May 2025 | Response to Comments

LANDFILL GAS TO ENERGY PLANT PROJECT

for City of Newport Beach

Prepared for:

City of Newport Beach
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PLACEWORKS

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ATTACHMENTS

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1. RESPONSE TO COMMENTS

Following is a list of agencies and organizations that submitted comments on the Initial Study/Mitigated Negative Declaration (IS/MND) for the Landfill Gas to Energy Plant Project during the public review period, which extended from November 27, 2024, through January 13, 2025. Comment letters and specific comments are given letters and numbers for reference purposes.

1. Response to Comments

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LETTER A1 – Gabrieleño Band of Mission Indians – KIZH NATION (3 page[s])

A1

From: Gabrieleno Administration <admin@gabrielenoindians.org>
Sent: January 09, 2025 4:12 PM
To: Perez, Joselyn <JPerez@newportbeachca.gov>
Subject: Re: Notice of Intent Adopt Mitigated Negative Declaration Landfill Gas to Energy Plant Project City of New Port Beach

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe. Report phish using the Phish Alert Button above.

Hello Josleyn

A1-Intro

Here are the requested mitigation measures down below.

Best regards,

Brandy Salas
Gabrieleño Band of Mission Indians - Kizh Nation

PO Box 393
Covina, CA 91723

Office: 844-390-0787

website: www.gabrielenoindians.org

The region where Gabrieleño culture thrived for more than twelve thousand years encompassed most of Los Angeles County, more than half of Orange County and portions of Riverside and San Bernardino counties. It was the labor of the Gabrieleño who built the missions, ranchos and the pueblos of Los Angeles. They were trained in the trades, and they did the construction and maintenance, as well as the farming and managing herds of livestock. The Gabrieleño are the ones who did all this work, and they really are the foundation of the early economy of the Los Angeles area. That's a contribution that Los Angeles has not recognized--the fact that in its early decades, without the Gabrieleño, the community simply would not have survived.

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GABRIELEÑO BAND OF MISSION INDIANS – KIZH NATION

California State Recognized Aboriginal Tribe of the Los Angeles Basin

(Historically known as the Gabrieleño Tribal Council - San Gabriel Band of Mission Indians)

GABRIELENO BAND OF MISSION INDIANS – KIZH NATION - PROPOSED TCR MITIGATION MEASURES

TCR-1: Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities

A. The project applicant/lead agency shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The monitor shall be retained prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching.
B. A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the earlier of the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity.
C. The monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs will identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCR"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to the project applicant/lead agency upon written request to the Tribe. A1-1
D. On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the project applicant/lead agency that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the project applicant/lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs.

TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial)

A. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the Kizh monitor and/or Kizh archaeologist. The Kizh will recover

and retain all discovered TCRs in the form and/or manner the Tribe deems appropriate, in the Tribe's sole discretion, and for any purpose the Tribe deems appropriate, including for educational, cultural and/or historic purposes.

TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects

A. Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute.
B. If Native American human remains and/or grave goods are discovered or recognized on the project site, then Public Resource Code 5097.9 as well as Health and Safety Code Section 7050.5 shall be followed.
C. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2).
D. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods.
E. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

A1-1 comt'd

PLEASE NOTE THE FOLLOWING:

Any/all revisions to the Kizh's proposed TCR mitigations set forth above must be requested in writing, and not more than ten (30) calendar days from the date that we consulted on the subject Project so that we can conclude consultation. Requested revisions shall be delivered to the Kizh via email at admin@gabrielenoindians.org, and in a Word document, redline format. Please include as the email subject: "REQUEST FOR MITIGATION REVISIONS," and identify the project name and location/address. If revisions are not requested within 10 calendar days of consultation, the Kizh's proposed mitigations are presumed accepted as proposed (i.e., as set forth above). The laws preserving the confidentiality of Native

The laws preserving the confidentiality of Native American documents and records prohibits the inclusion of any information about the location of Native American artifacts, sites, sacred lands, or any other information that is exempt from public disclosure pursuant to the Public Records Act. (Cal. Code Regs. § 15120(d) Rocklin (2011) 197 Cal.App.4th 200, at p. 220. Please be advised that these protective mitigation measures are property of the KIZH Nation Tribal

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government and no other entity or Tribal government nor should they be utilized for any other Tribal government or entity and are protected under the AB52 confidentiality act

A1-1 cont'd

Thank you for your anticipated cooperation.

A1. Response to Comments from Gabrieleño Band of Mission Indians – Kizh Nation, dated January 9, 2025.

A1-1 The Gabrieleno Band of Mission Indians are requesting mitigation measures related to tribal cultural resources that could be uncovered on the project site during ground-disturbing activities. These mitigation measures have been added to the IS/MND and will be incorporated into the Mitigation Monitoring and Reporting Program.

The following text in Section 3.18, *Tribal Cultural Resources*, of the IS/MND (pages 137 and 138) has been added/revised. Changes to the Initial Study are identified here in strikeout text to indicate deletions and underlined text to signify additions.

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 <u>With Mitigation</u>. 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 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

1. Response to Comments

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.~~ Although discovery of resources is unlikely given the previous disturbance of the site, it is recognized that there is some potential for discovery of new resources, therefore Mitigation Measures **TCR-1** through **TCR-3** are required to reduce impacts to less than significant.

Mitigation Measure

TCR-1 **Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities:** The project applicant shall retain a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians – Kizh Nation. The monitor shall be retained prior to the commencement of any "ground-disturbing activity" for the subject project at all project locations. "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching.

A copy of the executed monitoring agreement shall be submitted to the lead agency prior to the earlier of the commencement of any ground-disturbing activity, or the issuance of any permit necessary to commence a ground-disturbing activity.

The monitor shall complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the Tribe. Monitor logs shall identify and describe any discovered tribal cultural resources (TCR), including but not limited to, Native American cultural and historical artifacts, places of significance, etc., as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs shall be provided to the project applicant/lead agency upon written request to the Tribe.

On-site tribal monitoring shall conclude upon the latter of the following (1) written confirmation to the Kizh from a designated point of contact for the project applicant that all ground-disturbing activities and phases that may involve ground-disturbing activities on the

project site or in connection with the project are complete; or (2) a determination and written notification by the Kizh to the project applicant and lead agency that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact Kizh TCRs.

TCR-2 **Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial):** Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully assessed by the Kizh monitor and/or Kizh archaeologist. The Kizh shall recover and retain all discovered TCRs in the form and/or manner the Tribe deems appropriate, in the Tribe's sole discretion, and for any purpose the Tribe deems appropriate, including for educational, cultural and/or historic purposes.

TCR-3 **Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects:** Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute. If Native American human remains and/or grave goods are discovered or recognized on the project site, then Public Resource Code 5097.9 as well as Health and Safety Code Section 7050.5 shall be followed. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

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LETTER A2 – Scott Shelly, California Department of Transportation (3 page[s])

A2

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

DISTRICT 12
1750 East 4th Street, Suite 100 | SANTA ANA, CA 92705
(657) 328-6000 | FAX (657) 328-6522 TTY 711
https://dot.ca.gov/caltrans-near-me/district-12

December 13, 2024

Ms. Joselyn Perez
Senior Planner
City of Newport Beach
100 Civic Center Drive
Newport Beach, CA. 92660

File: LDR/CEQA
SCH: **2024120012**
12-ORA-2024-02700
SR 73, PM: 21.396

Dear Ms. Perez,

Thank you for including the California Department of Transportation (Caltrans) in the review of the Mitigated Negative Declaration (MND) for the Landfill Gas to Energy Plant Project. Biofuels Coyote Canyon Biogas (project applicant) proposes to develop the 4.14-acre project site with 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 have a total building footprint of 38,500 square feet (0.88 acres) composed of pipe racks, various vessels, a condensate tank, flare, thermal oxidizer, and other processing equipment. The first stage of primary treatment is covered by the existing landfill flaring facility on the project site operated by Orange County Waste and Recycling. Landfill gas (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 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 point of receipt (POR) skid to monitor the quality of the RNG and an 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. A2-1

The site located in the northeastern portion of Newport Beach in Orange County. The project site is located on the top of a hill, on a previously established level building pad surrounded by an existing block wall, adjacent to the closed Coyote Canyon Landfill. The physical address for the project site is 20662 Newport Coast Drive. The project site can be accessed from SR-73, approximately 0.2 mile to the east, via Newport Coast Drive. The Newport Drive exit from SR-73 is 0.5 miles to the north of the project site.

"Provide a safe and reliable transportation network that serves all people and respects the environment"

1. Response to Comments

City of Newport Beach
December 13, 2024
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State Route 73 is both owned and operated by Caltrans. Therefore, Caltrans is a responsible agency on this project, and has the following comments:

1. Caltrans encourages the design of Complete Streets that include high-quality pedestrian, bicycle, and transit facilities that are safe and comfortable for users of all ages and abilities. Improvements may include providing secure bicycle parking, pedestrian-oriented LED lighting, and comfortable connections to nearby active transportation and/or transit facilities. Complete Streets improvements also promote regional connectivity, improve air quality, reduce congestion, promote improved first-/last-mile connections, and increase safety for all modes of transportation. A2-2

2. The project is close to an existing Class II bikeway on Newport Coast Drive. With that in mind, Caltrans recommends the inclusion of secure and functional short-term bike parking to encourage workers to participate in active transportation practices. Short-term bike parking at public locations should be placed in visible areas that are close to main destinations and should be installed at least 24" away from walls and other objects (e.g. trash cans, plants, etc.). With the increasing popularity of electric bikes and cargo/utility bikes, bike parking should also be designed to accommodate different styles, sizes, and weights of bikes (e.g. cargo bike, bike with trailer, adult tricycle, etc.). A2-3
    - For additional guidance on bicycle parking best practices, see the "Essentials of Bike Parking" guidance created by the Association of Pedestrian and Bicycle Professionals (link to online PDF: https://www.apbp.org/Publications).

3. Consider the inclusion of mitigation measures for safety hazards for bicyclists and pedestrians, especially given that the project site is close to Newport Coast Drive which has a Class II bikeway, as part of the traffic control plan. Currently, Mitigation measures as listed on pages 134-135 of the Initial Study only mentions measures related to drivers, but not bicyclists and pedestrians. A2-4

4. Any work performed within Caltrans right-of-way (R/W) will require discretionary review and approval by Caltrans and an encroachment permit will be required for any work within the Caltrans R/W prior to construction. Prior to submitting to Caltrans Permit's branch, applicant should fill out Applicant's Checklist to Determine Applicable Review Process (QMAP List) Form TR-0416 to determine if project oversight/coordination with Caltrans Project Manager is needed. Applicant must submit a signed Standard Encroachment Permit application form TR-0100 along with a deposit payable to Caltrans. Deposit amount will be dependent on when the application is submitted. Public A2-5

"Provide a safe and reliable transportation network that serves all people and respects the environment"

corporations are legally exempt from encroachment permit fees. However, contractors working for public corporations are not exempt from fees. Please note that all utility work should be disclosed prior to permit submittal, and utility companies are to apply for separate permits for their corresponding work. A2-5 cont'd

Caltrans' mission is to provide a safe and reliable transportation network that serves all people and respects the environment. Please continue to coordinate with Caltrans for any future developments that could potentially impact State transportation facilities. If you have any questions, please do not hesitate to contact Julie Lugaro at Julie.lugaro@dot.ca.gov. A2-6

Sincerely,

Scott Shelley
Branch Chief,
Local Development Review-Climate Change-Transit Grants
Caltrans, District 12

1. Response to Comments

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A2. Response to Comments from California Department of Transportation, dated December 13, 2024.

A2-1 The project site can be accessed from State Route (SR) 73, approximately 0.2 mile to the east, via Newport Coast Drive. The California Department of Transportation (Caltrans) notes that SR-73 is both owned and operated by Caltrans. Therefore, Caltrans is a responsible agency on this project. No response is required.

A2-2 The commenter is describing the concept of Complete Street. No response is required. The proposed project does not include offsite roadway improvements therefore, specific complete street requirements to do not apply

A2-3 Caltrans is recommending the inclusion of secure and functional short-term bike parking to encourage workers to participate in active transportation practices. This design feature has been added to the proposed project as a Condition of Approval. Short-term bike parking would be provided at a visible location at the project site and will be installed at least 24 feet away from walls and other objects. Bike parking would be designed to accommodate different styles of bikes.

A2-4 Mitigation measure TRANS-1 has been updated as shown below to include safety hazards for bicyclists and pedestrian as part of the traffic control plan. The following text in Section 3.17, Transportation, of the IS/MND (page 134) has been added/revised. Changes to the Initial Study are identified here in strikeout text to indicate deletions and underlined text to signify additions.

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. Construction traffic may also impact bicyclists and pedestrians accessing the sidewalk and the Class II bikeway on 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

1. Response to Comments

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. The traffic control plan shall also include measures that address safety hazards to bicyclists and pedestrians.

A2-5 It is not anticipated that any work would be done within Caltrans right-of-way (R/W). However, any work performed within Caltrans R/W would be reviewed and approved by Caltrans and an encroachment permit would be obtained prior to construction within Caltrans's R/W. Prior to submitting to Caltrans's Permit branch, the applicant would fill out the Applicant's Checklist to Determine Applicable Review Process (QMAP List) Form TR-0416 to determine if project oversight/coordination with a Caltrans Project Manager is needed. The applicant would submit a signed Standard Encroachment Permit application form TR-0100 along with a deposit payable to Caltrans. All utility work would be disclosed prior to permit submittal, and utility companies would apply for separate permits for their corresponding work.

A2-6 Caltrans notes their mission to provide a safe and reliable transportation network. No response required.

LETTER A3 – Sam Wang, South Coast Air Quality Management District (6 page[s])

A3

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL:
jperez@newportbeachca.gov
Joselyn Perez, Senior Planner
City of Newport Beach
Planning Division
100 Civic Center Drive
Newport Beach, CA 92660

January 16, 2025

Notice of Intent to Adopt an Initial Study/Mitigated Negative Declaration (IS/MND) for the Landfill Gas to Energy Plant Project (PA2022-063) (Proposed Project) (SCH: 2024120012)

South Coast Air Quality Management District (AQMD) staff appreciate the opportunity to review the above-mentioned document. The City of Newport Beach is the California Environmental Quality Act (CEQA) Lead Agency for the Proposed Project. To provide context, South Coast AQMD staff has provided a brief summary of the project information and prepared the following comments which are organized by topic of concern.

Summary of Proposed Project Information in the IS/MND

Based on the IS/MND, the Proposed Project consists of developing a renewable natural gas (RNG) processing plant and a pipeline interconnection facility on 4.14 acres on a site located adjacent to the closed Coyote Canyon Landfill. The proposed RNG Plant is intended to process and treat excess landfill gas (LFG) from the Coyote Canyon Landfill Gas Collection and Control System, which would otherwise be incinerated at the existing, adjacent flare station, and route the processed product gas, RNG, to SoCalGas for use by their customers.

A3-1

The proposed RNG facility would have a total building footprint of 38,500 square feet (0.88 acre) composed of pipe racks, various vessels, a condensate tank, flare, thermal oxidizer, and other processing equipment. The first stage of primary treatment of LFG currently occurs at an existing landfill flaring facility on the project site operated by Orange County Waste and Recycling. Under the Proposed Project, however, the LFG would be conveyed to the proposed RNG facility through a proposed underground LFG supply line where it would undergo secondary and advanced treatment. The treated LFG would then be injected into SoCalGas infrastructure in the western part of the site via the proposed 6,000-square-foot pipeline interconnection facility. 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 the RNG from the POR to the existing fossil natural gas pipeline tie-in point. 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. Based on a review of aerial photographs, South Coast AQMD staff found that the nearest sensitive receptor (e.g., residential development) is located 1,200 feet to the south of the Proposed Project site.[1] Project development is anticipated

[1] IS/MND p. 11.

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to take approximately 12 months, from February 2025 to January 2026.[2] The Proposed Project site is located at 20662 Newport Coast Drive in the City of Newport Beach.[3] A3-1 cont'd

South Coast AQMD Comments

Recommended Revisions to Greenhouse Gas Analysis

According to Section 1 - Project Description of the IS/MND, the Lead Agency proposes to develop the RNG Plant to process a maximum of 3,200 standard cubic feet per minute (scfm) of raw (untreated) LFG which is comprised of approximately 40-45% methane (CH4).[4]

The Proposed Project's greenhouse gas (GHG) emission estimates are summarized in Table 9 - Greenhouse Gas Emissions Summary and Significance Evaluation.[5] A portion of the GHG emission estimates in Table 9 appear to have been calculated using the California Emissions Estimator Model (CalEEMod) for direct on-site and off-site GHG emissions from construction and operation, as well as indirect off-site GHG emissions from electric power, water conveyance, and waste disposal. Meanwhile, the GHG emissions from stationary sources, including the RNG thermal oxidizer, enclosed RNG flare, and emergency generator, were calculated separately and added to Table 9. However, the GHG analysis in the IS/MND neither appears to include the baseline GHG emissions from the LFG itself, nor the GHG emissions from the proposed flare and the product gas (RNG) that will be sent to SoCalGas. The IS/MND states that only anthropogenic GHGs (CH4 and nitrous oxide (N2O) from the tail gas combustion), not biogenic GHGs from the LFG itself, were included in the analysis. While this approach may be suitable for the purpose of complying with the California Air Resources Board's GHG Mandatory Reporting Regulation, CEQA Guidelines Section 15064.4 requires a Lead Agency to make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the *full scope* of all sources of GHG emissions.[6,7] Therefore, as explained in further detail, the IS/MND should evaluate all GHG emissions, including carbon dioxide (CO2) from the tail gas from the thermal oxidizer as well as CO2, CH4, and N_2O from the proposed flare, and compare the total post-project GHG emissions in terms of carbon dioxide equivalents (CO2eq) to the existing environmental setting/baseline conditions. A3-2

In addition, it is unclear in the IS/MND how the CEQA baseline for the existing environmental setting and post-project GHG sources were defined for the Proposed Project. The GHG baseline should discuss existing conditions, including direct and indirect on-site and off-site sources such as the 3,200 scfm of raw LFG (40-45% methane) currently collected and sent to the existing flare. To calculate GHG emissions for both the baseline and the Proposed Project (e.g., post-project conditions), the Lead Agency is recommended to first convert the emissions of CO2, CH4, and N2O into CO2eq by applying the appropriate Global Warming Potentials (GWPs) and then subtract the baseline emissions from the post-project emissions to determine the incremental A3-3

[2] *Ibid* p. 49.
[3] *Ibid* p. 13.
[4] *Ibid* p. 392.
[5] *Ibid* p. 94.
[6] 2018 Amendments to CARB Mandatory Reporting Regulation are available at https://ww2.arb.ca.gov/mrr-regulation.
[7] CEQA Guidelines Section 15064.4, available at https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-5-preliminary-review-of-projects-and-conduct-of-initial-study/section-150644-determining-the-significance-of-impacts-from-greenhouse-gas-emissions.

change.[8] The GHG analysis in the IS/MND should also discuss post-project scenarios for GHG sources by addressing both construction and all operational GHG sources. GHGs from short-term construction activities are typically amortized over 30 years. To amortize GHGs from temporary construction activities over a 30-year period (estimated life of the project/equipment), the amount of CO2eq emissions during construction are calculated and then divided by 30. Relative to operational activities, the GHG analysis should include all direct and indirect on-site and off-site sources, including but not limited to: 1) the RNG product gas sent to SoCalGas; 2) the RNG thermal oxidizer; 3) the RNG flare; 4) any supplemental fuel (natural gas) used by the flare and thermal oxidizer; 5) the emergency generator; 6) energy use and employee transportation for onsite workers; 7) fugitive emissions;[9] A3-4

Once the baseline and post-project GHG sources are defined and their emissions are quantified, the net change of GHGs between the two should be compared to the South Coast AQMD's air quality significance threshold of 10,000 metric tons per year (MT/yr) of CO2eq to determine the significance of the GHG impacts. As a result, the Lead Agency is recommended to revise the GHG analysis in the revised or Final CEQA document. A3-5

Omission of Supplemental Fuel Usage for the Enclosed RNG Flares from the Air Quality Analysis

Based on the IS/MND, the air quality analysis includes emissions from supplemental fuel utilized by the thermal oxidizer at the landfill. However, the analysis does not address the emissions from supplemental fuel usage for the enclosed RNG Flares.[10] If the utilization of supplemental fuel is anticipated for these flares during the startup, normal operation, or periods of low-quality or insufficient RNG, the associated emissions should be analyzed and quantified. Therefore, the Lead Agency is advised to: 1) identify the type and quantity of the expected supplemental fuel; 2) address the associated emissions and the environmental impacts, including the criteria air pollutants, toxics, and GHG emissions; and 3) include this analysis and information in the IS/MND. A3-6

Clarification of Health Risk Units and Comparison with South Coast AQMD Air Quality Significance Threshold for Toxic Air Contaminants

Health risks associated with exposure to carcinogenic compounds emitted from the Proposed Project site are expressed as the probability of developing cancer. According to the IS/MND, the incremental cancer risks for residential and commercial areas are presented in Table 7 - Off-Site Health Risk Assessment Results – Air Toxics.[11] However, the individual and total cancer risk values in the Table 7 are not reported in units of "per million" but have been compared to the South Coast AQMD's maximum incremental cancer risk threshold of 10 in one million. Therefore, the units do not align with the threshold for comparison. It is recommended that the Lead Agency correct the units by multiplying all values in Table 7 by one million to ensure consistency. Once A3-7

[8] The most recent Global Warming Potentials (GWPs) are available on U.S. EPA's website at: https://www.epa.gov/ghgemissions/understanding-global-warming-potentials

[9] Estimates of landfill gases emissions from the landfill and the RNG facility can be found in U.S. EPA's *Landfill Gas Energy Project Development Handbook*, available at: https://www.epa.gov/lmop/landfill-gas-energy-project-development-handbook and *Landfill Gas Emissions Model (LandGEM)*, available at: https://www.epa.gov/catc/clean-air-technology-center-products#software

[10] IS/MND, Table 3 - Comparison of Project Emissions to Regional Daily Thresholds, p. 78.

[11] IS/MND, p. 72.

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adjusted, the values can be accurately compared to the South Coast AQMD's maximum incremental cancer risk threshold.[12] A3-7 cont'd

Project Scope and Cumulative Impacts

Section 1.1 - General Description of the IS/MND states, "SoCalGas will develop a POR facility which will receive RNG from the plant, odorize, compress, and insert the RNG into its pipeline. A 120-gallon odorant tank will be installed in the POR facility."[13] Figure 7 - RNG Process Design Flow,[14] and Figure 6 - Conceptual Site Plan,[15] both indicate that the SoCalGas POR facility is within the boundary of the Proposed Project, but the SoCalGas POR facility and its associated equipment do not appear to be analyzed in the IS/MND. To avoid concerns about piecemealing under CEQA, South Coast AQMD staff recommend that the IS/MND be revised to also include a thorough air quality analysis of the impacts, including modeling, from the SoCalGas POR facility. Additionally, the transportation route for RNG fuel from the project site to the SoCalGas POR facility should be incorporated into the project boundary. This inclusion is essential for conducting a comprehensive air quality modeling analysis to assess potential impacts on the surrounding community. If the Lead Agency determines that the SoCalGas POR facility is not part of the Proposed Project, its impacts should be evaluated and discussed as cumulative impacts in Section 3.4.21 - Mandatory Findings of Significance, in accordance with CEQA Guidelines Appendix G – Environmental Checklist Form, Section XVIII - Mandatory Findings of Significance (b). A3-8

South Coast AQMD Air Permits and Role as a Responsible Agency

If implementation of the Proposed Project would require the use of new stationary and portable sources, including but not limited to emergency generators, fire water pumps, boilers, etc., air permits from South Coast AQMD will be required. The final CEQA document should include a discussion about the South Coast AQMD rules that may be applicable to the Proposed Project. Those rules may include, but are not limited to, Rule 201 – Permit to Construct,[16] Rule 203 – Permit to Operate,[17] Rule 401 – Visible Emissions,[18] Rule 402 – Nuisance,[19] Rule 403 – Fugitive Dust,[20] Rule 1110.2 – Emissions from Gaseous- and Liquid-Fueled Engines,[21] Rule 1113 – Architectural Coatings,[22] Rule 1166 – Volatile Organic Compound Emissions From Decontamination of Soil,[23] Rule 1179 – Publicly Owned Treatment Works Operations,[24] Regulation XIII – New Source Review,[25] Rule 1401 – New Source Review of Toxic Air Contaminants,[26] Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air A3-9

[12] South Coast AQMD Air Quality Significance Thresholds, https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf
[13] IS/MND, p. 737.
[14] IS/MND, p. 30.
[15] IS/MND, p. 28.
[16] South Coast AQMD Rule 201 available at: https://www.aqmd.gov/docs/default-source/rule-book/reg-ii/rule-201.pdf
[17] South Coast AQMD Rule 203 available at: https://www.aqmd.gov/docs/default-source/rule-book/reg-ii/rule-203.pdf
[18] South Coast AQMD Rule 401 available at: https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-401.pdf
[19] South Coast AQMD Rule 402 available at: https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf
[20] South Coast AQMD Rule 403 available at: https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403
[21] South Coast AQMD Rule 1110.2 available at: https://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1110_2.pdf
[22] South Coast AQMD Rule 1113 available at: https://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf
[23] South Coast AQMD Rule 1166 available at https://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1166.pdf
[24] South Coast AQMD Rule 1179 available at https://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1179.pdf
[25] South Coast AQMD Regulation XIII available at https://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/regulation-xiii
[26] South Coast AQMD Rule 1401 available at https://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1401.pdf

Contaminants,[27] and Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines.[28] A3-9 cont'd

In addition, it is important to note that since air permits from South Coast AQMD are required, South Coast AQMD's role under CEQA is as a Responsible Agency. CEQA Guidelines Section 15096 sets forth specific procedures for a Responsible Agency, including making a decision on the adequacy of the CEQA document for use as part of the process for conducting a review of the Proposed Project and issuing discretionary approvals. Moreover, it is important to note that if a Responsible Agency determines that a CEQA document is not adequate to rely upon for its discretionary approvals, the Responsible Agency must take further actions listed in CEQA Guidelines Section 15096(e), which could have the effect of delaying the implementation of the Proposed Project. In its role as CEQA Responsible Agency, the South Coast AQMD is obligated to ensure that the CEQA document prepared for this Proposed Project contains a sufficient project description and analysis to be relied upon in order to issue any discretionary approvals that may be needed for air permits. South Coast AQMD is concerned that the project description and analysis in its current form in the IS/MND is inadequate to be relied upon for this purpose. A3-10

For these reasons, the analysis should be revised so that the final CEQA document includes a discussion about any and all new stationary and portable equipment requiring South Coast AQMD air permits and to provide the evaluation of their air quality and GHG impacts for the Proposed Project as this information will be relied upon as the basis for the permit conditions and emission limits for the air permit(s). Please contact South Coast AQMD's Engineering and Permitting staff at (909) 396-3385 for questions regarding what types of equipment would require air permits. For more general information on permits, please visit South Coast AQMD's webpage at https://www.aqmd.gov/home/permits.

Conclusion

The Lead Agency is recommended to revise the CEQA analysis to address the aforementioned comments and provide the necessary evidence to sufficiently support the conclusions reached. If the requested information and analysis are not included in the final CEQA document, either the Final IS/MND or other type of CEQA document, the Lead Agency should provide reasons for not doing so. Pursuant to California Public Resources Code Section 21092.5(b) and CEQA Guidelines Section 15074, prior to approving the Proposed Project, the Lead Agency shall consider the IS/MND for adoption together with any comments received during the public review process and notify each public agency when any public hearings are scheduled. Please provide South Coast AQMD with written responses to all comments contained herein prior to the adoption of the Final IS/MND. When responding to issues raised in the comments, detailed reasons supported by substantial evidence in the record to explain why specific comments and suggestions are not accepted must be provided. In addition, if the Lead Agency decides to adopt the Final IS/MND, please provide South Coast AQMD with a notice of any scheduled public hearing(s). A3-11

Thank you for the opportunity to provide comments. South Coast AQMD staff is available to work with the Lead Agency to address any air quality questions that may arise from this comment letter. Please contact Sahar Ghadimi, Air Quality Specialist, at sghadimi@aqmd.gov should you have any questions.

[27] South Coast AQMD Rule 1466 available https://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1466.pdf
[28] South Coast AQMD Rule 1470 available at https://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1470.pdf

1. Response to Comments

Sincerely,

Sam Wang

Sam Wang
Program Supervisor, CEQA IGR
Planning, Rule Development & Implementation

BR:ND:SW:SG
ORC241203-05
Control Number

A3. Response to Comments from Sam Wang, South Coast Air Quality Management District, dated January 16, 2025.

A3-1 Comment is acknowledged.

A3-2 For Coyote Canyon Sanitary Landfill (Coyote Canyon), the current permitted control devices at the site are four landfill gas (LFG) enclosed flares, each permitted for 1,500 standard cubic feet per minute (SCFM), for a total capacity of 6,000 SCFM. It should be noted that only three of the four LFG flares are able to operate concurrently at any one time. Table 1 provides the estimated greenhouse gas (GHG) emissions from the existing LFG flares at the landfill, this is the baseline of the GHG generated from LFG from the current operations:

Table 1 Existing Flare GHG Emissions

Sources[1]	Activity Rate (MMBTU per hour)	Emissions (Metric Tons)			Total GHG Emissions ($MTCO_2e$ per year)	Total Regulated GHG Emissions ($MTCO_2e$ per year)[3]
		CO_2	CH_4	N_2O		
Flare 1	45.54	22,897	1.41	0.28	23,015.05	117.74
Flare 2	45.54	22,897	1.41	0.28	23,015.05	117.74
Flare 3	45.54	22,897	1.41	0.28	23,015.05	117.74
Flare 4	45.54	22,897	1.41	0.28	23,015.05	117.74
Three Flares[2]	**n/a**				**69,045.15**	**353.21**

Source: SCS Engineers 2025 (Attachment 1).
Notes: BTU=British Thermal Unit; MMBTU=million metric BTU; SCFM=standard cubic feet per minute; $MTCO_2e$: metric tons of carbon dioxide equivalent.
1 Four flares are permitted at Coyote Canyon Landfill for no more than 1,500 SCFM at 50 percent methane and heating value of 1,012 BTU, converted to 47.25 MMBTU per hour.
2 Per Coyote Canyon Landfill permit, only three flares are allowed to operate concurrently at any one time.
3 Excludes CO_2 emissions, which are biogenic emissions and account for CH_4 and N_2O emissions only, which are anthropogenic emissions. Emissions of CH_4 and N_2O are converted to CO_2 equivalent emissions based on the Intergovernmental Panel on Climate Change's Fourth Assessment Report global warming potentials of 25 for CH_4 and 298 for N_2O.

