water Drainage System and Waterways



- Releasing oil into a waterway in sufficient amounts to cause a visible sheen or bottom sludge is a violation of state and federal water quality standards.
- Remediation is not complete until all visible indications of oil have been removed.
- Small areas may be soaked up using oil absorbent mats. Oil booms can be used to contain oil on water surfaces.
- Large surface areas may require the use of an oil skimmer.
- Remove oil released into dry storm water drains to prevent the migration and contamination of waterways during future precipitation events.
- Future storm water discharges from these conveyances should be monitored for signs of oil.

FOR INTERNAL PURPOSES ONLY

Removal of Contaminated Materials



- EAs will determine the magnitude of the cleanup activities governed by current regulations.
- Remediation may involve the excavation of soils either manually or with the use of heavy equipment.
- Develop waste type and quantity estimates for obtaining proper disposal approvals.
- Waste characterization sampling may be required. The facility manager may coordinate water and/or soil sampling to verify that applicable cleanup standards have been met.
- Contain oil or glycol-contaminated materials (i.e., excavated soils, absorbent materials, etc.) in drums or place directly into plastic lined dump trucks (or other containers determined to be appropriate from transportation and disposal)

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Spill Notifications



- Once a discharge is detected (or suspected) the Plant Manager shall be notified immediately.
 - The Plant Manager will submit the incident report via EHS Insight
 - The EA will follow up with the Plant Manager or Site Operator to obtain additional information.
 - EA will notify Federal, state and local agencies as necessary.
- Landfill personnel will be notified if the discharge leaves the facility's property or threatens the landfill's on-site storm water or leachate containment ponds.

FOR INTERNAL PURPOSES ONLY

Spill Reporting



Archaea Energy English David Jaenike

Home / Incident Event / Report an Incident

Send Notification Print First Report Cancel

First Report Workflow

Consequences

<input type="checkbox"/> Illness	- Record details relevant for regulatory reporting and affected personnel.
<input type="checkbox"/> Injury	- Record details relevant for regulatory reporting of injured personnel.
<input type="checkbox"/> Asset	- Record details about damage to equipment, property, and vehicles.
<input checked="" type="checkbox"/> Environmental	- Record details about environmental damage and released materials.
<input type="checkbox"/> Security	- Record details about security breaches and damages, both virtual and physical.
<input type="checkbox"/> Near Miss	- Record details about a potential consequence.

Event Details

Business Entity

Bethlehem ✓ ▼

GPS or Map Location of Incident

Did the Incident occur on company premises?

☐ Yes ☐ No

EHS Insight Spill Report

FOR INTERNAL PURPOSES ONLY

Recordkeeping



- Records of spills must be maintained onsite for at least 5 years.
- All records must include:
 - Name and title of employees involved in spill response
 - Date and time of the release of oil
 - Type of material released
 - Estimates of the total quantity released
 - Estimates of the quantity discharged, Source of release
 - Environment impact
 - Any damage or injuries as a result
 - Parties notified
 - Spill response summary
 - Estimation of volume of oil recovered
 - Waste disposal records
 - Records of regulatory notifications (if necessary)
 - Operating procedures and equipment upgrades needed to prevent recurrence, Recommendations to prevent future spills.

In the event of a discharge of oil to navigable waters or adjoining shorelines, the following information will be provided to the National Response Center (see the notification information provided in Section 4.3 of the Plan)

Discharge/Leakage Date		Type	
Facility Name			
Facility Location (Address/Zip)			
Name of reporting individual			
Type of material discharged		Quantity (Total quantity discharged)	Quantity (Volume)
Source of the discharge		Media affected	<input type="checkbox"/> Soil <input type="checkbox"/> Water (specify) <input type="checkbox"/> Other (specify)
Actions taken			
Damage or injuries		<input type="checkbox"/> No <input type="checkbox"/> Yes (specify)	Evaluation needed? <input type="checkbox"/> No <input type="checkbox"/> Yes (specify)
Organizations and individuals notified		<input type="checkbox"/> National Response Center 800-424-9302 Time <input type="checkbox"/> Cleaning contractor (Specify) Time <input type="checkbox"/> Facility personnel (Specify) Time <input type="checkbox"/> State Agency (Specify) Time <input type="checkbox"/> Other (Specify) Time	

Table 3-4
Pollution Incident History

Date	Description (Cause/Magnitude/Action/Impact)
8/8/2024	Initial operations. No releases within the past five years.

Release Certification

I hereby certify that I have knowledge of the daily operations of the Facility and attest that there have been no releases of hazardous substances from this Facility for the period indicated below.

FOR INTERNAL PURPOSES ONLY

Common SPCC Violations



- Untrained Personnel
- Failure to Report Spills
- Lack of adequate SPCC Plans, or out-of-date plans (emergency contact info)
- Inadequate secondary containment
- Lack of procedures and control measures to prevent a spill from reaching the environment
- Lacking or damaged labeling
- Missing inspection records
- Corrosion on active tank and/or piping systems

FOR INTERNAL PURPOSES ONLY

Disposal



- Used oil: 55 gallon drum or 275 gallon tote
 - Container must be closed when not filling. Must have “Used Oil” Label placed on side of drum.
 - Container must be on containment
 - Dispose via Safety Kleen, or another licensed waste hauler.
- Oily condensate: oil/condensate skimmed off the oil water separator. **Must be managed separate from used oil, profiled prior to disposal. Environmental Advisor to assist**
- Oily rags, oily filters and oil spill clean up material: Placed in 55 gallon open top drum.
 - Container must be closed when not filling. Must have “Oily Absorbents” Label placed on side of drum.
 - Dispose via Safety Kleen, or another licensed waste hauler.

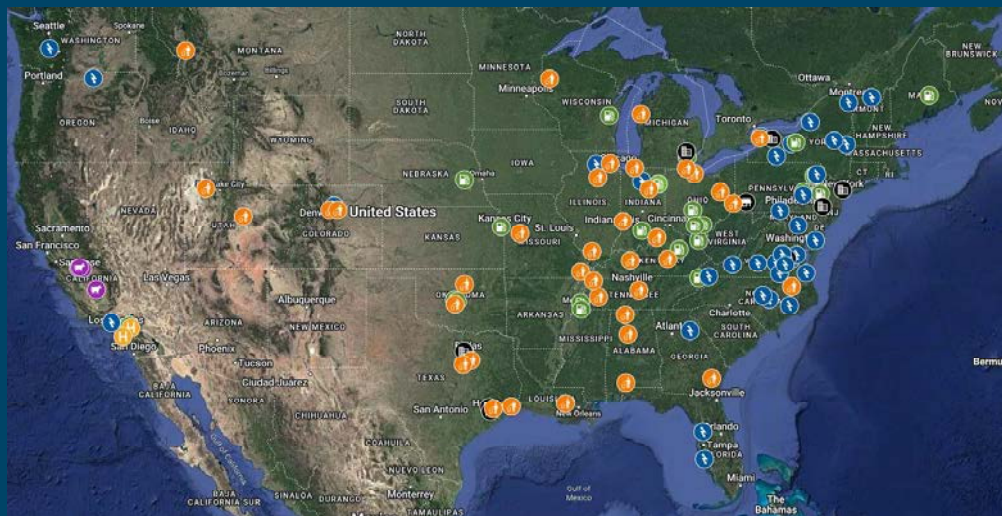
FOR INTERNAL PURPOSES ONLY

Questions?

Pauline Ruddy, Director Environment and Regulatory Affairs
Pauline.ruddy@bp.com or pruddy@archaea.energy

Emily Zambuto, Executive Director of Environmental Compliance
ezambuto@archaea.energy

Nevin Edwards, Environmental Data and New Development Manager
nedwards@archaea.energy



Advisor	Contact Information	Region
Lisa Manning, P.E.	lmanning@archaea.energy p. 828-450-3980	Southeast: FL, GA, AL, Eastern TN + MD & DE
David Jaenike	djaenike@archaea.energy p. 595-738-7693	Northeast: NY, PA, ME, VT
TBD: Emily Zambuto*	ezambuto@archaea.energy p. 585-948-4616	Upper Mid-West/Great Lakes: MI, OH, IN, IL, WI
Ryan Christman, P.E.	rchristman@archaea.energy p. 863-224-4395	Mid-Atlantic: VA, NC
Trenton Martin	tamartin@archaea.energy p. 913-544-5186	Mid-West: KS, MO, NE, OK, LA, AL, KY, Western TN
Bianca Johnson	bjohnson@archaea.energy p. 346-439-1938	Western: WA, OR, CA, UT, MT, CO, TX

Appendix

Appendix I Site Severe Weather Response Plan

Appendix

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Site Severe Weather Response Plan



Version 1.0
Archaea Energy
PMO
11/8/2022

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1 Purpose

The Site Severe Weather Response Plan standardizes the Archaea Energy approach to mitigating risks associated with severe weather. Sections that address disaster preparedness, post-disaster assessment, and recovery, are intended to:

1. Prepare sites and personnel in advance of an emergency and,
2. Provide an accurate damage assessment and condition report after an emergency.

2 Scope

The following severe weather procedures represent a phased response to an increased level of danger.

Severe Weather (Hurricane, Tornado, etc.) Watch Procedures should automatically commence upon the issuance of a severe weather watch by the National Weather Service. These basic preparations include precautionary distribution of emergency supplies, filling of fuel supply tanks, and preparing to use back-up power.

Severe Weather (Hurricane, Tornado, etc.) Warning Procedures should automatically commence upon the issuance of a severe weather warning by the National Weather Service. These preparations include full emergency measures such as securing computer equipment, boarding up windows, and relocating on-site equipment to designated areas.

Note: Severe weather preparations can also be initiated before a formal severe weather watch or warning is issued.

- When warranted by factors such as available manpower, status of equipment, etc.
- At the discretion of the Regional Manager, Lead Operator, and Field Safety Manager, who are also responsible to initiate such procedures.

3 Audience

Regional Manager, Plant Manager and Plant Operators of Archaea Energy shall read and understand the company's Severe Weather Response Plan and consult the following check lists to prepare the LFGTE Facility for severe weather.

4 Plan

4.1 Operational Considerations

Site management, local, and state authorities will determine the plan to use during Severe Weather Watches or Warnings. Regional and Facility managers are responsible for monitoring, as follows.

72 hours before severe weather arrival

Notify regional manager/operations manager, review operational status.

48 hours before severe weather arrival

Review severe weather tracking with regional manager and grid reliability status.

24 hours before severe weather arrival

Shut down plant, secure site, all personnel evacuate the property.

4.2 Severe Weather Emergency Operations

Use the [Severe Weather Watch](#) and [Severe Weather Warning](#) procedures when the National Weather Service or General Administration has declared a Severe Weather Watch.

The Regional Manager, site personnel, and the Operations Team play a key role in preparing for and recovering from severe weather. Coordinate field operations communication through the following personnel:

- Regional Manager
- Director, LFGTE or RNG (as appropriate)

If phones are not available, use email or radio communication.

4.2.1 Storm Preparations

All onsite employees should contact their Regional Manager concerning their personal disaster plans to facilitate emergency scheduling. Personnel should ensure the company has correct, complete contact information in the system of record (for example, ADP or similar system).

Refer to the [Severe Weather Watch](#) and [Severe Weather Warning](#) procedures in this document.

4.2.2 Operations Shut Down

The facility may be shut down prior to the area experiencing severe weather. **Standard practice is to begin plant shut down 24 hours prior to severe weather is expected.** However, the plant may be shut down earlier based on local conditions.

Operations resume upon a facility inspection after an all clear is issued by Archaea Energy, the Utility, and the host landfill.

4.2.3 Record Keeping

Downtime records must be maintained as a condition of the site's plans and permit requirements.

4.2.4 Declaration of Emergency

A declaration of emergency by the Company may occur prior to the issuance of a severe weather watch or warning issued by the National Weather Service.

4.2.5 Disaster Preparedness – Coordination Meeting

Upon declaration of emergency by the Lead Operator, Regional Manager, or Field Safety Manager, a meeting of all critical Archaea Energy departments is held via a conference call. The primary purpose of the meeting is to develop a shutdown schedule for individual facilities.

This meeting occurs prior to the formal issuance of a severe weather (severe weather, tornado, windstorm, etc.) watch by the National Weather Service.

Critical departments include, but are not limited to:

- COO
- Director of Operations
- Regional Manager
- Plant Operator
- Tech Infrastructure and Operations
- Health, Safety & Environmental
- HR Representative for Area
- Finance Representative
- Environmental Representative

4.3 Severe Weather Preparation Checklist

Inspect all facilities prior to severe weather season to ensure adequate procedures are in place to minimize building damage.

The following steps should be taken annually, before storm season begins.

- ☐ 1. The Lead Operator is responsible for procurement, inventory, storage, and distribution of emergency supplies. Check emergency supplies prior to severe weather season each year. Obtain supplies only for 2-3 days.
- ☐ 2. Note the stability of the utility grid in the area.
- ☐ 3. Perform regular facility inspections prior to and during the severe weather season to ensure the facility is prepared for potential storm activity and building damage is minimized.
- ☐ 4. Determine severe weather work assignments annually prior to severe weather season.
- ☐ 5. Follow all general procedures, as required.

4.4 Severe Weather Watch Checklist

- ☐ 1. The Lead Operator records all efforts associated with severe weather preparedness.
- ☐ 2. Follow all general procedures as required.
- ☐ 3. The Lead Operator/Regional Manager coordinates employee preparedness work activities with the Operations Team.
- ☐ 4. Fill generator fuel tanks.
- ☐ 5. Test all generators to ensure they are operational. If not, notify Regional Manager.
- ☐ 6. List incomplete preparedness tasks and track them to completion in the system of record.
- ☐ 7. Secure all fuel/lubricant storage tanks/drums.
- ☐ 8. Verify battery health of all equipment batteries, including station 48 VDC, engine 24 VDC, PLC backup batteries.
- ☐ 9. Inspect all outside areas and remove loose debris that could potentially damage or destroy equipment or structures.
- ☐ 10. Repair any loose or damaged doors and/or siding.
- ☐ 11. Organize materials, tools, workbenches, and shop equipment to minimize damage and lost recovery time.
- ☐ 12. Backup computer system. All computer users are responsible for backing up their own data files.
- ☐ 13. Release personnel to their homes on a timely basis.
- ☐ 14. Secure facility doors.

4.5 Severe Weather Warning Checklist

- ☐ 1. Follow all general procedures as required.
- ☐ 2. Stage all equipment in the plant in the least hazardous area:
 - ☐ o Smaller, lighter equipment in center between units
 - ☐ o Bigger, heavier equipment ringing the smaller equipment
 - ☐ o Move as much equipment, waste receptacles, etc. as possible inside plant
- ☐ 3. Coordinate and schedule shut down of plant with host landfill contact.
- ☐ 4. When required by Regional Manager and Operations Manager, secure plant with controlled shutdown, isolation of electrical equipment, and storage tank valves/sight glasses
 - ☐ o Shut all sight glasses/tank valves
 - ☐ o Shutdown plant
 - ☐ o Lubricate Kaeser blower lobes to ensure they don't lock up/rust
 - ☐ o Open engine 24 VDC control breakers on the side of the engine
 - ☐ o Open utility interconnect/substation breaker
 - ☐ o Open plant 48 VDC control power breaker
- ☐ 5. Turn off and unplug ALL computer equipment and metering equipment (Landtec GEM, Testo 340, Siemens Ultramat GC, etc.) susceptible to damage should be moved to a more secure area and covered (with plastic or placed in pelican cases).
- ☐ 6. Draft back-to-work schedule.
- ☐ 7. Leave brooms, shovels, and spill kit just inside the facility entrance for easy deployment.
- ☐ 8. Take radios (if available), 4Gas Analyzer, cell phones, and chargers home for communications, as necessary.
- ☐ 9. The Lead Operator shall ensure emergency preparations work is complete.
- ☐ 10. Release personnel to their homes on a timely basis.
- ☐ 11. Secure facility doors.

4.6 Recovery Checklist

The Lead Operator must convene a meeting of the Operations Team Leaders and site personnel to evaluate the operational status of facility as soon as possible after a severe weather event.

Recovery is that period of time beginning within three (3) hours of re-opening a site or facility until normal operations are resumed. Normal operations should be established as soon as possible.

Generally, recovery operations are determined by the extent of damage sustained during the storm. The responsible coordinators must determine specific procedures or course of action to follow for their areas.

The Lead Operator should use the checklist below and the [Damage Assessment Form](#) to record the facility inspection immediately after the emergency and report it to the Regional Manager.

- ☐ 1. Ensure you have the 4Gas clipped on and active before you assess damage .
- ☐ 2. Survey the area for outside and inside damage and use the below form to log all damage.
- ☐ 3. Repair faults, as needed.
- ☐ 4. Clear areas of debris, as needed.
- ☐ 5. Obtain approval from utility grid to power on the plant.
- ☐ 6. Follow the restart plant from a utility outage procedure (plant specific).

4.7 Damage Assessment Form

4Gas must be on and active during damage assessment.

Facility: Archaea Energy - Date: _____
 Lead Operator _____ Time: _____

Use minor, moderate or severe to describe the extent of damage.

1. Access road to facility open ☐ Yes ☐ No

Comments: _____

2. Facility entrance and roads open ☐ Yes ☐ No

Comments: _____

3. Facility utilities damage ☐ Yes ☐ No *If yes, please comment*

a. Electrical Power Lines ☐ Yes ☐ No

b. Telephone Lines ☐ Yes ☐ No

c. Water Service ☐ Yes ☐ No

d. Sewer Service ☐ Yes ☐ No

Comments: _____

If yes, please comment

4. Facility grounds damage

☐ Yes ☐ No

e. Flooding ☐ Yes ☐ No

f. Downed Trees ☐ Yes ☐ No

g. Vegetation Damage ☐ Yes ☐ No

h. Debris Accumulation ☐ Yes ☐ No

i. Fences, Posts or Gates Damage ☐ Yes ☐ No

j. Signs Damaged or Missing ☐ Yes ☐ No

Comments:

If yes, please comment

5. Building Damage (Exterior)

☐ Yes ☐ No

a. Walls ☐ Yes ☐ No

b. Roof ☐ Yes ☐ No

c. Doors ☐ Yes ☐ No

d. Windows ☐ Yes ☐ No

e. Other ☐ Yes ☐ No

Comments:

If yes, please comment

6. Building Damage (Interior)

☐ Yes ☐ No

f. Walls or Ceilings

☐ Yes ☐ No

g. Flooring

☐ Yes ☐ No

h. Office Equipment (e.g., computers, printers, telephone, etc.)

☐ Yes ☐ No

i. Electrical Equipment

☐ Yes ☐ No

j. Furniture

☐ Yes ☐ No

Comments:

If yes, please comment

7. Temporary Structures Damaged

☐ Yes ☐ No

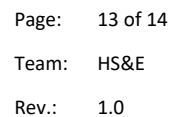
Comments:

8. Environmental Concerns

If yes, please comment

<input type="checkbox"/> Stormwater retention areas flooded or damaged	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Fuel tanks damaged	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Fuel tanks leaking	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Fuel tanks contaminated with water	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Condensate at unacceptable levels in plant	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Other hazardous materials present/exposed	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Comments:



This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Date _____

NOTE: The only controlled copies of this document are the electronic read only version located on the [Company Intranet](#).
Company Confidential & Proprietary.