Regarding biogenic and anthropogenic GHGs, Table 9 (pages 94–95) of the IS/MND presents both with- and without-biogenic emissions inventories for the proposed project. The with-biogenic emissions inventory for permitted sources are shown under the "Permitted Sources–Total" inventory. The without-biogenic emissions inventory for the permitted sources are shown under "Permitted Sources–Regulated." As stated on page 94 of the IS/MND, CO_2 generated from combustion of biogas is considered biogenic emissions as it is part of the natural carbon cycle and does not contribute to a net increase in atmospheric CO_2. The analysis included the with-biogenic emissions inventory for public disclosure purposes. However, under CEQA, the general framework to analyze potential GHG-related impacts focuses on anthropogenic GHG emissions only, and therefore biogenic GHG emissions are not considered in evaluating project emissions to the District's 10,000 metric tons of carbon dioxide equivalent per year ($MTCO_2e$/yr) significance threshold for GHG.

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Commenter states that the GHGs from the proposed flare are not included while also noting the inclusion of GHG emissions for the "enclosed RNG flare." Overall, there is only one flare proposed to be in operation at the RNG plant, and it is the process (off-specification gas) enclosed flare, which is included in Table 9 as "Enclosed RNG Flare." Therefore, there are no flare GHG emissions missing.

In terms of the RNG that is sent to SoCalGas, the RNG is the same composition of natural gas (NG) and is in a closed system that is distributed to SoCalGas. The SoCalGas Point of Receipt (POR) will analyze the product RNG, and the compression of the RNG will occur in the proposed facility prior to the POR facility. If there are any concerns with the product RNG, it will not be routed to the SoCalGas POR and would be combusted as off-specification gas at the RNG flare. This will all occur within the closed system . Additionally, there are no GHG emission sources associated with the RNG.

A3-3 As described in Section 1.5.1, *Proposed Land Use*, of the IS/MND (page 4), the existing landfill gas (LFG) currently generated at the Coyote Canyon Landfill would be diverted to the proposed Renewable Natural Gas (RNG) facility. The proposed RNG facility would treat the current LFG and future quantities of LFG from the landfill. Overall, because the flaring operations would change after implementation of the proposed project, the emissions shown in Table 9 of the IS/MND (pages 94–95) represent a more conservative approach because the results shown do not account for any net reductions in flaring operations as they currently operate today. However, Table 9 of the IS/MND is revised to include the GHG emissions for the existing flaring operations and the net change in emissions after project implementation. Changes to the Initial Study are identified here in strikeout text to indicate deletions and underlined text to signify additions.

Table 9 Project-Related Greenhouse Gas Emissions

Source	$MTCO_2e$/year	Percent of Project Total
Proposed 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%
Proposed 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~~27	<1%
Total Emissions	**50,280**	**100%**

Table 9 Project-Related Greenhouse Gas Emissions

Source	$MTCO_2e$/year	Percent of Project Total
Total Land Use and Permitted Emissions[8]		
Proposed Land Use Emissions	7,785	NA
Proposed Permitted Sources Emissions	50,280	NA
Total Emissions	**58,065**	NA
Existing Flare Emissions[9]	69,045	NA
Net Change	**(10,980)**	NA
Proposed Permitted Sources – Regulated[7,9~~10~~]		
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		
Proposed Land Use Emissions	7,785	NA
Proposed Regulated Permitted Sources Emissions	60	NA
Total Emissions	**7,845**	NA
Existing Regulated Flare Emissions[11]	353	NA
Net Change	**7,492**	NA
South Coast AQMD's Bright-Line Permitted Sources Threshold[~~10~~12]	10,000	NA
Exceeds Bright-Line Threshold	**No**	**NA**

Source: CalEEMod Version 2022.1.

Notes: $MTCO_2e$: 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; CO_2 = 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 CO_2 emissions generated from combustion of natural gas.

9 Based on annual GHG emissions of 23,015.05 $MTCO_2e$/yr per flare and operation of three flares. Four flares are permitted at Coyote Canyon Landfill for no more than 1,500 SCFM at 50 percent methane and heating value of 1,012 BTU, converted to 47.25 MMBTU per hour. Per Coyote Canyon Landfill permit, only three flares are allowed to operate concurrently at any one time.

10 Excludes biogenic CO_2 emissions generated from combustion of natural gas.

11 Based on annual GHG emissions of 117.74 $MTCO_2e$/yr per flare and operation of three flares.

12 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 $MTCO_2e$/yr.

A3-4 As shown in Table 9 (pages 94–95) of the IS/MND, the GHG analysis quantified both project-related construction and operation emissions. Construction emissions were quantified with the California Emissions Estimator Model (CalEEMod), version 2022, and consist of emissions related to project-related construction activities. For example, project construction emissions account for emissions from operation of off-road

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construction equipment in addition to mobile-source emissions related to construction worker and vendor vehicle trips.

For operation, Table 9 includes emissions associated with both the permitted stationary equipment and the non-permitted sources (i.e., "Land Use Emissions"). The non-permitted sources were quantified using CalEEMod and include emissions from project-related vehicle trips, area sources (e.g., landscaping equipment), energy usage, water demand, wastewater generation, solid waste generation, and refrigerants. For permitted source emissions, Table 9 includes emissions from the following sources:

1) Thermal Oxidizer–Main ("RNG thermal oxidizer")

2) Thermal Oxidizer–Supplemental ("supplemental fuel used by flare and thermal oxidizer")

3) Enclosed RNG Flare ("RNG flare")

4) Natural Gas-Powered Emergency Generator ("emergency generator").

Regarding RNG product gas sent to SoCalGas, the RNG sent to SoCalGas would be in a closed system, and no GHG emissions would be omitted from the transfer of the RNG. Additionally, the capacity of the SoCalGas pipeline system is not increasing with the injection of RNG, so there will not be any increase in GHG emissions. For fugitive emissions, there would be no fugitive emissions associated with the proposed project during normal/planned operations because the only sources would be the point sources listed above. The remainder of the proposed plant would be an all-closed system with no fugitives.

A3-5 Please see response to Comment A3-3 and the revised Table 9. As shown in the table, total regulated project GHG emissions when considering the permitted and non-permitted sources would be 7,845 $MTCO_2e$/yr. When compared to the regulated GHG emissions of 353 $MTCO_2e$/yr generated by the existing flare operations, the proposed project would result in an annual net increase of 7,492 $MTCO_2e$/yr.

A3-6 The supplemental fuel was not missing from the reporting because there is no supplemental fuel for the off-specification flare. The RNG flare's design allows for a higher turndown rate, which enables the flare to operate with lower flows and/or lower heating values. Therefore, supplemental fuel is not necessary for the operation of the flare, in contrast to the thermal oxidizer.

A3-7 Table 7 (page 72) of the IS/MND has been revised to update the cancer risk values based on commenter's recommendations. Additionally, the Acute Hazard Index for the "Enclosed RNG Flare" has been revised to reflect the correct value. Furthermore, Appendix B3 is updated to include the latest version of the "Permit to Construction/Permit to Operate for a Renewable Natural Gas Plan for Biofuels Coyote

Canyon Biogas, LCC Newport Beach, California," with a revision date of July 2024. The updated Appendix B3 is included in Attachment 2 of this Response to Comments document. Changes to the Initial Study are identified here in strikeout text to indicate deletions and underlined text to signify additions.

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~~2.41E-01	~~1.74E-08~~1.74E-02	3.23E-03	9.13E-03
Thermal Oxidizer – Supplemental Fuel	~~8.33E-09~~8.33E-03	~~4.28E-10~~4.25E-04	4.05E-06	4.04E-04
Enclosed RNG Flare	~~4.74E-08~~4.74E-02	~~1.63E-09~~1.63E-03	~~1.18E-03~~1.37E-05	1.18E-03
Enclosed RNG Flare (Part 2)	~~1.69E-07~~1.69E-01	~~9.75E-09~~9.75E-03	2.47E-03	9.95E-03
Natural Gas-Powered Emergency Generator	~~4.01E-07~~4.01E-01	~~2.51E-08~~2.51E-02	5.56E-02	7.24E-03
Total	**~~8.66E-07~~8.66E-01**	**~~5.43E-08~~5.43E-02**	**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.

A3-8 The analysis in the IS/MND includes both the installation and operation of a new RNG processing plant and a pipeline interconnection facility (collectively referred to as the RNG facility throughout the IS/MND). 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 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. The transportation route for the RNG fuel from the RNG processing plant to the SoCalGas POR facility and subsequently to the existing fossil natural gas pipeline tie-in point is within the project site surrounded by the existing 12-inch wall.

A3-9 The following text in Section 3.3, *Air Quality*, of the IS/MND (pages 67 and 68) has been added. Changes to the Initial Study are identified here in strikeout text to indicate deletions and underlined text to signify additions.

Permitting Thresholds

The proposed project would be subject to South Coast Air Quality Management District (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.

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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; SO_2 = sulfur dioxide; PM_{10} = 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).

The following discusses the other applicable South Coast AQMD Rules associated with the proposed project:

- **Rule 401 (Visible Emissions):** No visible emissions are expected from the proposed RNG Plant with the proper operation of the equipment.
- **Rule 402 (Nuisance):** No nuisance complaints are expected from the proposed RNG Plant with the proper operation of the equipment.
- **Rule 403 (Fugitive Dust):** No significant fugitive dust emissions are anticipated from the proposed RNG Plant that would cause a violation of Rule 403.
- **Rule 404 (Particulate Matter – Concentration):** Particulate matter emissions from the proposed RNG Plant are not expected to exceed the threshold concentrations set forth in District Rule 404, Table 404(a).
- **Rule 405 (Solid Particular Matter – Weight):** Solid particulate matter emissions from the proposed RNG Plant are not expected to exceed the threshold process weights set forth in District Rule 405, Table 405(a).
- **Rule 407 (Liquid and Gaseous Air Contaminants):** CO and SO_x emissions are not expected to exceed 2,000 parts per million volume (ppmv) and 500 ppmv, respectively, from the proposed RNG Plant.
- **Rule 409 (Combustion Contaminants):** Combustion contaminants exceeding 0.23 grams per cubic meter of gas calculated to 12 percent (%) of CO_2 is not expected to discharge from the proposed RNG Plant.

- **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.

- **Rule 430 (Breakdown Provisions):** Adherence to applicable breakdown provision requirements is expected with proper operation of the proposed RNG Plant.

- **Rule 431.1 (Sulfur Content of Gaseous Fuels):** The Landfill is currently in compliance with Rule 431.1, and the installation of the proposed RNG Plant will not change the SO_2 emissions for the entire landfill; therefore, Landfill 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.

- **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 volatile organic compounds (VOC) leaks from pumps and compressors within the proposed system.

- **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.

- **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 NO_X emission limit of 0.025 pounds per million metric British Thermal Units (lb/MMBTU) higher heating value (HHV) under the "other flare gas" category.

- **Rule 1147 (NOx Reductions from Miscellaneous Sources):** The proposed thermal oxidizer will meet the NO_X requirements under Rule 1147 of 60 ppm or 0.073 lb/MMBTU.

- **Rule 1150.1 (Active Landfills):** The proposed RNG Plant would not affect the operation of the existing gas collection or landfill flare systems at Coyote Canyon Landfill. However, landfill flare emissions will be reduced once the RNG Plant is operating. The landfill operator, OC Waste and Recycling, will continue to maintain compliance with Rule 1150.1 for the landfill. The RNG Plant will provide the same level of control for Non-Methane Organic Compounds required under Rule 1150.1, although the plant itself is not subject to the rule.

- **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 volatile organic compounds within the proposed system.

A3-10 South Coast AQMD's is describing its role as a responsible agency under CEQA. No response required.

A3-11 This document includes responses to South Coast AQMD's comments and revises the IS/MND as necessary. Prior to approving the proposed project, the City will consider the IS/MND for adoption together with any comments received during the public review

1. Response to Comments

process and this document. The City will notify each public agency when any public hearings are scheduled. The City will also provide South Coast AQMD with this document ten days prior to the Planning Commission Hearing scheduled to consider the proposed project. The Response to Comments will be posted at https://www.newportbeachca.gov/government/departments/community-development/planning-division/projects-environmental-document-download-page/environmental-document-download-page.

LETTER O1 – Sheila M. Sannadan, Adams, Broadwell Joseph & Cardozo, (2 page[s])

O1

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December 3, 2024

Via U.S. Mail and Email
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Via Email Only
Joselyn Perez, Senior Planner
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Re: Request for Immediate Access to Documents Referenced in the Initial Study/Mitigated Negative Declaration – Landfill Gas to Energy Plant Project (SCH No. 2024120012; Project No. PA2022-063)

Dear Mr. Murillo, Ms. Brown, and Ms. Perez:

We are writing on behalf of California Unions for Reliable Energy ("CURE") to request ***immediate access*** to any and all documents referenced, incorporated by reference, and relied upon in the Initial Study/Mitigated Negative Declaration ("IS/MND") prepared Landfill Gas to Energy Plant Project (SCH No. 2024120012; Project No. PA2022-063) ("Project"), proposed by Archaea Energy Inc. (d.b.a. Biofuels Coyote Canyon Biogas, LLC). *This request excludes a copy of the IS/MND. This request also excludes any documents that are currently available on the Newport Beach website, as of today's date*.[1] O1-1

The Project proposes 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) in the City of Newport Beach, Orange County, California. The proposed RNG facility would have a total footprint of 38,500 square feet (SF) and would convert existing landfill gas (LFG) into a pipeline-quality natural gas equivalent. The pipeline interconnection facility would be approximately 6,000 SF, and the RNG processing plant would be approximately

[1] Accessed https://www.newportbeachca.gov/government/departments/community-development/planning-division/projects-environmental-document-download-page/environmental-document-download-page on December 3, 2024.

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32,500 SF. 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. The project site is located within the boundary of the closed Coyote Canyon Landfill at 20662 Newport Coast Dr, Newport Beach, CA.

Our request for ***immediate access*** to all documents referenced in the IS/MND is made pursuant to the California Environmental Quality Act ("CEQA"), which requires that all documents referenced, incorporated by reference, and relied upon in an environmental review document be made available to the public for the entire comment period.[2]

O1-1 cont'd

Please use the following contact information for all correspondence:

U.S. Mail
Sheila M. Sannadan
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080-7037

Email
ssannadan@adamsbroadwell.com

If you have any questions, please call me at (650) 589-1660 or email me at ssannadan@adamsbroadwell.com. Thank you for your assistance with this matter.

Sincerely,

Sheila M. Sannadan
Legal Assistant

SMS:acp

[2] *See* Public Resources Code § 21092(b)(1) (stating that "all documents referenced in the draft environmental impact report or negative declaration" shall be made "available for review"); 14 Cal. Code Reg. § 15072(g)(4) (stating that all documents incorporated by reference in the MND . . . "shall be readily accessible to the public").

O1. Response to Comments from Sheila M. Sannadan, Adams, Broadwell Joseph & Cardozo, dated December 3, 2024.

O1-1 The City sent all documents referenced, incorporated by reference, and relied upon in the IS/MND via email to Sheila Sannadan, Legal Assistant at Adams Broadwell Joseph and Cardozo, on December 23, 2024. The recipient acknowledged receipt of the email on Dec 24, 2024.

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LETTER O2 – Kelilah D. Federman, Adams, Broadwell Joseph & Cardozo, (69 page[s])

O2

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January 13, 2025

Via Email and Overnight Mail

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Re: Comments on Initial Study / Mitigated Negative Declaration for Landfill Gas to Energy Plant Project (SCH No. 2024120012; Project No. PA2022-063)

Dear Ms. Perez and Mr. Murillo:

We are writing on behalf of Orange County Residents for Responsible Industry ("Residents") to provide comments on the Initial Study/Mitigated Negative Declaration ("MND") prepared by the City of Newport Beach ("City") for the Landfill Gas to Energy Plant Project (PA2022-06; SCH No. 2024120012) ("Project") proposed by Biofuels Coyote Canyon Biogas ("Applicant"). The Project site is located at 20662 Newport Coast Drive in the City. The Project 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.

O2-1

The Applicant proposes to develop the 4.14-acre Project site with 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 have a total building footprint of 38,500 square feet (0.88 acres) composed of pipe racks, various vessels, a condensate tank, flare, thermal oxidizer, and other processing equipment. The first stage of primary treatment is covered by the existing landfill flaring facility on the Project site operated by Orange County Waste and Recycling. Landfill gas ("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 treated LFG would then be injected into

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1. Response to Comments

SoCalGas infrastructure via the proposed 6,000-square-foot pipeline interconnection facility. 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 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.

O2-1 cont'd

The Applicant seeks a Conditional Use Permit ("CUP") from the City because the Project site is designated and zoned OS, which allows for major utilities with approval of a CUP. Project development is anticipated to take approximately 12 months.[1] The health risk analysis relied on a nine-month completion timeline for its analysis.[2] 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.

O2-2

Residents' comments on air quality, public health, and greenhouse gas ("GHG') impacts were prepared with the assistance of air quality and hazards consultant Komal Shukla, Ph.D. of Group Delta Consultants, Inc. and noise consultant Jack Meighan of Wilson Ihrig. Dr. Shukla's comments and curriculum vitae attached to this letter as Exhibit A.[3] Mr. Meighan's comments and curriculum vitae are included as Exhibit B.[4] Their attached comments require separate responses under CEQA. We reserve the right to supplement these comments at a later date and at any future proceedings related to this Project.[5]

O2-3

Based on our review of the MND, and reference documents, we conclude that the is substantially deficient and fails to fulfill its mandate under CEQA as an informational document in several ways. As explained more fully below and in the attached expert comments, an EIR must be prepared because substantial evidence

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[1] MND, p. 38.
[2] MND, p. 69.
[3] **Exhibit A:** Letter from Dr. Komal Shukla to Adams Broadwell Joseph & Cardozo, Comments on Archaea Landfill Gas to Energy Project (ALGEP) Mitigated Negative Declaration (MND) Orange County, California) (Dec. 20, 2024) ("**Shukla Comments**").
[4] **Exhibit B:** Letter from Jack Meighan to Adams Broadwell Joseph & Cardozo, Archaea Landfill Gas Project IS/MND City of Newport Beach, California Comments on Noise Analysis (Dec. 13, 2024) **("Meighan Comments**").
[5] Gov. Code § 65009(b); PRC § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* ("*Bakersfield*") (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

supports a fair argument that the Project results in significant air quality, public health, greenhouse gas emissions, and noise impacts. The MND relies on an unsupported environmental baseline against which to measure the Project's significant impacts, and fails to include a complete baseline description accounting for the cell tower generators onsite. The MND relies on a truncated construction period in the health risk analysis, from twelve months to nine months, which artificially reduced health risk impacts to construction workers and the community. Installation of Project components, and fugitive emissions will result in significant air quality, public health, and GHG impacts which the MND failed to adequately analyze or mitigate. O2-3 cont'd

The City must prepare an EIR to adequately analyze and mitigate the Project's potentially significant environmental impacts. The City cannot certify the MND and cannot approve the Project until the City prepares an EIR circulated for public review and comment.

I. STATEMENT OF INTEREST

Residents is a coalition of individuals and labor organizations with members who may be adversely affected by the potential public and worker health and safety hazards and environmental and public service impacts of the Project. The coalition includes Orange County residents, California Unions for Reliable Energy ("CURE"), and its local union affiliates and their members and their families. CURE is a coalition of labor organizations whose members encourage sustainable development of California's energy and natural resources. Residents was formed to advocate for responsible and sustainable industrial development in Orange County to protect public health and safety and the environment where Residents' members and their families live, work and recreate. O2-4

The individual members of Residents, and the members of its affiliated labor organizations, would be directly affected by the Project and may also work constructing the Project itself. They would therefore be first in line to be exposed to any health and safety hazards that may be present on the Project site. They each have a personal stake in protecting the Project area from unnecessary, adverse environmental and public health and safety impacts. Thus, Residents, its participating organizations, and their members stand to be directly affected by the Project's impacts.

Residents supports the development of clean, renewable energy technology where properly analyzed and carefully planned to minimize impacts on public health and the environment. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and

1. Response to Comments

industry to expand in the region, and by making it less desirable for businesses to locate and people to live and recreate in the City and in Orange County. Continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduces future employment opportunities. Projects should avoid adverse impacts to natural resources and public health, and should take all feasible steps to ensure that unavoidable impacts are mitigated to the maximum extent feasible. Only by maintaining the highest standards can energy development truly be sustainable.

O2-4 cont'd

Finally, the organizational members of Residents are concerned with projects that can result in serious environmental harm without providing countervailing economic benefits. CEQA provides a balancing process whereby economic benefits are weighed against significant impacts to the environment. It is in this spirit we offer these comments.

II. LEGAL BACKGROUND

CEQA requires that lead agencies analyze any project with potentially significant environmental impacts in an EIR, except in limited circumstances.[6] The purpose of an EIR "is to inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made. Thus, the EIR protects not only the environment, but also informed self-government."[7] The EIR has been described as "an environmental 'alarm bell' whose purpose is to alert the public and its responsible official to environmental changes before they have reached ecological points of no return."[8]

O2-5

A negative declaration may be prepared instead of an EIR when, after preparing an initial study, a lead agency determines that a project "would not have a significant effect on the environment."[9] Courts have held that if "no EIR has been prepared for a nonexempt project, but substantial evidence in the record supports a fair argument that the project may result in significant adverse impacts, the proper remedy is to order preparation of an EIR."[10]

The presumption in favor of preparing an EIR, rather than a negative declaration, is reflected in the "fair argument" standard. Under that standard, the

[6] Pub. Resources Code, § 21000; CEQA Guidelines, § 15002.
[7] *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 564 (internal citations omitted).
[8] *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.
[9] *Quail Botanical Gardens v. City of Encinitas* (1994) 29 Cal.App.4th 1597; Pub. Resources Code, § 21080(c).
[10] *Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 319-320.

lead agency "shall" prepare an EIR whenever substantial evidence in the whole record before the agency supports a fair argument that a project may have a significant effect on the environment.[11] The fair argument standard creates a "low threshold" of favoring environmental review through an EIR, rather than through a negative declaration.

"Substantial evidence" required to support a fair argument is defined as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached."[12] "[I]n marginal cases where it is not clear whether there is substantial evidence that a project may have a significant effect on the environment, the lead agency shall be guided by the following principle: If there is disagreement among expert opinion supported by facts over the significance of an effect on the environment, the Lead Agency shall treat the effect as significant and shall prepare an EIR."[13]

O2-5 cont'd

With respect to this Project, the MND fails to satisfy the basic purposes of CEQA. The MND fails to adequately disclose, investigate, and analyze the Project's potentially significant impacts, and fails to provide substantial evidence to conclude that impacts will be mitigated to a less than significant level. Because the MND lacks basic information regarding the Project's potentially significant impacts, the MND's conclusion that the Project will have a less than significant impact on the environment is unsupported.[14] The City failed to gather the relevant data to support its finding of no significant impacts, and substantial evidence shows that the Project may result in potentially significant impacts. As detailed herein and in the attached expert comments, substantial evidence supports a fair argument that the Project may result in significant and unmitigated impacts to air quality, public health, and from transportation and traffic. The City must prepare an EIR that analyzes, discloses, and mitigates these impacts and which considers less environmentally damaging alternatives.

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[11] Pub. Resources Code, §§ 21080(d), 21082.2(d); CEQA Guidelines, §§ 15002(k)(3), 15064(f)(1), (h)(1); *Laurel Heights Improvement Assn. v. Regents of the Univ. of Cal.* (1993) 6 Cal.4th 1112, 1123; *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75, 82; *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 1501-51; *Quail Botanical Gardens Found., Inc. v. City of Encinitas* (1994) 29 Cal.Appl.4th 1597, 1601-1602.
[12] CEQA Guidelines, § 15384(a).
[13] CEQA Guidelines, § 15064(g).
[14] Pub. Resources Code, § 21064.5.

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III. THE MND FAILS TO ADEQUATELY DESCRIBE THE ENVIRONMENTAL SETTING

An initial study must include a description of the project's environmental setting.[15] The description of the environmental setting constitutes the baseline physical conditions by which a lead agency may assess the significance of a project's impacts.[16] "The purpose of this requirement is to give the public and decision makers the most accurate and understandable picture practically possible of the project's likely near-term and long-term impacts."[17]

CEQA requires that a lead agency include a description of the physical environmental conditions in the vicinity of the Project as they exist at the time environmental review commences.[18] As numerous courts have held, the impacts of a project must be measured against the "real conditions on the ground."[19] The description of the environmental setting constitutes the baseline physical conditions by which a lead agency may assess the significance of a project's impacts.[20] Use of the proper baseline is critical to a meaningful assessment of a project's environmental impacts.[21] An agency's failure to adequately describe the existing setting contravenes the fundamental purpose of the environmental review process, which is to determine whether there is a potentially substantial, adverse change compared to the existing setting. O2-6

Baseline information on which a lead agency relies must be supported by substantial evidence.[22] The CEQA Guidelines define "substantial evidence" as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion."[23] "Substantial evidence shall

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[15] CEQA Guidelines § 15063(d)(2).
[16] *Id.* § 15125(a); *see also Communities for a Better Environment v. South Coast Air Quality Management District* (2010) 38 Cal. 4th 310, 320-21 (CEQA Guidelines § 15125(a) applies to an initial study).
[17] CEQA Guidelines § 15125(a).
[18] CEQA Guidelines, § 15125, subd. (a).
[19] *Save Our Peninsula Com. v. Monterey Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 121-22; *City of Carmel-by-the Sea v. Bd. of Supervisors* (1986) 183 Cal.App.3d 229, 246.
[20] CEQA Guidelines, § 15125, subd. (a).
[21] *Communities for a Better Environment v. South Coast Air Quality Management District* (2010) 48 Ca.4th 310, 320.
[22] *CBE v. SCAQMD, supra,* 48 Ca.4th at 321 (stating "an agency enjoys the discretion to decide [...] exactly how the existing physical conditions without the project can most realistically be measured, subject to review, as with all CEQA factual determinations, for support by substantial evidence"); *see Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435.
[23] CEQA Guidelines §15384.

include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts ... [U]nsubstantiated opinion or narrative [and] evidence which is clearly inaccurate or erroneous ... is not substantial evidence."[24]

O2-6 cont'd

A. The MND Uses An Erroneous Baseline of 1990 Operational Pollutant Emissions Levels

The MND provides that the "most recent operating conditions of the CCL have been used through this IS /MND as the 'baseline conditions' to compare the impacts of the proposed project."[25] The CCL was a Class III municipal solid waste landfill from 1963 to 1990 in the City of Newport Beach.[26] The CCL began disposal operations in 1963 and ceased operations in 1990.[27] However, the project site was used as a landfill gas-to-energy facility which operated from 1988 to December 2015.[28] The MND's reliance on a 1990 baseline is unsupported by substantial evidence. The correct baseline the City should have utilized are emissions as of 2015, which constitute the most recent existing physical conditions on the ground when the gas-to-energy facility ceased operations in December 2015.[29] The 2015 emissions are more precise than existing conditions at the time the notice of preparation is published[30], because 2015 was the most recent use of the Project site as a gas-to-energy facility, the use most similar to that of proposed Project.

O2-7

In addition to not describing the most recent baseline operations at the Project site, the 1990 baseline used in the MND lacks the requisite background data to accurately inform an air quality analysis for the Project. As Dr. Shukla demonstrates in her comments, the MND does not include sufficient evidence such as air quality monitoring data, modeled background pollutant concentrations, or other verifiable datasets to justify the reliance on the 1990 baseline, and therefore fails to support the assumptions used in the MND's analysis.[31] The emissions associated with the Project may therefore be significantly underestimated as a result of the reliance on an unsupported baseline.

Dr. Shukla's comments provide substantial evidence supporting a fair argument that using unsupported operating conditions from a plant that has been out of service for over 30 years presents a significant analytical omission for failure

[24] Pub. Resources Code § 21082.2(c).
[25] MND, p. 43.
[26] MND, p. 3.
[27] *Id.*
[28] MND, p. 116.
[29] MND, p.
[30] CEQA Guidelines § 15125(a).
[31] Shukla Comments, p. 24.

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to analyze the real existing conditions on the ground, and that actual emissions may be significant and unmitigated.[32] Dr. Shukla's comments demonstrate that "it is imperative for the City to conduct a rigorous and comprehensive analysis of existing background pollutant concentrations in conjunction with anticipated emissions from the proposed activities" in order to accurately characterize the existing environmental setting. An EIR must be prepared which adequately characterizes the environmental setting, against which to analyze the Project's potentially significant impacts.

O2-7 cont'd

B. The MND Fails to Provide an Accurate and Complete Description of Existing Emission Sources Including Onsite Cell Tower Generators

The Project site currently includes a County flare yard and blower station, as well as 65-foot cell towers and associated generators.[33] The MND does not include any information regarding these components and fails to include any information regarding the emissions associated with the cell tower backup generators. The MND's Appendices related to the Air Quality and GHG analysis do not include analysis of the impacts associated with the onsite backup generators for the cell towers.

O2-8

Dr. Shukla explains that the backup generator emissions will contribute to the Project's GHG emissions, which are a cumulative impact. The absence of these emissions from the MND's emissions modeling results in underreported emissions. Specifically, Dr. Shukla's comments demonstrate that emissions from cell tower diesel backup generators may result in significant emissions of nitrogen oxides ("NOx"), particulate matter ("PM"), and GHGs. The MND's inadequate project description precludes a comprehensive analysis of the Project's potential environmental effects.

IV. AN EIR IS REQUIRED FOR THE PROJECT BECAUSE THERE IS SUBSTANTIAL EVIDENCE SUPPORTING A FAIR ARGUMENT THAT THE PROJECT MAY HAVE SIGNIFICANT AIR QUALITY IMPACTS

O2-9

A negative declaration is improper, and an EIR must be prepared, whenever it can be fairly argued on the basis of substantial evidence that the project may have a significant environmental impact.[34] "[S]ignificant effect on the environment"

[32] Shukla Comments, p. 24.
[33] MND, p. 75.
[34] Pub. Resources Code § 21151; CEQA Guidelines § 15064(f); *Citizens for Responsible Equitable Envt'l Dev. v. City of Chula Vista* ("*CREED*") (2011) 197 Cal.App.4th 327, 330-31; *Communities for a Better Env't v. South Coast Air Quality Mgmt. Dist.* (2010) 48 Cal.4th 310, 319 ("*CBE v. SCAQMD*").

is defined as "a substantial, or potentially substantial, adverse change in the environment."[35] An effect on the environment need not be "momentous" to meet the CEQA test for significance; it is enough that the impacts are "not trivial."[36] Substantial evidence, for purposes of the fair argument standard, includes "fact, a reasonable assumption predicated upon fact, or expert opinion supported by fact."[37]

Moreover, the failure to provide information required by CEQA is a failure to proceed in the manner required by CEQA.[38] Challenges to an agency's failure to proceed in the manner required by CEQA, such as the failure to address a subject required to be covered in an MND or to disclose information about a project's environmental effects or alternatives, are subject to a less deferential standard than challenges to an agency's factual conclusions.[39] Even when the substantial evidence standard is applicable to agency decisions to certify an MND and approve a project, reviewing courts will not 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A clearly inadequate or unsupported study is entitled to no judicial deference.'"[40] O2-9 cont'd

CURE's experts provide substantial evidence that the Project will have significant impacts on air quality and public health. An EIR must be prepared to further evaluate and mitigate potentially significant impacts to air quality.

A. The MND Fails to Disclose the Project's Significant Air Quality Impacts

i. The MND Fails to Analyze Emissions from Pipeline Installation

Dr. Shukla's comments demonstrate that the MND fails to analyze the Project's potentially significant air quality impacts associated with pipeline installation.[41] Dr. Shukla's comments provide substantial evidence that pipeline welding during Project construction will result in emissions of air pollutants, including criteria pollutants such as nitrogen oxides ("NOx"), carbon monoxide ("CO"), and particulate matter ("PM") which may exceed thresholds, resulting in O2-10

[35] Pub. Resources Code § 21068; CEQA Guidelines § 15382; *County Sanitation Dist. No. 2 v. County of Kern* (2005) 127 Cal.App.4th 1544, 1581.
[36] *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 83.
[37] Pub. Resources Code § 21080(e)(1) (emphasis added); *CREED*, 197 Cal.App.4th at 331.
[38] *Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236.
[39] *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435.
[40] *Berkeley Jets*, 91 Cal.App.4th at 1355.
[41] Shukla Comments, p. 7.

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significant air quality impacts.[42] Dr. Shukla explains that welding releases toxic metals such as hexavalent chromium—a known carcinogen[43]—as well as cobalt, manganese, nickel, and lead.[44] Hazardous air pollutants ("HAPs") like hexavalent chromium, lead, and cadmium may also be released from welding stainless steel for the proposed pipeline installation.[45] These pollutants are emitted during the high-temperature combustion processes integral to welding, "significantly contributing to localized and regional air quality degradation."[46] Substantial evidence in Dr. Shukla's comments support a fair argument that pipeline construction may result in significant air quality impacts that are not disclosed or mitigated in the MND. The City must prepare an EIR to analyze the Project's significant air quality emissions associated with pipeline installation in order to satisfy CEQA.

O2-10 cont'd

ii. The MND Fails to Analyze Emissions from Key Equipment

Dr. Shukla's comments provide substantial evidence that significant air quality emissions sources were omitted from the MND's analysis. The MND fails to adequately analyze emissions from the following sources: Feed Compressors, Recycle Compressors, and Associated Coolers; Temperature Swing Adsorption (TSA) Pretreatment Skid; Operating Chillers; Membrane Skid; Nitrogen Rejection Unit (NRU) and Associated Skids; Flaring/Blowdown, Pressure Relief Valves, and Process Drains; and other Valves, Pumps, Flanges.[47] Leaks may occur from these Project components which could result in significant emissions of criteria pollutants (such as nitrogen oxides, particulate matter, and volatile organic compounds) and GHGs (including carbon dioxide and methane).[48]

O2-11

The MND's failure to calculate and analyze the Project's potential fugitive emissions from leaking parts and components of the RNG facility renders the MND's analysis unsupported. Dr. Shukla's comments provide substantial evidence that fugitive emissions from leaking project components "may have a significant impact on local air quality."[49] An EIR must be prepared which accurately analyzed fugitive emissions from Project components before the Project can lawfully be approved.

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[42] Shukla Comments, p. 7.
[43] U.S. Department of Labor Occupational Safety and Health Administration (OSHA), Hexavalent Chromium – Health Effects, *available at:* https://www.osha.gov/hexavalent-chromium/health-effects.
[44] Shukla Comments, p. 7.
[45] *Id.*
[46] *Id.* at 8.
[47] Shukla Comments, p. 21-22.
[48] *Id.* at 20.
[49] *Id.* at 9.

iii. The MND Fails to Analyze Secondary Pollutant Formation

Emissions from Project construction will result in significant air quality impacts due to the secondary pollutant formation and indirect ozone formation.[50] Ozone is associated with significant public health risks, including exacerbation of asthma, chronic bronchitis, and other respiratory conditions, which are particularly concerning in vulnerable populations.[51] Ozone, a secondary pollutant, is formed through complex photochemical reactions involving precursor emissions such as nitrogen oxides (NOx) and volatile organic compounds ("VOCs").[52] The MND's failure to include detailed emissions inventories and advanced photochemical modeling undermines the reliability of the MND's air quality assessment.[53] Substantial evidence in Dr. Shukla's comments support a fair argument that the Project results in significant emissions of ozone precursors which must be analyzed and mitigated in an EIR before the Project can lawfully be approved. O2-12

iv. The MND Fails to Analyze Accidental Startup or Shutdown Emissions

The MND's air quality, health risk, and GHG analyses omit data on the potentially significant impacts associated with Shutdown, Startup, Turnaround and Upset phases of the Project.[54] These phases may result in significant emissions, but the MND relies on modelling with these phases zeroed out.[55] But, the MND provides that the Project will include an annual scheduled shutdown for plant maintenance.[56] The MND provides that "[u]nplanned shutdowns are anticipated to be less than 10 times per year."[57] There may be significant emissions of methane, CO, NOx, and other pollutants that directly impact air quality associated with these phases, but the MND fails to quantify these emissions. O2-13

During the Shutdown, Startup, Turnaround and Upset phases of the Project, accidents or operational upsets in systems such as the Thermal Oxidizer ("TOX") and flaring systems can lead to uncontrolled emissions of criteria pollutants and HAPs, which have significant implications for air quality and public health, according to Dr. Shukla.[58] The TOX, an essential component for controlling emissions, is designed to combust VOCs, methane, and HAPs present in landfill

[50] Shukla Comments, p. 16.
[51] *Id.*
[52] *Id.*
[53] *Id.*
[54] *Id.* at 25.
[55] *Id.* at 26.
[56] MND, p. 22.
[57] *Id.*
[58] Shukla Comments, p. 27.

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gas.[59] During an upset, such as equipment malfunctions or temperature and gas flow fluctuations, there can be elevated emissions of unburned methane, CO, NOx, and other pollutants that directly impact air quality.[60] Accidents, such as overheating or improper venting, can pose fire or explosion risks, resulting in significant environmental and public health and safety concerns.[61]

Similarly, Dr. Shukla explains that the flare system, which is engineered to manage the complete combustion of off-specification RNG at full design flow, is vulnerable to upsets caused by inconsistent gas flow, high moisture content, or equipment failures.[62] During shutdown, startup and turnaround, these risks are exacerbated.[63] Malfunctions can lead to incomplete combustion, releasing VOCs, CO, particulate matter, and potentially hazardous byproducts like formaldehyde.[64] Dr. Shukla's comments provide substantial evidence that emissions from Shutdown, Startup, Turnaround and Upset phases of the Project may result in significant air quality, public health and GHG emissions that must be analyzed in an EIR in accordance with CEQA.

O2-13 cont'd

B. The Project Results in Significant Ozone Emissions Requiring BACT

Best Available Control Technology ("BACT") is required for the Project because the Project results in an emissions increase of NOx, which is an ozone precursor. SCAQMD Rules provide that "[t]he Executive Officer or designee shall deny the Permit to Construct for any relocation or for any new or modified source which results in an emission increase of any nonattainment air contaminant, any ozone depleting compound, or ammonia, unless BACT is employed for the new or relocated source or for the actual modification to an existing source."[65] The South Coast Air Basin is designated nonattainment for ozone and PM2.5 under the state and federal AAQS.[66] Dr. Shukla's comments provide substantial evidence that the Project results in an increase in nonattainment ozone emissions due to the significant emissions of ozone precursors. BACT is therefore required. An EIR must be prepared which includes BACT measures, including implementation of Tier

O2-14

[59] Refer to 'What components make up landfill gas?' in U.S. EPA: Frequent Questions about Landfill Gas; https://www.epa.gov/lmop/frequent-questions-about-landfill-gas
[60] IChemE: Thermal Oxidiser Fire and Explosion Hazards; Pg. 705-707; https://www.icheme.org/media/10200/xvi-paper-55.pdf
[61] *Ibid*
[62] Shukla Comments, p. 25.
[63] *Id.*
[64] U.S. EPA: Composition of Organic Gas Emissions from Flaring Natural Gas; Pg. 13; August 2017; https://www.epa.gov/sites/default/files/2017-11/documents/organic_gas.pdf
[65] SCAQMD Rule 1303(a)(1).
[66] MND, p. 64.

4 Final engines for construction equipment and Tier 4 or low emission backup generators.[67]

O2-14 cont'd

C. The Project is Required to Obtain Offsets for the NOx Emissions Increase Associated with the Project

Substantial evidence in Dr. Shukla's comments supports a fair argument that, when accounting for all emission sources, the Project's NOx emissions will exceed 4 tons a year, requiring offsets pursuant to South Coast Air Quality Management District ("SCAQMD") Rule 1302(b)(2).

But, the MND incorrectly relies on the Modified Facility exemption pursuant to SCAQMD Rule 1304(d)(2)(B) to conclude that NOx emissions do not exceed the threshold and that offsets are not required.[68] The Project is not a modification of the previous landfill gas-to-energy facility, but is a New Facility pursuant to Rule 1404.1(c)(11). The previous landfill gas-to-energy facility, which operated from 1988 to 2015 was demolished.[69] After its closure, the site was cleared.[70] 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).[71] On the site currently are generators and tanks, 65-foot cell towers, a power panel and switchgear, a blower pad, and the county flare yard.[72] 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.[73] The MND's reliance on a Facility Exemption for a Modified Facility is not correct. The Project is a New Facility. A New Facility under the SCAQMD Rules means "a Facility or an operation that is not an Existing Facility or Relocated Facility."[74]

O2-15

The Permit to Construct application, submitted by the Applicant to SCAQMD for the Project, is not for an Alteration/Modification, but for New Construction for each of the Project components requested. [75] The Applicant applied for Permits to Construct New Construction, not Alteration/Modification for each Project

[67] Shukla Comments, p. 13.
[68] MND, p. 67.
[69] MND, p. 3.
[70] *Id.*
[71] *Id.*
[72] *Id.*
[73] MND, p. 3.
[74] SCAQMD Rule 1404.1(c)(11).
[75] 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, (July 22, 2024), Appendix D.

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component including: Thermal Oxidizer; Enclosed RNG Flare; H2S Scrubber System; Condensate Tanks; the Emergency Backup Generator.[76] None of the applications are for Modification.[77] The MND's assumption that the Project would qualify for an exemption pursuant to Rule 1304 for a Modified Facility is therefore incorrect. The MND must analyze the requirement of the Applicant to provide offsets pursuant to Rule 1303(b)(2). Any inconsistencies or non-compliance with this Air District Rule would result in significant impacts which must be disclosed and mitigated.

Offsets are required pursuant to the following ratio: "Offset ratios shall be 1.2-to-1.0 for Emission Reduction Credits and 1.0-to-1.0 for allocations from the Priority Reserve, except for facilities not located in the South Coast Air Basin (SOCAB), where the offset ratio for Emission Reduction Credits only shall be 1.2-to-1.0 for VOC, NOX, SOX and PM10 and 1.0-to-1.0 for CO."[78] O2-15 cont'd

The Project is not subject to the Modified Facility Exemption because the Project results in an exceedance of the 4 tons per year maximum allowable emissions pursuant to Rule 1304(d)(2) Table A.[79] The MND calculated that the Project will emit 3.996 tons of NOx emissions per year.[80] But, Dr. Shukla's comments demonstrate that, when accounting for all emissions sources, the Project will emit more than 4 tons per year of NOx. An EIR must be prepared which includes accurate disclosure of NOx emissions and an analysis of the offsets required for the Project.

D. The MND Fails to Mitigate Potentially Significant Air Quality Impacts

The Newport Beach General Plan Policy NR 8.1 requires the City to "Require developers to use construction equipment that use low polluting fuels, engines, and exhaust controls to the extent available and feasible."[81] Policy NR 8.2 requires the City to "Require developers maintain construction in good operating condition to minimize air pollutants."[82] Policy NR 8.3 requires the City to "Require developers to turn off construction equipment when not in use for an extended time period."[83] The MND does not demonstrate conformance with these Policies. O2-16

[76] *Id.*
[77] *Id.*
[78] SCAQMD Rule 1303(b)(2)(A).
[79] SCAQMD Rule 1304(d)(2) Table A.
[80] MND, p. 68.
[81] City of Newport Beach General Plan Update EIR Section 4.2 Air Quality (2006), p. 4.2-20.
[82] *Id.*
[83] *Id.*

As shown in Dr. Shukla's comments, additional mitigation measures are necessary to reduce the Project's potentially significant air quality and greenhouse gas emissions. In particular, Dr. Shukla's comments demonstrate that reducing idling times to two minutes would significantly reduce NOx emissions associated with Project construction. The City must prepare an EIR which adequately mitigates the Project's significant NOx emissions, before the Project can lawfully be approved. O2-16 cont'd

V. AN EIR IS REQUIRED FOR THE PROJECT BECAUSE THERE IS SUBSTANTIAL EVIDENCE SUPPORTING A FAIR ARGUMENT THAT THE PROJECT MAY HAVE SIGNIFICANT GHG IMPACTS

CEQA requires the lead agency to use scientific data to evaluate GHG impacts directly and indirectly associated with a project.[84] The analysis must "reasonably reflect evolving scientific knowledge and state regulatory schemes."[85] In determining the significance of GHG emissions impacts, the agency must consider the "extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions."[86] 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.[87] O2-17

[84] See 14 C.C.R. § 15064.4(a) (lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project); 14 C.C.R. § 15064(d) (evaluating significance of the environmental effect of a project requires consideration of reasonably foreseeable indirect physical changes caused by the project); 14 C.C.R. § 15358(a)(2) (defining "effects" or "impacts" to include indirect or secondary effects caused by the project and are "later in time or farther removed in distance, but are still reasonably foreseeable" including "effects on air"); CEQA Guidelines, Appendix G, § VIII: Greenhouse Gas Emissions (stating agencies should consider whether the project would "generate greenhouse gas emissions, ***either directly or indirectly***, that may have a significant impact on the environment.") (emphasis added).
[85] 14 C.C.R. § 15064.4(b); see also *Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 504 (holding that lead agencies have an obligation to track shifting regulations and to prepare EIRs in a fashion that keeps "in step with evolving scientific knowledge and state regulatory schemes").
[86] 14 C.C.R. § 15064.4(b)(3).
[87] *Id.*

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A. The MND Fails to Disclose the Project's Potentially Significant GHG Emissions

Dr. Shukla's comments provide substantial evidence that the MND's GHG emissions analysis may grossly underestimate potentially significant GHG impacts from the Project. Dr. Shukla found that the MND fails to analyze fugitive GHG emissions from Temperature Swing Adsorption (TSA) Pretreatment Skid, Operating Chillers, Membrane Skid, Nitrogen Rejection Unit (NRU) and Associated Skids, Valves, Pumps, Flanges, Flaring/Blowdown, Pressure Relief Valves, and Process Drains.[88] When accounting for fugitive GHG emissions from these sources, GHG emissions may be significant and require mitigation.[89] An EIR must be prepared which adequately quantifies and mitigates potentially significant GHG emissions from Project construction and operation. O2-18

B. The MND Fails to Adequately Mitigate the Project's GHG Emissions

Dr. Shukla's comments demonstrate that requiring mitigation "integrating Tier 4 engines and other mitigation measures ensures the Project's alignment with both state and federal air quality and climate policies while proactively addressing cumulative GHG impacts as required by CEQA."[90] Dr. Shukla recommends the implementation of Tier 4 Final Engines for construction equipment and Tier 4 or low emission backup generators to reduce significant GHG emissions from Project construction and operation. These measures must be included in an EIR before the Project can proceed. O2-19

VI. THE MND FAILS TO DISCLOSE, ANALYZE, AND MITIGATE HEALTH RISKS FROM CONSTRUCTION AND OPERATIONAL EMISSIONS

An agency must support its findings of a project's potential environmental impacts with concrete evidence, with "sufficient information to foster informed public participation and to enable the decision makers to consider the environmental factors necessary to make a reasoned decision."[91] A project's health risks "must be 'clearly identified' and the discussion must include 'relevant specifics' about the environmental changes attributable to the Project and their associated health outcomes."[92] O2-20

[88] Shukla Comments, p. 22.
[89] *Id.*
[90] Shukla Comments, p. 14.
[91] *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 516.
[92] *Id.* at 518.

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Courts have held that an environmental review document must disclose a project's potential health risks to a degree of specificity that would allow the public to make the correlation between the project's impacts and adverse effects to human health.[93] In *Bakersfield*, the court found that the EIRs' description of health risks were insufficient and that after reading them, "the public would have no idea of the health consequences that result when more pollutants are added to a nonattainment basin."[94] Likewise in *Sierra Club*, the California Supreme Court held that the EIR's discussion of health impacts associated with exposure to the named pollutants was too general and the failure of the EIR to indicate the concentrations at which each pollutant would trigger the identified symptoms rendered the report inadequate.[95] Some connection between air quality impacts and their direct, adverse effects on human health must be made. As the Court explained, "a sufficient discussion of significant impacts requires not merely a determination of whether an impact is significant, but some effort to explain the nature and magnitude of the impact."[96] CEQA mandates discussion, supported by substantial evidence, of the nature and magnitude of impacts of air pollution on public health.[97]

O2-20 cont'd

The failure to provide information required by CEQA makes meaningful assessment of potentially significant impacts impossible and is presumed to be prejudicial.[98] Challenges to an agency's failure to proceed in the manner required by CEQA, such as the failure to address a subject required to be covered in an EIR or to disclose information about a project's environmental effects or alternatives, are subject to a less deferential standard than challenges to an agency's factual conclusions.[99] Courts reviewing challenges to an agency's approval of a CEQA document based on a lack of substantial evidence will "determine de novo whether the agency has employed the correct procedures, scrupulously enforcing all legislatively mandated CEQA requirements."[100]

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[93] *Id.* at 518–520; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184.
[94] *Id.* at 1220.
[95] *Sierra Club*, at 521.
[96] *Id.* at 519, citing *Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 514–515.
[97] *Sierra Club*, 6 Cal.5th at 518–522.
[98] *Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236–1237.
[99] *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435.
[100] *Id.* (internal quotations omitted).

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The MND relies on a health risk analysis which relied on a nine-month construction period for its analysis.[101] But, the MND confirms that construction will last 12 months.[102] Dr. Shukla's comments provide substantial evidence that this results in a significant underestimation of health risk impacts due to an artificially truncated construction period. The City must conduct a revised health risk assessment with the 12-month construction timeline to adequately assess health risks. The MND's health risk analysis is therefore unsupported by substantial evidence. A revised health risk analysis must be conducted in an EIR in accordance with CEQA given the Project's potentially significant health risk impacts, as demonstrated herein and in Dr. Shukla's expert report attached hereto.

O2-20 cont'd

A. Health Risks from Construction Emissions Are Significant and Must Be Evaluated and Mitigated in an EIR with a Legally Adequate Health Risk Analysis

i. The MND Fails to Analyze Health Impacts from Pipeline Welding Fumes

The MND fails to adequately analyze impacts associated with hazardous pollutants being emitted during pipeline welding. Dr. Shukla's comments provide substantial evidence supporting a fair argument that the Project's pipeline welding will result in a potentially significant health risk to workers.[103] Pipeline welding has the potential to release a large variety of harmful emissions during project construction.[104] Gaseous emissions like carbon dioxide, ozone, and nitrogen oxides are commonly identified due to combustion processes, ultraviolet light from the welding arc, and high temperatures.[105] PM – usually in the form of metal fumes and silica dust, is also identified due to melting electrodes, filler materials, and base metals as well as grinding or cutting pipes during preparation or post-weld processing.[106] VOCs are potentially emitted depending on coatings, primers, or lubricants used on pipe surfaces.[107] HAPs like hexavalent chromium (Cr^{6+}), lead, and cadmium are also identified from welding certain materials like stainless steel.[108] The Project results in potentially significant health risk impacts associated with pipeline welding and construction. These impacts must be disclosed and mitigated in an EIR before the Project can be approved.

O2-21

[101] MND, p. 69.
[102] MND, p. 38; 65; 127.
[103] Shukla Comments, p. 8.
[104] *Id.*
[105] Shukla Comments, p. 8.
[106] *Id.*
[107] *Id.*
[108] *Id.*

VII. THE MND FAILS TO DISCLOSE, ANALYZE, AND MITIGATE POTENTIALLY SIGNIFICANT RISKS OF UPSET INVOLVING HAZARDOUS MATERIALS

The MND determined that hazards impacts are less than significant from flammable vapor clouds, jet fire, and toxic vapor clouds from the proposed project on surrounding vegetation; sensitive receptors in the surrounding area; the proposed control room on the project site; and the existing OCWR building on the project site.[109] However, as Dr. Shukla points out, the MND fails to disclose many of the most crucial aspects of risks of upset of hazardous materials, such as the hazardous gases present in landfill gas, the types of hazards (fire, explosion) that leaks pose, the severity of these hazards, and the gases that must be monitored.[110]

O2-22

The MND provides that project design features including "fire and gas detection systems" will reduce impacts to less than significant.[111] This statement is unsupported. The MND does not specify whether fire and gas monitoring will adequately analyze and mitigate impacts from leaks. The Project Application provides that the Project is subject to Rule 466 for 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."[112] But, Rule 466 applies only to inspection and monitoring for VOC leaks from pumps and compressors and does not require inspection and monitoring for potential leaks of other emissions sources like carbon dioxide, hydrogen sulfide (H_2S), NOx and GHGs that may leak from project components.[113]

To mitigate the potentially significant hazards risks associated with leaks, Dr. Shukla recommends that the Project implement robust Leak Detection and Repair ("LDAR") protocols to ensure prompt identification and remediation of leaks, minimizing environmental impacts and ensuring system integrity.[114] Leak detection monitoring is essential to detect leaks of hazardous gases before they present a health hazard or risk of upset.

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[109] MND, p. 101.
[110] Shukla Comments, p. 18.
[111] MND, p. 101.
[112] 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, (July 22, 2024), p. 10.
[113] Shukla Comments, p. 21.
[114] Shukla Comments, p. 18.

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Methane leaks at the processing facility, for example, present a significant fire and explosion hazard. Landfill gas contains high concentrations of methane, which is highly explosive when mixed with air at a volume between its LEL of 5% and it UEL of 15%.[115] Methane has been known to leak from natural gas storage facilities in California in recent years. In 2015, a natural gas facility at Aliso Canyon leaked natural gas that amounted to over 100,000 tons of methane.[116] It was determined that 60 metric tons of methane and 4.5 metric tons of ethane per hour were released into the atmosphere.[117] This resulted in a doubling of methane emissions in the Los Angeles Basin.[118] At the time, more than 5,000 households were evacuated. A leak of methane, CO, and NOx of this magnitude from the Project would be significant and catastrophic air quality, public health, hazards, fire and explosion hazard.[119]

O2-22 cont'd

Landfill gas also contains high concentrations of H_2S, which can result in effects that range from headaches and eye irritation to unconsciousness and death.[120] Many HAPs are present in landfill gas including benzene, vinyl chloride, tetrachloroethylene, ethylene dibromide, ethylene dichloride, methylene chloride, perchloroethylene, carbon tetrachloride, methyl mercapatan, hydrogen sulfide (H_2S), ammonia (NH_3), and mercury.[121]

Dr. Shukla cites to an example of an accident resulting from an upset of this type that occurred in Poza Rica, Mexico, in 1951. A malfunction in a flare stack connected to a sulfur recovery unit led to the release of hydrogen sulfide gas for over 20 minutes. Under foggy and calm weather conditions, the toxic plume drifted off-

[115] Landfill Gas Safety and Health Issues; https://www.atsdr.cdc.gov/HAC/landfill/PDFs/Landfill_2001_ch3.pdf.
[116] NOAA Climate Program Office: NOAA and Partners Report the Largest Methane Leak in U.S. History in a Joint Study; March 2016; https://cpo.noaa.gov/noaa-and-partners-report-the-largest-methane-leak-in-us-history-in-a-joint-study/#:~:text=One%20of%20the%20115%20wells,methane%20leak%20in%20U.S.%20history.
[117] Science; Methane emissions from the 2015 Aliso Canyon blowout in Los Angeles, CA, February 2016; https://www.science.org/doi/10.1126/science.aaf2348.
[118] *Id.*
[119] Shukla Comments, p. 28.
[120] Occupational Safety and Health Administration, Hydrogen Sulfide; https://www.osha.gov/hydrogen-sulfide.
[121] SWANA, A Compilation of Landfill Gas Field Practices and Procedures, pdf 26, August 2011; https://www.google.com/search?q=A+Compilation+of+Landfill+Gas+Field+Practices+and+Procedures%2C+August+2011&oq=A+Compilation+of+Landfill+Gas+Field+Practices+and+Procedures%2C+August+2011&aqs=chrome..69i57j69i64l3.716j0j7&sourceid=chrome&ie=UTF-8.

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site, causing 22 fatalities and 320 hospitalizations due to exposure-related symptoms.[122]

Another significant incident underscores the severe consequences of accidental upsets and highlights the critical importance of maintaining flaring systems to prevent such events. In 1986, a methane explosion destroyed a home in Loscoe, England. Ground heating was detected approximately 329 feet from the landfill boundary but went unreported. A record-low atmospheric pressure allowed accumulated methane to escape through openings in a nearby residential area. The ignition of the gas, triggered by the use of a light switch, caused the explosion and displaced 55 households into temporary accommodations. [123]

O2-22 cont'd

The MND fails to include a Risk of Upset Analysis, evaluating the potential impacts to the closest residences and schools. Absent substantial evidence, the MND concludes that "hazards related to accidental release of hazardous materials would be less than significant."[124] The MND fails to analyze potentially significant impacts to sensitive receptors within the potential impact radius of a pipeline accident. The MND fails as an informational document under CEQA for failing to disclose the potentially significant impact of an accident at the processing facility and along the pipeline. An EIR must be prepared to adequately analyze and mitigate the Project's potentially significant hazards impacts.

VIII. THE MND FAILS TO ANALYZE CUMULATIVE IMPACTS

CEQA requires lead agencies to consider "past, present, and probable future projects producing related or cumulative impacts."[125] The lead agency must find that a project may have a significant effect on the environment and must therefore require an EIR if the project's potential environmental impacts, although individually limited, are cumulatively considerable.[126] "Cumulatively considerable" under CEQA means that "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."[127]

O2-23

[122] Avada Environmental, What Has Changed Since the Loscoe Landfill Gas Explosion? (March 14, 2019) https://avadaenvironmental.com/2019/03/14/what-has-changed-since-the-loscoe-landfill-gas-explosion/.
[123] Paul Denham et.al., Managing the Hazards of Flare Disposal Systems, Hazards Symposium Series No. 160 (2015) https://www.icheme.org/media/8462/xxv-paper-15.pdf.
[124] MND, p. 100.
[125] PRC § 21083; 14 CCR §15130(b)(1)(A); *CBE v. CRA*, 103 Cal.App.4th at 117.
[126] PRC § 21083(b); 14 CCR §§ 15064(h)(1), 15065(a)(3).
[127] CEQA Guidelines §15064(h)(1).

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This analysis necessarily requires the identification of other projects that will be constructed and/or operating over the same time period as the subject project and the analysis of these projects together with the Project being reviewed. Thus, cumulative impacts can be determined by identifying past projects, other current projects, and probable future projects and their impacts. Similarly, SCAQMD's CEQA guidelines require an analysis of cumulative air quality impacts, including a quantitative analysis of cumulative TAC and PM emissions.

The MND provides that "[t]here 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."[128] The MND concludes that 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.[129] But, substantial evidence in Dr. Shukla's expert reports supports a fair argument that the Project results in cumulatively significant air quality, public health and greenhouse gas emissions. O2-23 cont'd

The MND asserts that the Project has less than significant cumulative impacts because the City concluded that the Project's individual impacts were less than significant, but the MND omitted significant air quality and GHG emission sources. The MND's conclusions regarding the Project's cumulative significance is therefore both factually and legally incorrect. Dr. Shukla's comments provide substantial evidence, that when accounting for all emissions sources and fugitive emissions sources, the Project results in potentially significant "cumulative air quality degradation."[130] Dr. Shukla's comments point to significant cumulative impacts of localized emissions which must be analyzed and mitigated in an EIR before the Project can be approved.

IX. THE MND FAILS TO ADEQUATELY ANALYZE NOISE AND VIBRATION IMPACTS

The Newport Beach General Plan requires conformance with specified noise limits. Specifically, Policy N 1.1 requires the City to "Require that all proposed projects are compatible with the noise environment through use of Table N2, and enforce the interior and exterior noise standards shown in Table N3."[131] The MND includes Table N3, which shows that construction may not exceed 50 dBA for the O2-24

[128] MND, p. 148.
[129] *Id.*
[130] Shukla Comments, p. 8.
[131] City of Newport Beach General Plan Update EIR Section 4.9 Noise (2006), p. 4.9-36.

closest residences.[132] The MND provides that the combined construction noise levels from pipe installation and equipment installation would be 55 dBA Leq and 56 dBA Leq, respectively.[133] This would exceed the residential threshold and result in a significant impact pursuant to CEQA. The Project's potentially significant noise impacts must be analyzed in an EIR before the Project can be approved.

O2-24 cont'd

X. CONCLUSION

There is substantial evidence supporting a fair argument that the Project will have potentially significant, unmitigated impacts on air quality, greenhouse gases, public health, and noise. The MND is also inadequate as a matter of laws because it fails to set forth the existing environmental setting, and identify, analyze, and mitigate all potentially significant impacts to air quality, greenhouse gases, public health, and noise. Due to these deficiencies, the City cannot conclude that the Project's impacts have been mitigated to a less than significant level.

O2-25

The CEQA Guidelines require that an EIR be prepared if there is substantial evidence supporting a fair argument that any aspect of a project, either individually or cumulatively, may cause a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial.[134] As discussed in detail above, there is more than a fair argument based on substantial evidence that the Project would result in significant adverse impacts not identified in the MND. Moreover, there is substantial evidence the proposed mitigation measures will not reduce potentially significant impacts to a level of insignificance.

We urge the City to fulfill its responsibilities under CEQA by withdrawing the MND and preparing an EIR to address the issues raised in this comment letter, the attached comments from Dr. Shukla and Mr. Meighan, and other public comments in the record. This is the only way the City, decisionmakers, and the public can ensure the Project's significant environmental, public health and safety impacts are mitigated to less than significant levels.

Sincerely,

Kelilah D. Federman

Attachments
KDF:acp

[132] Meighan Comments, p. 3.
[133] MND, p. 127.
[134] CEQA Guidelines § 15063(b)(1).