5 Definitions and Acronyms

N/A

6 Related Documents

1. [HS&E Hazard Assessment and PPE Policy.pdf](#)
2. [HS&E Incident Reporting and Investigation Policy.pdf](#)

7 Records

This record will be maintained in the [HS&E Policies](#) folder.

8 Approvals

Approver Title
SVP, Health & Safety

9 Revision History

Revision	Date	Changes
1.0	11/08/2022	Initial version

Appendix

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Appendix

Appendix J Preliminary Drainage Report

Appendix

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Coyote Canyon Landfill Project: Preliminary Drainage Report

December 14, 2023

Submitted to:



City of Newport Beach
100 Civic Center Drive
Newport Beach, CA 92660



Orange County Public Works
601 N. Ross Street
Santa Ana, CA 92701



Archaea Energy Inc.
4444 Westheimer Road, Suite G450
Houston, TX 77027

Prepared by:



BKF ENGINEERS

BKF Engineers
4675 MacArthur Court, Suite 400
Newport Beach, CA 92660

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Appendix A. AES Pre-Project RM Calculations

Appendix B. AES Post-Project RM Calculations

1. Introduction

1.1 Overview

The following Preliminary Drainage Report is being prepared for the Coyote Canyon Landfill (CCL) Project ("Project"). This Report will summarize the pre-project and post-project peak flowrates and present a proposed drainage concept. This report will include analyses and modeling to compare the 10-year and 25-year pre- and post- flowrates.

1.2 Location

The Project is a 1.88-acre site located at Coyote Canyon Landfill (CCL), which is at 20662 Newport Coast Drive in the City of Newport Beach, Orange County, California. The Project is a new Renewable Natural Gas (RNG) Plant at CCL which will convert landfill gas into a pipeline quality natural gas equivalent. The RNG Plant will occupy about 1.07 acres of the Project site.

A project vicinity map is shown on **Exhibit 1**.

1.3 Drainage

Pre-Project

The pre-project condition site overland flows to two discharge locations. About 75% of the Project site (1.4-acres), on the eastern side discharges to a concrete ditch (*Discharge Point #1*). The concrete ditch is tributary to an offsite City-owned 24-inch RCP. The remaining 25% of the Project site (0.5-acres), on the western side, drains to the entrance road (*Discharge Point #2*). These road flows drain offsite along the road's v-gutter and are intercepted by catch basins which also discharge to the 24-inch RCP.

Refer to the pre-project condition drainage map shown on **Exhibit 2**.

Post-Project

The post-project condition site drainage preserves the pre-project drainage patterns and flow distribution to the two discharge locations. The eastern 1.4-acres of the site drains northerly to the proposed perimeter access road along the northern and eastern Project boundary. The access road gutter directs flows and captures them with inlets to a subsurface gravel layer under the access road. The gravel layer will provide storage and is for hydromodification compliance. Within the gravel layer, a perforated pipe directs flows to a treatment BMP unit at the northwest Project boundary, located at *Discharge Point #1*. The BMP unit's outflows are piped offsite to the 24-inch RCP. The western 0.5-acres does not change in post-project condition, as the tributary area and flow paths to *Discharge Point #2* are the same as pre-project condition.

Refer to the post-project condition drainage map shown on **Exhibit 3**.

For focus of this drainage report, the analyses present hydrology assuming surface flows and are not based on subsurface flows. Additionally, hydraulic analyses are beyond the scope of this report and will be evaluated under a separate cover.

2. Methodology

2-1. Overview

The 10-year and 25-year hydrologic calculations for the pre-project and post-project conditions are prepared using the Advanced Engineering Software (AES) software. The AES software includes *Rational Method* (RM) calculations to determine peak flowrates.

2-2. Rational Method

The *Rational Method* (RM) calculations with the *Advanced Engineering Software* (AES) software are completed for the Projects drainage areas. These RM calculations follow the *Orange County Hydrology Manual* (OCHM). The software requires input for drainage area characteristics, which includes area, landuse, flowpath length, and flowpath slope.

The RM correlates rainfall intensity, runoff coefficient, and drainage area to peak runoff. The software computes runoff from the following relationship:

$$Q = 0.90 \times (I - F_m) \times A \text{ for } I \text{ greater than } F_p$$

$$Q = 0.90 \times a_i \times I \times A \text{ for } I \text{ less than or equal to } F_p$$

Where:

Q = runoff (cfs)

0.90 = calibration constant determined by an average fit between Rational Method and design storm unit hydrograph

$F_m = a_p \times F_p$ = loss rate of total watershed (in/hr)

I = rainfall intensity (in/hr)

F_p = infiltration rate for pervious areas (in/hr)

a_i = ratio of impervious area to total area (decimal fraction)

a_p = ratio of pervious area to total area (decimal fraction)

A summary of the modeling parameters for the RM calculations are presented:

- **Subareas**: The Project's subarea boundaries are shown on **Exhibit 2** and **Exhibit 3** for pre-project and post-project conditions. Boundaries are delineated using 2022 topographic survey by D. Woolley & Associates and 2023 preliminary proposed grading by BKF.
- **Landuse**: The Project landuse is designated as *commercial* (90% impervious) for impervious areas and *urban turf* in poor condition for pervious areas. Given 100% impervious landuse category is not allowed in AES, the commercial area was scaled up to equate to a subarea's actual impervious percentage.
- **Soils**: The Project was assigned Soil Group D and applied an Antecedent Moisture Condition (AMC) II for 10-year and 25-year storms, which represent moderate runoff potential.
- **Loss Rate**: The loss rates for pervious areas (F_p) is based on Soil Group, which is 0.2 inches per hour for Soil Group D.
- **Time of Concentration (T_c)**: The initial time of concentration (T_c) is calculated with the Kirpich formula, and requires subarea length, slope, and development type. For model routing, initial subareas for commercial/industrial landuses should be subdivided to have flowpath lengths less than 330 feet, as recommended in the OCHM Addendum No. 1. The Project subareas have flow paths lengths not exceeding the 330 feet criteria.

A summary of the *Rational Method* (RM) calculations for the 10-year and 25-year storms for each of the sub-area is shown in **Table 1** and **Table 2** for pre-project and post-project conditions.

Table 1. Pre-Project AES RM Subarea Flow Summary

Area ID	Area (ac)	Imper %	Q ₁₀ (cfs)	Q ₂₅ (cfs)
101	0.41	0.0%	0.75	0.91
102	0.96	19.8%	2.86	3.43
103	0.51	49.0%	1.36	1.63

Table 2. Post-Project AES RM Subarea Flow Summary

Area ID	Area (ac)	Imper %	Q ₁₀ (cfs)	Q ₂₅ (cfs)
201	0.38	73.7%	1.04	1.25
202	0.99	58.6%	3.11	3.71
203	0.51	49.0%	1.36	1.63

For comparison assessment, post-project versus pre-project flows are determined at the two discharge locations. For the post-project condition, flows tributary to *Discharge Point #1* increase by 1.2 and 1.4 cfs during the 10-year and 25-year storms, respectively.

Table 3. Post-Project vs. Pre-Project AES RM 10-Year Flows at Discharge Points

Discharge Point	Area (ac)	Pre-Proj. Q ₁₀ (cfs)	Post-Proj. Q ₁₀ (cfs)	[Post] – [Pre] ΔQ ₁₀
#1	1.37	2.40	3.61	1.21
#2	0.51	1.36	1.36	0.00

Table 4. Post-Project vs. Pre-Project AES RM 25-Year Flows at Discharge Points

Discharge Point	Area (ac)	Pre-Proj. Q ₂₅ (cfs)	Post-Proj. Q ₂₅ (cfs)	[Post] – [Pre] ΔQ ₂₅
#1	1.37	2.93	4.33	1.40
#2	0.51	1.63	1.63	0.00

The results of the RM modeling are included in **Appendix A** for pre-project and **Appendix B** for post-project.

3. Conclusion

This Preliminary Drainage Report for the Coyote Canyon Landfill (CCL) Project has determined preliminary hydrology calculations to determine pre-project and post-project design flowrates. This Report has also presented the Project's proposed drainage concept.

The analyses in this Report show post-project discharge rates for the 10-year and 25-year event exceed the pre-project rates at *Discharge Point #1*. However, the site was previously occupied with structures associated with a landfill gas-to-energy facility that was operated from 1988 to December 2015. The facility received landfill gas from the Coyote Landfill and converted it to electricity. The facility had five buildings as well as numerous other supporting structures on-site. In addition to the five buildings on the project site, the major features of the facility include the following: a boiler and dilution fan structure, five pad-mounted transformers, a generator breaker, a cooling tower structure, landfill gas blowers, four flares for burning excess landfill gas, a storage area and an exhaust stack associated with the steam plant. In addition, there are several above ground storage tanks located on the project site. The site was completely paved. See Figure 1 below. In December 2015, the previous operator, Fortistar, closed the facility since the landfill was no longer producing enough landfill gas for the facility to remain economically viable. The site was subsequently demolished and prepared for a new facility by a new operator. It is our opinion that the pre-project condition should be the condition before the removal and demolition of the previous facility. Since the proposed project site consists of pervious areas, the post-project condition flow rate for the 10- and 25-year flows are less than pre-project condition when it is 100% impervious. Therefore, the proposed project does not have an impact to the drainage condition.



4. References

Orange County Hydrology Manual, Williamson and Schmid, Oct. 1986.

Orange County Flood Control District Design Manual, 2nd Ed., Jan. 2023.

Exhibit 1. Project Vicinity Map



PRELIMINARY DRAINAGE REPORT

REV	DATE	DESCRIPTION	DRN BY	CHK BY	APRV BY
U	11/16/23	ISSUE FOR BID	DMM	VL	RTC

CIVIL ENGINEER:
BKF **BKF ENGINEERS**
4675 MACARTHUR CT., SUITE 400
NEWPORT BEACH, CA 92660
(949) 526-8640
www.bkf.com

OWNER: **ARCHAEA ENERGY**
4444 WESTHEIMER ROAD, SUITE G450
HOUSTON, TX 77027
Ph: (346) 708-8272

ENGINEER: **BIOGAS ENGINEERING**
2321 E. 28TH STREET, SUITE 400
SIGNAL HILL, CA 90755, Ph: (562) 726-3565
EMAIL: INFO@BIOGASENG.COM

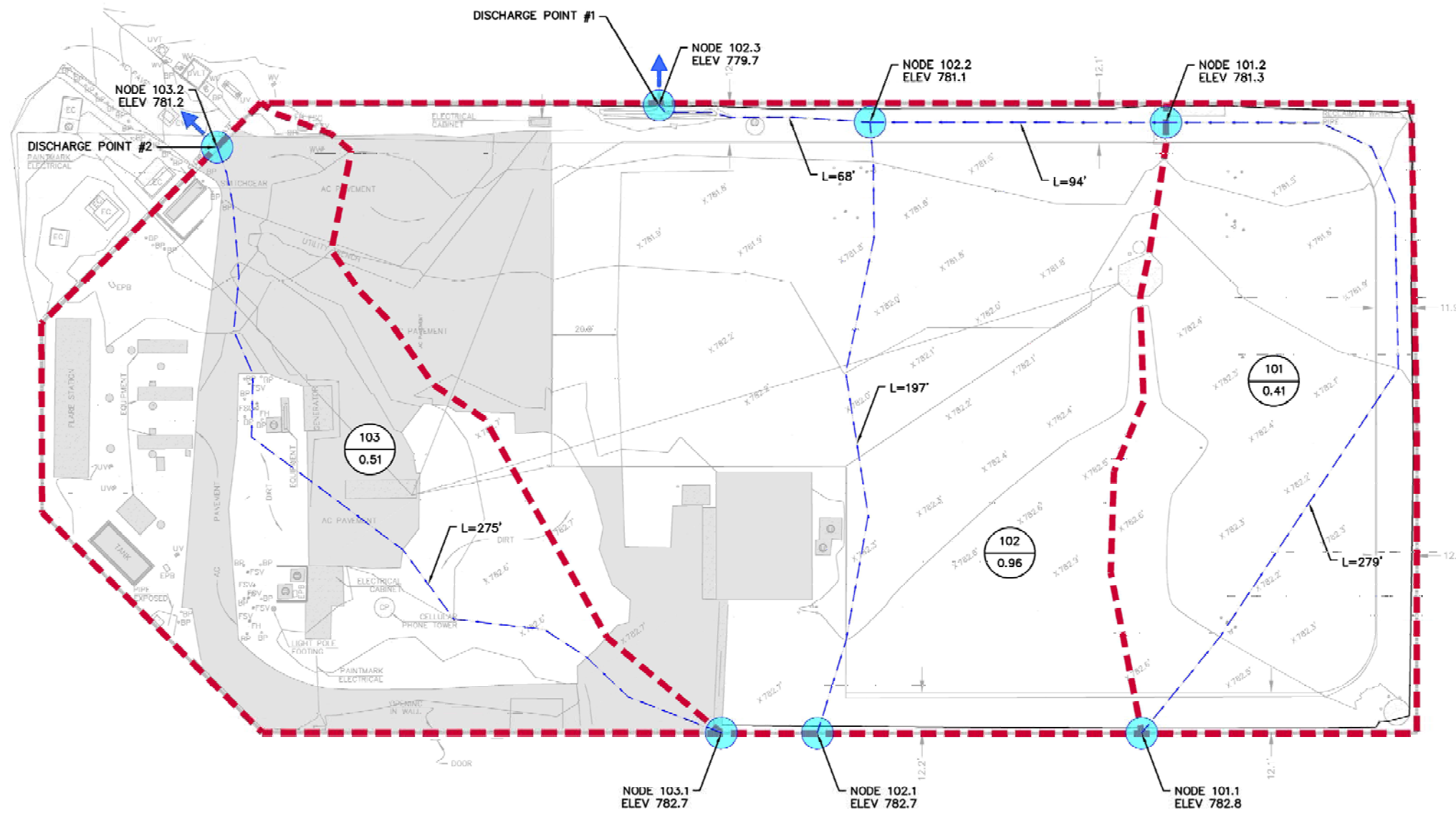
PROJECT VICINITY MAP	
COYOTE CANYON LANDFILL RNG PROJECT 20662 NEWPORT COAST DRIVE — NEWPORT BEACH, CA 92657	EXH 01

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NOT FOR CONSTRUCTION

ISSUED FOR REVIEW

Exhibit 2. Pre-Project Drainage Map



Pre-Project Hydrology				
Area ID	Area (ac)	Imperv %	Q ₁₀ (cfs)	Q ₂₅ (cfs)
101	0.41	0.0%	0.75	0.91
102	0.96	19.8%	2.86	3.43
103	0.51	49.0%	1.36	1.63

PRELIMINARY DRAINAGE REPORT

CONFIDENTIAL

NOT FOR CONSTRUCTION

ISSUE FOR BID

REV	DATE	DESCRIPTION	DRN BY	CHK BY	APRV BY
U	11/16/23	ISSUE FOR BID	DMM	VL	RTC

CIVIL ENGINEER:



BKF ENGINEERS
4675 MACARTHUR CT., SUITE 400
NEWPORT BEACH, CA 92660
(949) 526-8640
www.bkf.com

OWNER:



4444 WESTHEIMER ROAD, SUITE G450
HOUSTON, TX 77027
Ph: (346) 708-8272

ENGINEER:



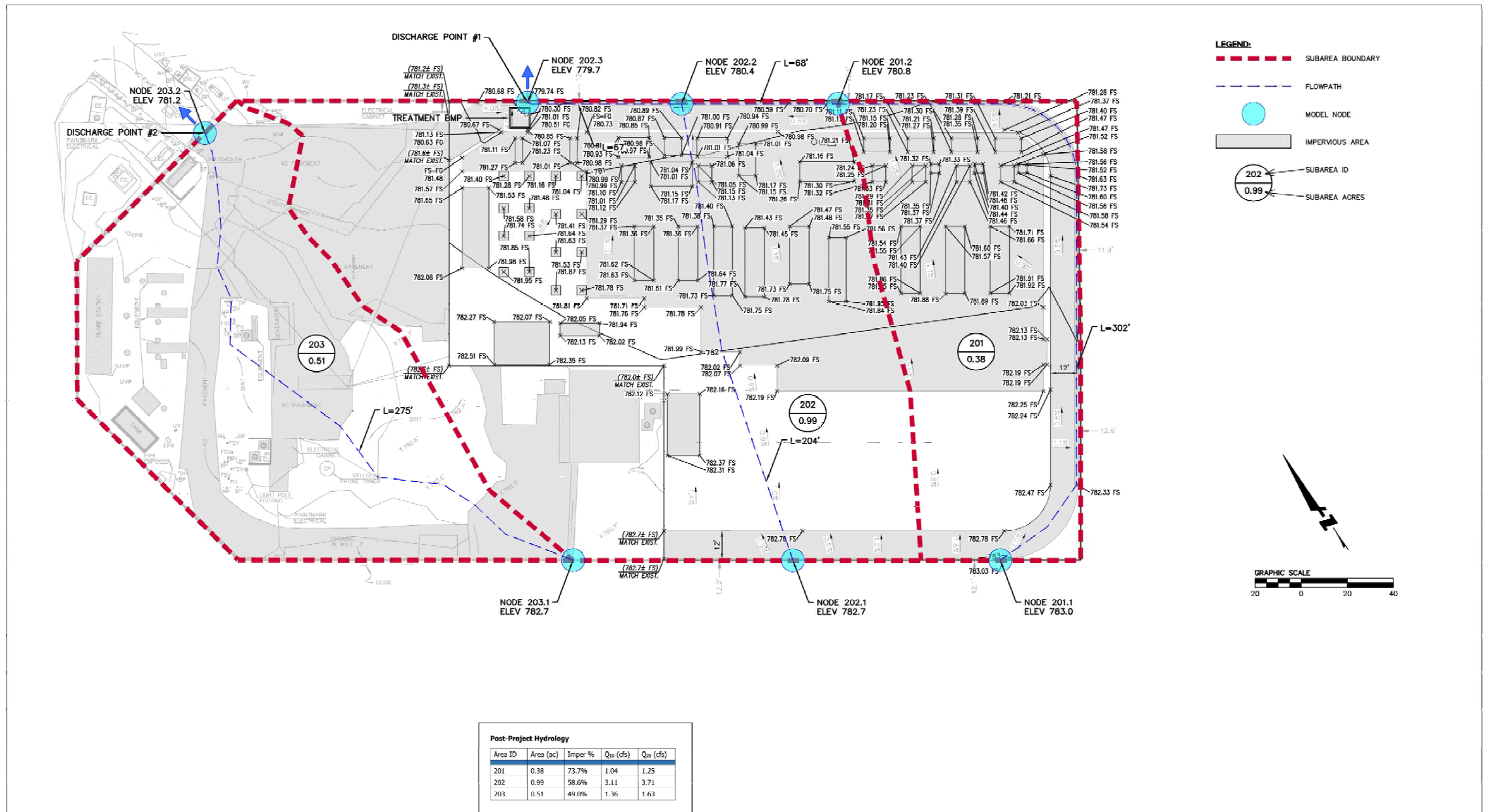
2321 E. 28TH STREET, SUITE 400
SIGNAL HILL, CA 90755, Ph: (562) 726-3565
EMAIL: INFO@BIOGASENG.COM

PRE-PROJECT DRAINAGE MAP

COYOTE CANYON LANDFILL
RNG PROJECT
20662 NEWPORT COAST DRIVE
NEWPORT BEACH, CA 92657

EXH
02

Exhibit 3. Post-Project Drainage Map



PRELIMINARY DRAINAGE REPORT

REV	DATE	DESCRIPTION	DRN BY	CHK BY	APRV BY
U	11/16/23	ISSUE FOR BID	DMM	VL	RTC

CIVIL ENGINEER:



BKF ENGINEERS
4675 MACARTHUR CT., SUITE 400
NEWPORT BEACH, CA 92660
(949) 526-8640
www.bkf.com

OWNER:



ARCHAEA ENERGY
4444 WESTHEIMER ROAD, SUITE G450
HOUSTON, TX 77027
Ph: (346) 708-8272

ENGINEER:



BIOGAS ENGINEERING
2321 E. 28TH STREET, SUITE 400
SIGNAL HILL, CA 90755, Ph: (562) 726-3565
EMAIL: INFO@BIOGASENG.COM

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NOT FOR CONSTRUCTION

ISSUE FOR BID

POST-PROJECT DRAINAGE MAP

COYOTE CANYON LANDFILL
RNG PROJECT
20662 NEWPORT COAST DRIVE
NEWPORT BEACH, CA 92657

EXH
03

Appendix A. AES Pre-Project RM Calculations

10-Year

RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
(Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
(c) Copyright 1983-2016 Advanced Engineering Software (aes)
Ver. 23.0 Release Date: 07/01/2016 License ID 1676

Analysis prepared by:

FILE NAME: CLPRE10.DAT
TIME/DATE OF STUDY: 12:59 12/14/2023
=====

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 10.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 12.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.85
DATA BANK RAINFALL USED
ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	HALF- WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT- / PARK- SIDE / SIDE / WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP (FT) (FT)	HIKE (FT)	FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0313	0.167	0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 101.10 TO NODE 101.20 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 279.00
ELEVATION DATA: UPSTREAM(FEET) = 782.80 DOWNSTREAM(FEET) = 781.30

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 14.200
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 2.232
SUBAREA T_c AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
URBAN POOR COVER "TURF"	D	0.41	0.20	1.000	87	14.20

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 1.000
SUBAREA RUNOFF(CFS) = 0.75
TOTAL AREA(ACRES) = 0.41 PEAK FLOW RATE(CFS) = 0.75

FLOW PROCESS FROM NODE 101.20 TO NODE 102.20 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====

ELEVATION DATA: UPSTREAM(FEET) = 781.30 DOWNSTREAM(FEET) = 781.10
CHANNEL LENGTH THRU SUBAREA(FEET) = 94.00 CHANNEL SLOPE = 0.0021
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.020 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 0.75
FLOW VELOCITY(FEET/SEC.) = 1.17 FLOW DEPTH(FEET) = 0.25

```

TRAVEL TIME(MIN.) = 1.33   Tc(MIN.) = 15.54
LONGEST FLOWPATH FROM NODE 101.10 TO NODE 102.20 = 373.00 FEET.

*****
FLOW PROCESS FROM NODE 102.10 TO NODE 102.20 IS CODE = 82
-----
>>>>ADD SUBAREA RUNOFF TO MAINLINE, AT MAINLINE Tc,<<<<
>>>>(AND COMPUTE INITIAL SUBAREA RUNOFF)<<<<
=====
INITIAL SUBAREA FLOW-LENGTH(FEET) = 197.00
ELEVATION DATA: UPSTREAM(FEET) = 782.70 DOWNSTREAM(FEET) = 781.10

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 6.588
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 3.466
SUBAREA Tc AND LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS   Tc
LAND USE           GROUP   (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
URBAN POOR COVER
"TURF"              D        0.75   0.20   1.000   87   11.38
COMMERCIAL          D        0.21   0.20   0.100   75   6.59
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.802
SUBAREA AREA(ACRES) = 0.96 INITIAL SUBAREA RUNOFF(CFS) = 2.86

** ADD SUBAREA RUNOFF TO MAINLINE AT MAINLINE Tc:
MAINLINE Tc(MIN.) = 15.54
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 2.120
SUBAREA AREA(ACRES) = 0.96 SUBAREA RUNOFF(CFS) = 1.69
EFFECTIVE AREA(ACRES) = 1.37 AREA-AVERAGED Fm(INCH/HR) = 0.17
AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.86
TOTAL AREA(ACRES) = 1.4 PEAK FLOW RATE(CFS) = 2.40

*****
FLOW PROCESS FROM NODE 102.20 TO NODE 102.30 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 781.10 DOWNSTREAM(FEET) = 779.70
CHANNEL LENGTH THRU SUBAREA(FEET) = 68.00 CHANNEL SLOPE = 0.0206
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.020 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 2.40
FLOW VELOCITY(FEET/SEC.) = 3.73 FLOW DEPTH(FEET) = 0.26
TRAVEL TIME(MIN.) = 0.30 Tc(MIN.) = 15.84
LONGEST FLOWPATH FROM NODE 101.10 TO NODE 102.30 = 441.00 FEET.

*****
FLOW PROCESS FROM NODE 103.10 TO NODE 103.20 IS CODE = 21
-----
>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
=====
INITIAL SUBAREA FLOW-LENGTH(FEET) = 275.00
ELEVATION DATA: UPSTREAM(FEET) = 782.70 DOWNSTREAM(FEET) = 781.20

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 8.152
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 3.068
SUBAREA Tc AND LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS   Tc
LAND USE           GROUP   (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
URBAN POOR COVER
"TURF"              D        0.23   0.20   1.000   87   14.08
COMMERCIAL          D        0.28   0.20   0.100   75   8.15
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.509
SUBAREA RUNOFF(CFS) = 1.36
TOTAL AREA(ACRES) = 0.51 PEAK FLOW RATE(CFS) = 1.36
=====
END OF STUDY SUMMARY:
TOTAL AREA(ACRES) = 0.5 TC(MIN.) = 8.15
EFFECTIVE AREA(ACRES) = 0.51 AREA-AVERAGED Fm(INCH/HR) = 0.10
AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.509
PEAK FLOW RATE(CFS) = 1.36
=====

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END OF RATIONAL METHOD ANALYSIS



25-Year

RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
(Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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Ver. 23.0 Release Date: 07/01/2016 License ID 1676

Analysis prepared by:

FILE NAME: CLPRE25.DAT
TIME/DATE OF STUDY: 13:06 12/14/2023
=====

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USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 25.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 12.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.85
DATA BANK RAINFALL USED
ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	HALF- WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT- / PARK- SIDE / SIDE / WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP HIKE (FT) (FT) (FT)	MANNING FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0313 0.167	0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 101.10 TO NODE 101.20 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 279.00
ELEVATION DATA: UPSTREAM(FEET) = 782.80 DOWNSTREAM(FEET) = 781.30

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 14.200
* 25 YEAR RAINFALL INTENSITY(INCH/HR) = 2.672
SUBAREA T_c AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
URBAN POOR COVER "TURF"	D	0.41	0.20	1.000	87	14.20

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 1.000
SUBAREA RUNOFF(CFS) = 0.91
TOTAL AREA(ACRES) = 0.41 PEAK FLOW RATE(CFS) = 0.91

FLOW PROCESS FROM NODE 101.20 TO NODE 102.20 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
=====

ELEVATION DATA: UPSTREAM(FEET) = 781.30 DOWNSTREAM(FEET) = 781.10
CHANNEL LENGTH THRU SUBAREA(FEET) = 94.00 CHANNEL SLOPE = 0.0021
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.020 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 0.91
FLOW VELOCITY(FEET/SEC.) = 1.24 FLOW DEPTH(FEET) = 0.29

```

TRAVEL TIME(MIN.) = 1.26   Tc(MIN.) = 15.46
LONGEST FLOWPATH FROM NODE 101.10 TO NODE 102.20 = 373.00 FEET.

*****
FLOW PROCESS FROM NODE 102.10 TO NODE 102.20 IS CODE = 82
-----
>>>>ADD SUBAREA RUNOFF TO MAINLINE, AT MAINLINE Tc,<<<<
>>>>(AND COMPUTE INITIAL SUBAREA RUNOFF)<<<<
=====
INITIAL SUBAREA FLOW-LENGTH(FEET) = 197.00
ELEVATION DATA: UPSTREAM(FEET) = 782.70 DOWNSTREAM(FEET) = 781.10

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 6.588
* 25 YEAR RAINFALL INTENSITY(INCH/HR) = 4.127
SUBAREA Tc AND LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/SCS SOIL AREA Fp Ap SCS Tc
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
URBAN POOR COVER
"TURF" D 0.75 0.20 1.000 87 11.38
COMMERCIAL D 0.21 0.20 0.100 75 6.59
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.802
SUBAREA AREA(ACRES) = 0.96 INITIAL SUBAREA RUNOFF(CFS) = 3.43

** ADD SUBAREA RUNOFF TO MAINLINE AT MAINLINE Tc:
MAINLINE Tc(MIN.) = 15.46
* 25 YEAR RAINFALL INTENSITY(INCH/HR) = 2.546
SUBAREA AREA(ACRES) = 0.96 SUBAREA RUNOFF(CFS) = 2.06
EFFECTIVE AREA(ACRES) = 1.37 AREA-AVERAGED Fm(INCH/HR) = 0.17
AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.86
TOTAL AREA(ACRES) = 1.4 PEAK FLOW RATE(CFS) = 2.93

*****
FLOW PROCESS FROM NODE 102.20 TO NODE 102.30 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 781.10 DOWNSTREAM(FEET) = 779.70
CHANNEL LENGTH THRU SUBAREA(FEET) = 68.00 CHANNEL SLOPE = 0.0206
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.020 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 2.93
FLOW VELOCITY(FEET/SEC.) = 3.96 FLOW DEPTH(FEET) = 0.29
TRAVEL TIME(MIN.) = 0.29 Tc(MIN.) = 15.75
LONGEST FLOWPATH FROM NODE 101.10 TO NODE 102.30 = 441.00 FEET.

*****
FLOW PROCESS FROM NODE 103.10 TO NODE 103.20 IS CODE = 21
-----
>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
=====
INITIAL SUBAREA FLOW-LENGTH(FEET) = 275.00
ELEVATION DATA: UPSTREAM(FEET) = 782.70 DOWNSTREAM(FEET) = 781.20

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 8.152
* 25 YEAR RAINFALL INTENSITY(INCH/HR) = 3.658
SUBAREA Tc AND LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/SCS SOIL AREA Fp Ap SCS Tc
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
URBAN POOR COVER
"TURF" D 0.23 0.20 1.000 87 14.08
COMMERCIAL D 0.28 0.20 0.100 75 8.15
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.509
SUBAREA RUNOFF(CFS) = 1.63
TOTAL AREA(ACRES) = 0.51 PEAK FLOW RATE(CFS) = 1.63

=====
END OF STUDY SUMMARY:
TOTAL AREA(ACRES) = 0.5 TC(MIN.) = 8.15
EFFECTIVE AREA(ACRES) = 0.51 AREA-AVERAGED Fm(INCH/HR) = 0.10
AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.509
PEAK FLOW RATE(CFS) = 1.63
=====

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END OF RATIONAL METHOD ANALYSIS



Appendix B. AES Post-Project RM Calculations

10-Year

RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
(Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
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Ver. 23.0 Release Date: 07/01/2016 License ID 1676

Analysis prepared by:

FILE NAME: CLPST10.DAT
TIME/DATE OF STUDY: 16:16 12/14/2023
=====

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USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 10.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 12.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.85
DATA BANK RAINFALL USED
ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	HALF- WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT- / PARK- SIDE / SIDE / WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP HIKE (FT) (FT) (FT)	MANNING FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0313 0.167	0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 201.10 TO NODE 201.20 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 302.00
ELEVATION DATA: UPSTREAM(FEET) = 783.00 DOWNSTREAM(FEET) = 780.80

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 7.987
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 3.104
SUBAREA T_c AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
URBAN POOR COVER						
"TURF"	D	0.07	0.20	1.000	87	13.79
COMMERCIAL	D	0.31	0.20	0.100	75	7.99

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.263
SUBAREA RUNOFF(CFS) = 1.04
TOTAL AREA(ACRES) = 0.38 PEAK FLOW RATE(CFS) = 1.04

FLOW PROCESS FROM NODE 201.20 TO NODE 202.20 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 780.80 DOWNSTREAM(FEET) = 780.40
CHANNEL LENGTH THRU SUBAREA(FEET) = 68.00 CHANNEL SLOPE = 0.0059
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.014 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 1.04

FLOW VELOCITY(FEET/SEC.) = 2.37 FLOW DEPTH(FEET) = 0.19
 TRAVEL TIME(MIN.) = 0.48 Tc(MIN.) = 8.47
 LONGEST FLOWPATH FROM NODE 201.10 TO NODE 202.20 = 370.00 FEET.

FLOW PROCESS FROM NODE 202.10 TO NODE 202.20 IS CODE = 82

>>>>ADD SUBAREA RUNOFF TO MAINLINE, AT MAINLINE Tc,<<<<
 >>>>(AND COMPUTE INITIAL SUBAREA RUNOFF)<<<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 204.00
 ELEVATION DATA: UPSTREAM(FEET) = 782.70 DOWNSTREAM(FEET) = 780.40

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 6.256

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 3.570

SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
-------------------------------	-------------------	-----------------	-----------------	-----------------	-----------	--------------

URBAN POOR COVER

"TURF"	D	0.35	0.20	1.000	87	10.80
--------	---	------	------	-------	----	-------

COMMERCIAL	D	0.64	0.20	0.100	75	6.26
------------	---	------	------	-------	----	------

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.415

SUBAREA AREA(ACRES) = 0.99 INITIAL SUBAREA RUNOFF(CFS) = 3.11

** ADD SUBAREA RUNOFF TO MAINLINE AT MAINLINE Tc:

MAINLINE Tc(MIN.) = 8.47

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 3.002

SUBAREA AREA(ACRES) = 0.99 SUBAREA RUNOFF(CFS) = 2.60

EFFECTIVE AREA(ACRES) = 1.37 AREA-AVERAGED Fm(INCH/HR) = 0.07

AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.37

TOTAL AREA(ACRES) = 1.4 PEAK FLOW RATE(CFS) = 3.61

FLOW PROCESS FROM NODE 202.20 TO NODE 202.30 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM(FEET) = 780.40 DOWNSTREAM(FEET) = 779.70

CHANNEL LENGTH THRU SUBAREA(FEET) = 67.00 CHANNEL SLOPE = 0.0104

CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 2.000

MANING'S FACTOR = 0.014 MAXIMUM DEPTH(FEET) = 1.00

CHANNEL FLOW THRU SUBAREA(CFS) = 3.61

FLOW VELOCITY(FEET/SEC.) = 4.22 FLOW DEPTH(FEET) = 0.32

TRAVEL TIME(MIN.) = 0.26 Tc(MIN.) = 8.73

LONGEST FLOWPATH FROM NODE 201.10 TO NODE 202.30 = 437.00 FEET.

FLOW PROCESS FROM NODE 203.10 TO NODE 203.20 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 275.00
 ELEVATION DATA: UPSTREAM(FEET) = 782.70 DOWNSTREAM(FEET) = 781.20

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 8.152

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 3.068

SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
-------------------------------	-------------------	-----------------	-----------------	-----------------	-----------	--------------

URBAN POOR COVER

"TURF"	D	0.23	0.20	1.000	87	14.08
--------	---	------	------	-------	----	-------

COMMERCIAL	D	0.28	0.20	0.100	75	8.15
------------	---	------	------	-------	----	------

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.509

SUBAREA RUNOFF(CFS) = 1.36

TOTAL AREA(ACRES) = 0.51 PEAK FLOW RATE(CFS) = 1.36

END OF STUDY SUMMARY:

TOTAL AREA(ACRES) = 0.5 TC(MIN.) = 8.15

EFFECTIVE AREA(ACRES) = 0.51 AREA-AVERAGED Fm(INCH/HR)= 0.10

AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.509

PEAK FLOW RATE(CFS) = 1.36

=====

END OF RATIONAL METHOD ANALYSIS



25-Year

RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
(Reference: 1986 ORANGE COUNTY HYDROLOGY CRITERION)
(c) Copyright 1983-2016 Advanced Engineering Software (aes)
Ver. 23.0 Release Date: 07/01/2016 License ID 1676

Analysis prepared by:

FILE NAME: CLPST25.DAT
TIME/DATE OF STUDY: 16:16 12/14/2023
=====

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 25.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 12.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.85
DATA BANK RAINFALL USED
ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	HALF- WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT- / PARK- SIDE / SIDE / WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP HIKE (FT) (FT) (FT)	MANING FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0312 0.167	0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)
*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 201.10 TO NODE 201.20 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 302.00
ELEVATION DATA: UPSTREAM(FEET) = 783.00 DOWNSTREAM(FEET) = 780.80

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 7.987
* 25 YEAR RAINFALL INTENSITY(INCH/HR) = 3.700
SUBAREA T_c AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
URBAN POOR COVER						
"TURF"	D	0.07	0.20	1.000	87	13.79
COMMERCIAL	D	0.31	0.20	0.100	75	7.99

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.263
SUBAREA RUNOFF(CFS) = 1.25
TOTAL AREA(ACRES) = 0.38 PEAK FLOW RATE(CFS) = 1.25

FLOW PROCESS FROM NODE 201.20 TO NODE 202.20 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 780.80 DOWNSTREAM(FEET) = 780.40
CHANNEL LENGTH THRU SUBAREA(FEET) = 68.00 CHANNEL SLOPE = 0.0059
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 2.000
MANING'S FACTOR = 0.014 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 1.25

FLOW VELOCITY(FEET/SEC.) = 2.47 FLOW DEPTH(FEET) = 0.21
 TRAVEL TIME(MIN.) = 0.46 Tc(MIN.) = 8.45
 LONGEST FLOWPATH FROM NODE 201.10 TO NODE 202.20 = 370.00 FEET.

FLOW PROCESS FROM NODE 202.10 TO NODE 202.20 IS CODE = 82

>>>>ADD SUBAREA RUNOFF TO MAINLINE, AT MAINLINE Tc,<<<<
 >>>>(AND COMPUTE INITIAL SUBAREA RUNOFF)<<<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 204.00
 ELEVATION DATA: UPSTREAM(FEET) = 782.70 DOWNSTREAM(FEET) = 780.40

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 6.256

* 25 YEAR RAINFALL INTENSITY(INCH/HR) = 4.249

SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
-------------------------------	-------------------	-----------------	-----------------	-----------------	-----------	--------------

URBAN POOR COVER

"TURF"	D	0.35	0.20	1.000	87	10.80
--------	---	------	------	-------	----	-------

COMMERCIAL	D	0.64	0.20	0.100	75	6.26
------------	---	------	------	-------	----	------

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.415

SUBAREA AREA(ACRES) = 0.99 INITIAL SUBAREA RUNOFF(CFS) = 3.71

** ADD SUBAREA RUNOFF TO MAINLINE AT MAINLINE Tc:

MAINLINE Tc(MIN.) = 8.45

* 25 YEAR RAINFALL INTENSITY(INCH/HR) = 3.585

SUBAREA AREA(ACRES) = 0.99 SUBAREA RUNOFF(CFS) = 3.12

EFFECTIVE AREA(ACRES) = 1.37 AREA-AVERAGED Fm(INCH/HR) = 0.07

AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.37

TOTAL AREA(ACRES) = 1.4 PEAK FLOW RATE(CFS) = 4.33

FLOW PROCESS FROM NODE 202.20 TO NODE 202.30 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM(FEET) = 780.40 DOWNSTREAM(FEET) = 779.70

CHANNEL LENGTH THRU SUBAREA(FEET) = 67.00 CHANNEL SLOPE = 0.0104

CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 2.000

MANING'S FACTOR = 0.014 MAXIMUM DEPTH(FEET) = 1.00

CHANNEL FLOW THRU SUBAREA(CFS) = 4.33

FLOW VELOCITY(FEET/SEC.) = 4.52 FLOW DEPTH(FEET) = 0.35

TRAVEL TIME(MIN.) = 0.25 Tc(MIN.) = 8.69

LONGEST FLOWPATH FROM NODE 201.10 TO NODE 202.30 = 437.00 FEET.