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1. Response to Comments

EXHIBIT A

GROUP DELTA

Adams Broadwell Joseph Cardozo
601 Gateway Blvd. Suite 1000
South San Francisco, CA 94080

December 20, 2024
Proposal No. EN8484

Attention: **Kelilah D. Federman**

Subject: Comments on Archaea Landfill Gas to Energy Project (ALGEP) Mitigated Negative Declaration (MND) Orange County, California

Dear Ms. Kelilah,

Dr. Komal Shukla of Group Delta Consultants, Inc. (Group Delta) is pleased to provide comments to Adams Broadwell Joseph & Cardozo (ABJC, Client) regarding the comprehensive review of the Mitigated Negative Declaration (MND) for the Archaea Landfill Gas to Energy Project (ALGEP). This report was prepared by the Applicant, Biofuels Coyote Canyon Biogas.[1]

Introduction

O2A-1

The ALGEP is proposed to be located on a 4.14-acre site in the northeastern region of the City of Newport Beach, Orange County, California. The site, situated at 20662 Newport Coast Drive, lies atop a hill within the boundaries of the decommissioned Coyote Canyon Landfill (CCL). As shown in Figure 1, the project site is immediately surrounded by open space on all sides. The main canyon landfill is immediately west of Newport Coast Drive. 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.[2]

The project involves the construction and operation of a renewable natural gas (RNG) processing facility and a pipeline interconnection facility under a lease agreement with OC Waste and Recycling (OCWR). The facility, occupying 38,500 square feet (approximately 0.88 acres) within the site, will be enclosed by a 12-foot-high perimeter wall. Utilizing existing landfill gas (LFG), the project aims to produce pipeline-quality RNG. Key infrastructure includes a Point of Receipt (POR) skid for monitoring RNG quality, and an 8-inch pipeline extension dedicated to transferring RNG

[1] Refer to Para. 1 on Pg. 15 of Initial Study-Mitigated Negative Declaration: Landfill Gas to Energy Plant Project

[2] Refer to Para. 3 on Pg. 4 of Initial Study-Mitigated Negative Declaration: Landfill Gas to Energy Plant Project

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from the POR to the tie-in point of an existing fossil natural gas pipeline on the western side of the site.

To support facility operations, additional infrastructure improvements are planned, including internal access routes, a fire hydrant, an on-site water tank, a septic tank system for the control room, a storm drain system for off-site stormwater disposal, and new underground power and telecommunication lines. These enhancements are intended to ensure the safe and efficient operation of the proposed RNG processing plant and its associated facilities.

As forementioned, the proposed RNG facility is planned to be built within the boundary of the previously operated CCL. The designated area for construction was not actively used for landfilling and is currently paved with concrete and asphalt, as shown in Figure 1. The CCL operated as a Class III municipal solid waste landfill from 1963 to 1990, accumulating a waste footprint of 325 acres before its demolition and clearing. The site includes remnants from a previous gas-to-energy facility, such as generators, tanks, 65-foot cell towers, a power panel, a switchgear, a blower pad, and the county flare yard. Additionally, there is a small operational support building located centrally, three parking spaces to the west of the building, and a cell tower situated in the southeast corner of the site.

O2A-1 cont'd

The Final Closure Plan for the CCL was certified by 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). The closure was formally documented on May 7, 2003, and the site is now managed and maintained by the Orange County Waste & Recycling (OCWR) department under the approved Final Closure Plan. The site previously operated under a Title V permit, which included a landfill gas (LFG) collection and control system. This system comprised up to 428 vertical gas collection wells and an LFG flaring system equipped with four 20-foot flares and two blowers, reflecting its legacy as a comprehensive waste management and energy recovery operation.[3]

[3] Refer to Para. 3 on Pg. 3 of Initial Study-Mitigated Negative Declaration: Landfill Gas to Energy Plant Project

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Figure 1: Regional Location of ALGEP Site Highlighted in Yellow

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Figure 2: Coyote Canyon Landfill Map with Proposed Site Highlighted in Yellow

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Figure 3: Aerial View of ALGEP Site Boundaries Orange County, California

O2A-1
cont'd

Project Description

Biofuels Coyote Canyon Biogas (the Applicant) has proposed the construction of a Renewable Natural Gas (RNG) processing facility. To support this project, Southern California Gas Company (SoCalGas), the local utility provider, intends to develop a supplemental pipeline interconnection facility. The City of Newport Beach, acting as the lead agency under the California Environmental Quality Act (CEQA), asserts that a Mitigated Negative Declaration (MND) is the appropriate CEQA

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compliance document for the proposed project. As the lead agency, the City holds primary approval authority over the project.

In conjunction with the MND, the City will adopt a mitigation monitoring and reporting program to ensure compliance with identified environmental safeguards. As part of the CEQA process, the City authorized the preparation of an Initial Study (IS) to justify why the project is not categorically exempt from CEQA requirements and to substantiate the determination that the project will not result in significant environmental impacts.

The proposed project requires the approval of a Conditional Use Permit (CUP) from the City of Newport Beach to proceed. The project site is designated and zoned as Open Space (OS), which permits major utility uses subject to CUP approval. A CUP provides a formal mechanism for evaluating the appropriateness of a proposed use and its operational characteristics within the specified zoning district. This process ensures that the project's potential effects on the site and its surroundings are thoroughly reviewed and mitigated as necessary. The CUP must comply with all applicable provisions of Title 20 (Planning and Zoning) of the Newport Beach Municipal Code (NBMC).

O2A-1 cont'd

In 2013, South Coast Air Quality Management District (SCAQMD) issued a Title V permit to OCWR, authorizing the operation of a landfill gas-to-energy plant that would utilize the landfill gas (LFG) generated by Coyote Canyon Landfill (CCL) to produce electricity. However, in December 2015, the original gas-to-energy plant was shut down due to the landfill's inability to generate sufficient LFG to support the facility's continued economic viability. As part of the Coyote Canyon Landfill Gas Recovery Facility Demolition and Telecom Update project, the plant's equipment was removed during the construction of two monopole telecom facilities.[4]

The Project's construction plan consists of:[5]

Site Preparation (1 month)

- Demolition and rerouting of water and condensate lines.
- Stripping topsoil and implementing dust control measures.

Grading (1 day)

- Minimal grading required as the previous facility already demolished and cleared the site for proposed use.

[4] Refer to Para. 1 on Pg. 4 of Initial Study-Mitigated Negative Declaration: Landfill Gas to Energy Plant Project

[5] Refer to Section 5.1 Construction Schedule on Pg. B1-89 of Initial Study/MND Appendix B1: Archaea Landfill Gas to Energy Plant Project

Building Construction (3 months)

- Pouring foundations and coating pipe welds.
- Loading and unloading construction materials.
- Dust control measures continued during construction activities.

Paving and Architectural Coating (3 months)

- Paving site access roads and operational areas.
- Applying protective architectural coatings to enhance durability and reduce environmental wear.
- Finalizing weatherproof finishes on building exteriors and infrastructure.
- Additional infrastructure improvements:
  - Internal access routes
  - Fire hydrant
  - On-site water tank
  - Septic tank system
  - Storm drain system
  - New underground power and telecommunication lines

O2A-1 cont'd

Trenching (6 months)

- Excavating trenches for utilities, including gas, water, and electrical lines.
- Installing and securing pipelines, 8-inch pipeline extension, conduits, and associated infrastructure.
- Backfilling and compacting soil to meet safety and structural requirements.
- Conducting inspections and ensuring compliance with regulatory standards.

Emissions Control & Reporting

1.1 Omission of Emission Sources from Pipeline Installation During Construction

O2A-2

The MND inadequately addresses emissions generated during pipeline welding activities by excluding them from its emissions analysis. Pipeline welding is a substantial source of air pollutants, including criteria pollutants such as nitrogen oxides (NOx), carbon monoxide (CO), and

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particulate matter (PM).[6,7] Additionally, welding releases toxic metals such as hexavalent chromium—a known carcinogen—as well as cobalt, manganese, nickel, and lead. These pollutants are emitted during the high-temperature combustion processes integral to welding necessary for project construction, and will likely significantly contribute to localized and regional air quality degradation. The omission of these potentially significant emissions represents a critical oversight, failing to account for their potential health and environmental impacts. Pipeline welding has the potential to release a large variety of harmful emissions during project construction. Gaseous emissions like carbon dioxide, ozone, and nitrogen oxides are commonly identified due to combustion processes, ultraviolet light from the welding arc, and high temperatures. Particulate matter (PM) – usually in the form of metal fumes and silica dust, is also identified due to melting electrodes, filler materials, and base metals as well as grinding or cutting pipes during preparation or post-weld processing. Volatile organic compounds (VOCs) are potentially emitted depending on coatings, primers, or lubricants used on pipe surfaces. Hazardous air pollutants (HAPs) like hexavalent chromium (Cr^{6+}), lead, and cadmium are also identified from welding certain materials like stainless steel. Welding processes often use inert or semi-inert shielding gases like argon, helium, or carbon dioxide, which can displace oxygen and lead to asphyxiation risks if not properly vented.[8]

O2A-2 cont'd

The proposed 8-inch pipeline, running along the southern boundary of the project site and connecting to an existing metering station, introduces new emission sources that must be thoroughly evaluated.[9] While the project site is located on a hill and a considerable distance from sensitive receptors, PM, NOx, and other metal fumes can affect air quality near the highways, where vehicle emissions already contribute to pollution. Fumes and particulate matter can be carried downhill by wind from excavation and welding preparation, further settling on the highway. Construction activities along this alignment, particularly welding operations, are likely to produce concentrated emissions at specific points, posing health risks to nearby workers and potentially contributing to cumulative air quality degradation. Failure to include these emissions in the analysis undermines the MND's ability to ensure compliance with air quality standards and regulatory thresholds.

[6] U.S. EPA, AP-42, Section 12.19, Electric Arc Welding;

https://www3.epa.gov/ttnchie1/ap42/ch12/final/c12s19.pdf

[7] CARB, Welding Emissions ;

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[8] U.S. EPA, AP-42, Chapter 12.19, Electric Arc Welding;
https://www3.epa.gov/ttnchie1/ap42/ch12/final/c12s19.pdf

[9] Refer to Para. 5 on Pg. 16 of Initial Study-Mitigated Negative Declaration: Landfill Gas to Energy Plant Project

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Although the Project emphasizes the temporary and short-term nature of these construction activities, it does not address the potential cumulative impacts of localized emissions. Even short-duration activities can lead to significant pollutant concentrations that adversely affect air quality, particularly in areas already challenged by nonattainment designations for pollutants like PM_{10} and ozone (Table 1). A detailed analysis of emissions from welding and related construction activities is essential to fully evaluate the project's environmental impact and ensure adequate mitigation measures are implemented. Such measures may include localized air quality monitoring, emission control technologies, and enhanced worker protection protocols to minimize health risks and reduce the environmental footprint of the project.

O2A-2 cont'd

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.

Table 1: Attainment Status of Criteria Pollutants in South Coast Air Basin

1.2 MND Does Not Adequately Analyze Fugitive Emissions

The emissions modeling presented in the MND relies on CalEEMod but fails to account for fugitive dust emissions generated by windblown dust sources and off-road travel, representing a significant omission. The South Coast Air Basin, where the Project is located, is designated as serious nonattainment for PM10 and nonattainment for PM2.5, making accurate assessments of particulate matter emissions critical. According to the *CalEEMod Technical Paper*, "This limitation could result in underestimated fugitive dust emissions if high wind and loose soil are substantial characteristics for a given land use/construction scenario."[10] Windblown fugitive dust emissions depend on factors such as soil type, moisture content, and wind speed, which are not inherently

O2A-3

[10] CalEEMod Technical Paper, Methodology Reasoning and Policy Development of the California Emission Estimator Model, July 2011, Pg. 4; https://www.aqmd.gov/docs/default-source/caleemod/techpaper.pdf

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addressed by CalEEMod. Established methodologies, such as those outlined in AP-42, are required to estimate wind erosion emissions accurately.[11]

Additionally, the MND fails to address fugitive emissions from components like valves, flanges, and control systems. Fugitive emissions from such equipment can contribute to the release of VOCs, HAPs, and other trace gases, which may have a significant impact on local air quality. Emissions can escape from numerous seals, joints, and connectors in equipment – specifically valves and flanges are prone to leaks, and over time, even small emissions can contribute to a significant release of pollutants like methane (CH_4), CO_2 and NOx. These fumes are likely to be dispersed throughout the area by wind and settle on the surrounding highways.

O2A-3 cont'd

However, the MND provides no supplementary calculations or independent analyses to quantify emissions from wind erosion or evaluate the resulting ambient air quality impacts. This omission undermines the integrity of the emissions analysis and fails to comply with CEQA requirements, which mandate comprehensive environmental evaluations.

[11] U.S. EPA, AP-42, Section 13.2.5, Industrial Wind Erosion; https://www3.epa.gov/ttnchie1/ap42/ch13/final/c13s0205.pdf

1.4 Failure to Implement Best Available Control Technology (BACT) for Construction Equipment

The Project is required to implement BACT because the Project results in emissions increase of ozone. When accounting for accurate ozone precursor emissions, it is clear that the Project results in significant impacts from ozone formation.

The Project's failure to implement BACT in the form of Tier 4 engines for construction vehicles represents a critical oversight in addressing air quality impacts. Tier 4 engines, regulated under the U.S. EPA emissions standards for non-road diesel engines, employ advanced technologies such as selective catalytic reduction (SCR) and diesel particulate filters (DPF) to achieve significant reductions in air pollutants.[18] These engines can reduce nitrogen oxides (NOx), particulate matter (PM), and hydrocarbons by up to 90% compared to older engine models. This advanced technology is a key measure for minimizing emissions and mitigating the environmental and health impacts of construction activities. Tier 4 engines are necessary to reduce the Project's significant NOx and PM emissions. O2A-4

The omission directly conflicts with CEQA requirements, which mandate that projects mitigate significant environmental impacts to the "maximum extent feasible." By not requiring Tier 4 equipment, the Project underestimates its emissions inventory, violating CEQA's mandate for a complete and accurate environmental assessment and mitigation. Furthermore, the Project is situated in the South Coast Air Basin, classified as a serious nonattainment area for PM10, PM2.5, and ozone. The continued use of high-emission construction equipment exacerbates regional air quality issues, contravening CEQA's directive to assess cumulatively significant impacts comprehensively. Additionally, this oversight disregards CARB's Off-Road Diesel Regulation[19], which phases in stringent standards to reduce construction emissions, further emphasizing the Project's regulatory non-compliance.

Mitigation measures should include requiring Tier 4-compliant or electric equipment wherever feasible, developing equipment upgrade or replacement programs to phase out non-compliant vehicles, and establishing rigorous monitoring and reporting protocols to ensure compliance

[18] U.S. EPA, Regulatons for Emissions from Heavy Equipment with Compression-Ignition (Diesel) Engines, 40 CFR Part 1039; https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-heavy-equipment-compression

[19] U.S. EPA, Final Rule for Control of Emissions of Air Pollution From Nonroad Diesel Engines; https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-control-emissions-air-pollution-nonroad-0

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throughout construction. By integrating these measures, the Project can align with regulatory standards, reduce cumulative air quality impacts, and uphold public health protections. O2A-4 cont'd

1.5 Absence of Disclosure and Mitigation Measures for GHG Emissions

It is critical to implement mitigation measures in accordance with CEQA Guidelines, § 15126.4(c). CEQA explicitly recognizes that GHG emissions constitute a cumulative impact; thus, even projects emitting below the threshold can contribute to the overall issue of climate change. Furthermore, the Project fails to account for emissions from cell tower backup generators, which can significantly affect the emissions inventory and potentially lead to nonconformance. The MND explains that the cell phone towers include backup generators (MND, e.g. pp. 15, 63, 75), but does not analyze their emissions. While the cell towers and generators are part of the existing site, their emissions will nevertheless contribute to the Project's total GHG emissions, which is inherently a cumulative impact. These generators, typically powered by diesel fuel, emit pollutants such as NOx, PM, and GHGs. Without disclosure and mitigation strategies, even minor oversights can significantly influence the emissions inventory. By failing to consider generator emissions and adopt feasible mitigation measures, the Project risks noncompliance with broader regulatory objectives, including California's CARB Scoping Plan, which aims to reduce statewide GHG emissions to 40% below 1990 levels by 2030 as mandated by SB 32. O2A-5

CARB's regulations emphasize the importance of minimizing GHG emissions through achievable technological advancements, such as the adoption of Tier 4 engines for construction equipment and operational Tier 4 generators.[20] These engines, mandated under U.S. EPA standards, significantly reduce not only NOx, PM10, and PM2.5 emissions but also contribute to lowering GHG emissions through improved combustion efficiency and reduced fuel consumption. The inclusion of mitigation measures such as requiring all off-road construction equipment over 50 horsepower to meet Tier 4 standards where available, aligns with both state and federal efforts to reduce emissions.[21] Out of the 48 pieces of construction equipment listed for the Project, only 10 have a horsepower rating below 50.[22] All equipment is scheduled for operation for 8 hours per day, indicating consistent and prolonged emissions contributions from higher-horsepower machinery during construction activities. This measure not only addresses localized air quality but also contributes to achieving CARB's statewide emission reduction targets.

By neglecting these mitigation opportunities, the Project risks violating the EPA's Clean Air Act standards, which set enforceable limits on pollutants contributing to regional and global climate

[20] See e.g. https://ww2.arb.ca.gov/our-work/programs/emergency-backup-generators/about; CARB, Portable Diesel Engine ATCM), available at https://ww2.arb.ca.gov/sites/default/files/2018-12/PERP_ATCM_12.5.18.pdf.
[21] U.S. EPA, 40 CFR Part 1039: Tier 4 emission standards and certification requirements; https://www.ecfr.gov/current/title-40/chapter-I/subchapter-U/part-1039

[22] Refer to CalEEMod Construction Off-Road Equipment Inputs on Pg. B1-58 of Initial Study/MND Appendix B1: Archaea Landfill Gas to Energy Plant Project

change. Additionally, noncompliance with CARB's Off-Road Diesel Regulation, which aims to accelerate the transition to cleaner technologies, could undermine efforts to meet California's climate goals. Integrating Tier 4 engines, addressing emissions from cell tower generators, and other mitigation measures ensures the Project's alignment with both state and federal air quality and climate policies while proactively addressing cumulative GHG impacts as required by CEQA. O2A-5 cont'd

1.6 MND Does Not Consider Cumulative Impact of Emissions

The Project dismisses its cumulative environmental impact by citing that it remains below the SCAQMD significance thresholds.[23] However, this approach fails to comply with CEQA Section 15355, which mandates a cumulative impact assessment encompassing the combined effects of past, present, and reasonably foreseeable future projects.[24]

This includes:[25]

1. Individual effects that can occur from a single project or multiple separate projects.
2. Cumulative impact resulting from several projects, which is the change in the environment caused by the incremental effect of the project when added to other closely related past, present, and reasonably foreseeable future projects.
    a. These impacts can emerge from individually minor projects that, collectively, have a significant effect over time

O2A-6

CEQA does not allow for a project's individual compliance with significance thresholds to justify ignoring its contribution to cumulative impacts, especially in areas already burdened with nonattainment status for pollutants such as ozone and particulate matter. Failing to evaluate cumulative impacts means that the potential for the project to contribute incrementally to the worsening of air quality—especially in nonattainment areas—is overlooked. The cumulative impact analysis must account for the collective effects of multiple projects, emissions sources, and regional pollution levels, considering how the combined burden of these activities may further impair air quality and hinder efforts to meet ambient air quality standards.

The MND's assertion that cumulative impacts are less than significant lacks supporting evidence. It does not identify other relevant projects within the South Coast Air Basin or analyze how their combined emissions, when considered with those of this Project, contribute to regional air

[23] Refer to Para. 3-4 on Pg. 148 of Initial Study/MND Appendix B1: Archaea Landfill Gas to Energy Plant Project

[24] CEQA Section 15355; https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/section-15355-cumulative-impacts

[25] Cal. Code Regs. Tit. 14 § 15355

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quality degradation. This omission is particularly problematic given the nonattainment status of the region, where even small contributions to emissions can exacerbate existing public health and environmental concerns. Background concentrations are essential for accurately estimating air quality concentrations and conducting a comprehensive cumulative impact analysis.[26] Regulatory guidelines stipulate that emissions from individual sources near the project site, particularly those not well-represented by ambient monitoring data, must be explicitly modeled to ensure a precise evaluation.[27] In many cases, background ambient monitoring alone fails to adequately capture the emissions that contribute to significant concentration gradients in the surrounding area, making detailed emissions modeling necessary.[28] The guidelines outline two crucial steps for addressing such gaps: (1) explicitly modeling emissions from nearby sources and (2) utilizing appropriately representative ambient monitoring data to account for contributions from other sources.[29] Failure to follow these steps results in an incomplete analysis, potentially skewing the assessment of the project's environmental and public health impacts. Without this thorough approach, the evaluation risks underestimating the project's cumulative contribution to air quality degradation, leading to misleading conclusions about its true impact on the surrounding community.

O2A-6 cont'd

Additionally, the absence of a transparent analysis conflicts with CARB and EPA guidelines, which stress the importance of cumulative assessments in understanding long-term air quality trends and regulatory compliance. Without this evaluation, the MND undermines its credibility and risks regulatory noncompliance. A proper cumulative impact assessment would involve identifying nearby projects, quantifying their emissions, and evaluating their combined effects through modeling. This analysis is necessary to determine whether additional mitigation measures are required to address the Project's contributions to cumulative air quality degradation and to ensure compliance with CEQA and regional air quality management plans

1.7 No Acknowledgement of Indirect Ozone Formation from Project

The Project is situated in an area classified as being in extreme nonattainment for ozone under both the 1-hour and 8-hour standards as outlined in Table 2. Ozone, a secondary pollutant, is formed through complex photochemical reactions involving precursor emissions such as nitrogen oxides (NOx) and volatile organic compounds (VOCs). These precursors are commonly emitted from sources like motor vehicles, industrial operations, and construction activities. Exposure to ozone is associated with significant public health risks, including exacerbation of asthma, chronic

O2A-7

[26] 40 C.F.R Pt. 51, App. W § 8.3.1.

[27] *Id.* §§ 8.3.1.i., 8.3.1.3.

[28] *Id.* §§ 8.3.1.i., 8.3.1.3.

[29] 40 C.F.R Pt. 51, App. W § 8.3.1.3.a.

bronchitis, and other respiratory conditions, which are particularly concerning in vulnerable populations.

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.

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Table 2: Attainment Status of Criteria Pollutants in the South Coast Air Basin – Ozone

Despite the Project's claim of emitting NOx and VOCs at low concentrations, its location in a region with favorable atmospheric conditions for ozone formation—including high solar radiation, warm temperatures, and stagnant air masses—amplifies the potential for these emissions to contribute disproportionately to local ozone levels.[30] Typically, Newport Beach temperatures range from about 65° F to 72° F from the month of April to July – perfectly cultivating the warm climate that favors ozone formation. The South Coast Air Basin's existing extreme nonattainment status highlights the urgency of mitigating additional ozone precursor emissions.[31]

This location is known to have elevated ozone emissions due to high levels of traffic, sunny climate and warm temperatures. The South Coast Air Basin is surrounded by mountains on one side and the ocean on the other – leading to less dispersion of pollutants which allow ozone to accumulate as well as inversions where a layer of warmer air traps cooler air and pollutants near the surface.[32]

[30] ACP, The influence of temperature on ozone production under varying NOx conditions – a modelling study, September 2016; https://acp.copernicus.org/articles/16/11601/2016/acp-16-11601-2016.pdf

[31] CARB, South Coast Air Basin Ozone Weight of Evidence Analysis, January 2023; https://ww2.arb.ca.gov/sites/default/files/Staff_Report_App_B.pdf

[32] *Ibid*

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The MND inadequately evaluates these implications, underestimating the broader consequences of the Project's precursor emissions. Specifically, the absence of detailed emissions inventories and advanced photochemical modeling undermines the reliability of the MND's air quality assessment. When accounting for accurate ozone precursor emissions, the Project results in significant impacts from ozone formation.

This oversight neglects CEQA's requirement for a comprehensive analysis of cumulative impacts and fails to comply with regulatory standards. The omission of detailed emissions inventories and modeling also undermines the credibility of the Project's emissions assessment, neglects necessary mitigation measures, and raises concerns about the Project's compliance with air quality management goals and its broader implications for community health. Without properly considering these emissions, the MND's claims of minimal ozone impact are unfounded, casting doubt on its assessment of the Project's environmental impact in a region already struggling with ozone non-compliance.

O2A-7 cont'd

Moreover, the increased VOC emissions associated with the Project further hinder compliance with state and federal ozone standards. The MND's lack of robust mitigation strategies, such as the use of low-VOC materials and NOx reduction technologies, raises significant concerns about the Project's alignment with air quality management goals. Without adequately quantifying these emissions and their cumulative effects, the MND's assertions of less than significant environmental impact remain unsupported. The deficiencies in emissions assessment and mitigation measures highlight the Project's potential to exacerbate ozone formation, jeopardizing public health and hindering regional air quality improvement efforts.

The MND does not include emissions from pipeline welding within its emissions analysis. Welding generates criteria pollutants like NOx, CO, and PM. The exclusion of this source presents a serious oversight within the emissions analysis.

1.8 No Consideration for Accidental Leaks from Operations

Common releases from RNG pipelines include methane, the primary component of RNG and a potent greenhouse gas, which can leak from joints, valves, and pressure relief systems or be vented during maintenance. Other emissions may include carbon dioxide (CO_2), nitrogen (N_2), oxygen (O_2), volatile organic compounds (VOCs), trace hydrogen sulfide (H_2S), and occasional leaks of process fluids like compressor lubricants or odorants, depending on the RNG source and treatment.[33,34] Flaring during overpressure events can also release CO_2 and other combustion byproducts. Despite these risks, the Project does not currently address potential emissions that

O2A-8

[33] U.S. EPA, Landfill Methane Outreach Program (LMOP): Basic Information about Landfill Gas; https://www.epa.gov/lmop/basic-information-about-landfill-gas

[34] Refer to Figure 7: Renewable Natural Gas Process Flow Diagram on Pg. 19 of Initial Study-Mitigated Negative Declaration: Landfill Gas to Energy Plant Project

may occur during RNG processing and transportation. A comprehensive risk assessment should evaluate leak points such as pipelines, compressors, and valves. To mitigate these risks, the Project should implement robust Leak Detection and Repair (LDAR) protocols to ensure prompt identification and remediation of leaks, minimizing environmental impacts and ensuring system integrity.

According to the EPA, RNG operations can optimize leak management by installing or upgrading advanced leak detection technologies that provide automatic notifications to operators upon detecting a leak.[35,36] This proactive approach can significantly enhance response times and minimize methane emissions. All equipment used in RNG processing and transportation, including leak detection systems, should be operated and maintained according to best practices to ensure efficiency and reliability.[37]

O2A-8 cont'd

Where feasible, upgrading equipment should be powered using renewable electricity, reducing the carbon footprint of the overall RNG lifecycle. Additionally, the physical distance between the point of RNG generation and the point of pipeline injection or end-use should be minimized to reduce the risk of methane emissions during transport.[38]

It is important to note that RNG pipeline quality specifications across the United States vary and lack standardization, which can introduce additional challenges for RNG providers. The Project must ensure that the quality of RNG is rigorously evaluated to meet the specific requirements of the intended pipeline. Non-compliant gas should be prevented from entering the pipeline network to maintain system integrity and safety.

Based on the EPA's Leak Detection Guide, the following steps are recommended for addressing this issue:[39]

1. Written LDAR Program

- **Documentation**: Develop a comprehensive, written LDAR program that clearly defines procedures, responsibilities, and compliance strategies. This document should be accessible to all personnel involved in the LDAR process.

[35] U.S. EPA, An Introduction to Renewable Natural Gas, August 2022;https://www.epa.gov/system/files/documents/2022-11/RNG_Intro_Guide.pdf

[36] U.S. EPA, Renewable Natural Gas: Facility Operation Best Practices to Create a More Climate-Friendly Project; August 2022; https://www.epa.gov/system/files/documents/2022-11/RNG_Operations_Guide.pdf

[37] *Id.*

[38] *Id.*

[39] U.S. EPA, Leak Detection and Repair: A Best Practices Guide; October 2007;https://www.epa.gov/sites/default/files/2014-02/documents/ldarguide.pdf

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2. Training

- **Personnel Training**: Implement regular training sessions for all employees involved in the LDAR program to ensure they are knowledgeable about detection techniques, equipment operation, and regulatory requirements.

3. LDAR Audits

- **Regular Audits**: Conduct periodic audits to assess the effectiveness of the LDAR program, identify areas for improvement, and ensure compliance with regulatory standards.

5. Internal Leak Definition for Valves and Pumps

- **Stricter Leak Definitions**: Adopt more stringent internal leak definitions than those mandated by regulations to proactively reduce emissions.

6. More Frequent Monitoring

- **Increased Inspection Frequency**: Implement more frequent monitoring of components, especially those prone to leaks, to detect and address issues promptly.

7. Repairing Leaking Components

- **Timely Repairs**: Establish protocols to ensure that identified leaks are repaired within a specified timeframe, prioritizing based on the severity of the leak.

O2A-8 cont"d

8. Delay of Repair Compliance Assurance

- **Justification and Monitoring**: If repairs are delayed, maintain thorough documentation justifying the delay and implement measures to monitor the leaking component until repair is feasible.

9. Electronic Monitoring and Storage of LDAR Data

- **Digital Records**: Utilize electronic systems for monitoring and storing LDAR data to enhance accuracy, accessibility, and analysis capabilities.

10. QA/QC of LDAR Data

- **Quality Assurance**: Establish quality assurance and quality control procedures to ensure the integrity and reliability of LDAR data.

11. Calibration/Calibration Drift Assessment

- **Equipment Calibration**: Regularly calibrate monitoring equipment and assess for calibration drift to maintain accurate leak detection capabilities.

12. Records Maintenance

- **Comprehensive Record-Keeping**: Maintain detailed records of all aspects of the LDAR program, including training, monitoring results, repairs, and audits, to demonstrate compliance and facilitate continuous improvement.

Implementing these best practices, as outlined by the EPA, will enhance the effectiveness of the LDAR program, ensuring better detection and repair of leaks, compliance with environmental regulations, and reduction of methane emissions.

O2A-8 cont"d

1.9 MND Omits Sources of Emissions from Key Equipment

The operational emissions analysis provided for the project only accounts for emissions from the Thermal Oxidizer (TOX), RNG flare, and emergency generator. However, under CEQA, all sources of emissions must be included in the analysis to ensure a comprehensive evaluation of environmental impacts. By excluding critical emission sources, the analysis presents a significant underestimation of the project's total air quality impacts, particularly in terms of both criteria pollutants and GHGs. The following equipment, which is part of the project, is responsible for emitting both criteria pollutants (such as nitrogen oxides, particulate matter, and volatile organic compounds) and GHGs (including carbon dioxide and methane):

Equipment	Source of Leaks
Feed Compressors, Recycle Compressors, and Associated Coolers	Leaks from compressors usually occur at the seals, typically due to wear and tear or improper installation.
Temperature Swing Adsorption (TSA) Pretreatment Skid	Leaks can occur at the seals of the TSA units or at the junctions where pipes connect to the skid.
Chiller	Leaks typically occur at the refrigerant connections, valves, or gaskets.
Membrane Skid	Leaks from membrane skids can occur due to damage to the membranes or improper sealing of connections.
Nitrogen Rejection Unit (NRU) and Associated Skids	Leaks from NRUs usually occur at the valve connections or where pressure relief systems are located.
Valves, Pumps, Flanges	Leaks from valves and pumps typically occur at the seal or packing area, or due to faulty connections.
Flaring/Blowdown, Pressure Relief Valves, and Process Drains	Leaks can happen due to improper valve seating, damage to seals, or incorrect installation of components.