FLOW PROCESS FROM NODE 203.10 TO NODE 203.20 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 275.00
 ELEVATION DATA: UPSTREAM(FEET) = 782.70 DOWNSTREAM(FEET) = 781.20

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 8.152

* 25 YEAR RAINFALL INTENSITY(INCH/HR) = 3.658

SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
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URBAN POOR COVER

"TURF"	D	0.23	0.20	1.000	87	14.08
--------	---	------	------	-------	----	-------

COMMERCIAL	D	0.28	0.20	0.100	75	8.15
------------	---	------	------	-------	----	------

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.509

SUBAREA RUNOFF(CFS) = 1.63

TOTAL AREA(ACRES) = 0.51 PEAK FLOW RATE(CFS) = 1.63

END OF STUDY SUMMARY:

TOTAL AREA(ACRES) = 0.5 TC(MIN.) = 8.15

EFFECTIVE AREA(ACRES) = 0.51 AREA-AVERAGED Fm(INCH/HR) = 0.10

AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.509

PEAK FLOW RATE(CFS) = 1.63

=====

END OF RATIONAL METHOD ANALYSIS



Appendix

Appendix K Noise Impact Analysis

Appendix

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MEMORANDUM

DATE: July 17, 2024

TO: Gabrielle Stephens, Project Manager, SCS Engineers

FROM: J.T. Stephens, Principal/Noise and Vibration Specialist

SUBJECT: Noise Impact Analysis: Proposed Landfill Gas to Renewable Natural Gas Project at Coyote Canyon Landfill, Newport Beach, California

INTRODUCTION AND PROJECT DESCRIPTION

This noise impact analysis has been prepared to evaluate the potential impacts associated with construction and operation of a proposed Landfill Gas-to-Renewable Natural Gas Facility (LFG to RNG) Project (proposed project) located at 20662 Newport Coast Drive in the City of Newport Beach (City), Orange County (County), California. The proposed project is located within the existing Coyote Canyon Sanitary Landfill (CCSL). The City will be the California Environmental Quality Act (CEQA) lead agency. This memorandum is intended to satisfy the City's requirement for a project-specific noise impact analysis and examines the impacts of the project to noise-sensitive uses near the project site. To properly account for the noise impacts associated with the proposed project, noise level impacts are assessed based on noise measurement data gathered in the vicinity of the project site (from January 10, 2022, to January 12, 2022) and modeled stationary source noise levels using the program SoundPLAN incorporating information from the proposed project's design engineer.

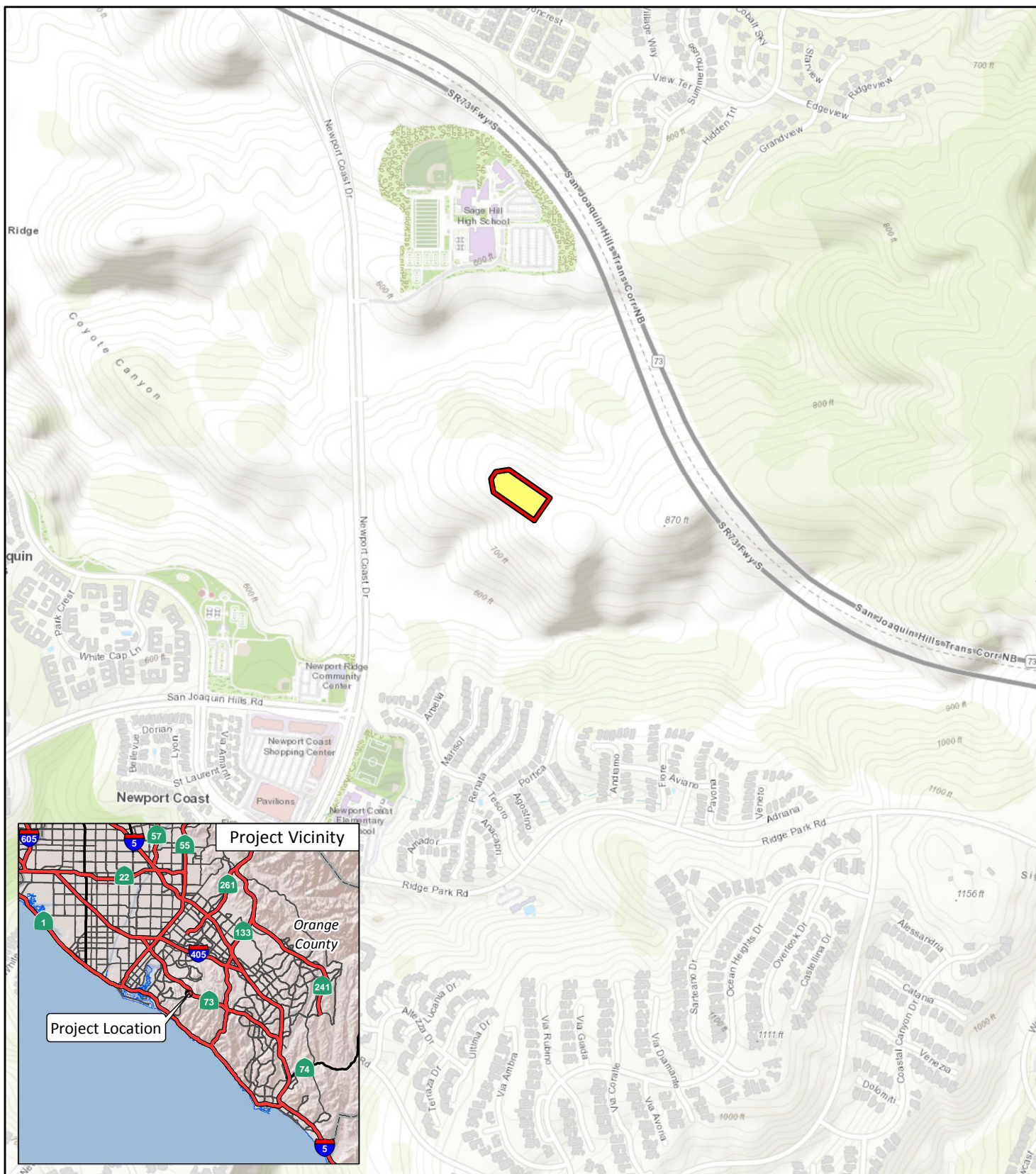
Location and Description

The project site is located near the center of the CCSL, approximately 925 feet east of Newport Coast Drive. Figure 1, below, shows the proposed project location. Currently, the project site contains an existing County flare and blower station along with a cell tower and associated generator.

While the proposed project is located within the existing CCSL, none of the existing operations at the CCSL will be under common ownership or control with the proposed project. The proposed project, once operational, consists of a variety of pieces of equipment, as shown in Figure 2, including the following pieces which generate noise:

- Feed Compressors
- Compressor Feed Oil Coolers
- Compressor Feed After Coolers
- TSA Pretreatment Skid

- Chiller
- Membrane Skid
- Recycle Compressor
- Recycle Compressor Oil Cooler
- Recycle Compressor After Cooler
- Deoxo Dryer
- Deoxo After Cooler
- Off-Spec Gas Flare
- NRU
- NRU Vacuum Rinse Skids
- NRU Vacuum Rinse Skid Oil Coolers
- NRU Vacuum Rinse Skid After Coolers
- Flare
- Thermal Oxidizer



LSA

LEGEND

Project Location



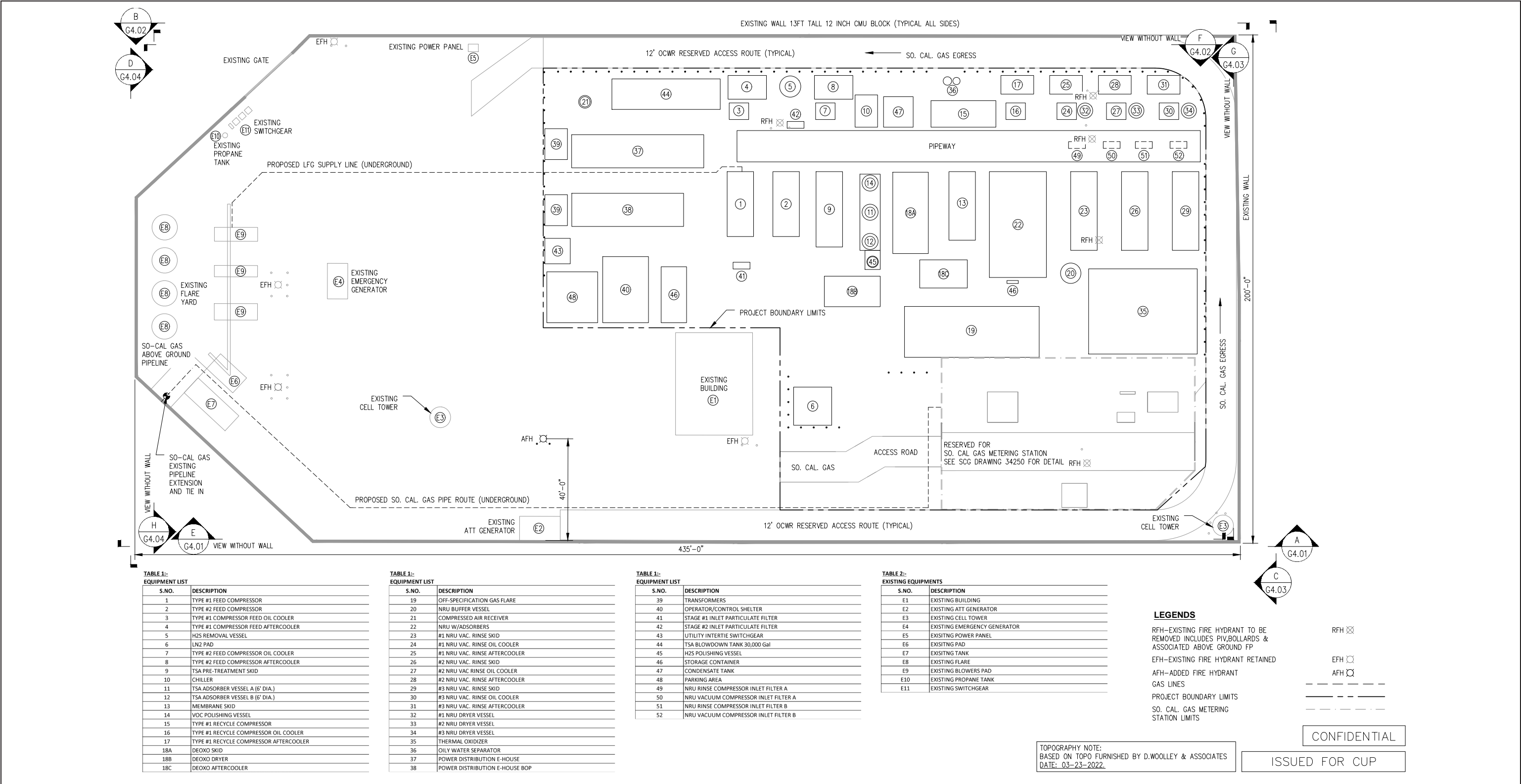
0 500 1000
FEET

SOURCE: Esri World Topo Map (2021)

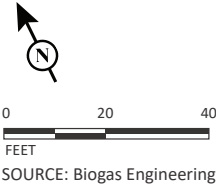
I:\SCN2101\GIS\MXD\ProjectLocation.mxd (2/2/2022)

FIGURE 1

*Coyote Canyon Landfill
Gas-to-Renewable Natural Gas Project
Project Location*



LSA



I:\SCN2101\G\Site_Plan2.ai (7/17/2024)

FIGURE 2

Coyote Canyon Landfill
Gas-to-Renewable Natural Gas Project
Site Plan

Surrounding Sensitive Receptors

The nearest sensitive receptors to the proposed project are the existing Sage High School located approximately 1,400 feet to the north and existing single-family homes in the Tesoro Community approximately 1,250 feet to the south.

CHARACTERISTICS OF SOUND

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a wave resulting in the tone's range from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment and is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

Measurement of Sound

Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units (e.g., inches or pounds), decibels are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 decibels (dB) is 10 times more intense than 1 dB, 20 dB is 100 times more intense than 1 dB, and 30 dB is 1,000 times more intense than 1 dB. Thirty decibels (30 dB) represent 1,000 times as much acoustic energy as 1 dB. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 dB (very quiet) to 100 dB (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single-point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source (e.g., highway traffic or railroad operations), the sound decreases 3 dB for each doubling of distance in a hard site environment. Similarly, line sources with intervening absorptive vegetation or line sources that are located at a great distance to the receptor would decrease 4.5 dB for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. This is the metric used by the City for stationary sources.

Noise impacts can be described in three categories. The first category is audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1.0 and 3.0 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise levels of less than 1.0 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 160–165 dBA will result in dizziness or loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying less developed areas.

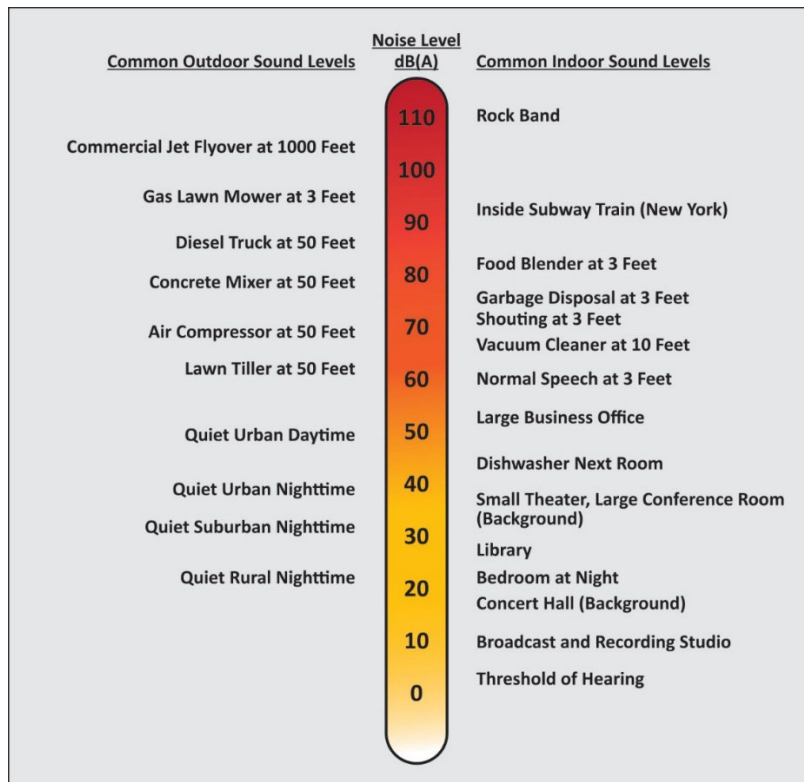
Table A lists full definitions of acoustical terms, and Table B shows common sound levels and their sources.

Table A: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit of level that denotes the ratio between two quantities proportional to power, the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter deemphasizes the very low and very high frequency components of the sound in a manner similar to the frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this assessment are A-weighted, unless reported otherwise.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time varying sound.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content, as well as the prevailing ambient noise level.

Source: *Handbook of Acoustical Measurements and Noise Control* (Harris, Cyril M., 1991).

Table B: Common Sound Levels and Noise Sources



Source: LSA Associates, Inc. (2016).

CHARACTERISTICS OF VIBRATION

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernible. Typically, there is more adverse reaction to effects associated with the shaking of a building. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items on shelves or hanging on walls, or a low-frequency rumbling noise.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 ft of the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 ft (FTA 2018). When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, the construction of the project could result in ground-borne vibration that may be perceptible and annoying.

Ground-borne vibration has the potential to disturb people and damage buildings. Although it is very rare for typical construction activities to cause even cosmetic building damage, it is not uncommon for construction processes such as blasting and pile driving to cause vibration of sufficient amplitudes to damage nearby buildings (FTA 2018). Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The RMS is best for characterizing human response to building vibration, and PPV is used to characterize potential for damage. Decibel notation acts to compress the range of numbers required to describe vibration. Vibration velocity level in decibels is defined as:

$$L_v = 20 \log_{10} [V/V_{\text{ref}}]$$

where L_v is the vibration velocity in decibels (VdB), “ V ” is the RMS velocity amplitude, and “ V_{ref} ” is the reference velocity amplitude, or 1×10^{-6} inches/second (in/sec) used in the United States.

APPLICABLE NOISE STANDARDS

City of Newport Beach

The City regulates noise based on the criteria presented in the Noise Element of the General Plan as well as the Municipal Code. As discussed below, the City does not have adopted construction noise thresholds; therefore, Federal Transit Administration (FTA) criteria will be used to assess potential construction noise impacts.

City of Newport Beach Noise Element of the General Plan

The City of Newport Beach has adopted a Noise Element of the General Plan to control noise in the planning process in order to ensure that Newport Beach residents will be protected from excessive noise intrusion. The following presents the applicable policies to the proposed project:

Noise Policies. To protect City of Newport Beach residents from excessive noise, the Noise Element contains the following policies related to the Project:

N 4.1 Stationary Noise Sources: *Enforce interior and exterior noise standards outlined in Table N3 (also shown in Table C of this analysis), and in the City's Municipal Code to ensure that sensitive noise receptors are not exposed to excessive noise levels from stationary noise sources, such as heating, ventilation, and air conditioning equipment.*

Table C: Noise Standards

Land Use Categories		Allowable Noise Levels (dBA)			
Categories	Uses	Interior ^{a,b}		Exterior ^{a,b}	
		Interior Noise Level (L _{eq}) 7 am to 10 pm	Interior Noise Level (L _{eq}) 10 pm to 7 am	Exterior Noise Level (L _{eq}) 7 am to 10 pm	Exterior Noise Level (L _{eq}) 10 pm to 7 am
Residential	Single Family, Two Family, Multiple Family (Zone I)	45	40	50	50
	Residential Portions of Mixed Use Developments (Zone III)	45	40	60	50
Commercial	Commercial (Zone II)	N/A	N/A	65	60
Industrial	Industrial of Manufacturing (Zone IV)	N/A	N/A	70	70
Institutional	Schools, Day Care Centers, Churches, Libraries, Museums, Health Care Institutions (Zone I)	45	40	55	50

SOURCE: EIP Associates, 2006

^a If the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

^b It shall be unlawful for any person at any location within the incorporated area of the City to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such a person which causes the noise level when measured on any other property, to exceed either of the following:

- The noise standard for the applicable zone for any fifteen-minute period;
- A maximum instantaneous noise level equal to the value of the noise standard plus twenty dBA for any period of time (measured using A-weighted slow response).
- In the event the ambient noise level exceeds the noise standard, the noise standard applicable to said category shall be increased to reflect the maximum ambient noise level.
- The noise standard for the residential portions of the residential property falling within one hundred feet of a commercial property, if the intruding noise originates from that commercial property.
- If the measurement location is on a boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

N 4.6 Maintenance or Construction Activities: *Enforce the Noise Ordinance noise limits and limits on hours of maintenance or construction activity in or adjacent to residential areas, including noise that results from in-home hobby or work-related activities.*

N 5.1 Limiting Hours of Activity: *Enforce the limits on hours of construction activity.*

City of Newport Beach Municipal Code

Section 10.26.025, Community Noise Control, provides the exterior and interior residential noise standards, which represent the maximum acceptable noise levels as measured from any receiving property in the City. It is considered unlawful to create noise on any property that results in noise levels exceeding 55 dBA L_{eq} for a period of 15 minutes at residential uses during daytime hours from 7:00 a.m. to 10:00 p.m. and 50 dBA L_{eq} for a period of 15 minutes at residential uses during nighttime hours from 10:00 p.m. to 7:00 a.m. For commercial uses, exterior noise levels shall not exceed 65 dBA L_{eq} during daytime hours and 60 dBA L_{eq} during nighttime hours. Maximum instantaneous noise levels may not exceed the above values plus 20 dBA for any period of time.