Table 3: Sources of Leaks in Process Equipment[40]

O2A-9

[40] U.S. EPA, Leak Detection and Repair: A Best Practices Guide; October 2007; Pg. 4; https://www.epa.gov/sites/default/files/2014-02/documents/ldarguide.pdf

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- **Feed Compressors, Recycle Compressors, and Associated Coolers**: These components are integral to the compression and cooling processes, which result in emissions of CO_2, NOx, and potentially VOCs from mechanical seals and exhausts.
- **Temperature Swing Adsorption (TSA) Pretreatment Skid**: The TSA system involves thermal and pressure cycling, which may generate emissions, particularly VOCs and GHGs, from leaks or venting during operation.
- **Chiller**: Operating chillers often release refrigerant gases, some of which are potent GHGs, in addition to emissions from their mechanical components.
- **Membrane Skid**: Emissions can occur from leaks at the membrane and associated plumbing connections, including VOCs and GHGs.
- **Nitrogen Rejection Unit (NRU) and Associated Skids**: The NRU process generates emissions from purging, venting, and possible leaks in the equipment, contributing to NOx and GHG emissions.
- **Valves, Pumps, Flanges**: These equipment components are prone to leaks at seals and joints, leading to emissions of various gases, including VOCs and GHGs.
- **Flaring/Blowdown, Pressure Relief Valves, and Process Drains**: These systems are designed to vent excess gases during operations but can result in unregulated releases of both criteria pollutants and GHGs, particularly in instances of malfunction or unplanned blowdowns.

O2A-9 cont'd

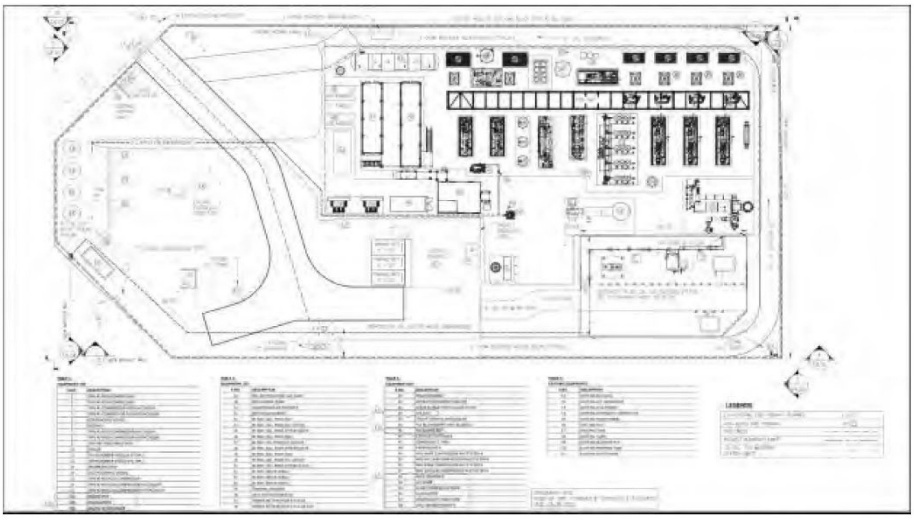

Figure 5: Full Scale ALGEP Conceptual Site Plan with All Equipment Listed

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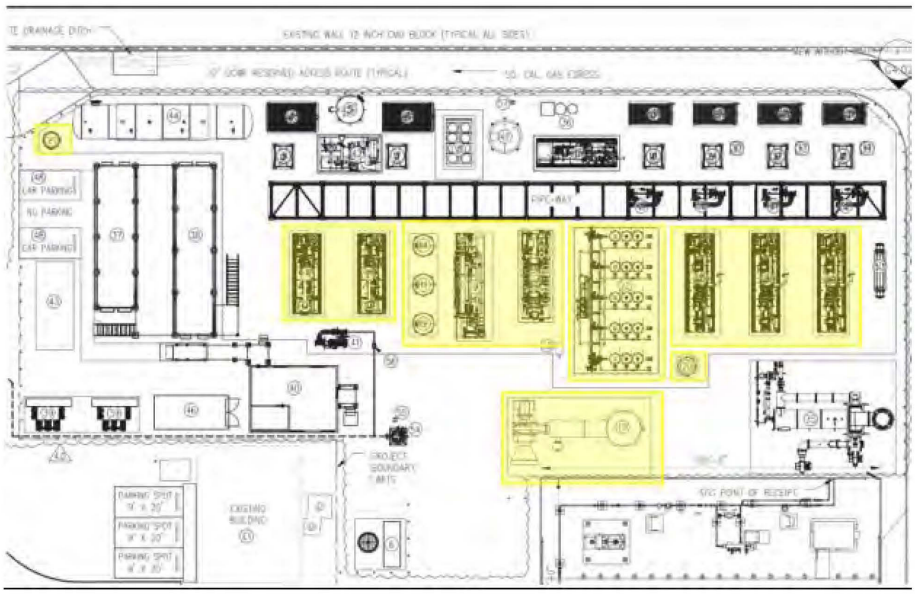

Figure 6: Enlarged View of ALGEP Conceptual Site Plan with Sources of Leaks Equipment Highlighted in Yellow

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

TABLE 1:-
EQUIPMENT LIST

S.NO.	DESCRIPTION
19	OFF-SPECIFICATION GAS FLARE
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

Figure 7: Enlarged View of ALGEP Conceptual Site Plan Equipment Lists

The exclusion of these emission sources significantly compromises the accuracy of the project's air quality analysis. Such omissions hinder the ability to fully assess the potential air pollution

O2A-9 cont'd

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impacts, including the long-term health effects on surrounding communities and the contribution to regional and global climate change. Additionally, these risks impact the environmental review process under CEQA, as a full and transparent analysis is necessary to ensure that mitigation measures, such as emission reductions or operational adjustments, can be effectively implemented.

O2A-9 cont'd

To mitigate these risks, the following actions should be taken. A reevaluation of the comprehensive emissions inventory, a detailed modeling and risk assessment, implementation of mitigation strategies like upgrading equipment and maintenance procedures, monitoring and reporting, and adaptive management strategies.

1.10 Unclear Baseline Data for Background Pollutant Operational Levels

The MND fails to provide sufficient baseline air quality data necessary to establish the existing concentrations of pollutants such as NOx, VOCs, and PM within the South Coast Air Basin. The Project references the use of "the most recent operating conditions of the CCL" to compare the impacts of the proposed project.[41] However, it does not include sufficient evidence such as air quality monitoring data, modeled background pollutant concentrations, or other verifiable datasets to justify the variables or assumptions used in the analysis. Notably, the Coyote Canyon Landfill has been inoperative since 1990, raising significant concerns regarding the relevance and validity of these background conditions.[42] Given that air quality and emission patterns have likely changed considerably over the past three decades due to technological advancements, regulatory changes, and shifts in regional emission sources introduces substantial uncertainty regarding the accuracy of the analysis presented. It is unclear as to how the MND has utilized the data from the previous plant and requires further explanation due to the age of the plant data and unstated methods.

O2A-10

Atmospheric dispersion models like AERMOD can be used to estimate the existing pollutant concentrations based on nearby regulatory monitoring data, meteorological conditions, and regional emission inventories. Inputs for the estimates can be obtained from the Mission Viejo monitor if on-site monitoring is not feasible. The modeled baseline data can subsequently be compared to the applicable air quality standards, including the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), to identify any exceedances or areas of concern. Utilizing operative conditions from a plant that has been out of service for over 30 years presents a significant and multifaceted issue. Over such an extended period, numerous physical and environmental parameters are likely to have undergone substantial changes, rendering historical operational data obsolete for current applications. One critical consideration is the roughness factor, a physical parameter that inherently evolves due

[41] Refer to Para. 6 on Pg. 46 of Initial Study-Mitigated Negative Declaration: Landfill Gas to Energy Plant Project

[42] County of Orange: Waste & Recycling; https://oclandfills.com/landfills/closed-landfill-sites/coyote-canyon

to material degradation, environmental influences, and wear-and-tear over time.[43] Notably, the roughness factor typically undergoes measurable changes approximately every five years, influenced by factors such as corrosion, sediment buildup, or structural alterations. Relying on outdated data fails to account for these dynamic changes, potentially compromising the accuracy of predictive models, and overall environmental impact.

Given that the South Coast Air Basin is currently designated as being in extreme nonattainment for ozone and serious nonattainment for particulate matter, it is imperative for the City to conduct a rigorous and comprehensive analysis of existing background pollutant concentrations in conjunction with anticipated emissions from the proposed activities. This integrated approach is essential to accurately assess the Project's potential contribution to cumulative air quality impacts and to ensure compliance with regulatory thresholds.

O2A-10 cont'd

1.11 No Quantification of Fugitive Startup or Shutdown Emissions

Fugitive emissions during startup and shutdown phases of equipment such as the Thermal Oxidizer (TOX) and flaring systems are omitted from the analysis, representing a significant oversight. These operational phases often account for a substantial portion of a facility's annual emissions, particularly during transient conditions when emission control efficiencies can vary. The Project's reliance on annual emissions data derived from the South Coast AQMD's Webtool further underscores this deficiency. As depicted in Figures 8 and 9, the reported data indicates that startup, shutdown, turnaround, and upset scenarios are inaccurately represented as emitting zero tons of relevant pollutants.

O2A-11

Quantifying emissions from Thermal Oxidizer (TOX) and flare system accidents or upsets in landfill RNG projects is complex due to the variability in operational conditions and the limited availability of specific data. However, risk management plans and worst-case scenario analysis can assist with outlining potential risks, mitigation measures, and emergency response strategies for accidents involving TOX and flaring systems.

[43] EGU, Impacts of a Revised Surface Roughness Parameterization in the Community Land Model, March 2022; https://gmd.copernicus.org/articles/15/2365/2022/

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	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**

	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**

Figure 8: 2021 AER Criteria Pollutants Permitted and Non-Permitted Emissions Summary

O2A-11 cont'd

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	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**

	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**

Figure 9: 2022 AER Criteria Pollutants Permitted and Non-Permitted Emissions Summary

O2A-11 cont'd

Under the California Environmental Quality Act, it is a regulatory requirement to evaluate and disclose all reasonably foreseeable environmental impacts, including those arising from operational upsets or accidents. The exclusion of these critical scenarios results in an incomplete and inadequate environmental impact assessment.

Accidents or operational upsets in systems such as the TOX and flaring systems can lead to uncontrolled emissions of criteria pollutants and hazardous air pollutants, which have significant implications for air quality and public health. The TOX, an essential component for controlling emissions, is designed to combust VOCs, methane, and HAPs present in landfill gas.[44] During an upset, such as equipment malfunctions or temperature and gas flow fluctuations, there can be inefficient operation or complete failure. This can lead to elevated emissions of unburned methane, CO, NOx, and other pollutants that directly impact air quality.[45] Accidents, such as

[44] Refer to 'What components make up landfill gas?' in U.S. EPA: Frequent Questions about Landfill Gas; https://www.epa.gov/lmop/frequent-questions-about-landfill-gas

[45] IChemE: Thermal Oxidiser Fire and Explosion Hazards; Pg. 705-707; https://www.icheme.org/media/10200/xvi-paper-55.pdf

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overheating or improper venting, can pose fire or explosion risks, further impairing environmental and safety concerns.[46]

Landfill explosions are rare; however, hazardous concentrations of methane gas can be released and remain undetected. Methane, which constitutes approximately 50% of landfill gas, is an odorless and highly combustible gas that becomes explosive at concentrations between 5% and 15%.[47] The distance landfill gas can migrate is influenced by site-specific factors, including soil permeability and atmospheric conditions, with documented migration distances exceeding 1,500 feet.[48]

Methane, being a lighter gas, inherently migrates along the path of least resistance. The Project's location atop a hill introduces a potential for lateral gas migration downslope toward nearby major freeways. Meteorological factors, such as elevated air temperatures and wind speeds, can facilitate the dispersion and travel of these gases.[49]

O2A-11 cont'd

Similarly, the flare system, which is engineered to manage the complete combustion of off-specification RNG at full design flow, is vulnerable to upsets caused by inconsistent gas flow, high moisture content, or equipment failures. Such malfunctions often lead to incomplete combustion, releasing VOCs, CO, particulate matter, and potentially hazardous byproducts like formaldehyde.[50]

An example of an accident resulting from this type of upset occurred in Poza Rica, Mexico, in 1951. A malfunction in a flare stack connected to a sulfur recovery unit led to the release of hydrogen sulfide gas for over 20 minutes. Under foggy and calm weather conditions, the toxic plume drifted off-site, causing 22 fatalities and 320 hospitalizations due to exposure-related symptoms.[51]

Another significant incident underscores the severe consequences of accidental upsets and highlights the critical importance of maintaining flaring systems to prevent such events. In 1986, a methane explosion destroyed a home in Loscoe, England. Ground heating was detected approximately 329 feet from the landfill boundary but went unreported. A record-low

[46] *Ibid*

[47] Science Direct: Determination of the explosion parameters of methane-air mixtures as function of the ignition source and the volume and shape of the explosion chambers; Abstract; December 2022; https://www.sciencedirect.com/science/article/pii/S0950423022001383

[48] Landfill Gas Primer: An Overview for Environmental Health Professionals; Landfill Gas Basics; November 2001; https://www.atsdr.cdc.gov/hac/landfill/html/ch2a.html#6

[49] Agency for Toxic Substances Disease Registry: Landfill Gas Basics; Pg. 7; November 2001 ;https://www.atsdr.cdc.gov/hac/landfill/pdfs/landfill_2001_ch2mod.pdf

[50] U.S. EPA: Composition of Organic Gas Emissions from Flaring Natural Gas; Pg. 13; August 2017; https://www.epa.gov/sites/default/files/2017-11/documents/organic_gas.pdf

[51] Avada Environmental, What Has Changed Since the Loscoe Landfill Gas Explosion? (March 14, 2019) https://avadaenvironmental.com/2019/03/14/what-has-changed-since-the-loscoe-landfill-gas-explosion/.

atmospheric pressure allowed accumulated methane to escape through openings in a nearby residential area. The ignition of the gas, triggered by the use of a light switch, caused the explosion and displaced 55 households into temporary accommodations. [52]

The South Coast Air Basin's designation as being in extreme nonattainment for ozone and serious nonattainment for particulate matter underscores the gravity of these potential emissions. Accidental releases from this project could exacerbate existing air quality challenges, posing severe risks to the environment and public health.

To ensure comprehensive environmental analysis and public health protection, the project must incorporate potential accidents and upset conditions for the TOX and flaring systems into its impact assessment. Accounting for these scenarios enables a more accurate evaluation of the project's risks and supports the development of robust mitigation strategies, such as enhanced monitoring systems, redundant safety mechanisms, and operational protocols. These measures are essential for minimizing the frequency and severity of unplanned emissions and safeguarding air quality and community well-being.

O2A-11 cont'd

1.12 Incomplete Analysis of Secondary Pollutant Formation

The MND fails to adequately assess the potential formation of secondary pollutants, a significant oversight in the environmental review process. Notably, the failure to account for the photochemical formation of ozone and other secondary pollutants in the atmosphere represents a critical omission.

The project's NOx emissions are near the SCAQMD Rule 1304 threshold, which is set at 4 tons per year. The project is projected to emit 3.996 tons per year, as detailed in Table 4 . When accounting for all Project emission sources, the threshold of 4 tons per year is certainly exceeded. When accounting for emissions sources from leaks from Feed Compressors, Recycle Compressors, and Associated Coolers, Temperature Swing Adsorption (TSA) Pretreatment Skid Chiller, Membrane Skid, Nitrogen Rejection Unit (NRU) and Associated Skids, Valfves, Pumps, Flanges, Flaring/Blowdown, Pressure Relief Valves, and Process Drains, emissions exceed the 4 tons per year threshold.

O2A-12

NOx emissions are a primary precursor to ozone formation. In the presence of volatile organic compounds and sunlight, NOx participates in photochemical reactions that lead to the

[52] Paul Denham et.al., Managing the Hazards of Flare Disposal Systems, Hazards Symposium Series No. 160 (2015) https://www.icheme.org/media/8462/xxv-paper-15.pdf.

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production of ozone, a key component of smog.[53] Elevated NOx levels can also contribute to the formation of secondary particulate matter, specifically $PM_{2.5}$. The percentage of $PM_{2.5}$ formed through precursor NOx ranges from 4% to 34% and 11% to 41% from VOC precursors.[54] When NOx reacts with ammonia in the atmosphere, ammonium nitrate is produced—an inorganic aerosol that contributes to fine particulate pollution. Exceeding the NOx threshold could indirectly lead to an increase in $PM_{2.5}$ concentrations.

The formation of these secondary pollutants is especially concerning given their significant role in regional air quality degradation, particularly in the South Coast Air Basin. This region is classified as an extreme nonattainment area for ozone and a serious nonattainment area for particulate matter. The potential for these secondary pollutants to exacerbate existing air quality challenges raises important implications for the region's ability to meet federal air quality standards with the addition of the Project.

Even a slight exceedance of the NOx threshold could lead to cumulative impacts, contributing to the formation of multiple pollutants. The additional NOx emissions could amplify the overall air quality impacts by triggering the formation of ozone and particulate matter simultaneously. This could necessitate further regulatory review, mitigation measures, and compliance with SCAQMD rules to address potential air quality impacts. Therefore, it is critical to closely monitor NOx emissions and their potential to surpass the threshold, given the cascading effects on air quality and regulatory compliance.

O2A-12 cont'd

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; SO_2 = sulfur dioxide; PM_{10} = 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).

[53] U.S. EPA Technical Bulletin: Nitrogen Oxides (NOx), Why And How They Are Controlled; June 2000; https://www3.epa.gov/ttncatc1/dir1/fnoxdoc.pdf

[54] U.S. EPA: MACTEC Evaluating the Contribution of PM2.5 Precursor Gases and Re-entrained Road Emissions to Mobile Source PM2.5 Particulate Matter Emission; May 2004;https://www3.epa.gov/ttnchie1/conference/ei13/mobile/hodan.pdf

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

O2A-12 cont'd

1.13 Lack of Analysis for Combined Effects of Multiple Pollutants

The MND evaluates air pollutants in isolation, failing to account for the cumulative and synergistic effects of multiple pollutants. This approach disregards the complex interactions between pollutants such as NOx, VOCs, and particulate matter, which can amplify health risks and exacerbate environmental impacts beyond the sum of their individual effects. As outlined in Section 1.12, the formation of secondary pollutants like ozone and PM2.5 due to photochemical reactions significantly contributes to respiratory and cardiovascular health issues. Furthermore, these secondary pollutants exacerbate the environmental strain in the already heavily polluted South Coast Air Basin.

To mitigate the potential for secondary pollutant formation, targeted emission reduction measures for NOx, VOCs, and PM are necessary. Specific mitigation strategies include:

- Tier 4 equipment to reduce NOx emissions,
- The use of low-VOC coatings, adhesives, and solvents to minimize VOC emissions, and
- Dust suppression measures like water spraying and soil stabilization to control PM emissions.

O2A-13

Additionally, staggering construction activities is a key strategy to minimize the simultaneous generation of high emissions from multiple pollutant sources, thus preventing the overlap of peak emissions and reducing the potential for synergistic impacts.

The failure to evaluate and mitigate the cumulative and synergistic effects of air pollutants in the MND represents a critical gap in the environmental analysis. A comprehensive approach that incorporates advanced modeling, emission reduction measures, and continuous monitoring is essential to address these complex interactions. Proper mitigation of cumulative and synergistic impacts will enhance compliance with air quality standards and protect both environmental and public health.

1.14 Inadequate Evaluation of Emissions During Peak Construction Activities

The MND fails to evaluate air quality impacts associated with peak construction activity periods, during which equipment usage and vehicle operations are at their highest intensity. Emissions during these high-demand periods are likely to exceed the average levels used in modeling analysis, potentially leading to short-term violations of local and federal air quality standards. Construction activities, such as heavy-duty equipment operation, material transport, and worker commutes, generate emissions of criteria pollutants and GHGs. Peak activity periods, characterized by simultaneous use of multiple high-emission equipment types, as well as increased vehicle trips, can result in elevated hourly and daily emission rates. These spikes in

O2A-14

1. Response to Comments

emissions are not adequately captured by average daily or annualized modeling approaches, leading to an underestimation of potential air quality impacts. Mitigation measures such as using Tier 4 Final equipment, retrofitting older equipment with emission control technologies, implementing regular maintenance schedules, and utilizing electric or hybrid equipment are effective strategies to reduce emissions during peak construction periods. However, the MND does not adequately consider or propose these measures to address the elevated emissions associated with peak construction activities.

The absence of an evaluation of peak emissions presents a significant concern for the air quality analysis, as it fails to account for potential exceedances of regulatory thresholds and the associated environmental and public health risks. Elevated emissions of pollutants such as NOx, CO, PM, and GHGs during these periods are known to lead to localized hotspots and noncompliance with federal and state regulations. For reference, the Project will have 22 diesel-powered heavy-duty equipment running for 8 hours a day during the 3-month facility construction phase.[55] During peak hours, increased traffic congestion can lead to prolonged idling which results in NOx, $PM_{2.5}$, and unburned hydrocarbons being emitted at rates similar to active operation. The overlap of construction activity and peak vehicular traffic hours results in higher cumulative emissions and elevated exposure risks for workers.

O2A-14 cont'd

Potential Impact of Peak Hours on NOx Emissions:

- Assuming peak hours account for 40% of daily NOx emissions, the baseline contribution from peak hours would be:
  Peak Hour Emissions (baseline) = 10.5 tons/year x 0.4 = 4.2 tons/year
- During periods of construction with 22 diesel-powered trucks operating, peak-hour emissions could increase due to additional traffic congestion and idling and failure to implement Tier 4 – BACT. Assuming this increase is approximately 15% higher during peak hours,:
  Additional NOx from peak hours = 4.2 tons/year x 0.15 = 0.63 tons/year

Revised Peak Hour Emissions:

- Peak Hour Total = 4.2 tons/year + 0.63 tons/year = 4.83 tons/year
- Total Annual NOx Emissions = 10.5 tons/year + 0.63 tons/day = 11.13 tons/year

[55] Refer to Section 5.2 Off-Road Equipment on Pg. B1-90 of Initial Study/MND Appendix B1: Archaea Landfill Gas to Energy Plant Project

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Comments on Archaea Landfill Gas to Energy Project Mitigated Negative Declaration 2024
South Coast Air Basin
Orange County, California Page 32

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)

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CNB-25 Construction Detailed Report, 4/14/2

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

O2A-14 cont'd

Traffic congestion and idling would increase NOx emissions by up to 40%, changing the reported 10.5 lbs of NOx per day to 11.13 lbs per day. Peak-hour emissions could increase the total daily NOx emissions by 5-7%, depending on the severity of congestion and the operational intensity of the diesel trucks during these critical periods.

In Newport Beach, California, air pollution levels consistently peak during morning and evening rush hours, driven primarily by heightened vehicular activity. These periods coincide with increased emissions of NOx and VOCs from gasoline- and diesel-powered engines – major precursors to ground-level ozone and $PM_{2.5}$. This pattern is commonly seen in densely populated urban and suburban areas where vehicular traffic is the dominant source of air pollution. Furthermore, the combustion processes in internal combustion engines emit a mix of CO, hydrocarbons, and fine particulates that further exacerbate local air quality.

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1. Response to Comments

To ensure compliance with regulatory standards and to minimize adverse environmental and health effects, it is essential to prohibit idling for more than 2 minutes, and accurately quantify and mitigate emissions during peak construction activity periods. The lack of this analysis and consideration for targeted mitigation measures renders the air quality assessment incomplete, undermining its ability to fully capture the project's potential impacts and to identify appropriate strategies for impact minimization.

O2A-14 cont'd

1.15 Absence of Operational Emissions Maintenance Plan

The MND fails to present a comprehensive strategy for monitoring and controlling operational emissions to ensure they remain below regulatory thresholds throughout the entire lifecycle of the project. The MND's current analysis does not account for the potential effects of equipment degradation, inadequate maintenance, or variations in activity levels, all of which could result in emissions exceeding the levels predicted in the initial modeling assessment.

Equipment degradation, which occurs over time due to wear and tear, can reduce the efficiency of emission control, leading to higher emissions than anticipated. Similarly, improper or inadequate maintenance of equipment may result in suboptimal performance, further exacerbating emissions beyond modeled projections. Furthermore, an increase in construction or operational activity levels due to unforeseen project demands or changes in work scheduling could lead to higher emissions than those originally estimated.

Additionally, BACT principles require the incorporation of feasible measures to reduce emissions to the greatest extent possible. An emissions management plan ensures that emissions will be effectively controlled, monitored and maintained within regulatory limits throughout the project's lifecycle. To address these potential risks, the MND should include a robust emissions management plan that incorporates the following components:

O2A-15

1. **Routine Emissions Monitoring**: Implement a system for regular emissions monitoring, using real-time air quality monitoring devices at key locations to track NOx, PM, VOC, and CO emissions from construction equipment and operational activities.
2. **Preventive Maintenance Program**: Establish a preventive maintenance schedule to ensure that all equipment remains in optimal working condition, with particular attention to emission control technologies. This should include regular inspections, servicing, and timely replacement of parts that could impact emissions.
3. **Operational Flexibility and Adjustments**: Develop procedures to adjust work practices or equipment use if emissions approach or exceed regulatory limits. This could include scaling back high-emission activities or replacing older equipment with newer, more efficient models.
4. **Reporting and Compliance Oversight**: Require quarterly emissions reports submitted to the South Coast Air Quality Management District to verify that emissions are consistently

within permissible limits. Any deviations from the expected emission levels should trigger immediate corrective actions.

5. **Training and Certification**: Ensure that all equipment operators and maintenance personnel are trained and certified in best practices for emission reduction and environmental compliance, to prevent emissions from being exacerbated by improper operation or maintenance practices.

O2A-15 cont'd

By incorporating these measures into the MND, the project would ensure that operational emissions are adequately controlled throughout the construction and operational phases, maintaining compliance with air quality standards and minimizing adverse environmental and health impacts.

Health and Environmental Risk

1.16 Unaddressed Health Effects from Pipeline Welding Fumes

The MND fails to incorporate an analysis of the pipeline material within its health risk assessment. Although the project site is located at a considerable distance from sensitive receptors, construction workers will inevitably be exposed to welding fumes during the construction phase. Welding processes emit a wide range of airborne particulates and fumes, with particle diameters typically ranging from 0.001 to 100 microns.[56,57]These fumes can contain a variety of toxic metals, including manganese, nickel, chromium, cobalt, and lead, each of which presents distinct health risks.[58] The specific health impacts associated with exposure to welding fumes are contingent upon several factors, including the composition of the materials being welded, the type of welding technique employed, and the duration and intensity of exposure. The inhalation of these fumes can cause acute respiratory irritation, chronic lung diseases, and neurological damage. Chromium and nickel, particularly in their hexavalent forms, are classified as human carcinogens and are associated with an elevated risk of lung cancer, nasal cancer, and skin conditions.[59,60] Lead

O2A-16

[56] SDAPCD, Welding Operations; July 2022; https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/welding/APCD-Welding-Operations.pdf

[57] U.S. EPA, AP-42, Chapter 12.19, Electric Arc Welding; https://www3.epa.gov/ttnchie1/ap42/ch12/final/c12s19.pdf

[58] *Ibid*

[59] ATSDR, Public Health Statement for Chromium; https://wwwn.cdc.gov/TSP/PHS/PHS.aspx?phsid=60&toxid=17

[60] U.S. EPA, Nickel Compounds: Hazard Summary; https://www.epa.gov/sites/default/files/2016-09/documents/nickle-compounds.pdf

1. Response to Comments

exposure, a concern particularly in older welding materials, can lead to high blood pressure and hypertension, nerve disorders, muscle and joint pain, as well as reproductive health impacts.[61]

For instance, stainless steel, as a pipe material, presents a potential exposure risk to hexavalent chromium during welding.[62] Hexavalent chromium is a known carcinogen associated with lung cancer, nasal cancer, and other respiratory disorders. Carbon steel, also known as mild steel, can result in exposure to fumes containing zinc oxide and iron oxide.[63] Galvanized steel, which utilizes a zinc coating, releases zinc oxide fumes during welding, leading to the development of metal fume fever.[64] Metal fume fever is characterized by flu-like symptoms that typically manifest 4-10 hours after exposure. Prolonged or repeated exposure to metal fumes can lead to tachyphylaxis, a medical term describing a sudden decrease in response to a medication.[65]

O2A-16 cont'd

The MND fails to disclose crucial information regarding the pipeline material to be welded, the type of coating material applied, and the specific welding methods to be utilized. This omission significantly undermines the adequacy of the MND's environmental and health risk evaluation. Therefore, a more detailed and comprehensive analysis, including material specifications and welding methodologies, is essential to ensure worker safety and compliance with applicable health and environmental standards.

Conclusion

The expert review conclusively determines that the MND is deficient in providing a comprehensive emissions analysis for critical pollutants, including ozone, PM, and NOx. The document does not comply with regulatory requirements and omits an evaluation of

[61] U.S. EPA, Lead; https://www.epa.gov/lead/what-are-some-health-effects-lead

[62] OSHA, Hexavalent Chromium; https://www.osha.gov/hexavalent-chromium

[63] TW Metals, Safety Data Sheet; https://www.eng.uwo.ca/files/departments-units/student-shop/2016/sds-carbon-alloy-and-tool-steels.pdf

[64] Henlex, Welding Fume Hazards: A Closer Look at Galvanized Steel; https://www.henlex.com/welding-fume-hazards-a-closer-look-at-galvanized-steel

[65] U.S. EPA, Health & Environmental Research Online (HERO), Metal Fume Fever and Polymer Fume Fever; https://hero.epa.gov/hero/index.cfm/reference/details/reference_id/3701808

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environmental and health related risks posed by these pollutants. Furthermore, the MND fails to consider cumulative environmental impacts and lacks the implementation of effective mitigation measures. The absence of accurate and reliable emissions data raises concerns about the potential for substantial adverse effects should the Project advance. O2A-17

Sincerely,

GROUP DELTA CONSULTANTS, INC.

Dr. Komal Shukla
Technical Director – Air Quality

1. Response to Comments

Komal Shukla, Ph.D., M.Sc., B.Sc
Air Quality Scientist

GROUP DELTA

Education
Ph.D. in Photochemical Modeling of Air Pollution (Environmental Engineering), Indian Institute of Technology Delhi-IIT Delhi (Photochemical Modeling of Ground Level Ozone), Delhi, India; Visiting Ph.D. Student, Institute Fellow, Gees, University of Birmingham, UK; MPhil Environment and Sustainable Development, IESD, Banaras Hindu University, Varanasi, India; M.Sc. Environment Management, University School of Environment Management (Sustainable and Low Carbon Energy Plan for Delhi), Delhi, India; B.Sc Chemistry (with honors) in Chemistry, University of Delhi, India

Years of Experience: 7

Years with Group Delta: 1

Dr. Shukla has a Ph.D. in air quality and atmospheric phenomenon modeling, with a strong technical background in tropospheric chemistry, industrial and city level environmental solutions, regulatory and global model applications, trace gases and particulate matter impact on human health and climate, and observations data analytic. Dr. Shukla is an air quality emissions modeler with nearly a decade of technical and research experience. She served as an in-house lead in federal contract scientific projects supporting the EPA's mission. Related experience includes:

Litigation, Compliance, Environmental Justice, On-Road Emissions, Industrial Emissions, California: As Air Quality Modeling Scientist, Ms. Shukla completed two major projects, including: Project I: Source apportionment of ozone and particulate matter pollution using photochemical modeling techniques, and Project II: Transportation and near-road air quality and emissions projection.

Environment and Climate Change Canada (ECCC), Toronto, Canada: As Research Scientist (Air Quality Modeling and Compliance in Alberta), Ms. Shukla completed two significant projects, including: Project I: Developing a photo-chemical transport model to understand oil and sands region emissions in North America and Project II: Modeling applications in delineating chemistry of tropospheric tracers.

University of North Carolina, Institute of Environment, Chapel Hill, North Carolina: As Postdoctoral Research Associate (Air Quality – Nyserda Led Air Quality Model Development, Ms. Shukla worked on critical projects including: Project I: Air quality modeling of various city level sources and health exposure sciences in New York City, - funded by NYSERDA and Project II: TRECH project (https://www.hsph.harvard.edu/c-change/news/trechstudy/) - Transportation, Equity, Climate & Health CMAQ based modeling of vehicular emission and policy assessment on the East Coast.

Indian Institute of Technology Delhi (IIT Delhi), Delhi, India: As Research Associate, Ms. Shukla worked on Project I: Quantification and contribution of paddy stubble burning emissions in Haryana to estimate PM2.5 concentrations in its surrounding cities and Delhi. Role: Modelling meteorology and PM2.5 for north India using WRF-chem and Project II: A Systems Approach to Air Pollution in Delhi (ASAAP) mobility grant funded by GCRF and NERC. Role: Monitored outdoor PM2.5 concentrations at two flyovers in Delhi and assessed pavement dwellers exposure to air pollution of PM2.5 near heavily trafficked roads to see impact on dwellers.

Various Technical Skills
Languages: T and C Shell-script, MATLAB, Fortran, Python, NCL, R, and NETCDF satellite data retrievals and analysis
Models: WRF-Chem, GEM-MACH, CMAQ, GCAM, CTOOLS, AERMOD, CALPUFF, ADMS, MOVES, InMAP and COBRA.

GROUP DELTA

3

Komal Shukla, Ph.D., M.Sc., B.Sc.

Photochemical pollutant and aerosol/dust modeling and urban air quality. Expertise in tropospheric chemistry, machine learning aided regression models, WRF-Chem/CMAQ (Chemical transport models), dispersion models.

Air Quality: CTOOLS/AERMOD/ADMS/R-LINE and satellite data assessment (OMI-AURA and MODIS). USEPA observation and meteorology handling, anthrapoegenic/energy emission inventory QA and preparation (MOVES), and impacts-benefits.

Select Research Papers:

- Shukla, K., Seppanen, C., Naess, B., Chang, C., Cooley, D., Maier, A., .. &Arunachalam, S. (2022). ZIP Code Level Estimation of Air Quality and Health Risk Due to Particulate Matter Pollution in New York City. Environmental Science & Technology.
- Shukla, K., Kumar, P., Mann, G. S., & Khare, M. (2020). Mapping spatial distribution of particulate matter using Kriging and Inverse Distance Weighting at supersites of megacity Delhi. Sustainable cities and society, 54, 101997.
- Shukla, K., Srivastava, P. K., Banerjee, T., & Aneja, V. P. (2017). Trend and variability of atmospheric ozone over middle Indo-Gangetic Plain: impacts of seasonality and precursor gases. Environmental Science and Pollution Research, 24(1), 164-179.
- Shukla, K., Dadheech, N., Kumar, P., & Khare, M. (2021). Regression-based flexible models for photochemical air pollutants in the national capital territory of megacity Delhi. Chemosphere, 272, 129611.
- Gulia, S., Khanna, 1., Shukla, K., & Khare, M. (2020). Ambient air pollutant monitoring and analysis protocol for low- and middle-income countries: An element of comprehensive urban air quality management framework. Atmospheric Environment, 222, 117120.
- Khare, M., & Shukla, K. (2020). Outdoor and Indoor Air Pollutant Exposure. In Environmental Pollutant Exposures and Public Health (pp. 95-114)
- Kumar, G. S., Sharma, A., Shukla, K., & Nema, A. K. (2020). Dynamic programming-based decision-making model for selecting optimal air pollution control technologies for an urban setting. In Smart Cities-Opportunities and Challenges (pp. 709-729). Springer, Singa pore.

Select Technical Conferences:

- Shukla, K., OJha, N., & Khare, M., (2019) Air Quality Simulations over Delhi Using WRF-Chem in Conference of Indian Aerosol Science and Technology Association 2018 "Aerosol Impacts:Human Health to Climate Change" 2018 http://cas.iitd.ac.in/iasta20I8/pdf/
- Shukla, K., Xiaoming, C., OJha, N., & Khare, M., (2018), Air Quality Simulations over Delhi Using WRF-Chem: Effects of Lo- cal Pollution and Regional-Scale Transport , A42A-0l presented at 2018 Fall Meeting, AGU, Washington, D.C., 10-14 Dec. http://abstractsearch.agu.org/meetings/2018/FM/A42A-0l. htm1 (Talk)
- Shukla, K., & Khare M., (2019) Behaviour of Ground Level Ozone and Its Association with Precursors and Meteorology in Delhi, India, AS17-A023, Atmospheric Chemistry in Highly Polluted Environments: Emissions, Fates, and Impacts, AS17-A023 presented at 2019 16th Annual meeting AOGS, Singapore, 28th -2nd August (Poster)
- Shukla, K., Kumar, S., & Nema A., (2019) Environmental Characterization of Two Chromium-based Industrial Waste Contaminated Sites of India, accepted as BllH-2219, to be presented in presented at 2019 Fall Meeting, AGU, San Francisco, CA, USA 09-13 Dec. (Poster)
- Shukla, K., & Khare M., (2019), Behavioral Chemistry of ground level ozone formation in heavily polluted environment of Delhi city, accepted as A21G-2645, to be presented in presented at 2019 Fall Meeting, AGU, San Francisco, CA, USA 09-13 Dec.
- (Poster) Kumar. S, Sharma. A., Shukla K., Nema, A.K., (2019). Dynamic programming based decision-making model for selecting optimal air pollution control technologies for an urban setting. Presented at 1st smart cities conference, Delhi, India (Talk).

4

1. Response to Comments

Komal Shukla, Ph.D., M.Sc., B.Sc.

International Panelist

Air Pollution, Environmental Management and Policy Related Invited Talks:

- Minimizing air pollution in Delhi city, Pure Earth, NY, USA, Boston College, 2019
- Photochemical pollution in heavily polluted environments of India and China" in the Development of Traffic Pollution Dispersion Models based upon Artificial Intelligence Technology, Chang'an University, Xian, 2019, China
- Air Pollution Challenges and Mitigation Opportunities in Delhi, CADTIME, Newcastle University, 2019, UK
- Indoor Air Quality: Problems and Initiatives", 2nd Indian International National Conference on Air Quality Management (IICAQM 2017): Health and Exposure, Indian Institute of Technology Delhi, New Delhi 2017, India
- Tackling the Challenges of Air Pollution in India", Indian Institute of Public Administration, New Delhi, 2019, India

EXHIBIT B

1. Response to Comments

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

CALIFORNIA
WASHINGTON
NEW YORK

WI #24-001.67

December 13th, 2024

Ms. Kelilah D. Federman
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, California 94080

SUBJECT: Archaea Landfill Gas Project IS/MND
City of Newport Beach, California
DRAFT- Comments on Noise Analysis

Dear Ms. Federman,

As requested, we have reviewed the information and noise impact analysis for the Initial Study / Mitigated Negative Declaration (IS/MND) for the Archaea Landfill Gas Project in Newport Beach, CA. This letter reports our comments on the noise analysis in the subject documents. The project involves the construction, operation, and maintenance of a new renewable natural gas processing plant and a pipeline interconnection facility. The approximately 4-acre site is located to the west of Newport Coast Drive and south of Highway 73. There are noise-sensitive uses flanking the site - Sage Hill School 1400 feet to the north and single-family houses as part of the Tesoro Crest gated community 1250 feet to the south. O2B-1

Wilson Ihrig is an acoustical consulting firm that has practiced exclusively in the field of acoustics since 1966. During our almost 58 years of operation, we have prepared hundreds of noise studies for Environmental Impact Reports and Statements. We have one of the largest technical laboratories in the acoustical consulting industry. We also utilize industry-standard acoustical programs such as Roadway Construction Noise Model (RCNM), SoundPLAN, and CadnaA. In short, we are well qualified to prepare environmental noise studies and review studies prepared by others.

Adverse Effects of Noise[1]

O2B-2

Although the health effects of noise are not taken as seriously in the United States as they are in other countries, they are real and, in many parts of the country, pervasive.

Noise-Induced Hearing Loss. If a person is repeatedly exposed to loud noises, he or she may experience noise-induced hearing impairment or loss. In the United States, both the Occupational Health and Safety Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) promote standards and regulations to protect the hearing of people exposed to high levels of industrial noise.

[1] More information on these and other adverse effects of noise may be found in *Guidelines for Community Noise*, eds B Berglund, T Lindvall, and D Schwela, World Health Organization, Geneva, Switzerland, 1999. (https://iris.who.int/handle/10665/66217)

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Speech Interference. Another common problem associated with noise is speech interference. In addition to the obvious issues that may arise from misunderstandings, speech interference also leads to problems with concentration fatigue, irritation, decreased working capacity, and automatic stress reactions. For complete speech intelligibility, the sound level of the speech should be 15 to 18 dBA higher than the background noise. Typical indoor speech levels are 45 to 50 dBA at 1 meter, so any noise above 30 dBA begins to interfere with speech intelligibility. The common reaction to higher background noise levels is to raise one's voice. If this is required persistently for long periods of time, stress reactions and irritation will likely result.

Sleep Disturbance. Noise can disturb sleep by making it more difficult to fall asleep, by waking someone after they are asleep, or by altering their sleep stage, e.g., reducing the amount of rapid eye movement (REM) sleep. Noise exposure for people who are sleeping has also been linked to increased blood pressure, increased heart rate, increase in body movements, and other physiological effects. Not surprisingly, people whose sleep is disturbed by noise often experience secondary effects such as increased fatigue, depressed mood, and decreased work performance.

O2B-2 cont'd

Cardiovascular and Physiological Effects. Human's bodily reactions to noise are rooted in the "fight or flight" response that evolved when many noises signaled imminent danger. These include increased blood pressure, elevated heart rate, and vasoconstriction. Prolonged exposure to acute noises can result in permanent effects such as hypertension and heart disease.

Impaired Cognitive Performance. Studies have established that noise exposure impairs people's abilities to perform complex tasks (tasks that require attention to detail or analytical processes) and it makes reading, paying attention, solving problems, and memorizing more difficult. This is why there are standards for classroom background noise levels and why offices and libraries are designed to provide quiet work environments.

line to the south. This would create a significant impact, and mitigation must be included in an EIR, such as an explicit limit on the sound power levels of the selected rooftop mechanical units.

Document Contains Unreported Significant Construction Noise Impacts

Construction Noise Lacks Evaluation of Substantial Increase

The DEIR draws upon the FTA guidance to use a construction noise level limit of 80 dBA as a threshold of significance [IS/MND, page K-10], but lacks any discussion of the existing ambient to place that threshold in context with the baseline conditions. The FTA Manual states, "**No standardized criteria** have been developed for assessing construction noise impact. Consequently, criteria must be developed on a project-specific basis unless local ordinances apply. … Project construction **noise criteria should account for the existing noise environment**, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use."[2]

O2B-3

The selected threshold of 80 dBA is 43 - 32 dBA higher than the short-term ambient measurements shown in Table F of Appendix K of the IS/MND. The IS/MND states that a "10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound." (IS/MND, page

[2] https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, page 179.

1. Response to Comments

K-5). **Given the quiet conditions, the City must re-consider the significance threshold and evaluate the increase over ambient noise levels using the existing baseline**.

The California Environmental Quality Act (CEQA) Guidelines cited in the acoustical assessment state that impacts to noise would be significant if the proposed project would result in "generation of a substantial temporary or permanent increase in ambient noise levels" [IS/MND, page K-12]. Although the IS/MND does include a construction noise analysis, it does not directly evaluate or disclose Project-related increases over the existing ambient noise (baseline). For example, the measured daytime ambient levels ranged from 38 to 56 dBA [IS/MND, Table F of Appendix K] while the projected construction noise levels ranged from 52 to 54 dBA [IS/MND, page K-17]. Based on these values the construction noise could increase the noise environment by up to 14 dBA, depending on the locations of the ambient measurements and projected construction noise levels. As noted in the IS/MND, a 10 dBA increase is perceived as a doubling of the sound and thus would cause an adverse impact (IS/MND, page K-5).

O2B-3 cont'd

As noted above, the selected construction noise threshold of 80 dBA is 43 dBA higher than the baseline noise conditions and threshold does not appear to take into account the baseline condition. While no impact threshold for substantial increase is specified in the City of Newport Beach General Plan or Municipal Code, is the responsibility of the project applicant to assess the noise increase over ambient levels against the human response observations noted in the IS/MND, or against a 3 dBA or 5 dBA limit that is typically identified by other jurisdictions as the impact threshold. Whether a 3, 5, or 10 dBA threshold is selected to evaluate the significance of a substantial increase, based on the construction noise analysis presented in the IS/MND the noise increase would be substantial and significant The Project must properly evaluate the noise increase over ambient levels at sensitive receptor locations, and if the increase is significant the Project must provide mitigation to reduce the impacts to less than significant, such a temporary construction noise barrier.

Document Indicates Modeled Noise Levels are Above Construction Noise Limits

On page 124 of the IS/MND, Table N3 appears mislabeled. It is currently titled 'Construction Equipment' even though it appears to show allowable noise levels by zoning classification. As it stands, this table creates confusion, potentially implying that the limits cited are for construction noise, when it appears this is not the case. If this logic is followed, construction noise is over significance thresholds, as modeled levels are 55 dBA at the closest residence, over the 50 dBA daytime limit presented for single family residences. Either this significant impact should be addressed, or the table title should be updated to avoid confusion.

O2B-4

Conclusion

The IS/MND has several errors and omissions regarding construction noise thresholds, with the document improperly not analyzing increases over ambient levels and implying that modeled levels may be over the ambient limit. Please feel free to contact me with any questions on this information.

Very truly yours,
WILSON IHRIG

Jack Meighan
Associate

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

JACK MEIGHAN

Associate

Jack joined Wilson Ihrig in 2021 and is an experienced acoustics engineer with expertise in projects involving rail transit systems, highways, CEQA analysis, environmental noise reduction, mechanical drawing reviews, and construction noise and vibration mitigation. He has hands-on experience with project management, including client coordination and presentations, as well as in designing, developing, and testing MATLAB code used in acoustics applications. Additionally, his expertise includes taking field measurements, developing test plans and specifying, purchasing, setting up and repairing acoustic measurement equipment. He has experience in using Traffic Noise Model (TNM), CadnaA, EASE, Visual Basic, LabView, and CAD software.

Education

- B.S. in Mechanical Engineering, University of Southern California, Los Angeles, CA

Project Experience

Metro Regional Connector, Los Angeles CA
Planned, took, and processed measurements as part of a team to determine the effectiveness of floating slab trackwork for a new subway in downtown Los Angeles that travels below the Walt Disney Concert Hall and the Colburn School of Music.

Rodeo Credit Enterprise CEQA Analysis for New Construction, Palmdale, CA
Wrote an accepted proposal and executed it for a noise study project to determine noise mitigation requirements on a new housing development. Led all aspects of the project and managed the budget during all phases of project completion. Completed 5 separate projects of this type for this developer.

Blackhall Studios, Santa Clarita, CA
Led the vibration measurement effort for a new soundstage directly adjacent to an existing freight and commuter rail line. Tested equipment, processed data, and analyzed results to determine the vibration propagation through the soil to the proposed soundstage locations, and was part of the team that developed mitigation techniques for the office spaces directly next to the rail line.

Octavia Residential Condos CEQA Study, San Francisco, CA
Calculated the STC ratings for the proposed windows to meet Title 24 requirements, modeled the acoustic performance of floor and ceiling structures, researched noise codes, helped with a mechanical design review, and wrote a report summarizing the results for a new Condominium project being developed in San Francisco.

San Diego International Airport Terminal I Replacement, CA
Conducted interior noise and vibration measurements, analyzed measurement data to help determine project criteria, modeled the existing and future terminals in CadnaA, and was part of a team that did a complete HVAC analysis of the entire terminal, as part of a CEQA analysis where a new terminal for the airport is being designed.

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Five Points Apartments Noise Study, Whittier, CA
Took measurements, researched sound data and solutions, and recommended mitigation for a new apartment complex that was located next to an existing car wash, as part of a CEQA review.

USC Ellison Vibration Survey, Los Angeles, CA
Conducted vibration measurements as part of a survey to determine the effectiveness of vibration isolation platforms that are used to insulate cell growth in a cancer research facility. Determined the effectiveness and presented this information to the client. Researched and recommended a permanent monitoring system so the client could view data in real time.

TEN50 Condos 'Popping' Noise Investigation, Los Angeles, CA
Was part of a team that investigated the noise source of an unwanted popping noise in luxury condos in Downtown Los Angeles. Helped isolate the noise source location with accelerometers to determine where vibrations were occurring first and used an acoustic camera to determine where in the condo the noise was coming from.

2000 University Project, Berkely, CA
Wrote a construction noise monitoring plan based on environmental noise calculations, wrote a report summarizing the results, and attending a meeting with the client to discuss options.

Bay Area Rapid Transit (BART) On-Track, CA, San Francisco Bay Area, CA*
Day to day project manager, responsible for meetings, presentations, and coordination with the client for an ongoing noise study on the BART system. Developed MATLAB code to process measurements and determine areas where high corrugation was present, contributing to excessively high in-car noise levels. Performed noise measurements inside both the right of way and the vehicle cabin, in addition to rail corrugation measurements.

California I-605/SR-60 Interchange Improvement, Los Angeles, CA*
Developed a noise model of the area that predicted sound levels for abatement design, in addition to conducting noise measurements and analysis. Led the Team in use of the FHWA Traffic Noise Model Software for the project, involving three major highways and two busy interchanges extending over 17 miles in southern California.

Sound Transit On-Track, Seattle, WA*
Took measurements, fixed equipment, and developed software in MATLAB to process Corrugation Analysis Trolley measurements as part of an ongoing noise study on the Sound Transit Link system. Tested vibration data to determine the best measurement and processing techniques to store the data in an online database for in-car measurements.

LA Metro CRRC Railcar Testing, Los Angeles, CA*
Led the effort to plan the measurements, determine measurement locations and finalize the test plan. Formulated a method to capture speed data directly from legacy train vehicles. Executed noise and vibration specification measurements for new rail cars delivered by CRRC.

City of Los Angeles, Pershing Square Station Rehabilitation Noise Monitoring, CA*
Built noise models, wrote a construction noise plan, and assisted in on-site construction noise issues as they arose for a renovation of the Pershing Square metro station in downtown Los

** Work done prior to working for Wilson Ihrig*

Angeles. Trained construction personnel in techniques for noise reduction and how to conduct noise monitoring measurements to meet project specifications.

City of Orange Metrolink Parking Garage Construction Monitoring, CA*
Wrote an adaptive management vibration monitoring plan, set up equipment to monitor live vibration levels, and generated weekly reports as part of an effort to build a new parking garage. Designed, planned, and completed measurements to predict and mitigate pile driving construction impacts at three historic building locations adjacent to the construction site. Coordinated with the client whenever an on-site problem arose.

LA Metro Westside Subway Construction, Los Angeles, CA*
Planned, organized, and processed noise measurements for the Purple Line extension construction. Implemented both long term microphones to measure noise levels and accelerometers to measure vibration levels in existing subway tunnels. Oversaw noise monitoring at sensitive construction sites for the project and worked with the contractor to find ways to reduce construction noise levels by approximately 10dB.

Montreal Réseau Express Métropolitain, Canada*
Conducted vibration propagation measurements used to create models to predict operational vibration levels for an under-construction transit line. Managed equipment, solved problems in the field, and wrote parts of the report summarizing the findings of the acoustic study.

NHCRP Barrier*
Took on-highway measurements and wrote, designed, developed, and tested MATLAB code to identify specific spectrograms to use for analyses for a project evaluating barrier reflected highway traffic noise differences in the presence of a single absorptive or reflective noise barrier.

Siemens Railcar Testing for Sound Transit, Seattle, WA*
Measured in-car noise and vibration for new rail cars delivered by Siemens. Developed new internal techniques for measurements based on the written specifications. Contributed to the team that helped identify issues that new cars had in meeting the Sound Transit specifications for noise and vibration. Participated in developing the test plan and specified then acquired new equipment for the measurement.

Toronto/Ontario Eglinton Crosstown Light Rail, Final Design, Canada*
Assisted in vibration propagation measurements, analysis, and recommendations for mitigation for a 12-mile light-rail line both on and under Eglinton Avenue. Set up and ran equipment for at-grade measurements with an impact hammer for underground measurements with an impact load cell that was used during pre-construction borehole drilling.

** Work done prior to working for Wilson Ihrig*

1. Response to Comments

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O2. Response to Comments from Kelilah D. Federman, Adams, Broadwell Joseph & Cardozo, dated December 3, 2024.

O2-1 The commentor is describing the proposed project and notes that the project development is anticipated to take approximately 12 months while the health risk analysis relied on a 9-month completion timeline for its analysis. The construction period for the proposed project would be 9 months as shown on page B1-57 of Appendix B1. The 12-month duration is a discrepancy in the IS/MND. The following text in Section 1.5.4, *Project Construction,* of the IS/MND (page 38) and Impact 3.3 (a) (page 65) has been added/revised. Changes to the Initial Study are identified here in strikeout text to indicate deletions and underlined text to signify additions.

1.5.4 Project Construction

Project development is anticipated to take approximately ~~12~~ nine months, from ~~February~~ May 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.

Regional Short-Term Construction Impacts

Construction activities would generate air pollutants. These emissions would primarily be 1) exhaust from offroad diesel-powered construction equipment, 2) dust generated by construction activities, 3) exhaust from onroad 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~~ nine months, specifically from ~~February~~ May 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, SO_2, PM_{10}, 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.

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O2-2 The commentor notes that air quality, public health, and greenhouse gas (GHG) impacts were prepared with the assistance of air quality and hazards consultant Komal Shukla, PhD, and that Dr. Shukla's comments are provided in a separate letter attached as Exhibit A to this letter. Responses to Exhibit A are provided in this document and numbered O2A-1 through O2A-17.

The commenter also notes that noise comments were prepared with the assistance of Jack Meighan, and that Mr. Meighan's comments are provided in a separate letter attached as Exhibit B to this letter. Responses to Exhibit B are provided in this document and numbered O2B-1 through O2B-5.

O2-3 The commenter is requesting the preparation of an Environmental Impact Report (EIR) based on issues raised in comments O2-6 through O2-24. The IS/MND fully discloses potential environmental impacts and mitigation, as appropriate, and reduces impacts to below significance. See responses to comments O2-6 through O2-24, which provide detailed responses to the commenter's specific assertions.

O2-4 This comment describes the members, goals, purpose, and concerns of the Orange County Residents for Responsible Industry (Residents) and the California Unions for Reliable Energy ("CURE"). No response is required.

O2-5 The commentor describes the legal background related to the preparation of an EIR versus an IS/MND and notes that if no EIR has been prepared for a nonexempt project, but substantial evidence in the record supports a fair argument that the project may result in significant adverse impacts, the proper remedy is to order preparation of an EIR. The commenter explains that with respect to this project, the IS/MND fails to adequately disclose, investigate, and analyze the proposed project's potentially significant impacts and fails to provide substantial evidence to conclude that impacts will be mitigated to a less than significant level. The commenter describes the impacts of concern in comments O2-6 through O2-24. Responses to these comments are provided below. The IS/MND fully discloses potential environmental impacts and mitigation, as appropriate, and reduces impacts to below significance. See responses to comments O2-6 through O2-24, which provide detailed responses to the commenter's specific assertions.

O2-6 The commenter describes the purpose of describing baseline conditions per CEQA. No response required.

O2-7 CEQA Guidelines Section 15125(a)(1) states that existing conditions should be based on the "physical environmental conditions at the time of notice of preparation is published, or if no notice of preparation is published, at the time the environmental analysis is commenced, from both a local and regional perspective". In accordance with this requirement, the baseline conditions identified in the IS/MND are the most recent operating conditions of the CCL.

The site is currently 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. On the site currently are generators and tanks, 65-foot cell towers, a power panel and switchgear, a blower pad, and the county flare yard. 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. This is the baseline condition considered throughout the IS/MND, not the condition of the site in 1990 as noted in this comment. The baseline used is the current condition of the site post-closure of the gas-to-energy facility that ceased operations in December 2015. The use of unsupported operating conditions from a plant that has been out of service for over 30 years, as the commenter notes, is not how the analysis in the IS/MND was conducted.

Table 3, *Comparison of Project Emissions to Regional Daily Thresholds*, of the IS/MND accounts for existing emissions generated by the four existing LFG flares at the 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.

The only time the 2015 gas-to-energy plant is mentioned for impact comparison is for the stormwater hydrology analysis. The IS/MND notes that when the site included the landfill gas-to-energy facility, which operated from 1988 to December 2015, the site was completely developed with 100 percent impervious surfaces and the existing storm drainage system had capacity to accommodate the 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 the 2015 conditions and the proposed project would not have an adverse impact on the storm drainage system's capacity.

O2-8 See response to Comment O2A-5. Additionally, the emergency generators for the cell towers represent existing equipment and operations for the project site. As described in the IS/MND (page 3), they are part of baseline conditions and would not be affected by the proposed project. Any emissions generated from this equipment would not be an increase over existing conditions. The emergency generators operate under an existing South Coast AQMD permit.

Because the emergency generators associated with the existing cell tower are not part of the proposed project and would remain unchanged with implementation of the project, these emissions are excluded from the project's emissions analysis.

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O2-9 The commenter is requesting the preparation of an EIR based on issues raised in comments O2-10 through O2-16. Responses to these comments are provided below.

O2-10 The project-related construction emissions shown in Table 2 (page 65) and Table 5 (page 69) of the IS/MND were quantified using the California Emissions Estimator Model (CalEEMod) program, which is the recommended emissions modeling program of the South Coast AQMD to quantify emissions generated from project-related construction activities for CEQA-level evaluations. In general, CalEEMod is a statewide computer model developed in collaboration with the various air districts in California, including South Coast AQMD, to quantify criteria air pollutant and greenhouse gas (GHG) emissions from project-related operation and construction activities. Furthermore, CalEEMod was developed using a construction survey overseen by South Coast AQMD to determine the construction profile for each construction phase. The survey included approximately 50 construction sites where information was compiled on the various construction phases, including demolition, site preparation, construction of structures, and other activities. CalEEMod accounts for potential emissions from welding activities through inclusion of a "welder" off-road equipment option to be selected as part of the construction equipment mix for various construction activities. For purposes of this analysis and in accordance with the methodology formulated for CalEEMod, welding equipment was included as part of the pipeline installation activity construction equipment mix to account for emissions associated with pipeline construction welding.

Regarding localized air quality impacts from welding emissions, the project site is over 1,000 feet from the nearest sensitive receptor. As discussed on Pages 68 and 69 of the IS/MND, project-related construction activities would not generate emissions that exceed any of the South Coast Air Quality Management District's localized significance thresholds (LSTs) for construction at the nearest single-family residences 1,200 feet to the south and for students at Sage Hill School High School approximately 1,500 feet to the north. Additionally, pipeline installation during construction, including pipeline welding, would intermittently occur over a brief three-to four-month period (described on Page 38 of the IS/MND). And as discussed on Pages 69 and 70 of the IS/MND, South Coast AQMD does not require the evaluation of long-term excess cancer risk or chronic health impacts from toxic air contaminant emissions for short-term construction projects.[1] Lastly, the prevailing wind direction near the project site is toward State Route 73 to the northeast and away from the nearest air quality sensitive receptors to the south (i.e., residences).[2] As discussed on Page 70 of the IS/MND, the localized construction emissions analysis, which includes pipeline installation, concludes that construction

[1] Note, the terms Toxic Air Contaminants and Hazardous Air Pollutants are used synonymously for the same class of chemical compounds.

[2] South Coast Air Quality Management District (South Coast AQMD), 2019–2023. Meteorological data for the John Wayne Airport.

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.

The intent of CEQA is to address project impacts to the environment and to nearby sensitive receptors, and not specifically to on-site employees of a project. In addition, protections and safety to project-related construction workers from potential hazards associated with welding, such as from toxic fumes, are provided through the federal Occupational Safety and Health Administration (OSHA) regulations (e.g., Standard Number 1926.353).

O2-11 The LFG treatment system is a closed-loop, pass-through system; therefore, there would be no pollutant emissions from the treatment process, except for the combustion devices. The only sources associated with the proposed project are the point sources (thermal oxidizer, off-specification RNG flare and emergency generator), which emission potentials were included.

Additionally, the IS/MND describes the Emergency Action Plan (EAP) and a draft is included in Appendix H. The EAP describes the roles and responsibilities of trained personal designated to perform process control activities necessary in mitigating leaks. The EAP would be supported by trained operators able to mitigate any potential leaks or emissions. The EAP also describes the inspection and monitoring program, employees training program and preventative maintenance.

The RTC also includes revisions to Section 3.3, *Air Quality*, (see pages 67 and 68) to clearly state that the proposed project will comply with South Coast AQMD's Rule 466 (Pumps and Compressors), as required through a program of inspection and monitoring for VOC leaks from pumps and compressors within the proposed system. Additionally, the Applicant would employ various Lower Explosive Limit (LEL) and H_2S sensors throughout the facility. The LEL sensors are used to detect methane gas leaks, which act as a surrogate to hazardous air pollutants (HAPs) emissions. NOx emissions are not generally part of any leaks since they are a combustion by-product. These sensors would cover leaks from joints, valves, and pressure relief systems or methane that is vented during maintenance. The LEL sensors would be located throughout the facility footprint and would signal alarms at specified levels, thus mitigating risks of escalating severity of leaks. The LEL sensors are equipped with a Hi and HiHi alarms. In the event a leak is detected, operators will investigate sources of leaks immediately upon a Hi alarm. The site will automatically shut down and cut off flow of gas to the facility when a HiHi alarm is triggered. The Applicant has a comprehensive program for trained operators to conduct daily rounds of the facility. The daily rounds include performing inspections of facility equipment for signs of equipment leaks through audible, visual, and olfactory observations.