Section 10.28.040, Construction Activity – Noise Regulations, states:

- A. *No person shall, while engaged in construction, remodeling, digging, grading, demolition, painting, plastering or any other related building activity, operate any tool, equipment or machine in a manner which produces loud noise that disturbs, or could disturb, a person of normal sensitivity who works or resides in the vicinity, unless authorized to do so in accordance with subsection (B) of this section.*
- B. *The provisions of subsection (A) of this section shall not apply to the following:*
 - 1. *Work performed on any weekday, which is not a federal holiday, between the hours of 7:00 a.m. and 6:30 p.m.*
 - 2. *Work performed on a Saturday, in any area of the City that is not designated as a high-density area, between the hours of 8:00 a.m. and 6:00 p.m.*

The City's Noise Element and Municipal Code do not provide specific noise level requirements or vibration impact criteria associated with construction activities; therefore, the FTA criteria will be used in this analysis.

Federal Transit Administration

Because the City does not have construction noise level limits, construction noise was assessed using criteria from the *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). Table D shows the FTA's Detailed Analysis Construction Noise Criteria based on the composite noise levels of the two noisiest pieces of equipment per construction phase. This provides reasonable criteria for

assessing construction noise impacts based on the potential for adverse community reaction when the noise criteria are exceeded.

Table D: General Assessment Construction Noise Criteria

Land Use	Daytime 1-hour L_{eq} (dBA)	Nighttime 1-hour L_{eq} (dBA)
Residential	80	70
Commercial	85	85
Industrial	90	90

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

dBA = A-weighted decibels

FTA = Federal Transit Administration

L_{eq} = equivalent continuous sound level

APPLICABLE VIBRATION STANDARDS

Federal Transit Administration

Construction Damage Criteria

The criteria for environmental impact from ground-borne vibration and noise are based on the maximum levels for a single event. Table E lists the potential vibration building damage criteria associated with construction activities, as suggested in the *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

FTA guidelines shows that a vibration level of up to 102 VdB (FTA 2018) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster) and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction building vibration damage criterion is 94 VdB.

Table E: Construction Vibration Damage Criteria

Building Category	Approximate L_v (VdB) ¹
Reinforced concrete, steel, or timber (no plaster)	102
Engineered concrete and masonry (no plaster)	98
Non-engineered timber and masonry buildings	94
Buildings extremely susceptible to vibration damage	90

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

¹ RMS vibration velocity in decibels (VdB) re 1 μ in/sec.

FTA = Federal Transit Administration

μ in/sec = microinches per second

L_v = velocity in decibels

RMS = root-mean-square

VdB = vibration velocity decibels

Construction Annoyance Criteria

The City of Newport Beach has not identified or adopted vibration standards. However, the 2006 General Plan EIR identified a limit of 72 VdB for frequent events (more than 70 vibrations events per

day) at residential uses and buildings where people normally sleep. For infrequent events with fewer than 70 vibration events per day, the vibration limit is 80 VdB. It should be noted that the General Plan EIR conservatively identified a residential-nighttime threshold of 72 VdB for all circumstances of vibrational energy; including for construction activities which due to City noise ordinances, would not be expected to occur during the nighttime period (10:00 p.m. to 7:00 a.m.). The 2006 General Plan EIR also identified a limit of 75 VdB for frequent events (more than 70 vibrations events per day) at institutional land uses with primarily daytime uses. For infrequent events with fewer than 70 vibration events per day, the vibration limit is 83 VdB. For the purposes of this analysis, these levels are identified as appropriate for office uses.

THRESHOLDS OF SIGNIFICANCE

Based on *Guidelines for the Implementation of the California Environmental Quality Act (CEQA)*, Appendix G, Public Resources Code, Sections 15000–15387, a project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and the goals of the community in which it is located. The following are the thresholds for potential noise impacts.

The *State CEQA Guidelines* indicate that a project would have a significant impact on noise if it would result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generation of excessive ground-borne vibration or ground-borne noise levels; or
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

OVERVIEW OF THE EXISTING NOISE ENVIRONMENT

The primary existing noise sources in the project area are transportation facilities, including State Route 73 (SR 73) and Newport Coast Drive. In addition, periodic aircraft operations are audible on the project site. In order to assess the existing noise conditions in the area, long-term noise measurements were conducted at the project site. Three long-term, 24-hour measurements were taken from January 10, 2022, to January 12, 2022. The locations of the noise measurements are shown on Figure 3, below, and the results are summarized in Table F. Noise measurement data information is provided in Attachment A of this analysis.

Table F: Existing Noise Level Measurements

Location Number	Location Description	Daytime Noise Levels ¹ (dBA L _{eq})	Nighttime Noise Levels ² (dBA L _{eq})	Primary Noise Sources
LT-1	Located at the south side of the project site, near hairpin turn of the access road. On chain-link fence north of the channel.	37.6-48.1	36.5-43.3	Very quiet.
LT-2	Located at the north side of the project site, just south of Sage Hill School. On chain-link fence north of the access road and channel.	44.0-55.9	36.3-49.5	Faint traffic on SR-73.
LT-3	Located at the west side of the project site, approximately 270 feet east of Newport Coast Drive. On sign on the west side of the access road.	49.0-57.5	39.4-53.4	Faint traffic on Newport Coast Drive.

Source: Compiled by LSA (June 2022).

¹ Daytime Noise Levels = noise levels during the hours of 7:00 a.m. to 10:00 p.m.

² Nighttime Noise Levels = noise levels during the hours of 10:00 p.m. to 7:00 a.m.

dBA = A-weighted decibels

ft = foot/feet

L_{eq} = equivalent continuous sound level

Aircraft Noise

Airport-related noise levels are primarily associated with aircraft engine noise made while aircraft are taking off, landing, or running their engines while still on the ground. The closest airport to the project site is John Wayne Airport (JWA), approximately 4.8 miles to the northwest. The project site is outside the 60 dBA CNEL noise contour of JWA based on the JWA Airport Impact Zones map in the Airport Environs Land Use Plan (Orange County Airport Land Use Commission 2008), and the 2021 Third Quarter 65 dB CNEL contour (JWA 2021) for JWA. Because the project is located outside of the nearest airport's 60 dBA CNEL contour, no further analysis related to airport noise is required in this report.



LSA

LEGEND

- Project Location
- Long-term Noise Monitor Location



0 175 350
FEET

SOURCE: Google Imagery (2021)

I:\SCN2101\GIS\MXD\NoiseMonitoringLocs.mxd (2/2/2022)

FIGURE 3

*Coyote Canyon Landfill
Gas-to-Renewable Natural Gas Project
Noise Monitoring Locations*

Sensitive Land Uses in the Project Vicinity

Certain land uses are considered more sensitive to noise than others are. Examples of these include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The closest land uses to the project site include the following:

- **North:** Existing Sage Hill High School approximately 1,400 feet from the project site.
- **East:** State Route 73 (SR 73).
- **South:** Existing single-family homes within the Tesoro Community approximately 1,250 feet from the project site.
- **West:** Newport Coast Drive.

PROJECT IMPACT ANALYSIS

The proposed project would result in short-term construction noise and vibration impacts and long-term stationary source noise and vibration impacts as described below.

Short-Term Construction-Related Impacts

Project construction occurring for a duration of 12 months would result in short-term noise and vibration impacts on adjacent land uses. Construction phases include grading, pipeline installation, and equipment installation. Maximum construction impacts during overlapping phases would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of impacts in each construction phase generally would be from one day to several months during the overlapping of pipeline and equipment installation phases of construction. The level and types of impacts that would occur during construction are described below.

Construction Noise Impacts

Two types of short-term noise impacts would occur during project construction, including: (1) equipment delivery and construction worker commutes; and (2) project construction operations.

The first type of short-term construction noise would result from transport of construction equipment and materials to the project site and construction worker commutes. These transportation activities would incrementally raise noise levels on access roads leading to the site. It is expected that larger trucks used in equipment delivery would generate higher noise impacts than trucks associated with worker commutes. The single-event noise from equipment trucks passing at a distance of 50 ft from a sensitive noise receptor would reach a maximum level of 84 dBA L_{max} . However, the pieces of heavy equipment for grading and construction activities would be moved on site just one time and would remain on site for the duration of each construction phase. This one-time trip, when heavy construction equipment is moved on and off site, would not add to the daily traffic noise in the project vicinity. The total number of daily vehicle trips would be minimal when compared to existing traffic volumes on the affected streets, and the long-term noise level changes associated with these trips would not be perceptible. Therefore, equipment transport noise and construction-related worker commute impacts would be short term and would not result in a significant off-site noise impact.

The second type of short-term noise impact is related to noise generated during grading, equipment installation, and pipeline construction on the project site. Construction is undertaken in discrete steps, each of which has its own mix of equipment, and consequently its own noise characteristics. These various sequential phases would change the character of the noise generated on the project site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table G lists the maximum noise levels recommended for noise impact assessments for typical construction equipment based on a distance of 50 ft between the construction equipment and a noise receptor. Typical operating cycles for these types of construction equipment may involve 1–2 minutes of full power operation followed by 3–4 minutes at lower power settings.

In addition to the reference maximum noise level, the usage factor provided in Table G is utilized to calculate the hourly noise level impact for each piece of equipment based on the following equation:

$$L_{eq}(equip) = E.L. + 10 \log(U.F.) - 20 \log\left(\frac{D}{50}\right)$$

where: $L_{eq}(equip)$ = L_{eq} at a receiver resulting from the operation of a single piece of equipment over a specified time period

E.L. = Noise emission level of the particular piece of equipment at a reference distance of 50 ft

U.F. = Usage factor that accounts for the fraction of time that the equipment is in use over the specified period of time

D = Distance from the receiver to the piece of equipment

Each piece of construction equipment operates as an individual point source. Utilizing the following equation, a composite noise level can be calculated when multiple sources of noise operate simultaneously:

$$Leq (composite) = 10 * \log_{10} \left(\sum_1^n 10^{\frac{Ln}{10}} \right)$$

Once composite noise levels are calculated, reference noise levels can then be adjusted for distance using the following equation:

$$Leq (at distance X) = Leq (at 50 feet) - 20 * \log_{10} \left(\frac{X}{50} \right)$$

In general, this equation shows that doubling the distance would decrease noise levels by 6 dBA while halving the distance would increase noise levels by 6 dBA.

Table G: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)	Maximum Noise Level (L _{max}) at 50 ft
Backhoe	16	85
Compressor	100	81
Concrete Mixer	40	85
Concrete Pump	40	85
Crane	16	83
Dozer	40	80
Forklift	50	75
Front [End] Loader	40	79
Grader	8	85
Jackhammer	16	86
Scraper	40	88
Tractor	40	80
Welder	40	74

Sources: Roadway Construction Noise Model (FHWA 2006).

ft = foot/feet

L_{max} = maximum instantaneous sound level

Utilizing the equations from the methodology above and the reference information in Table G, construction noise levels during the pipe installation and equipment installation phases were calculated based on information from the *BioFuels Coyote Canyon Biomethane Facility – Renewable Gas Interconnection Rule 45 Interconnect Detailed Engineering Study Report* (Southern California Gas Company 2022). Construction noise levels during the pipe installation phase, lasting four months, would be 83 dBA L_{eq} at a distance of 50 ft from the construction area. Construction noise levels from equipment installation, lasting twelve months, is expected to be approximately 77 dBA L_{eq} at 50 feet. Additionally, minor grading would be necessary prior to equipment installation and pipe installation, however those noise levels would be similar to the pipeline installation and would be of shorter duration.

Construction noise levels will fluctuate throughout the construction period as equipment moves between the various areas on the project site. In order to assess the specific noise levels at the surrounding receptors, the average noise level experienced during construction was assessed based on the distance of activities to the surrounding receptors which would be 1,700 feet from the property line of the existing school use to the north and 1,380 feet from the existing single-family homes to the south. At those distances, the combined construction noise levels from pipe installation and equipment installation would be 54 dBA L_{eq} and 52 dBA L_{eq}, respectively. Construction noise calculations are provided in Attachment B.

While construction-related, short-term noise levels have the potential to be higher than existing ambient noise levels in the project area under existing conditions, the noise impacts would no longer occur once project construction is completed. As stated above, noise impacts associated with construction activities are regulated by the City's noise ordinance. The proposed project will be required to comply with the construction hours specified in the City's Noise Ordinance, which states that construction activities are allowed between 7:00 a.m. and 6:30 p.m., Monday through Friday,

and from 8:00 a.m. to 6:00 p.m. on Saturday. No construction is permitted outside of these hours or on Sundays and federal holidays.

As it relates to off-site uses, for informational purposes, construction-related noise impacts would remain below the 80 dBA L_{eq} 8-hour construction noise level criteria as established by the FTA for residential land uses. With adherence to the City's construction hours, construction noise impacts would be considered less than significant.

Construction Vibration Building Damage and Annoyance Potential

Ground-borne noise and vibration from construction activity would be very low at surrounding uses. While there is currently limited information regarding vibration source levels, to provide a comparison of vibration levels expected for a project of this size (as shown in Table H), a large bulldozer, similar to a crane, would generate approximately 87 VdB of ground-borne vibration when measured at 25 ft based on the *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project boundary (assuming the construction equipment would be used at or near the project boundary) because vibration impacts occur normally within the buildings. The formula for vibration transmission is provided below.

$$L_v\text{dB (D)} = L_v\text{dB (25 ft)} - 30 \text{ Log (D/25)}$$

As discussed above, vibration levels above 94 VdB would result in potential damage to non-engineered timber and masonry building and levels above 72 VdB would have the potential to cause annoyance at sensitive residential receptors.

Table H: Vibration Source Amplitudes for Construction Equipment

Equipment		Reference L_v at 25 feet ¹
Pile Driver	Impact, upper range	104
	Impact, typical	93
Hoe Ram		87
Large Bulldozer		87
Caisson Drilling		87
Loaded Trucks		86
Jackhammer		79
Small Bulldozer		58

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

Note: **Bolded** equipment is similar to that expected to be used during construction.

¹ RMS vibration velocity in decibels (VdB) is 1 $\mu\text{in/sec}$.

$\mu\text{in/sec}$ = micro-inches per second RMS = root-mean-square L_v = velocity in decibels

FTA = Federal Transit Administration VdB = vibration velocity decibels

The closest off-site structures to the project site are the existing school buildings to the north, approximately 1,400 ft from the potential construction activities and the existing single-family homes to the south, approximately 1,250 ft from the potential construction activities. Using the equations above, the operation of equipment similar to a large bulldozer would generate ground-borne vibration levels of up to 36 VdB at these receptors. At this level, vibration from construction

would be well below both the damage and annoyance thresholds as described above. Therefore, this impact would be less than significant and no mitigation would be required.

Long-Term Operational Noise Impacts

Noise impacts associated with the long-term operation of the project must comply with the standards presented in the City's Municipal Code discussed above. Noise associated with the project includes the operation of various pieces of equipment necessary to operate the proposed LFG to RNG plant. It is assumed that all equipment has the potential to operate continuously, 24 hours a day, 7 days a week. As presented below, the proposed oil coolers would be the only equipment that would have variable noise levels based on temperature that is generally tied to higher temperatures during daytime hours and cooler temperatures during the more sensitive nighttime hours.

In order to calculate the expected impacts due to long-term operational stationary source activities, the software SoundPLAN was used. SoundPLAN is a noise modeling program that allows 3-D calculations to be made taking into account topography, ground attenuation, and shielding from structures and walls. Within the model, the noise library allows for the input of many noise sources and calculates the composite noise levels experienced at any receptor necessary. The results from any calculation can be presented both in both tabular and graphic formats. The proposed operations assumed in this analysis were based on conversations with the project engineer and are conservative in nature (i.e. all operations are occurring simultaneously). Table I provides the sources modeled and their respective sound pressure level at a distance of 3 feet included in the analysis is as follows:

Table I: Equipment Reference Noise Levels

Equipment	Source Height (ft)	Reference Noise Level at 3 ft (dBA L _{eq})
Feed Compressor – #1 and #2	6	92
Compressor Feed Oil Cooler – #1 and #2	10	95
Compressor Feed After Cooler – #1 and #2	13	85
TSA Pretreatment Skid	6	85
Chiller	10	85
Membrane Skid	6	85
Recycle Compressor – #1	6	92
Recycle Compressor Oil Cooler – #1	10	95
Recycle Compressor After Cooler – #1	13	85
Deoxo Dryer	4	85
Deoxo After Cooler	4	85.1
Off-Spec Gas Flare	5	85
NRU	10	93
NRU Vacuum Rinse Skid - #1, #2, and #3	6	93
NRU Vacuum Rinse Skid Oil Cooler- #1, #2, and #3	10	95
NRU Vacuum Rinse Skid After Cooler- #1, #2, and #3	13	85
Flare	5	85 ¹
Thermal Oxidizer	4	85 ¹

Source: SCS Engineers, 2022

¹ Reference noise level at 5ft

dBA = A-weighted decibels

ft = foot/feet

L_{eq} = equivalent continuous sound level

Graphics showing the results of the SoundPLAN modeling during full site operations for both daytime and nighttime conditions including the 13 ft perimeter wall, are provided in Attachment C. Table J presents the composite noise levels at the nearest sensitive receptors.

Table J: Noise Level Impacts at Surrounding Sensitive Receptors

Location	Overall Project Noise Level (dBA L _{eq})	
	Daytime	Night
High School - North	45.5	42.9
Single-Family Homes - South	48.0	46.6

Source: Compiled by LSA (July 2022).

dBA = A-weighted decibels

L_{eq} = equivalent continuous sound level

The results show that the noise levels at the sensitive receptors to the north and to the south would experience noise levels below the daytime 55 dBA L_{eq} standard and nighttime 50 dBA L_{eq} standard from the proposed project operations, thus the project would not result in an impact to the existing sensitive receptors.

REFERENCES

- Airport Land Use Commission. 2008. *Airport Environs Land Use Plan for John Wayne Airport*. April 17.
- Federal Highway Administration (FHWA). 2006. *Highway Construction Noise Handbook*. Roadway Construction Noise Model, FHWA-HEP-06-015. DOT-VNTSC-FHWA-06-02. NTIS No. PB2006-109012. August.
- Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. Office of Planning and Environment. Report No. 0123. September.
- Harris, Cyril M., editor. 1991. *Handbook of Acoustical Measurements and Noise Control*, Third Edition.
- John Wayne Airport (JWA). 2021. John Wayne Airport 2021 Third Quarter 65 dB CNEL Contour. Website: www.ocair.com/about/administration/access-noise/reports-resources/ (accessed July 17, 2024).
- Newport Beach, City of. 1995. Municipal Code. Chapter 10.26 Community Noise Control, and Section 10.28.040 Construction Activity—Noise Regulations.
- _____. 2006. General Plan. Chapter 12 Noise Element.
- _____. 2006. City of Newport Beach General Plan 2006 Update. April.
- SCS Engineers. 2022. *Information provided by Project Engineer regarding equipment sound levels*. January.
- Southern California Gas Company. 2022. *BioFuels Coyote Canyon Biomethane Facility – Renewable Gas Interconnection Rule 45 Interconnect Detailed Engineering Study Report*. October.
- Attachments: A: Noise Measurement Data
 B: Construction Noise Printout
 C: SoundPLAN Printout

ATTACHMENT A
NOISE MEASUREMENT DATA

Noise Measurement Survey – 24 HR

Project Number: SCN2101

Test Personnel: Corey Knips

Project Name: Coyote Canyon

Equipment: Spark 906RC (SN:18906)

Site Number: LT-1 Date: 1/10/2022

Time: From 3:00 p.m. To 3:00 p.m.

Site Location: South end of project site, near hairpin turn of access road. On chain-link fence north of channel.

Primary Noise Sources: Very quiet.

Comments: _____

Photo:



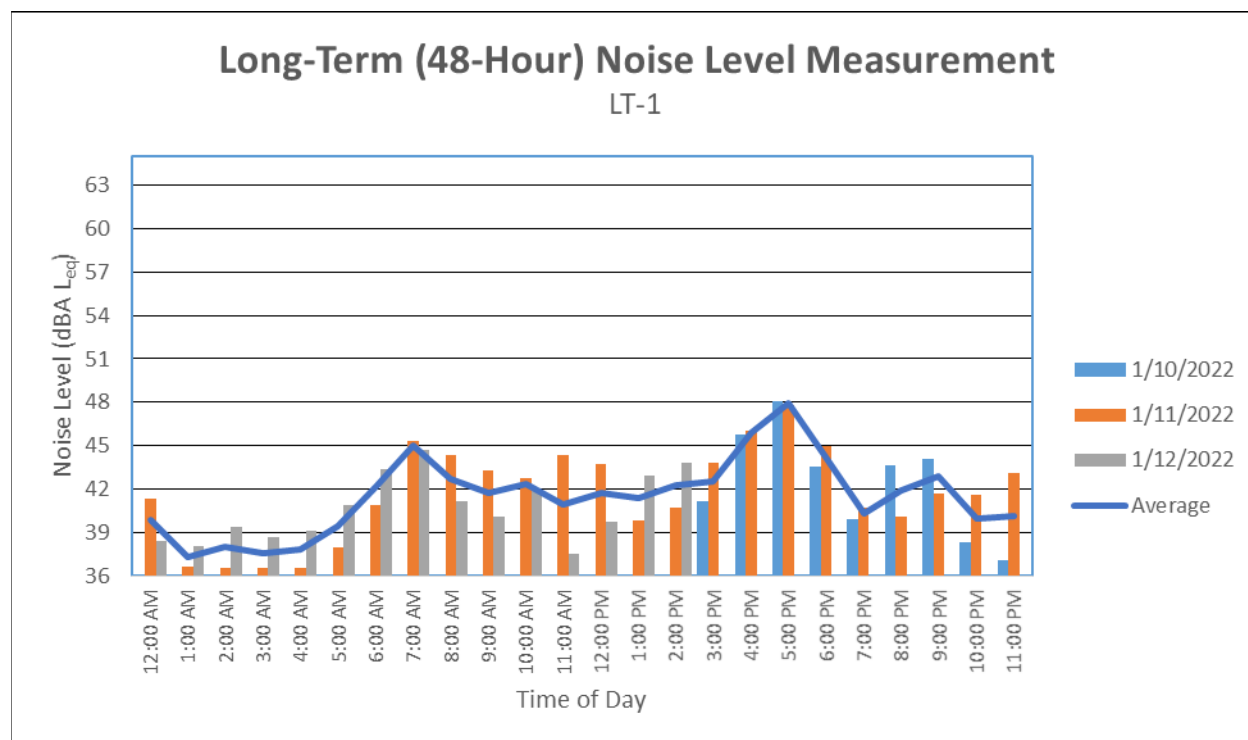
Long-Term (24-Hour) Noise Level Measurement Results at LT-1

Start Time	Noise Level (dBA L _{eq})			
	1/10/2022	1/11/2022	1/12/2022	Average
3:00 PM	--	41.3	38.4	39.8
4:00 PM	--	36.6	38.0	37.3
5:00 PM	--	36.6	39.4	38.0
6:00 PM	--	36.5	38.7	37.6
7:00 PM	--	36.6	39.1	37.9
8:00 PM	--	37.9	40.9	39.4
9:00 PM	--	40.9	43.3	42.1
10:00 PM	--	45.3	44.7	45.0
11:00 PM	--	44.3	41.2	42.7
12:00 AM	--	43.3	40.1	41.7
1:00 AM	--	42.8	41.9	42.3
2:00 AM	--	44.4	37.6	41.0
3:00 AM	--	43.7	39.7	41.7
4:00 AM	--	39.8	42.9	41.4
5:00 AM	--	40.7	43.8	42.3
6:00 AM	41.2	43.8	--	42.5
7:00 AM	45.7	46.0	--	45.9
8:00 AM	48.1	47.8	--	47.9
9:00 AM	43.5	45.0	--	44.3
10:00 AM	39.9	40.7	--	40.3
11:00 AM	43.7	40.1	--	41.9
12:00 AM	44.1	41.7	--	42.9
1:00 PM	38.4	41.6	--	40.0
2:00 PM	37.1	43.1	--	40.1

Source: Compiled by LSA Associates, Inc. (2022).

dBA = A-weighted decibel

L_{eq} = equivalent continuous sound level



Project Number: SCN2101

Project Name: Coyote Canyon

Test Personnel: Corey Knips

Equipment: Spark 906RC (SN:18907)

Site Number: LT-2 Date: 1/10/2022

Time: From 3:00 p.m. To 3:00 p.m.

Site Location: North end of project site, just south of Sage Hill School. On chain-link fence north of access road and channel.

Primary Noise Sources: Faint traffic on SR-73.

Comments: _____

Photo:



Long-Term (24-Hour) Noise Level Measurement Results at LT-2

Start Time	Noise Level (dBA L _{eq})			Average
	1/10/2022	1/11/2022	1/12/2022	
3:00 PM	--	46.0	37.8	41.9
4:00 PM	--	37.5	39.4	38.4
5:00 PM	--	37.1	36.3	36.7
6:00 PM	--	42.1	37.3	39.7
7:00 PM	--	39.2	38.2	38.7
8:00 PM	--	45.5	42.4	44.0
9:00 PM	--	49.5	45.1	47.3
10:00 PM	--	51.2	47.9	49.6
11:00 PM	--	52.8	46.9	49.8
12:00 AM	--	50.9	45.2	48.1
1:00 AM	--	48.0	46.6	47.3
2:00 AM	--	47.8	45.8	46.8
3:00 AM	--	48.4	46.2	47.3
4:00 AM	--	45.4	46.1	45.7
5:00 AM	--	45.7	48.7	47.2
6:00 AM	46.9	47.1	--	47.0
7:00 AM	52.3	47.8	--	50.0
8:00 AM	55.9	52.4	--	54.2
9:00 AM	52.0	50.3	--	51.1
10:00 AM	49.1	49.4	--	49.3
11:00 AM	48.6	46.4	--	47.5
12:00 AM	48.3	44.0	--	46.2
1:00 PM	45.5	42.5	--	44.0
2:00 PM	43.0	39.4	--	41.2

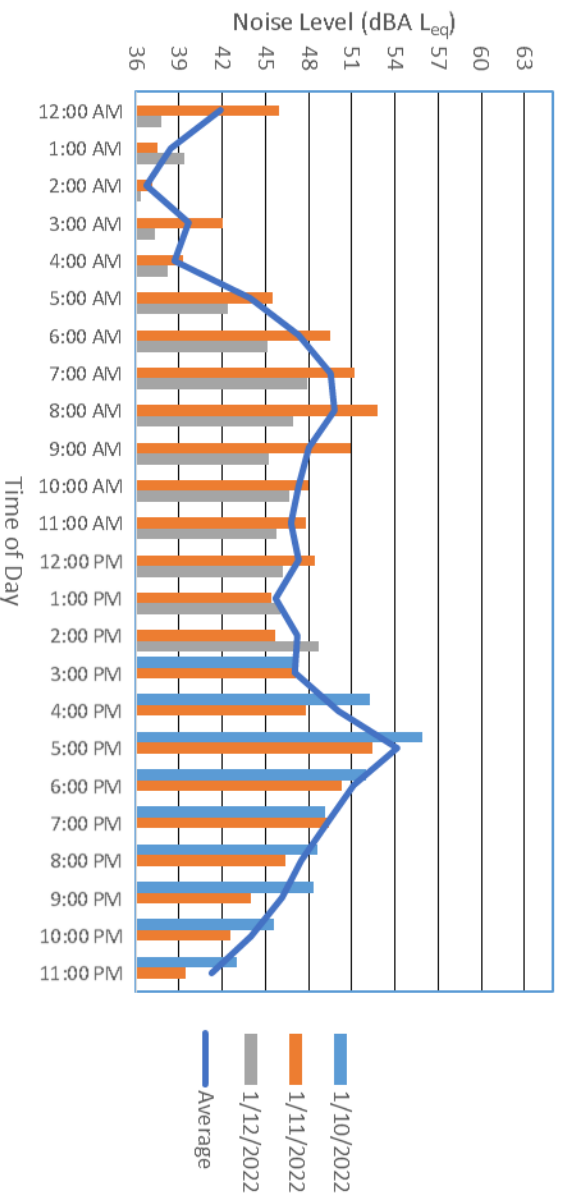
Source: Compiled by LSA Associates, Inc. (2022).

dBA = A-weighted decibel

L_{eq} = equivalent continuous sound level

Long-Term (48-Hour) Noise Level Measurement

LT-2



Project Number: SCN2101

Project Name: Coyote Canyon

Test Personnel: Corey Knips

Equipment: Spark 906RC (SN:18908)

Site Number: LT-3 Date: 1/10/2022

Time: From 3:00 p.m. To 3:00 p.m.

Site Location: West side of project site, approximately 270 feet east of Newport Coast Drive,
On sign on the west side of the access road.

Primary Noise Sources: Faint traffic on Newport Coast Drive.

Comments: _____

Photo:



Long-Term (24-Hour) Noise Level Measurement Results at LT-3

Start Time	Noise Level (dBA L _{eq})			Average
	1/10/2022	1/11/2022	1/12/2022	
3:00 PM	--	45.3	43.1	44.2
4:00 PM	--	43.7	40.7	42.2
5:00 PM	--	52.1	39.6	45.8
6:00 PM	--	51.6	39.4	45.5
7:00 PM	--	49.5	47.3	48.4
8:00 PM	--	48.3	47.4	47.9
9:00 PM	--	53.4	51.7	52.6
10:00 PM	--	54.2	55.5	54.8
11:00 PM	--	54.0	56.3	55.1
12:00 AM	--	56.8	55.0	55.9
1:00 AM	--	57.5	54.5	56.0
2:00 AM	--	50.8	50.4	50.6
3:00 AM	--	53.9	50.8	52.4
4:00 AM	--	54.9	51.4	53.2
5:00 AM	--	54.9	49.0	52.0
6:00 AM	53.7	54.0	--	53.9
7:00 AM	55.5	54.8	--	55.2
8:00 AM	54.7	56.2	--	55.5
9:00 AM	52.7	54.9	--	53.8
10:00 AM	51.1	51.6	--	51.3
11:00 AM	54.3	51.8	--	53.0
12:00 AM	55.2	49.9	--	52.5
1:00 PM	51.1	47.7	--	49.4
2:00 PM	49.9	46.0	--	48.0

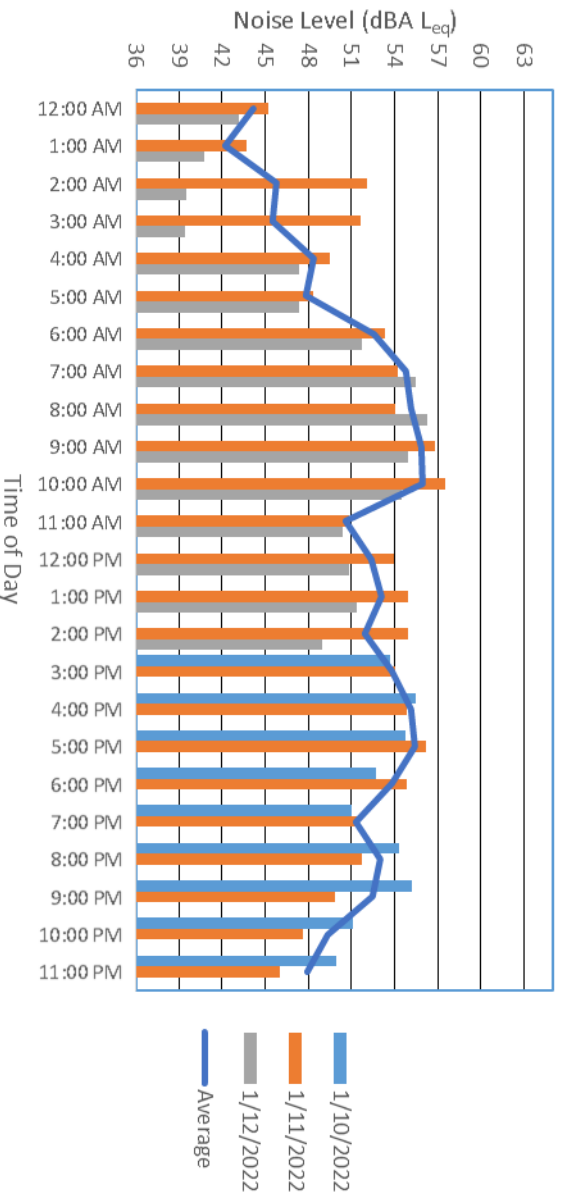
Source: Compiled by LSA Associates, Inc. (2022).

dBA = A-weighted decibel

L_{eq} = equivalent continuous sound level

Long-Term (48-Hour) Noise Level Measurement

LT-3



ATTACHMENT B
CONSTRUCTION NOISE CALCULATIONS

Construction Calculations

Phase: Pipe Installation - 4 Months

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor ¹	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA)	
					Lmax	Leq
Backhoe	85	16	50	0.5	85	77
Dozer	80	40	50	0.5	80	76
Tractor	80	40	50	0.5	80	76
Pneumatic Tool	86	16	50	0.5	86	78
Welder	74	40	50	0.5	74	70
Combined at 50 feet					90	83
Phase at Receptor 1380 feet					61	54
Phase at Receptor 1700 feet					59	52

Phase: Equipment Installation - 12 months

Equipment	Reference (dBA) 50 ft Lmax	Usage Factor ¹	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA)	
					Lmax	Leq
Crane	83	16	50	0	83	75
Forklift	75	50	50	0	75	72
Combined at 50 feet					84	77
Phase at Receptor 1250 feet					56	49
Phase at Receptor 1400 feet					55	48
Combined Phases at Receptor 1250 feet					62	55
Combined Phases at Receptor 1400 feet					60	54

Sources: *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances (USEPA 1971). RCNM*

¹- Percentage of time that a piece of equipment is operating at full power.