O2-12 See response to Comment O2A-7.

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O2-13 The emission potentials from the point sources were estimated on the worst-case scenario for the proposed operations, with the equipment maximum potential operating hours. Emission potentials incorporated transient periods in which the operating scenario is changing or unstable and off-specification in which off-specification gas(es) are routed to the flares. In the event there are unplanned shutdowns, the system is designed so that all valves are closed and the LFG that would be routed to the proposed RNG Plant would be re-routed to the existing LFG enclosed flares, which are separately owned and operated by OC Waste and Recycling. This scenario is the equivalent of reverting back to baseline conditions. The thermal oxidizer and off-specification RNG flare are designed so there are no uncontrolled emissions vented when the sources are shut down or in the rare event of a malfunction; the designs of the systems include programming that prevent free venting.

Additionally, safety factors are included at the proposed plant that would signal the equipment to shut down and cease operation to prevent catastrophic events (see discussion on LEL sensors in the response to comment O2-11).

Fire hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment are addressed in the IS/MND under impact 3.9(b). A Preliminary Site Consequence Assessment was prepared for the proposed project to outline the potential for flammable vapor clouds, jet fire , 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 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 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.

Strict adherence to all emergency response procedures in the EAP and the Site Severe Weather Response Plan would also be required throughout the duration of the project.

O2-14 See response to Comment O2A-4.

O2-15 The determination of offsets that are required for a proposed plant is left to the discretion of the assigned air district. The emission estimates for the proposed plant and point sources were below the South Coast AQMD offset thresholds. In accordance with South Coast AQMD Rule 1303 (b)(2), Emission Offsets, the project's estimated potential to emit emissions were compared to the offset trigger levels specified in Rule 1304(d)(2)(B), Table A. As shown in Table 4 of the IS/MND, the permitted equipment under the proposed project would not exceed the offset trigger levels even under worse case scenarios.

Rule 1304(d)(1)(A) notes that "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

PM_{10}: 4 tpy

SO_X: 4 tpy

VOC: 4 tpy

Additionally, NOx emissions are generally not part of any leaks since they are a combustion by-product and there would be no fugitive emissions associated with the proposed project because the only sources would be the point sources (Thermal Oxidizer–Main, Thermal Oxidizer–Supplemental, Enclosed RNG Flare, Natural Gas-Powered Emergency Generator). The remainder of the proposed plant would be an all-closed system with no fugitives.

The project's Permit to Construct is for a New Facility per Sout Coast AQMD rules. South Coast AQMD has issued the facility its own facility number with the application process separate from any landfill operations.

O2-16 Regarding the General Plan policies referenced by Commenter, the proposed project would be required to comply with any mandated requirements that may extend from implementation of these referenced policies. Furthermore, the policies were crafted as part of the City's General Plan adopted in November 2006. Effective on September 1, 2006, ultra low sulfur diesel fuel became required for diesel-powered off-road equipment and on-road vehicles per the California Air Resources Board (CARB) mandate. Compliance with this regulation meets the requirements of Policy NR8.1 of the General Plan. Additionally, off-road equipment have had to comply with increasingly stricter emissions standards established by the United States Environmental Protection Agency,

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with the strictest Tier 4 standards phased in since 2008. The cleaner fuel requirements and engines contribute to reducing emissions generated from operation of off-road construction equipment. Compliance with these regulations meet the requirements of Policy NR8.1 of the General Plan. Construction contractors would also be required to comply with CARB Rule 2485 (13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling), which limits nonessential idling of off-road equipment to five minutes. Compliance with these rules meet the requirements of Policy NR8.3 of the General Plan.

Overall, the South Coast AQMD has established construction-related regional significance thresholds for VOC, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$. As discussed on Page 65 of the IS/MND, project-related construction activities would not generate emissions that exceed any of the South Coast AQMD's regional significance thresholds for construction. Thus, per CEQA Guidelines Section 15126.4(3), mitigation is not required.

O2-17 The commenter is requesting the preparation of an EIR based on issues raised in comments O2-18 through O2-19. Responses to these comments are provided below.

O2-18 See response to Comment O2-11.

O2-19 See response to Comment O2A-5.

O2-20 Response to Comment O2-10 addresses construction-related health risks. In addition, as discussed in response to Comment O2-1, the construction duration for the proposed project would be 9 months overall and not 12 months, which is consistent with the 9-month duration stated in Section 3.3, *Air Quality*, of the IS/MND (page 69). The operational health risks associated with the project are discussed on Pages 71 to 72 of the IS/MND. Table 7 on Page 72 of the IS/MND demonstrates that health risks from operation of the project are well below South Coast AQMD's risk thresholds for the nearest residences to the south and for the Sage Hill School High School to the north. Therefore, health risks for the project's construction and operational emissions were disclosed in the IS/MND and were determined to be less than significant.

O2-21 See response to Comment O2-10.

O2-22 The Applicant would employ various LEL and H_2S sensors throughout the facility. The LEL sensors are used to detect methane gas leaks, which act as a surrogate to hazardous air pollutants (HAPs) emissions. NOx emissions are not generally part of any leaks since they are a combustion by-product.

The LEL sensors would be located throughout the facility footprint and would signal alarms at specified levels, thus mitigating risks of escalating severity of leaks. As part of the refining process, H_2S removal equipment, which converts H_2S into elemental sulfur, would be located near the front of the plant.

The LEL sensors are equipped with Hi and HiHi alarms. In the event a leak is detected, operators will investigate sources of leaks immediately upon a Hi alarm. The site will automatically shut down and cut off flow of gas to the facility when a HiHi alarm is triggered.

Additionally, the Applicant has a comprehensive program for trained operators to conduct daily rounds of the facility. The daily rounds include performing inspections of facility equipment for signs of equipment leaks through audible, visual, and olfactory observations. Furthermore, as described in Impact 3.9(a) of the IS/MND, the Applicant would implement an EAP, supported by trained operators able to mitigate any potential leaks or emissions. A Draft EAP is included as Appendix H of the IS/MND.

O2-23 Per South Coast AQMD guidance, the significance thresholds used to evaluate project-specific impacts are also used to evaluate cumulative impacts (South Coast AQMD 2003).[3] Thus, projects that exceed the significance thresholds are considered cumulatively considerable, and projects that do not exceed the significance thresholds are not considered cumulatively considerable. As discussed in Section 3.3, *Air Quality*, of the IS/MND, the proposed project would not result in exceedances of the South Coast AQMD significance thresholds. Therefore, per South Coast AQMD, the proposed project would also not result in cumulative considerable impacts. Regarding greenhouse gas (GHG) emissions, as stated on pages 93 and 94 of the IS/MND, global climate change is not confined to a particular project area, and a single project by itself does not generate enough GHG emissions on its own to result in a measurable increase in global concentrations of GHG. Thus, climate change impacts of a project are considered on a cumulative basis. Therefore, because the proposed project would not exceed South Coast AQMD's GHG significance threshold, the proposed project's GHG emissions impacts would not be cumulatively considerable.

O2-24 The title for Table N3 in the IS/MND was incorrectly labeled as "Construction Equipment." The following text in Section 3.13, *Noise*, of the IS/MND (pages 123 and 124) has been added/revised. Changes to the Initial Study are identified here in strikeout text to indicate deletions and underlined text to signify additions.

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:

[3] South Coast Air Quality Management District. 2003, August. Appendix D, White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution. https://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf?sfvrsn=4.

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- **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.

Table N3 ~~Construction Equipment~~ Exterior and Interior Noise Standards

Land Use Categories		Allowable Noise Levels (dBA)			
		Interior[a,b]		Exterior[a,b]	
Categories	Uses	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.

The purpose of these noise standards is to ensure that noise-sensitive receptors are not exposed to excessive noise levels from stationary noise sources such as heating, ventilation, and air conditioning equipment. During the construction phase, there are stationary sources (compressors or generators) and mobile sources (excavators or front-end loaders) of construction noise associated with construction activities. The exterior and interior noise standards shown in Table N3 are applied to stationary sources and not mobile sources, which are the predominant sources of noise during construction. The

noise standards in Table N3 are intended to be applied to operational project noise and not temporary construction noise.

Although the City's Noise Ordinance limits construction activities to specific days of the week and hours of the day, construction equipment generates high noise levels and may not always be reducible to the levels specified in the City's Noise Ordinance. Section 10.26.035 of the Municipal Code (Exemptions, exempts "noise sources associated with construction, repair, remodeling, demolition, or grading of any real property." Section 10.26.035 also states that construction noise should fall under the provisions of Section 10.28 of the Code (Loud and Unreasonable Noise). Thus, construction noise is not subject to the noise standards in the Municipal Code during limited hours of the day and days of the week.

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.

Regarding off-site uses, construction-related noise impacts would remain below the 80 dBA Leq and 85 dBA Leq 8-hour construction noise level criteria established by the Federal Transit Administration for residential and commercial land uses. Additionally, Table F of Appendix K of the IS/MND (reproduced below) shows existing noise level measurements at three locations. As shown in Figure 1, *Ambient Noise Monitoring Locations*, of this document, LT-1 is approximately 400 feet north of the residence along Renata Street that is considered the closest residential sensitive receptor to the project site. Both LT-1 and the single-family home along Renata Street are approximately 1,130 feet from Newport Coast Drive and will experience the same ambient noise levels. LT-2 is approximately 270 feet south of the Sage Hill School structure that is considered the closest non-residential sensitive receptor to the project site. Both LT-2 and this structure at the Sage Hill School are approximately 875 feet from SR-73 and 910 feet from Newport Coast Drive and will experience the same ambient noise levels.

Figure 1 - Ambient Noise Monitoring Locations

Project Boundary

LT-X Long-Term Noise Monitoring Locations (3)

0 430
Scale (Feet)

Source: Nearmap 2023.

1. Response to Comments

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1. Response to Comments

Table F: Existing Noise Level Measurements

Number Location	Location Description	Daytime Noise Levels[1] (dBA Leq)	Nighttime Noise Levels[2] (dBA Leq)	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
Leq = equivalent continuous sound level

As noted in Attachment B, *Construction Noise Calculations*, of Appendix K of the IS/MND, pipeline installation will take approximately 4 months[4]. The average noise level experienced during construction was assessed based on the distance of activities to the surrounding sensitive receptors which would be 1,700 feet from the property line of the existing school used 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 Leq and 56 dBA Leq, respectively. Therefore, the school would experience an increase in ambient noise levels ranging from 1 to 11 dBA Leq for four months. The single-family home would experience an increase in ambient noise levels ranging from 8 to 18 dBa Leq for four months. The change in ambient noise levels at the sensitive receptors would be minimal and would only last for four months.

O2-25 The commenter is requesting the preparation of an EIR based on issues raised in comments O2-6 through O2-24. Responses to these comments have been provided in this document, substantiating that the IS/MND, along with changes made to the document as described herein, adequately analyzes and mitigates impacts associated with air quality, GHG, public health, and noise. This document also substantiates that the environmental setting was properly delineated in the IS/MND.

[4] It should be noted that the noise study conservatively assumes that equipment installation would take 12 months. This phase would take 9 months.

O2A-1 This comment includes a description of the history of the project site and a description of the proposed project. No response is required.

O2A-2 See response to Comment O2-10.

O2A-3 As discussed in response to Comment O2-10, project-related construction emissions were quantified using the California Emissions Estimator Model (CalEEMod) software program. CalEEMod is the modeling program recommended by the South Coast AQMD to quantify emission generated from project-related construction activities for CEQA-level evaluations. In general, CalEEMod is a statewide computer model developed in collaboration with the various air districts in California, including South Coast AQMD, to quantify criteria air pollutant and greenhouse gas emissions from project-related operation and construction activities. Furthermore, CalEEMod was developed using a construction survey overseen by South Coast AQMD to determine the construction profile for each construction phase. The survey included approximately 50 construction sites where information was compiled on the various construction phases, including demolition, site preparation, construction of structures, and other activities.

While CalEEMod does not include "windblown" generated fugitive dust from construction activities, the CalEEMod Users Guide notes that not including quantification of windblown fugitive dust in CalEEMod "is consistent with approaches taken in other comprehensive models."[5] In addition, CalEEMod does not entirely exclude fugitive dust emissions. It accounts for fugitive dust generated from other types of sources associated with construction. For example, it accounts for fugitive dust generated from operation of off-road construction equipment used in ground-disturbing activities (e.g., grading), truck loading, demolition activities, and travel of on-road vehicles on paved and unpaved roads. The project-related construction emissions of PM_{10} and $PM_{2.5}$ shown in Table 2 and Table 5 of the IS/MND (pages 65 and 69) include emissions from these aforementioned sources where applicable (e.g., the proposed project would not require demolition of existing structures and thus, fugitive dust emissions from demolition activities are not included). In general, the total PM_{10} and $PM_{2.5}$ emissions shown in these two tables primarily consist of tailpipe exhaust emissions for the construction activities that would not involve using off-road equipment for ground-disturbing activities. Furthermore, as shown in the tables, project-related construction emissions of PM_{10} and $PM_{2.5}$ would be substantially below the respective South Coast AQMD significance thresholds (i.e., 5 percent and 7 percent of the PM_{10} and $PM_{2.5}$ regional significance thresholds, respectively, and 3 percent and 2 percent of the PM_{10} and $PM_{2.5}$ screening-level localized significance thresholds, respectively). Additionally, the project would comply with South Coat AQMD's Rule 403 (Fugitive Dust) and significant fugitive dust emissions that would violate Rule 403 are not anticipated. The proposed project would be located at an existing

[5] California Air Pollution Control Officers Association (CAPCOA). 2022, April. California Emissions Estimator Model User Guide. Version 2022.1.

pad and would not result in off-road travel. Furthermore, project-related vehicle trips would travel on paved roads because the project site is within a well-developed region, and the access road from Newport Coast Drive to the project site is paved. CalEEMod also calculates operation-related fugitive dust emissions generated by project-related on-road vehicle trips. As shown in Table 3 of the IS/MND (page 67), the proposed project would generate nominal mobile-source PM_{10} and $PM_{2.5}$ emissions (0.042 and 0.11 pound per day, respectively). And overall, the proposed project would result in net increases of PM_{10} and $PM_{2.5}$ emissions that are substantially below the South Coast AQMD significance thresholds (i.e., 10 percent and 27 percent of the PM_{10} and $PM_{2.5}$ regional significance thresholds). Regarding fugitive emissions, the proposed project consists of a closed LFG treatment system; therefore, the LFG, from entry to the point of the final product RNG, would be contained within the system as designed.

O2A-4 The South Coast AQMD has established construction-related regional significance thresholds for VOC, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$. VOC and NO_X are air pollutant precursors for ozone. As discussed on Page 65 of the IS/MND, project-related construction activities would not generate emissions that exceed any of the South Coast AQMD's regional significance thresholds for construction. Thus, per CEQA Guidelines Section 15126.4(3), mitigation is not required.

Additionally, Best Available Control Technologies (BACTs) are not applicable to construction emission, BACTs are only applicable for permitted equipment that exceeds the South Coast AQMD trigger levels.

O2A-5 In general, the purpose of CEQA is to assess potential effects of a project to the environment. Per CEQA Guidelines Section 15360, the "environment" is defined as "…the physical conditions which exist within the area which will be affected by a proposed project…." As stated by Commenter and discussed in Section 1.4.1, *Existing Land Use*, of the IS/MND (page 3), the cell towers and associated generators are existing equipment on the project site and are part of the existing environment. Additionally, these pieces of equipment would remain and be unaffected by the proposed project. Overall, the cell tower backup generators are not part of the proposed project and thus, any emissions they may generate are not considered for project emissions.

Regarding use of construction equipment that meets the Tier 4 emissions standards, see response to Comment O2A-4 as it pertains to air pollutant emissions. For GHG, as discussed in Section 3.8, *Greenhouse Gas Emissions*, of the IS/MND (pages 93–95), project-related construction GHG emissions were incorporated into the project's overall emissions inventory consistent with the methodology recommended by the South Coast AQMD. Overall, as shown in Table 9 of the IS/MND (page 95), the proposed project would not generate emissions that exceeds the South Coast AQMD GHG significance threshold. Thus, similar to air quality, mitigation, such as Tier 4 construction equipment, is not warranted.

O2A-6 Per South Coast AQMD guidance, the significance thresholds used to evaluate project-specific impacts are also used to evaluate cumulative impacts (South Coast AQMD 2003).[6,7] This is because air quality is regulated at a basin-level and the regional significance thresholds developed by South Coast AQMD reflect the proposed project's contribution to regional air quality emissions. Thus, projects that exceed the significance thresholds are considered cumulatively considerable while projects that do not exceed the significance thresholds are not considered cumulatively considerable. As discussed in Section 3.3, *Air Quality*, of the IS/MND, the proposed project would not result in exceedances of the South Coast AQMD significance thresholds. Therefore, per South Coast AQMD, the proposed project would also not result in cumulative considerable impacts.

Regarding GHG emissions, global climate change is not confined to a particular project area, and a single project by itself does not generate enough GHG emissions on its own to result in a measurable increase in global concentrations of GHG. Thus, similar to regional air quality impacts, climate change impacts of a project are considered on a cumulative basis. Because the proposed project would not exceed South Coast AQMD Working Group's GHG significance threshold, the proposed project's GHG emissions impacts would not be cumulatively considerable.

The cumulative impacts of the air quality impacts and GHG emissions were quantified based on the worst-case operating scenarios at full capacity, which still demonstrated less than significant impacts. The emissions were quantified based on the planned operations of the proposed project and planned equipment. Extending beyond the worst-case operating scenarios would be purely speculative in terms of assessing the potential air emission impacts because the system is designed in such a way that there are no fugitive emission sources during normal operations. Therefore, it is expected that the air quality impacts of the actual operation of the proposed project will be far less than these conservative estimates.

O2A-7 The South Coast AQMD does not have a regional significance threshold for ozone. However, with respect to ozone precursor emissions (i.e., VOC and NO_X), South Coast AQMD has set its operational CEQA significance threshold for NO_X and VOC at 10 tons per year (expressed as 55 pounds per day). This is based on the federal Clean Air Act, which defines a major stationary source for extreme ozone nonattainment areas such as the South Coast AQMD as one emitting 10 tons per year. Under the federal Clean Air Act, such sources are subject to enhanced control requirements, thus South Coast AQMD determined that 55 pounds per day is an appropriate threshold for making a CEQA

[6] South Coast Air Quality Management District. 2003, August. Appendix D, White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution. https://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf?sfvrsn=4.

[7] South Coast Air Quality Management District. 1993. CEQA Air Quality Handbook. https://planning.lacity.gov/eir/8150Sunset/References/4.B.%20Air%20Quality/AQ.19_SCAQMD%20CEQA%20AQ%20Handbook%201993.pdf.

significance finding and requiring feasible mitigation. Overall, South Coast AQMD takes the position that a source which does not emit 10 tons/yr of NO_X or VOC would not contribute cumulatively to ozone formation, and vice versa. [8]

As discussed in Section 3.2, *Air Quality*, of the IS/MND (pages 65–69), the proposed project would not generate VOC and NO_X emissions that would exceed the respective significance thresholds, and mitigation measures would not be required to reduce project-related VOC and NO_X emissions. Additionally, because the proposed project would not exceed the VOC and NO_X regional emissions thresholds, it would not contribute cumulatively to ozone formation. In addition, as noted in the response to Comment A3-9, the proposed RNG Plant will not emit oxides of nitrogen (measured as nitrogen dioxide) in excess of thresholds in Rule 474. Also, individual combustion devices will meet the District's requirement for emissions; including but not limited to Rules 1118.1, 1147, and 1173 (as detailed in the response to Comment A3-9). As the proposed RNG Plant did not trigger further requirements with emission thresholds within the District's Rules and Requirements, it was determined no further assessment was necessary.

Regarding pipeline welding emissions, see response to Comment O2-10.

O2A-8 See the response to Comment O2-22 and O2-24. The Applicant would employ various LEL and H_2S sensors throughout the facility.

LEL sensors are located strategically throughout the site to ensure adequate coverage of the entire facility footprint. These sensors would cover leaks from joints, valves, and pressure relief systems or methane that is vented during maintenance.

The plant would be equipped with a gas chromatograph on the RNG product gas line that continuously monitors parameters to ensure gas meets pipeline specifications so that non-compliant gas does not enter the pipeline network.

Additionally, the Applicant has a comprehensive EAP plan in place, supported by trained operators able to mitigate any potential leaks or emissions. Environmental training will be provided to operation personnel prior to the facility's startup and quarterly thereafter. Additionally, the Applicant has a comprehensive program for trained operators to conduct daily rounds of the facility. The daily rounds include performing inspections of facility equipment for signs of equipment leaks through audible, visual, and olfactory observations.

The EAP also includes measures related to handling occasional leaks of process fluids like compressor lubricants or odorants would be handled.

[8] South Coast Air Quality Management District. 2015, April 6. Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae, *Sierra Club v. County of Fresno (Friant Ranch, L.P.)* (2018) 6 Cal.5th 502, Case No. S21978.

O2A-9 As previously stated, these worst-case operating scenarios include only the point emission sources. Leaks should not be included in the emission estimates because they would not accurately represent the potentials to emit from the proposed project during planned operations; fugitives or leaks may only occur in upset conditions.

O2A-10 It was not required for a modeling baseline to be established for the assessment of the proposed project. The detailed modeling that was completed in accordance with South Coast AQMD Rule 1303, Table A-1, 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 was required. 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). BCCB has demonstrated via the Air Quality Impact Assessment (AQIA) analysis that facility emissions of criteria pollutants comply with applicable AAQS. This AQIA followed the methodology of South Coast AQMD and CARB.

O2A-11 As previously stated, the emission estimates include the worst-case operating scenarios for both the thermal oxidizer and off-specification RNG flare. These incorporated transient periods in which the operating scenario is changing or unstable and off-specification gas(es) are routed to the two devices. Additionally, as previously stated, during times of upset or malfunctions, the system is designed so that all valves are closed and LFG is rerouted to the existing LFG flares for control. Additionally, safety factors are included at the proposed plant that would signal the equipment to shut down and cease operation to prevent catastrophic events.

O2A-12 The proposed plant has minimal NO_X emissions even under the worse-case scenario of the proposed operations. As noted in the response to Comment A3-9, the proposed RNG plant will not emit oxides of nitrogen (measured as nitrogen dioxide) in excess of thresholds in Rule 474. Because the proposed RNG plant did not trigger further requirements with emission thresholds in the District's Rules and Requirements, it was determined no further assessment was necessary.

O2A-13 Modeling of air quality emissions is consistent with South Coast AQMD's CEQA Air Quality Analysis Handbook (1993) and uses the latest mass-emissions modeling tools (e.g., CalEEMod) and approved emissions factors from South Coast AQMD for permitted sources of emissions.

1. Response to Comments

The South Coast AQMD CEQA significance thresholds are based on the trigger levels for the federal New Source Review (NSR) Program and consider the interaction between pollutants in the atmosphere to create secondary air pollutants, like ozone. The NSR Program was created to ensure projects are consistent with attainment of health-based federal ambient air quality standards. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health of sensitive populations such as asthmatics, children, and the elderly. Therefore, projects that do not exceed the South Coast AQMD regional significance thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and would not result in a significant finding requiring mitigation. As discussed in Section 3.2, *Air Quality*, of the IS/MND, the proposed project would not generate emissions that exceed the regional significance thresholds. Thus, per CEQA Guidelines Section 15126.4(3), mitigation is not required.

O2A-14 The 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 South Coast Air Basin and has established construction emissions significance thresholds to determine a project's cumulative impact on air quality. The thresholds as shown in Table 2 (page 65) of the IS/MND are based on a pounds per day metric, which South Coast AQMD has determined to be appropriate to determine potentially significant air quality impacts from project construction activities. The IS/MND reflects the best available information on peak-day emissions. Modeling was based on CalEEMod, Version 2022.1, and preliminary construction information provided by the project applicant and CalEEMod default inputs (see Appendix B1). Construction emissions modeling includes overlap of construction activities with peak vehicular traffic in order to provide a peak-day emissions analysis for the construction phase. As discussed on Page 65 of the IS/MND, project-related construction activities would not generate emissions that exceed any of the South Coast Air Quality Management District's regional significance thresholds for construction. Thus, per CEQA Guidelines Section 15126.4(3), mitigation is not required. Additionally, prior to the initiation of construction activities at the project site, the applicant would prepare a traffic control plan. The traffic control plan would 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.

O2A-15 South Coast AQMD is the agency responsible for ensuring monitoring and compliance. As part of the South Coast AQMD air permitting process, the Applicant conducted a BACT analysis for emission control technologies, ensuring effective emission reduction. As part of the Permit Conditions,, the Applicant will be required to conduct performance tests on the emission control equipment and report results to South Coast AQMD. Furthermore, the Applicant conducts routine preventative maintenance on the facility

equipment following manufacturer recommendations. This includes extensive maintenance annually while the plant is shut down. The facility would also have a robust maintenance plan to test, calibrate, and replace emission monitoring equipment as needed. The Applicant also deploys various flow meters and gas composition analyzers throughout the process, which are calibrated annually following manufacturer recommendations. Flow meters and gas analyzers measure the volume of gas and methane composition of gas on the inlet to each control device. Like the existing flare onsite, South Coast AQMD maintains an annual emissions inventory of emissions for each source at the CCL and reviews the emissions to ensure that emissions are within the Permit Limits. It should be noted that as a closed landfill, annual emissions would likely decrease overtime as the amount of LFG decreases.

Initial performance testing will be conducted on the thermal oxidizer and enclosed flare within 180 days of facility startup. Reports will be submitted to South Coast AQMD within 60 days of testing. After initial performance testing, the compliance demonstration for the thermal oxidizer and enclosed flare is monitoring of combustion temperature on a continuous basis. Records of combustion temperature will be maintained for each control device. Compliance reporting frequency will be dictated by South Coast AQMD.O2A-16 See response to Comment O2-10.

O2A-17 This comment summarizes the issues brought up in comments O2A-1 through O2A-16. See responses to these comments above.

O2B-1 This comment includes a description of the proposed project and of Wilson Ihrig. No response is required.

O2B-2 This comment includes a general description of the adverse impacts of noise. No response is required.

O2B-3 Refer to response to Comment O2-24.

O2B-4 Refer to response to Comment O2-24.

1. Response to Comments

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Appendix

Attachment 1 Greenhouse Gas Emission Table – Coyote Canyon LF Flares

COYOTE CANYON LANDFILL
EMISSION CALCULATIONS

Emission Factors (kilograms/MMBtu)

Fuel	Carbon Dioxide (CO_2)	Methane (CH_4)	Nitrous Oxide (N_2O)
LFG	52.07	3.20E-03	6.30E-04

Total GHG Emission

Sources		**Flare 1**	**Flare 2**	**Flare 3**	**Flare 4**
Activity Rate		45.54 MMBtu/hr	45.54 MMBtu/hr	45.54 MMBtu/hr	45.54 MMBtu/hr
Emissions (metric tons)	**CO_2**	22,897	22,897	22,897	22,897
	CH_4	1.41	1.41	1.41	1.41
	N_2O	0.28	0.28	0.28	0.28
Total Biogenic GHG Emissions (metric ton CO_2e)		23,015.05	23,015.05	23,015.05	23,015.05
Total (short ton CO_2e)		**25,369.72**	**25,369.72**	**25,369.72**	**25,369.72**
Total GHG Emission for all three Flares (short ton CO2e)**		**76,109.16**			

* For Flares are permitted at Coyote for no more than 1,500 standard cubic feet per minute (SCFM), converted to 47.25 million metric British Thermal Units per hour (MMBTU/Hr).
** Only three flares can concurrently run at any one time.

Regulated Emissions

Sources		**Flare 1***	**Flare 2***	**Flare 3**	**Flare 4**
Activity Rate		45.54 MMBtu/hr	45.54 MMBtu/hr	45.54 MMBtu/hr	45.54 MMBtu/hr
Emissions	**CH_4**	1.41	1.41	1.41	1.41
(metric tons)	**N_2O**	0.28	0.28	0.28	0.28
Total GHG Emissions (metric ton CO_2e)		**117.74**	**117.74**	**117.74**	**117.74**
Total (short ton CO2e)		**129.78**	**129.78**	**129.78**	**129.78**
Total GHG Emission for 3,000 SCFM flow (short ton CO2e)**		**259.56**			

* For Flares are permitted at Coyote for no more than 1,500 standard cubic feet per minute (SCFM), converted to 47.25 million metric British Thermal Units per hour (MMBTU/Hr).
**No more than three flares can operate at any one time. The GHG emissions are compiled on the RNG Facility proposed capacity of 3,000 SCFM at 50% methane, therefore this demonstrates the emissions of three flare operating with a combined flow of 3,000 SCFM.

Appendix

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Appendix

Attachment 2 Final Application for Renewable Natural Gas Facility – Coyote Canyon

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 Rev. July 22, 2024**

3900 Kilroy Airport Way, Suite 100
Long Beach, CA 90806
562-426-9544

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Figures

Tables (within Text)

Tables (attached)

Appendices

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
Environmental Data and New Development 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 revision to the original application for a RNG Plant that was submitted in December 2023 which included a hydrogen sulfide (H_2S) treatment system, volatile organic compound (VOC) removal system, gas treatment system, thermal oxidizer (TOX), an enclosed RNG flare and various related equipment. Initial follow up from the SCAQMD was received in January 2024 and responded to in February 2024. This revised application includes all of the original equipment and operating scenarios, yet it includes the use of an emergency backup engine.

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: Steven Boor, COO

Signature: DocuSigned by: Steven Boor B3BA495CCB09470...

Date: 7/17/2024

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 H_2S, VOCs, carbon dioxide (CO_2), nitrogen, (N_2), and oxygen (O_2). 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 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 (°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 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 H_2S 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 H_2S treatment system. The bulk of the H_2S contained in the LFG will be removed via a non-regenerative H_2S 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 H_2S 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 H_2S 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 H_2S concentration and other parameters, as necessary.

3.1.1.1 Equipment Specifications for H_2S Treatment System

Below are some specific details regarding the H_2S 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_2S
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 H_2S 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 H_2S not removed by the upstream H_2S treatment system. Polishing for additional removal of the remaining VOCs (and H_2S) 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 CO_2 stream plus the nitrogen rejection unit waste gas with the resulting effluent sent to the TOX.

3.1.2.1 Carbon Dioxide Removal

The CO_2 removal system will be located within the RNG Plant as shown in Figures attached. After second stage compression, H_2S, VOC, and water removal, the CO_2 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 CO_2 and is heated using waste heat from the TOX. The stage 1 permeate, which contains about 82% CO_2, 6% CH_4, and similar levels of N_2 and O_2, is used to regenerate the TSA system.