dBA – A-weighted Decibels

Lmax- Maximum Level

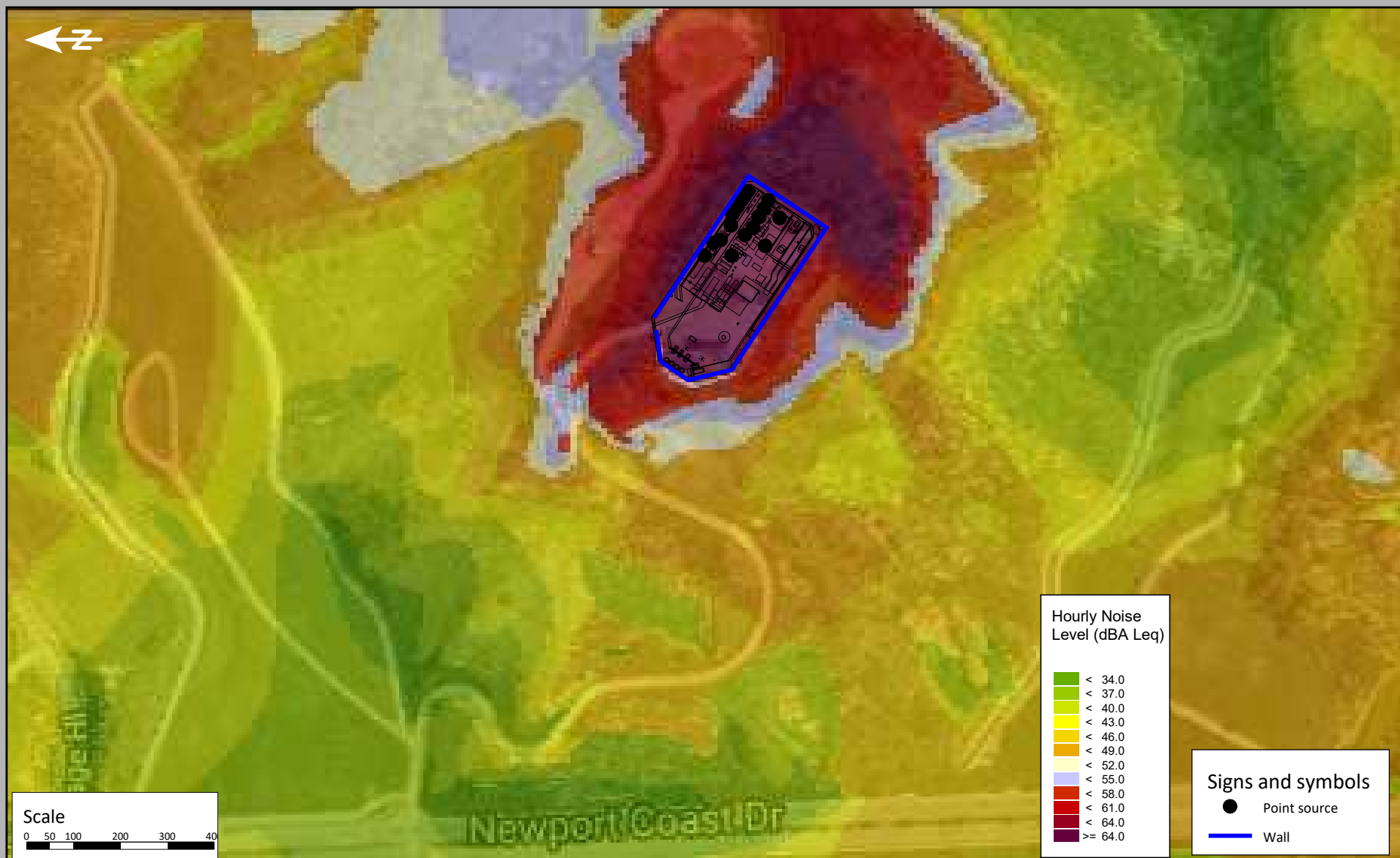
Leq- Equivalent Level

ATTACHMENT C
SOUNDPLAN PRINTOUTS

Coyote Canyon Landfill

Project No. SCN2101

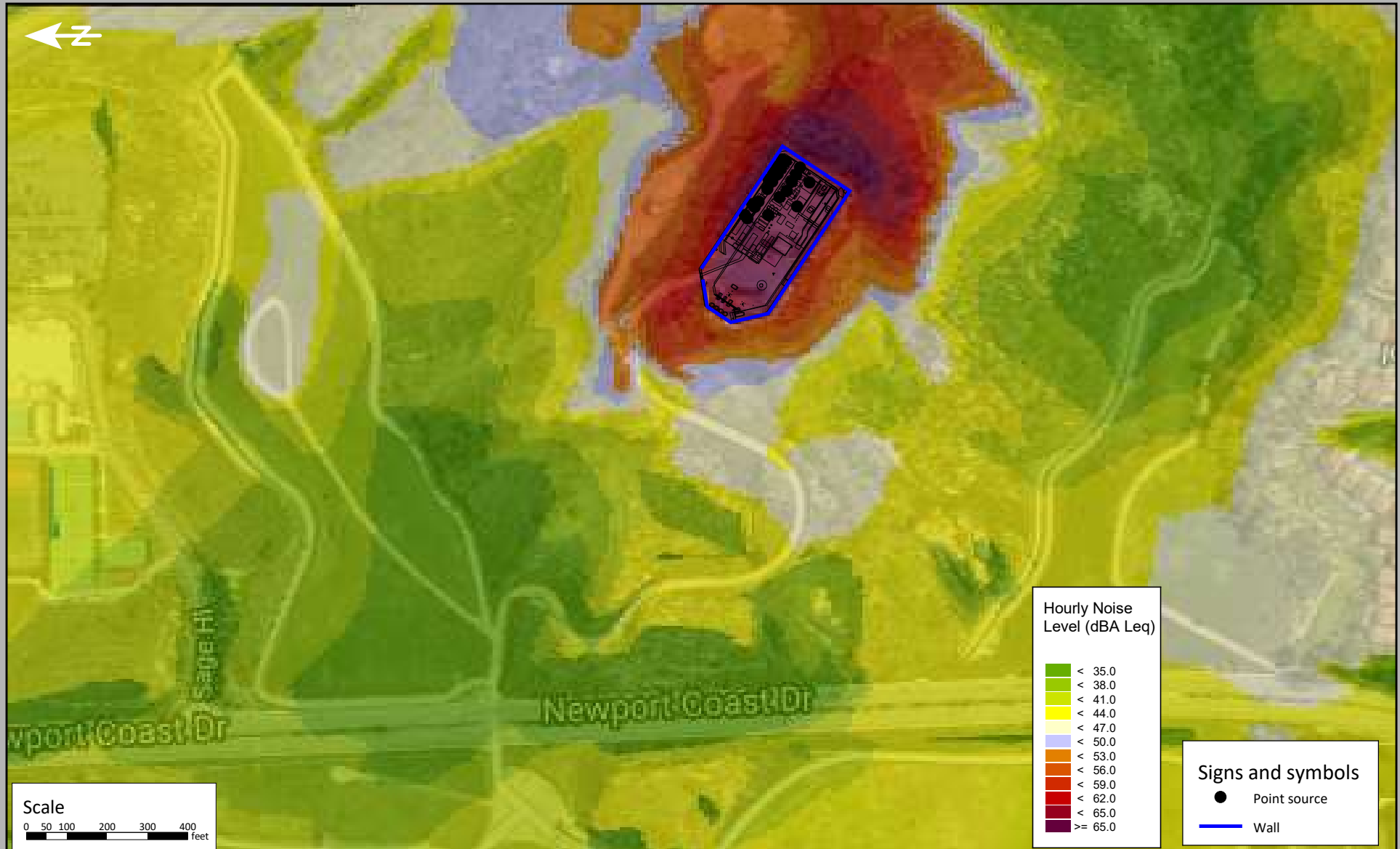
Project Operational Noise Levels - Daytime



Coyote Canyon Landfill

Project No. SCN2101

Project Operational Noise Levels - Nighttime



Appendix

Appendix L Service Provider Questionnaire Responses

Appendix

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From: [Emily Parks](#)
To: JCartwright@nbpd.org
Cc: [Dina El Chammas](#)
Subject: Preparation of an Initial Study/Mitigated Negative Declaration for the Proposed Renewable Natural Gas (RNG) Plant Project in the City of Newport Beach
Date: Monday, February 26, 2024 3:34:00 PM
Attachments: [Police Questionnaire.doc](#)
[image002.png](#)
[04 Site Aerial 240125 85x11 P.pdf](#)
[05 Conceptual Site Plan 240118 11x17 L Type 1.pdf](#)
[02 Coyote Canyon Landfill Map 240125 11x17 L Type 1.pdf](#)

To Chief Joe Cartwright:

PlaceWorks has been retained by the City of Newport Beach to prepare an Initial Study/Mitigated Negative Declaration (IS/MND) for the renewable natural gas (RNG) plant project which would disturb approximately 0.88 acres on the existing Coyote Canyon Landfill (CCL) at 20662 Newport Coast Drive. Construction activities would consist of installing and operating an RNG processing facility and pipeline interconnection facility. The RNG facility will treat landfill gas (LFG) from the closed landfill to create usable fuel which would then be injected into existing SoCalGas infrastructure.

The proposed RNG facility would include secondary and advanced treatment of the LFG. Specifically, the RNG processing facility would convert LFG into a pipeline-quality natural gas equivalent. Primary treatment of LFG would occur at the existing landfill flaring facility operated by Orange County Waste & Recycling (OCWR). The existing flares at the CCL would be used as backup if the RNG processing facility goes offline or to combust any excess LFG that is not used.

PlaceWorks would like to assess the adequacy of the Newport Beach Police Department's police facilities. We are requesting input from your agency to evaluate the ability of the Department to meet the existing needs and serve the future needs of the proposed operation of the RNG processing facility. Enclosed is an aerial map of the project site, a conceptual site plan for the proposed project, and a brief questionnaire for you to fill out and return to us. Any other responses or comments you have are also welcome. All responses will become part of the public record. Please email your response to the questionnaire to Emily Parks, eparks@placeworks.com, or mail your response to the address in the footer, by March 11, 2024.

If you have any questions or require further information, please feel free to email me. Thank you for your assistance.

Sincerely,

PLACEWORKS



EMILY PARKS, MS
Associate I



3 MacArthur Place, Suite 1100 | Santa Ana, California 92707
714.966.9220 ext. 2397
eparks@placeworks.com | placeworks.com

PlaceWorks is now 100% employee-owned!

**Proposed Renewable Natural Gas (RNG) Plant Project
Police Questionnaire**

Please verify/respond to the following:

1. Please confirm the following station responds to calls from the project site:
 - a. Newport Beach Police Department at 870 Santa Barbara Drive, Newport Beach, CA 92660

Confirmed.

2. Please indicate the type of service calls or service demands anticipated by the proposed uses (proposed RNG facility).

Based on the proposal, I do not anticipate any police calls for service to the facility unless there was a gas leak or other industrial accident. To mitigate this type of risk, I am confident your team has specific safety measures and procedures in place to keep the facility operating safely, which will be further outlined in your proposal.

3. Given the existing level of staffing and equipment, will the police department be able to provide police services to the proposed project? If not, please indicate what will be required to serve the project.

Based on the staffing level and equipment, the police department will be able to provide police services to the proposed project's location. In order to ensure a timely response, the location must allow access for the police and fire departments. It is my recommendation to have a Knox Box (emergency access) key installed to allow the police and fire departments to enter the secure location.

4. What impact will the proposed project, in combination with all the other projects planned in the area, have on the ability of the police department to provide police services in the area?

I am unaware of any other proposed projects in the area at this time, which could interrupt police services.

**Proposed Renewable Natural Gas (RNG) Plant Project
Police Questionnaire**

5. What conditions will the Police Department require or recommended to reduce safety hazards and reduce potential impacts on police service?

I recommend training your employees on the best and safest industry practices to mitigate risk to the area. To reduce risk, it is our recommendation to install safety systems to alert the police department, the fire department, and the community in the event of a gas leak.

Given the potential dangers associated with this critical infrastructure, it is essential to include the Newport Beach Fire Department, the Orange County Fire Authority, and the Orange County Intelligence Assessment Center in this process.

6. Please add any comments you may wish to make regarding this matter.

It is my recommendation to conduct a walk-through with the above listed stakeholders (Newport Beach Fire Department, Orange County Fire Authority, Orange County Intelligence Assessment Center, and the Newport Beach Police Department).

Once a walk-through is completed, a safety pre-plan can be created by the Newport Beach Police Department to assist with our response to the location.

Response Prepared By:

Gary Clemente

Name

Lieutenant

Title

Newport Beach Police Department

Agency

March 8, 2024

Date

From: [Emily Parks](#)
To: jboyles@nbfd.net
Cc: [Dina El Chammas](#)
Subject: Preparation of an Initial Study/Mitigated Negative Declaration for the Proposed Renewable Natural Gas (RNG) Plant Project in the City of Newport Beach
Date: Thursday, February 29, 2024 1:35:00 PM
Attachments: [Fire Questionnaire.doc](#)
[image003.png](#)
[04 Site Aerial 240125 85x11 P.pdf](#)
[05 Conceptual Site Plan 240118 11x17 L Type 1.pdf](#)
[02 Coyote Canyon Landfill Map 240125 11x17 L Type 1.pdf](#)

To Chief Jeff:

PlaceWorks has been retained by the City of Newport Beach to prepare an Initial Study/Mitigated Negative Declaration (IS/MND) for the renewable natural gas (RNG) plant project which would disturb approximately 0.88 acres on the existing Coyote Canyon Landfill (CCL) at 20662 Newport Coast Drive. Construction activities would consist of installing and operating an RNG processing facility and pipeline interconnection facility. The RNG facility will treat landfill gas (LFG) from the closed landfill to create usable fuel which would then be injected into existing SoCalGas infrastructure.

The proposed RNG facility would include secondary and advanced treatment of the LFG. Specifically, the RNG processing facility would convert LFG into a pipeline-quality natural gas equivalent. Primary treatment of LFG would occur at the existing landfill flaring facility operated by Orange County Waste & Recycling (OCWR). The existing flares at the CCL would be used as backup if the RNG processing facility goes offline or to combust any excess LFG that is not used.

PlaceWorks would like to assess the adequacy of the City of Newport Beach Fire Department's fire facilities. We are requesting input from your agency to evaluate the ability of the Department to meet the existing needs and serve the future needs of the proposed operation of the RNG processing facility. Enclosed is an aerial map of the project site, a conceptual site plan for the proposed project, and a brief questionnaire for you to fill out and return to us. Any other responses or comments you have are also welcome. All responses will become part of the public record. Please email your response to the questionnaire to Emily Parks, eparks@placeworks.com, by March 14, 2024.

If you have any questions or require further information, please feel free to email me. Thank you for your assistance.

Sincerely,

PLACEWORKS



MS

EMILY PARKS,
Associate I



3 MacArthur Place, Suite 1100 | Santa Ana, California 92707

714.966.9220 ext. 2397

eparks@placeworks.com | placeworks.com

PlaceWorks is now 100% employee-owned!

**Proposed Renewable Natural Gas (RNG) Plant Project
Fire Questionnaire**

Please verify/respond to the following:

1. Please list any additional stations that would respond to the site and include equipment and personnel at each station:

Fire Stations and Equipment Serving the Project Site

Station	Address	Equipment/Personnel
City of Newport Beach Fire Department		
Newport Coast Fire Station 8	6502 Ridge Park Rd. Newport Beach, CA 92657	Type I Engine (3) Type III Engine (cross-staffed)
Fashion Island Fire Station 3	868 Santa Barbara Newport Beach, CA 92660	Type I Engine (3) Aerial Ladder Truck (4) Paramedic Ambulance (2) Battalion Chief (1)
Corona Del Mar Fire Station 5	410 Marigold Ave. Newport Beach, CA 92625	Type I Engine (3) Paramedic Ambulance (2)
Santa Ana Heights Fire Station 7	20401 Acacia St. Newport Beach, CA 92660	Type I Engine (3) Paramedic Ambulance (2)
Balboa Island Fire Station 4	124 Marine Ave. Newport Beach, CA 92662	Type I Engine (3)
Mariner's Fire Station 6	1348 Irvine Ave. Newport Beach, CA 92660	Type I Engine (3) OES Type I Engine (cross-staffed)
Peninsula Fire Station 2	2807 Newport Blvd. Newport Beach, CA 92663	Type I Engine (3) Aerial Ladder Truck (3) Paramedic Ambulance (2)
Balboa Fire Station 1	110 E. Balboa Blvd. Newport Beach, CA 92661	Type I Engine (3)

2. What is the approximate fire flow requirement for the proposed project?

Fire flow would be calculated based on the construction type of the project. This would require the applicant to request a fire flow from Irvine Ranch Water District for all on site hydrants and provide an analysis according to Appendix B of the 2022 California Fire Code.

3. What is the Department's standard for the first arriving unit on scene for moderate risk emergency medical services and a moderate risk fire incident? What is the average response time to the project?

A moderate risk emergency medical services response would include the closest fire engine or fire truck with the closest paramedic ambulance.

**Proposed Renewable Natural Gas (RNG) Plant Project
Fire Questionnaire**

A moderate risk fire incident response would include the three closest fire engines, closest fire truck, closest paramedic ambulance, and a battalion chief.

First Due (closest engine) Responses requiring Personal Protective Equipment for a fire – our goal is less than 5 minutes, 20 seconds, 90% of the time.

First Due (closest engine) Responses without Personal Protective Equipment for a medical aid – our goal is less than 5 minutes 90% of the time.

4. What is the preferred response time for the Fire Department? Does the Department currently meet this goal?

Preferred response times are as follows:

First Due (closest engine) Responses requiring Personal Protective Equipment for a fire – our goal is less than 5 minutes, 20 seconds, 90% of the time.

First Due (closest engine) Responses without Personal Protective Equipment for a medical aid – our goal is less than 5 minutes 90% of the time

Yes, the department meets these goals.

5. Are there any existing deficiencies in the level of fire protection service currently provided to the area including and surrounding the project site?

There are deficiencies that would require specific mitigation measures regarding vegetation management practices. A landscape and vegetation management plan needs to be submitted to the Newport Beach Fire Department for review by the Fire Prevention Division. This includes a defensible space plan within 100 feet of all portions of the structures, a maintenance schedule, fuel thinning, spacing between shrubs, tree canopies, ladder fuels and tree canopies, and removal of invasive species of vegetation according to Chapter 49 of the California Fire Code and section 51182 of the Government Code. Additionally, compliance with Chapter 7A of the 2022 California Building Code regarding the construction features of the project would require review and approval by the Newport Beach Building Department.

6. Would this project have a significant impact on the ability to maintain an adequate level of fire protection service to the area?

No, it would not.

**Proposed Renewable Natural Gas (RNG) Plant Project
Fire Questionnaire**

7. Would the Fire Department need to construct new facilities, expand existing facilities, and/or hire more firefighters or staff to accommodate the proposed project?

No, it would not.

8. Do you have any concerns regarding emergency evacuation or emergency access within the Fire Department's service area, or anything you would like us to know about evacuation and access conditions?

The proposed fire department access shall be designed to meet the weight of the heaviest apparatus and meet the requirements of NBFD Guideline C.01. The minimum street width shall be 20 feet, with no parking on either side. The width shall be increased to 26 feet within 30 feet of a hydrant, no vehicle parking allowed. Parking on one side is permitted for streets that are a minimum of 28 feet wide. Parking on both sides of a street is permitted for streets that are a minimum of 36 feet wide. Roads must be constructed of a material that provides an all-weather driving surface and capable of supporting 72,000 pounds-imposed loads for fire apparatus and truck outrigger loads of 75 pounds per square inch over a two-foot area. Calculations stamped and signed by a Registered Professional Engineer (RPE) shall certify that the proposed surface meets the criteria of an all-weather driving surface and can withstand the weight of 72,000 pounds.

9. Are there any existing plans for expansion or relocation of fire stations that would serve the proposed project? If so, please describe or provide reports or other documents describing the planned expansion or relocation.

We are considering re-locating fire station 3 to a few blocks closer to the proposed sight. This is only an idea at this point, and there are no reports to provide. However, it would decrease the response times slightly for a fire response.

10. We understand the Fire Marshall has expressed concerns about the possibility of an offsite fire reaching the facility due to the surrounding dry vegetation. Please provide recommendations that could reduce the demand for fire protection and emergency response services and reduce fire hazard potential.

There are deficiencies that would require specific mitigation measures regarding vegetation management practices. A landscape and vegetation management plan shall be submitted to the Newport Beach Fire Department for review by the Fire Prevention Division. This includes a defensible space plan within 100 feet of all portions of the structures, a maintenance schedule, fuel thinning, spacing between shrubs, tree canopies, ladder fuels and tree canopies, and removal of invasive species of vegetation according to Chapter 49 of the California Fire Code and section 51182 of the Government Code. Plans shall be developed and submitted by a technical expert for review by NBFD Fire Prevention Division. The concern is not only an off-site fire reaching a facility but an on-site fire reaching the wildland urban interface, resulting a fire expanding to the existing commercial and residential in the area.

**Proposed Renewable Natural Gas (RNG) Plant Project
Fire Questionnaire**

11. Please add any other comments you may wish to make regarding this project.

Historically, we have experienced increased calls for response due to the flame created from burning off the methane. Typically, the unit was able to identify that it was under normal operating procedures and return to the station. However, if there will be a flame in the new facility, it would be advantageous to shield the flame from visibility of the public. Vehicles travelling on the 73 fwy, especially under foggy conditions see the flame and call 911. We would appreciate your cooperation in attempting to preemptively mitigate this issue during the design phase. Reducing wasted time responding to a false call could make the difference for somebody else in need of help nearby.

Response Prepared By:

<u>JUSTIN CARR</u>	<u>ASSISTANT FIRE CHIEF</u>
Name	Title
<u>NEWPORT BEACH FIRE</u>	<u>3/25/24</u>
Agency	Date

Appendix

Appendix M AB 52 Tribal Consultation Correspondence

Appendix

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October 9, 2023

Joyce Stanfield Perry, Tribal Manager
Juaneño Band of Mission Indians - Acjachemen Nation
4955 Paseo Segovia
Irvine, CA 92603
kaamalam@gmail.com

Subject: Assembly Bill 52 (AB 52) Formal Notice of the Proposed Landfill Gas to Energy Plant in the City of Newport Beach, Orange County

Dear Ms. Joyce Stanfield Perry:

The City of Newport Beach (City) is reviewing an application for the construction of a renewable natural gas (RNG) plant located at the Coyote Canyon Landfill (CCL) at 20662 Newport Coast Drive. The RNG facility will treat landfill gas (LFG) from the closed landfill to create usable fuel which would then be injected into existing SoCalGas infrastructure. Currently, the LFG is treated and flared off. The project site would disturb approximately 0.88 acres on a portion of Assessor's Parcel Number (APN) 478-03-071 located 925 feet east of Newport Coast Drive (see Figure 1, *Project Location* and Figure 2, *Aerial Photograph*).

The project site is categorized and zoned Open Space (OS), which allows for Major Utilities with approval of a Conditional Use Permit (CUP). As such, the proposed RNG facility would require the approval of a CUP. Currently, the project site is completely paved with an existing County flare and blower station along with a cell tower and associated generator. The CCL is operated by Orange County Waste & Recycling (OCWR).

Construction activities would consist of installing and operating an RNG processing facility and pipeline interconnection facility. The proposed RNG facility would include secondary and advanced treatment of the LFG. Specifically, the RNG processing facility would convert LFG into a pipeline-quality natural gas equivalent. Primary treatment of LFG would occur at the existing landfill flaring facility operated by OCWR. The existing flares at the CCL would be used as backup if the RNG processing facility goes offline or to combust any excess LFG that is not used.

The pipeline interconnection facilities to SoCalGas' infrastructure would consist of two primary components, a point of receipt (POR) and a pipeline extension. The POR would monitor the quality of the RNG to ensure that it meets specifications and includes equipment to prevent non-compliant gas from entering the pipeline. The POR would also meter and odorize the RNG prior to injection. RNG would be delivered to the POR from the production facility through piping built specifically for this purpose. The point of receipt facility will be located within the OCWR existing walled compound that surrounds the RNG plant. The pipeline extension is a dedicated pipeline to transfer the RNG from the POR to the fossil natural gas pipeline located on Newport Coast Drive. The pipeline extension already connects to the project site from a previous service with an existing pipeline tie-in point in the southern portion of the site. The pipeline extension would be re-used by SoCalGas to convey the RNG into their system, therefore no pipeline excavation or construction would be necessary outside of the OCWR walled compound.

The City has started the process of preparing an Initial Study/Mitigated Negative Declaration (IS/MND) to analyze impacts associated with implementation of the proposed RNG facility. The City is notifying local Native American tribes, pursuant to California Public Resource Code Section 21080.3.1 (AB 52). The City recognizes that "Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources that may inform the lead agency in its identification and

determination of the significance of tribal cultural resources.” As such, the City is soliciting input, and, if necessary, consultation with your tribe to identify any potential environmental impacts from the proposed RNG facility.

The City would appreciate receiving any comments, issues and/or concerns related to cultural resources, sacred lands, and tribal cultural resources that you may have for the project area. All information provided will be kept confidential. If the tribe wishes to consult with the City about the potential impacts to that may occur to tribal or cultural resources, **please respond within 30 days**, pursuant to Public Resources Code section 21080.3.1(d).

If you need any additional information or have any questions, please contact me at (949) 644-3312 or via e-mail at JPerez@newportbeachca.gov. Thank you for your assistance.

Sincerely,

Joselyn Perez
Associate Planner
Community Development Department
City of Newport Beach
JPerez@newportbeachca.gov

Attachment:

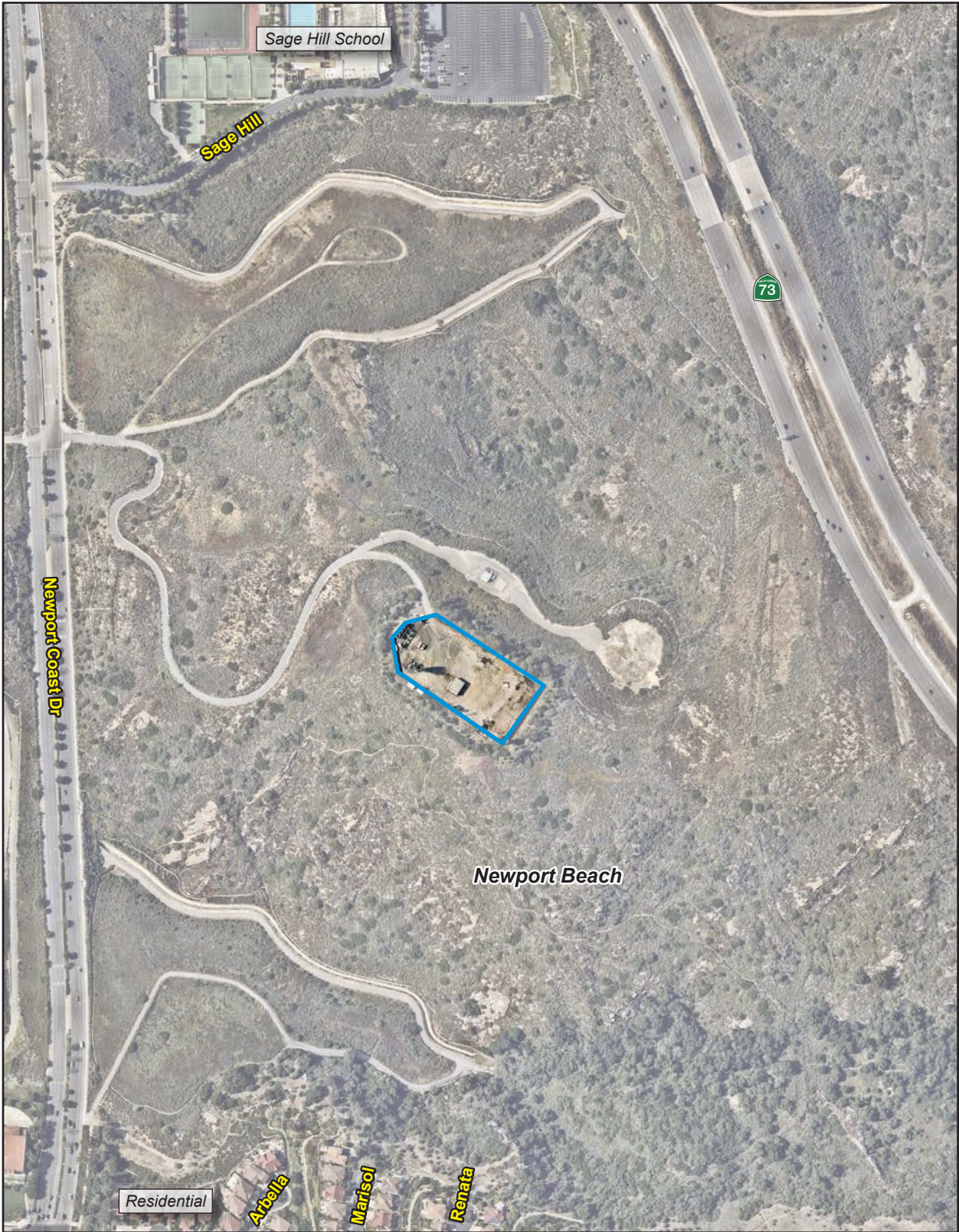
Figure 1, *Project Location*

Figure 2, *Aerial Photograph*

Figure 1 - Project Location



Figure 2 - Aerial Photograph



Project Boundary

0 430
Scale (Feet)



Source: Nearmap 2023.

PlaceWorks

October 9, 2023

Christina Conley, Cultural Resources Administrator
Gabrielino Tongva Tribe
PO Box 941078
Simi Valley, CA 93094
christina.marsden@alumni.usc.edu

Subject: Assembly Bill 52 (AB 52) Formal Notice of the Proposed Landfill Gas to Energy Plant in the City of Newport Beach, Orange County

Dear Ms. Christina Conley:

The City of Newport Beach (City) is reviewing an application for the construction of a renewable natural gas (RNG) plant located at the Coyote Canyon Landfill (CCL) at 20662 Newport Coast Drive. The RNG facility will treat landfill gas (LFG) from the closed landfill to create usable fuel which would then be injected into existing SoCalGas infrastructure. Currently, the LFG is treated and flared off. The project site would disturb approximately 0.88 acres on a portion of Assessor's Parcel Number (APN) 478-03-071 located 925 feet east of Newport Coast Drive (see Figure 1, *Project Location* and Figure 2, *Aerial Photograph*).

The project site is categorized and zoned Open Space (OS), which allows for Major Utilities with approval of a Conditional Use Permit (CUP). As such, the proposed RNG facility would require the approval of a CUP. Currently, the project site is completely paved with an existing County flare and blower station along with a cell tower and associated generator. The CCL is operated by Orange County Waste & Recycling (OCWR).

Construction activities would consist of installing and operating an RNG processing facility and pipeline interconnection facility. The proposed RNG facility would include secondary and advanced treatment of the LFG. Specifically, the RNG processing facility would convert LFG into a pipeline-quality natural gas equivalent. Primary treatment of LFG would occur at the existing landfill flaring facility operated by OCWR. The existing flares at the CCL would be used as backup if the RNG processing facility goes offline or to combust any excess LFG that is not used.

The pipeline interconnection facilities to SoCalGas' infrastructure would consist of two primary components, a point of receipt (POR) and a pipeline extension. The POR would monitor the quality of the RNG to ensure that it meets specifications and includes equipment to prevent non-compliant gas from entering the pipeline. The POR would also meter and odorize the RNG prior to injection. RNG would be delivered to the POR from the production facility through piping built specifically for this purpose. The point of receipt facility will be located within the OCWR existing walled compound that surrounds the RNG plant. The pipeline extension is a dedicated pipeline to transfer the RNG from the POR to the fossil natural gas pipeline located on Newport Coast Drive. The pipeline extension already connects to the project site from a previous service with an existing pipeline tie-in point in the southern portion of the site. The pipeline extension would be re-used by SoCalGas to convey the RNG into their system, therefore no pipeline excavation or construction would be necessary outside of the OCWR walled compound.

The City has started the process of preparing an Initial Study/Mitigated Negative Declaration (IS/MND) to analyze impacts associated with implementation of the proposed RNG facility. The City is notifying local Native American tribes, pursuant to California Public Resource Code Section 21080.3.1 (AB 52). The City recognizes that "Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources that may inform the lead agency in its identification and

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The City would appreciate receiving any comments, issues and/or concerns related to cultural resources, sacred lands, and tribal cultural resources that you may have for the project area. All information provided will be kept confidential. If the tribe wishes to consult with the City about the potential impacts to that may occur to tribal or cultural resources, **please respond within 30 days**, pursuant to Public Resources Code section 21080.3.1(d).

If you need any additional information or have any questions, please contact me at (949) 644-3312 or via e-mail at JPerez@newportbeachca.gov. Thank you for your assistance.

Sincerely,

Joselyn Perez
Associate Planner
Community Development Department
City of Newport Beach
JPerez@newportbeachca.gov

Attachment:

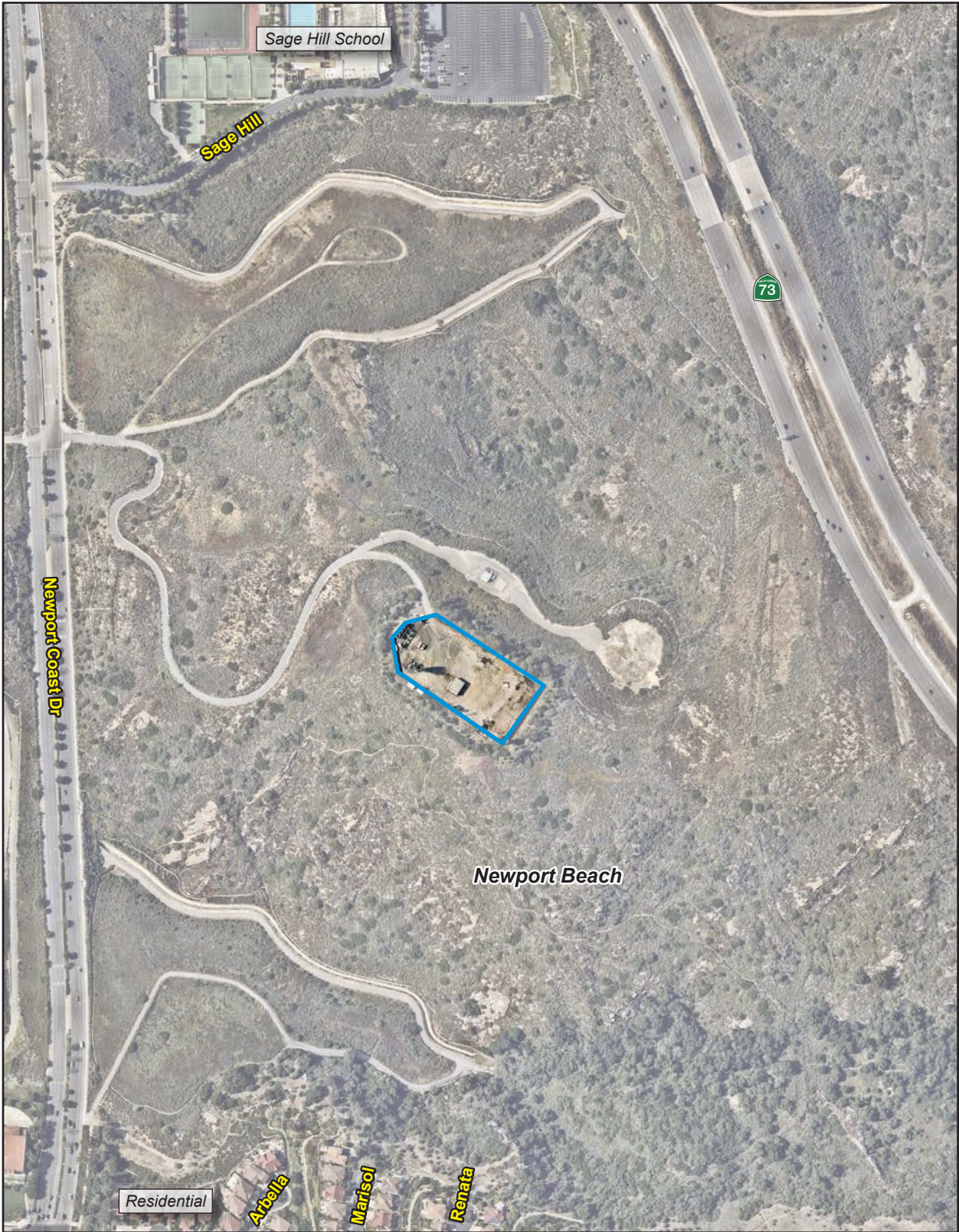
Figure 1, *Project Location*

Figure 2, *Aerial Photograph*

Figure 1 - Project Location



Figure 2 - Aerial Photograph



Project Boundary

0 430
Scale (Feet)



Source: Nearmap 2023.

PlaceWorks

October 9, 2023

Andrew Salas, Chairman
Gabrieleño Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723
admin@gabrielenoindians.org

Subject: Assembly Bill 52 (AB 52) Formal Notice of the Proposed Landfill Gas to Energy Plant in the City of Newport Beach, Orange County

Dear Mr. Andrew Salas:

The City of Newport Beach (City) is reviewing an application for the construction of a renewable natural gas (RNG) plant located at the Coyote Canyon Landfill (CCL) at 20662 Newport Coast Drive. The RNG facility will treat landfill gas (LFG) from the closed landfill to create usable fuel which would then be injected into existing SoCalGas infrastructure. Currently, the LFG is treated and flared off. The project site would disturb approximately 0.88 acres on a portion of Assessor's Parcel Number (APN) 478-03-071 located 925 feet east of Newport Coast Drive (see Figure 1, *Project Location* and Figure 2, *Aerial Photograph*).

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The City has started the process of preparing an Initial Study/Mitigated Negative Declaration (IS/MND) to analyze impacts associated with implementation of the proposed RNG facility. The City is notifying local Native American tribes, pursuant to California Public Resource Code Section 21080.3.1 (AB 52). The City recognizes that "Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources that may inform the lead agency in its identification and determination of the significance of tribal cultural resources." As such, the City is soliciting input, and, if

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If you need any additional information or have any questions, please contact me at (949) 644-3312 or via e-mail at JPerez@newportbeachca.gov. Thank you for your assistance.

Sincerely,

Joselyn Perez
Associate Planner
Community Development Department
City of Newport Beach
JPerez@newportbeachca.gov

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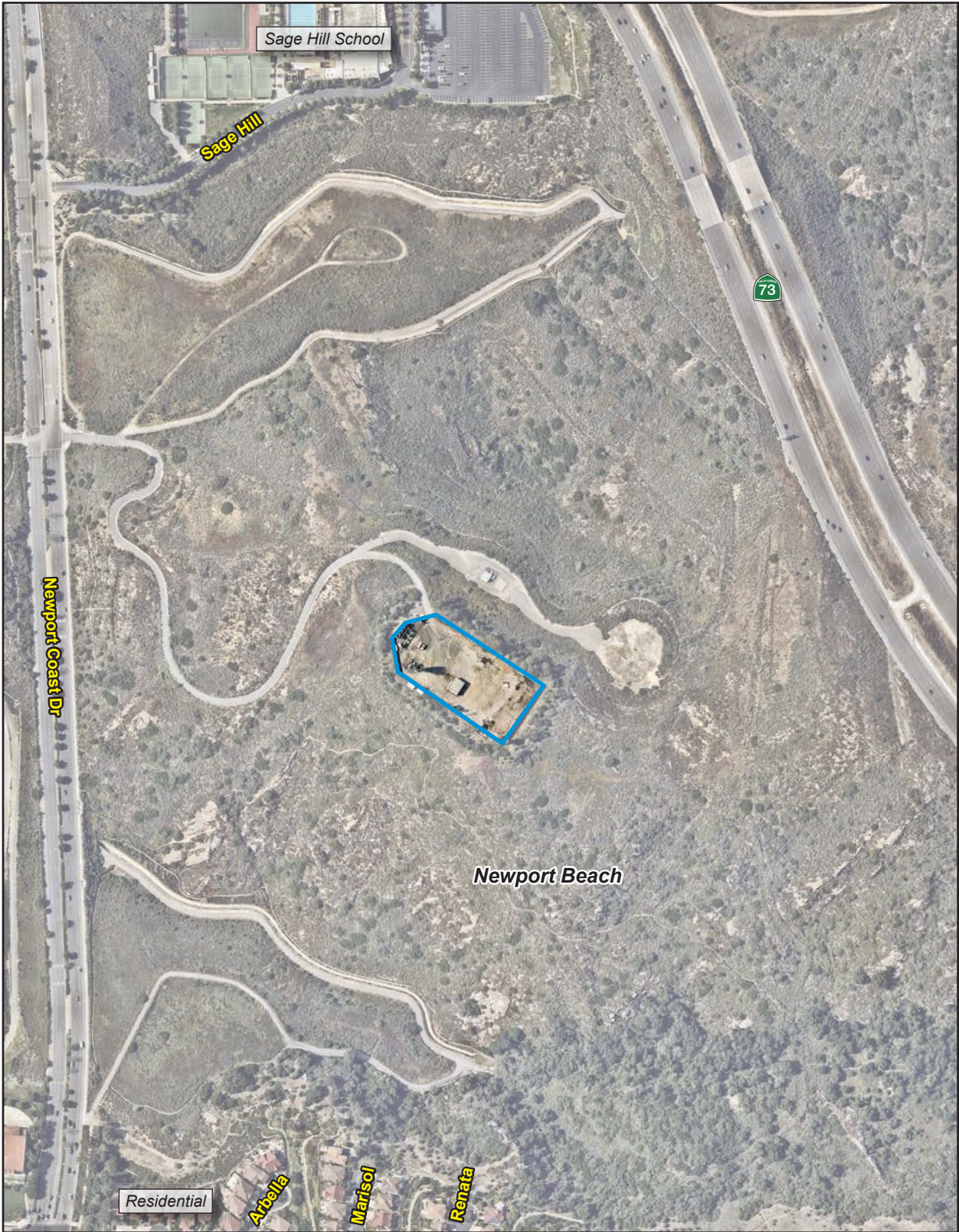
Figure 1, *Project Location*

Figure 2, *Aerial Photograph*

Figure 1 - Project Location



Figure 2 - Aerial Photograph



Project Boundary

0 430
Scale (Feet)



Source: Nearmap 2023.

PlaceWorks