The stage 1 retentate stream (process gas enriched in CH_4) enters the second stage membrane unit. The second stage membrane unit also produces a low pressure permeate stream that is rich in CO_2 and CH_4 (up to 50%). To recover the CH_4, 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 N_2 removal system will be located within the RNG Plant as shown in Figures attached. After the CO_2 removal process, the process gas is now considered intermediate or low heating value product gas. It contains CH_4, N_2, and O_2 with small amounts of CO_2 (<1%) and little to no VOCs or H_2S. Due to the presence of elevated concentrations of N_2 and O_2, 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 N_2 and O_2 from the CH_4. As the $CH_4/(N_2+O_2)$ separation is not 100% efficient, the N_2 reject gas stream from the PSA system routed to TOX will contain CH_4. The CH_4 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.

3.5 EMERGENCY GENERATOR

3.5.1 Standby Emergency Backup Generator

An emergency backup generator will be installed to provide temporary power to the RNG Plant in the event of a grid power outage. Temporary power will be used for lighting, administrative/control, and instrument air purposes to safely shutdown the RNG Plant. The emergency generator will operate for no more than 200 hours annually. The generator is a stationary, Large Spark Ignited Engine (LSIE) emergency-standby rated generator. It is natural gas engine-driven that is turbocharged and aftercooled with a 6 cylinder 14.2L engine. It is rated for 200 kW and is both SCAQMD and United States Environmental Protection Agency (EPA) Certified. The generator will be located at the RNG Plant as shown in Appendix A.

3.5.2 Equipment Specifications for Emergency Backup Generator

Equipment specifications are included in Appendix B. Below are some specific details regarding the emergency backup generator:

Quantity:	One (1)
Power Output:	200 kW
Manufacturer:	Generac Industrial Power
SCAQMD CEP #:	618436
EPA Certificate #:	RGNXB14.22C1-031
Size:	10’-10” length x 4’-2” width x 5’-10” height

Table 16 (attached) shows the calculated PTE for toxics and criteria pollutants for the emergency backup generator.

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 (SO_2), CO, particulate matter (PM) less than 10 microns (PM_{10}), 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
NOx	0.06 lbs/MMBtu (HHV)	Manufacturer's Guarantee
CO	0.20 lbs/MMBtu (HHV)	Manufacturer's Guarantee
SO_2	25 ppmv as H_2S (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
NOx	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_2S (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

Table 3. Natural-Gas Fired Emergency Backup Generator Emission Factors

Criteria Pollutant	LAER/BACT Emission Factor	Data Source
NOx	0.12 g/bhp-hr	Manufacturer's Guarantee/BACT
CO	0.21 g/bhp-hr	Manufacturer's Guarantee/BACT
SO_2	5.88E-04 lb/MMBtu	AP-42 Table 3.2-2
$PM_{10}/PM_{2.5}$	9.91E-03 lb/MMBtu	AP-42 Table 3.2-2
VOCs	0.24 g/bhp-hr	Manufacturer's Guarantee/BACT

Tables 8 through 11 (attached) provides emission estimates of the RNG Plant. Table 12 (attached) provides a summary of the proposed facility-wide emissions.

4.1.2 Toxic Emissions

Toxic pollutant emissions from the TOX, enclosed flare and emergency backup generator include the toxic air contaminants (TACs) shown in Tables 8 through 11 (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 Particular 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 SOx 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 CO_2 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 SO_2 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, PM_{10}, $PM_{2.5}$, and SO_2, 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 NOx, CO, and NMOCs/VOCs. Therefore, the TOX meets the BACT levels per the manufacturer guarantees in Appendix B.

- NOx: 0.06 lb/MMBtu (HHV)
- CO: 0.20 lb/MMBtu (HHV)
- SO_2: 25 ppmv as H_2S (inlet)
- $PM_{10}/PM_{2.5}$: 17 lb/MMSCF as CH_4
- 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 NOx 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.

- NOx: 0.025 lb/MMBtu (HHV)
- CO: 0.06 lb/MMBtu (HHV)
- SO_2: 25 ppmv as H_2S (inlet)
- $PM_{10}/PM_{2.5}$: 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.

5.3.1.3 Emergency Generator

The emergency generator meets the BACT levels of SCAQMD's BACT Guidelines for Non-Major Polluting Facilities for spark ignition engines greater than 130 horsepower (hp) per the manufacturer guarantees in **Appendix B**.

- NOx: 1.5 grams per brake horsepower-hour (g/bhp-hr)
- CO: 2.0 g/bhp-hr
- $PM_{10}/PM_{2.5}$: 9.91E-03 pounds per MMBtu (lb/MMBtu)
- VOC: 1.0 g/bhp-hr
- SO_2: 5.88E-04 lb/MMBtu

The above BACT emission values were applied in calculating the PTE estimates for the proposed emergency backup generator found in **Table 14**.

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:

- NOx : 4 tons per year (tpy)
- CO: 29 tpy
- PM_{10}: 4 tpy
- SOx: 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 4. List of TACs

Pollutant	Source(s)
1,1,1-Trichloroethane (methyl chloroform)	TOX
1,1,2,2-Tetrachloroethane	TOX, Emergency Generator
1,1-Dichloroethane (ethylidene dichloride)	TOX
1,1-Dichloroethene (vinylidene chloride)	TOX
1,2-Dichloroethane (ethylene dichloride)	TOX, Emergency Generator
1,2-Dichloropropane (propylene dichloride)	TOX
2-Propanol (isopropyl alcohol)	TOX
Acrylonitrile	TOX
Benzene	TOX, Enclosed RNG Flare, Emergency Generator
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
Carbon tetrachloride	TOX, Emergency Generator
Carbonyl sulfide	TOX
Chlorobenzene	TOX, Emergency Generator
Chloroethane (ethyl chloride)	TOX, Emergency Generator
Chloroform	TOX, Emergency Generator
Chlorodifluoromethane	TOX
Chrysene	Enclosed RNG Flare, Emergency Generator
Dibenzo(a,h)anthracene	Enclosed RNG Flare
Dichlorobenzene (1,4-Dichlorobenzene)	TOX
Dichlorodifluoromethane	TOX
Dichloromethane (Methylene Chloride)	TOX
Ethyl benzene	TOX, Emergency Generator
Ethylene dibromide (1,2-Dibromoethane)	TOX, Emergency Generator
Fluorotrichloromethane	TOX
Hexane	TOX, Enclosed RNG Flare, Emergency Generator
Hydrochloric acid	TOX
Hydrogen Sulfide	TOX
Indeno(1,2,3-cd)pyrene	Enclosed RNG Flare

Pollutant	Source(s)
Mercury (total)	TOX, Enclosed RNG Flare
Methyl ethyl ketone	TOX
Perchloroethylene (tetrachloroethylene)	TOX, Emergency Generator
Toluene	TOX, Enclosed RNG Flare, Emergency Generator
Trichloroethylene (trichloroethene)	TOX
Vinyl chloride	TOX, Emergency Generator
Xylenes	TOX, Emergency Generator
PAH	TOX, Emergency Generator
Naphthalene	TOX, Enclosed RNG Flare
Formaldehyde	TOX, Enclosed RNG Flare, Emergency Generator
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
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
1,1,2-Trichloroethane (Vinyl Trichloride)	Emergency Generator

Pollutant	Source(s)
1,3-Butadiene	Emergency Generator
Acetaldehyde	Emergency Generator
Acrolein	Emergency Generator
Benzo(b)Fluoranthene	Emergency Generator
Methanol	Emergency Generator
Phenol	Emergency Generator
Styrene	Emergency Generator
PAHs	Emergency Generator

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 2 below shows a summary of results, attached **Table 13** includes further details of the results. The target organs for acute and chronic risk were from the eye and respiratory system, respectively. 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 5. Risk Summary

Source	Tier	Acute HI	Chronic HI	Residential Cancer Risk	Commercial Cancer Risk
Thermal Oxidizer	3	3.23E-03	9.13E-03	2.41E-07	1.74E-08
Thermal Oxidizer – Supplemental Fuel	3	4.05E-06	4.04E-04	8.33E-09	4.28E-10
Enclosed RNG Flare	3	1.37E-05	1.18E-03	4.74E-08	1.63E-09
Enclosed RNG Flare (Part 2)	3	2.47E-03	9.95E-03	1.69E-07	9.75E-09
Emergency Generator	3	5.56E-02	7.24E-03	4.01E-07	2.51E-08
Total		6.13E-02	2.79E-02	8.66E-07	5.43E-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 AAAA); 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 CO_2 from RNG are considered biogenic, meaning they come from a biofuel and do not contribute to a net increase in atmospheric CO_2.

Biogenic CO_2 should not be counted as part of the regulated GHG emissions from the RNG sources. Methane (CH_4) and nitrous oxide (N_2O) 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 6. 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 N_2O have been converted into CO_2 equivalent (CO_2e) using a global warming potential factor of 25 for CH_4 and 298 for N_2O.

Table 7. Project Total GHG Emissions

Sources		Thermal Oxidizer	Thermal Oxidizer Supplemental	Enclosed RNG Flare	Emergency Generator
Activity Rate		12.11 MMBtu/hr	8.25 MMBtu/hr	77.8 MMBtu/hr	2.32 MMBtu/hr*
Emissions (metric tons)	**CO_2**	6,089	4,227	39,861	27
	CH_4	0.37	0.08	0.75	0.0005
	N_2O	0.07	0.008	0.075	0.0001

Total GHG Emissions (metric ton CO_2e)	50,281
Total (short ton CO_2e)	55,425

*Emergency generator based on 200 hours/year operation.

Table 8. Regulated GHG Emissions

Sources		**Thermal Oxidizer**	**Thermal Oxidizer Supplemental**	**Enclosed RNG Flare**	**Emergency Generator**
Activity Rate		12.11 MMBtu/hr	8.25 MMBtu/hr	77.8 MMBtu/hr	2.32 MMBtu/hr*
Emissions (metric tons)	**CH_4**	0.37	0.08	0.08	0.001
	N_2O	0.07	0.008	0.075	0.0001
Total GHG Emissions (metric ton CO_2e)		60			
Total (short ton CO_2e)		66			

*Emergency generator based on 200 hours/year operation.

The facility's GHGs from the project are estimated at 66 tpy of CO_2e, 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-project is under a CEQA review with the City of Newport as the lead agency. BCCB is anticipating preparation of a negative declaration (ND) or a mitigated negative declaration (MND) which will be determined by the City of Newport upon review of the initial study prepared for the proposed project.

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_2S 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
Emergency I.C. Engine (Schedule B)	$3,785.55
Expedited Processing Fee	$1,892.78
Total	**$43,916.27**

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.

Per this revised Application, the additional fees of $5,299.26 for the Emergency I.C. Engine and associated expedited processing fees are enclosed.

The following application forms are enclosed with the application and can be found in Appendix D.

H_2S 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:

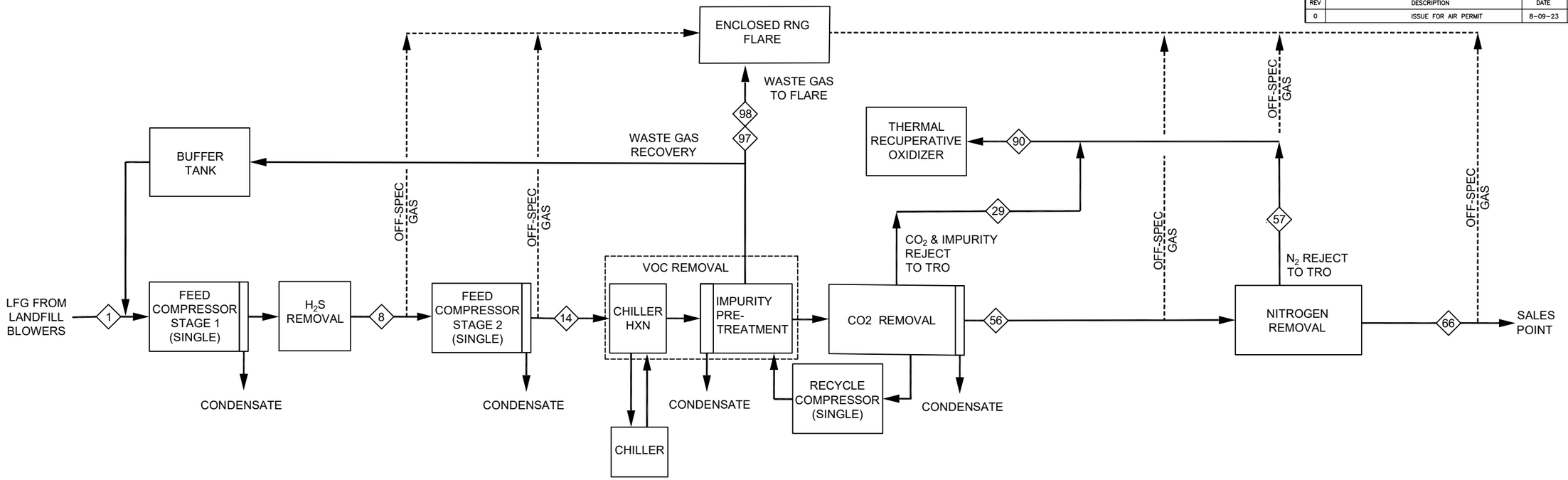
- Application Form for Permit or Plan Approval - Form 400-A
- California Environmental Quality Act Applicability - Form 400-CEQA
- Plot Plan and Stack Information Form – Form 400-PS
- Storage Tank – Form 400-E-18

Emergency Backup Generator:

- Application Form for Permit or Plan Approval - Form 400-A

Figures

REVISIONS				
REV	DESCRIPTION	DATE	DRAWN	APPROVED
0	ISSUE FOR AIR PERMIT	8-09-23		



LANDFILL GAS (LFG) FEED CONDITIONS	MAIN LFG FEED GAS
STREAM NUMBER:	**< 1 >**
GAS COMPOSITION	***VOL% (dry)***
CH4	42.69
CO2	35.35
N2	18.89
O2	3.00
H2O	SAT @ 90 F
	PPMV (dry)
TOTAL S (H2S+OTHER S)	28
VOC (AS HEXANE)	600
SITE CONDITIONS:	
ELEVATION, FEET	50
AMBIENT PRESSURE, PSIA	14.67
MIN. AMBIENT, DEG F	34
MAX. AMBIENT, DEG F	100

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 >**	**< 8 >**	**< 14 >**	**< 29 >**	**< 56 >**	**< 57 >**	**< 66 >**	**< 90 >**	**< 97 >**	**< 98 >**
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
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
PRESSURE	PSIA	15.7	37.7	223.2	17.7	115.2	17.7	103.7	17.7	14.7	14.8
TEMPERATURE	DEG F	100.0	137.1	125.0	250.0	97.0	100.0	105.0	212.6	37.9	89.0
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
GAS COMPOSITION: (TOTAL SULFUR AS H2S, VOC AS HEXANE)		***VOL% (wet / dry)***	***VOL% (wet / dry)***	***VOL% (wet / dry)***	***VOL% (wet / dry)***	***VOL% (wet / dry)***	***VOL% (wet / dry)***	***VOL% (wet / dry)***	***VOL% (wet / dry)***	***VOL% (wet / dry)***	***VOL% (wet / dry)***
	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
	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
	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
	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
	H2O	5.52 / -	5.49 / -	0.87 / -	0.28 / -	0.00 / -	0.00 / -	0.00 / -	0.20 / -	0.06 / -	0.06 / -
		PPMV (wet / dry)	***PPMV (wet / dry)***	***PPMV (wet / dry)***	***PPMV (wet / dry)***	***PPMV (wet / dry)***	***PPMV (wet / dry)***	***PPMV (wet / dry)***	***PPMV (wet / dry)***	***PPMV (wet / dry)***	***PPMV (wet / dry)***
	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
	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

ARCHAEA ENERGY

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES

TOLERANCES
DECIMALS .X= ±.1 .XX= ±.02 .XXX= ±.010
ANGLES ±0 30' FRACTIONS ±1/32

DO NOT SCALE DRAWING

PROJECT NO.

APPROVALS	DATE
DRAWN P.KLOMKAEW	9-26-22
CHECKED S.CHAFIN	9-26-22
ENGINEERED	
APPROVED	

BIOFUELS COYOTE CANYON BIOGAS LLC
NEWPORT BEACH, CA

TITLE
COYOTE CANYON BIOMETHANE FACILITY

SIZE	DWG. NO.	REV.
D	1	0

SCALE | WEIGHT | SHEET 1 OF 1

DWG NO 1 SH 1 REV 0

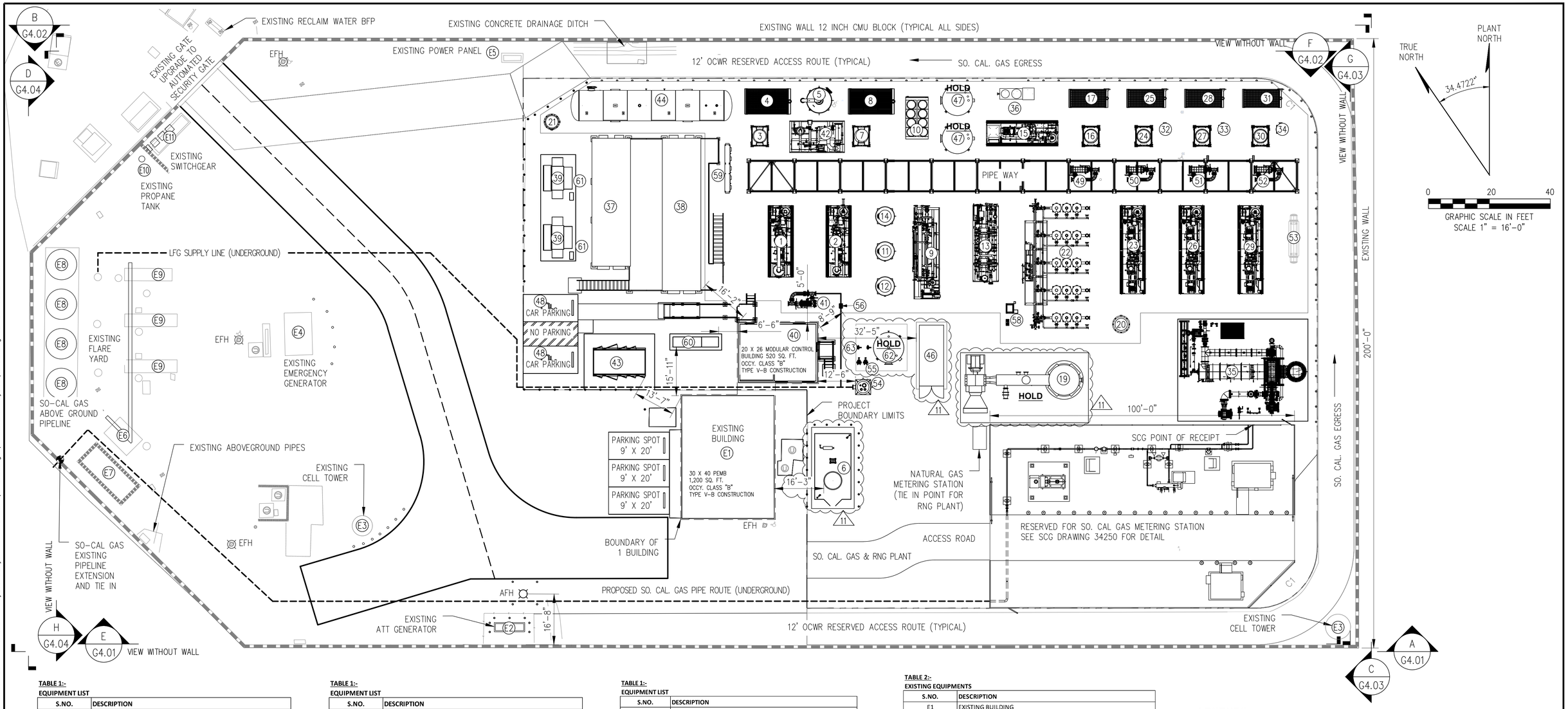


TABLE 1:-
EQUIPMENT LIST

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
11 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~~
11 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 EXHANGER (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
11 61	NEUTRAL GROUNDING RESISTORS
11 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	EXISITNG POWER PANEL
E6	EXISITNG PAD
E7	EXISITNG TANK
E8	EXISTING FLARE
E9	EXISTING BLOWERS PAD
E10	EXISTING PROPANE TANK
E11	EXISTING SWITCHGEAR

LEGENDS

EFH–EXISTING FIRE HYDRANT RETAINED	EFH
AFH–ADDED FIRE HYDRANT	AFH
GAS LINES	
PROJECT BOUNDARY LIMITS	
SO. CAL. GAS METERING STATION LIMITS	

AREA JUSTIFICATION FOR CONTROL BUILDING

ID #	DESCRIPTION	WIDTH	LENGTH	AREA			TYPE CONSTRUCTION	OCCY CLASS	MAX. ALLOW. AREA
40	NEW MODULAR CONTROL BUILDING	26	20	520	27.7%		V-B	B	9,000
E1	EXISTING PEMB BUILDING	30	40	1,200	63.8%		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

11 **HOLD:-** VENDOR DRAWING IS AWAITED.

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: 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

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 Emergency Generator Location
Planned Flare Location
Planned TOx Location
Planned TOx Location
Planned Emergency Generator Location
Planned Flare Location
Google Earth
Data CSUMB SFML, CA OPC
N
400 ft

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 H_2S ppmv into the product gas at 25 ppmv after sulfur treatment. Then, 100% of the H_2S is converted to SO_2.

(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:

Pollutant	Emission Factor	Data Source
NMOCs/VOCs	98% 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_2S	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**

Criteria Air Pollutants	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)
Volatile Organic Compounds (VOCs)	86.18	100.0	0.184	98.0%	0.00	0.020	7.35	0.004

Criteria Air Pollutants	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)
Nitrogen Oxides (NO_X)	--	--	0.06		0.495	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	98% 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 H2S	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

Criteria Air Pollutants	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)
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

Criteria Air Pollutants	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)
Volatile Organic Compounds (VOCs)			0.038		2.96	70.94	2,586.26	1.29
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 H_2S in the maximum waste gas flow to the flare. 100% conversion of H_2S to SO_2 is assumed to occur at the flare.

(d) Waste gas energy content is expected to range between 156-973 BTU/SCF (HHV). Flare maximum heat release based upon 432.1 BTU/SCF (HHV). The heating value of Methane assumed to be 1012

(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)	1,012	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)	3,000	SCFM(d)
Waste Gas Flow Rate to Flare (maximum)	180,000	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)	68,060	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_2S	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
POTENTIAL TO EMIT EMISSION SOURCE ESTIMATES FOR EMERGENCY GENERATOR
COYOTE CANYON RNG FACILITY
NEWPORT BEACH, CALIFORNIA

Natural Gas Power (Emergency Backup) Generator for Facility

Criteria Pollutant	Engine Rating		Emission Factor[1]		Operational Hours[2]		Maximum Emissions			
	MMBtu/hr	bhp	g/bhp-hr	lb/MMBtu	hr/day	hrs/yr	lb/hr	lb/day	lb/yr	tons/yr
CO	2.3247	304	0.21	--	8	200	0.14	1.13	28.15	0.014
SOx			--	5.88E-04	8	200	0.0014	0.011	0.27	0.00014
NOx			0.12	--	8	200	0.08	0.64	16.08	0.008
VOC			0.24	--	8	200	0.16	1.29	32.17	0.016
$PM_{10}/PM_{2.5}$			--	9.91E-03	8	200	0.02	0.18	4.61	0.002

[1] Emission factor for CO, NOx, and VOCs from manufacturer. Emission factor for $PM/PM_{10}/PM_{2.5}$ and SOx from AP-42 Table 3.2-2 for 4-stroke lean-burn engines.

[2] Based on estimated maximum usage of 8 hours per day, 200 hours per year.

CAS Number	Hazardous Air Pollutants (HAPs)	Engine Rating	Emissions Factor	Operational Hours[2]		Maximum Emissions			
		MMBtu/hr	lb/MMBtu	hr/day	hrs/yr	lb/hr	lb/day	lb/yr	tons/yr
79-34-5	1,1,2,2-Tetrachloroethane	2.3247	4.00E-05	8	200	9.30E-05	7.44E-04	1.86E-02	9.30E-06
79-00-5	1,1,2-Trichloroethane	2.3247	3.18E-05	8	200	7.39E-05	5.91E-04	1.48E-02	7.39E-06
75-34-3	1,1-Dichloroethane	2.3247	2.36E-05	8	200	5.49E-05	4.39E-04	1.10E-02	5.49E-06
107-06-2	1,2-Dichloroethane	2.3247	2.36E-05	8	200	5.49E-05	4.39E-04	1.10E-02	5.49E-06
78-87-5	1,2-Dichloropropane	2.3247	2.69E-05	8	200	6.25E-05	5.00E-04	1.25E-02	6.25E-06
106-99-0	1,3-Butadiene	2.3247	2.67E-04	8	200	6.21E-04	4.97E-03	1.24E-01	6.21E-05
542-75-6	1,3-Dichloropropene	2.3247	2.64E-05	8	200	6.14E-05	4.91E-04	1.23E-02	6.14E-06
91-57-6	2-Methylnaphthalene	2.3247	3.32E-05	8	200	7.72E-05	6.17E-04	1.54E-02	7.72E-06
540-84-1	2,2,4-Trimethylpentane	2.3247	2.50E-04	8	200	5.81E-04	4.65E-03	1.16E-01	5.81E-05
203-96-8	Acenaphthene	2.3247	1.25E-06	8	200	2.91E-06	2.32E-05	5.81E-04	2.91E-07
120-12-7	Acenaphthylene	2.3247	5.53E-06	8	200	1.29E-05	1.03E-04	2.57E-03	1.29E-06
75-07-0	Acetaldehyde	2.3247	8.36E-03	8	200	1.94E-02	1.55E-01	3.89E+00	1.94E-03
107-02-8	Acrolein	2.3247	5.14E-03	8	200	1.19E-02	9.56E-02	2.39E+00	1.19E-03
71-43-2	Benzene	2.3247	4.40E-04	8	200	1.02E-03	8.18E-03	2.05E-01	1.02E-04
205-99-2	Benzo(b)fluoranthene	2.3247	1.66E-07	8	200	3.86E-07	3.09E-06	7.72E-05	3.86E-08
192-97-2	Benzo(e)pyrene	2.3247	4.15E-07	8	200	9.65E-07	7.72E-06	1.93E-04	9.65E-08
191-24-2	Benzo(g,h,i)perylene	2.3247	4.14E-07	8	200	9.62E-07	7.70E-06	1.92E-04	9.62E-08
92-52-4	Biphenyl	2.3247	5.41E-04	8	200	1.26E-03	1.01E-02	2.52E-01	1.26E-04
56-23-5	Carbon Tetrachloride	2.3247	3.65E-05	8	200	8.49E-05	6.79E-04	1.70E-02	8.49E-06
108-90-7	Chlorobenzene	2.3247	3.04E-05	8	200	7.07E-05	5.65E-04	1.41E-02	7.07E-06
75-00-3	Chloroethane	2.3247	1.87E-06	8	200	4.35E-06	3.48E-05	8.69E-04	4.35E-07
67-66-3	Chloroform	2.3247	2.85E-05	8	200	6.63E-05	5.30E-04	1.33E-02	6.63E-06
218-01-9	Chrysene	2.3247	6.93E-07	8	200	1.61E-06	1.29E-05	3.22E-04	1.61E-07
100-41-4	Ethylbenzene	2.3247	3.97E-05	8	200	9.23E-05	7.38E-04	1.85E-02	9.23E-06
106-93-4	Ethylene Dibromide	2.3247	4.43E-05	8	200	1.03E-04	8.24E-04	2.06E-02	1.03E-05
206-44-0	Fluoranthene	2.3247	1.11E-06	8	200	2.58E-06	2.06E-05	5.16E-04	2.58E-07
86-73-7	Fluorene	2.3247	5.67E-06	8	200	1.32E-05	1.05E-04	2.64E-03	1.32E-06
50-00-0	Formaldehyde	2.3247	5.28E-02	8	200	1.23E-01	9.82E-01	2.45E+01	1.23E-02
110-54-3	Hexane	2.3247	1.11E-03	8	200	2.58E-03	2.06E-02	5.16E-01	2.58E-04
67-56-1	Methanol	2.3247	2.50E-03	8	200	5.81E-03	4.65E-02	1.16E+00	5.81E-04
75-09-2	Methylene Chloride	2.3247	2.00E-05	8	200	4.65E-05	3.72E-04	9.30E-03	4.65E-06
91-20-3	Naphthalene	2.3247	7.44E-05	8	200	1.73E-04	1.38E-03	3.46E-02	1.73E-05
218-01-9	PAH	2.3247	2.69E-04	8	200	6.25E-04	5.00E-03	1.25E-01	6.25E-05
85-01-8	Phenanthrene	2.3247	1.04E-05	8	200	2.42E-05	1.93E-04	4.84E-03	2.42E-06
108-95-2	Phenol	2.3247	2.40E-05	8	200	5.58E-05	4.46E-04	1.12E-02	5.58E-06
129-00-0	Pyrene	2.3247	1.36E-06	8	200	3.16E-06	2.53E-05	6.32E-04	3.16E-07
100-42-5	Styrene	2.3247	2.36E-05	8	200	5.49E-05	4.39E-04	1.10E-02	5.49E-06
79-34-5	Tetrachloroethane	2.3247	2.48E-06	8	200	5.77E-06	4.61E-05	1.15E-03	5.77E-07
108-88-3	Toluene	2.3247	4.08E-04	8	200	9.48E-04	7.59E-03	1.90E-01	9.48E-05
75-01-4	Vinyl Chloride	2.3247	1.49E-05	8	200	3.46E-05	2.77E-04	6.93E-03	3.46E-06
1330-20-7	Xylene	2.3247	1.84E-04	8	200	4.28E-04	3.42E-03	8.55E-02	4.28E-05
	Total HAPs					**0.17**	**1.35**	**33.87**	**0.017**

[1] Emission factor for HAPs from AP-42 Table 3.2-3 for 4-stroke lean-burn engines.

[2] Based on estimated maximum usage of 8 hours per day, 1 day per month.

TABLE 12
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
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	0.17	1.35	0.02
TOTAL EMISSIONS		**3.25**	**76.64**	**4.00**	**8.88**	**210.88**	**12.51**	**1.63**	**38.85**	**1.24**	**1.22**	**29.23**	**2.35**	**1.13**	**24.53**	**2.35**	**3.46**	**66.29**	**6.23**

Note: Pounds per day are based on 24 hours of operation a day.

TABLE 14
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)	3.996	10.00	No	4.00	No	NA	29.32	46.67	1.00	Yes/Yes
Carbon Monoxide (CO)	12.51	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)	2.35	10.00	No	4.00	No	NA	11.64	11.60	1.00	Yes/Yes
Particulate Matter (PM_{10})	1.24	70.00	No	4.00	No	NA	5.83	32.83	1.00	Yes/Yes
Total Hazardous Air Pollutants (HAPs)	6.23	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

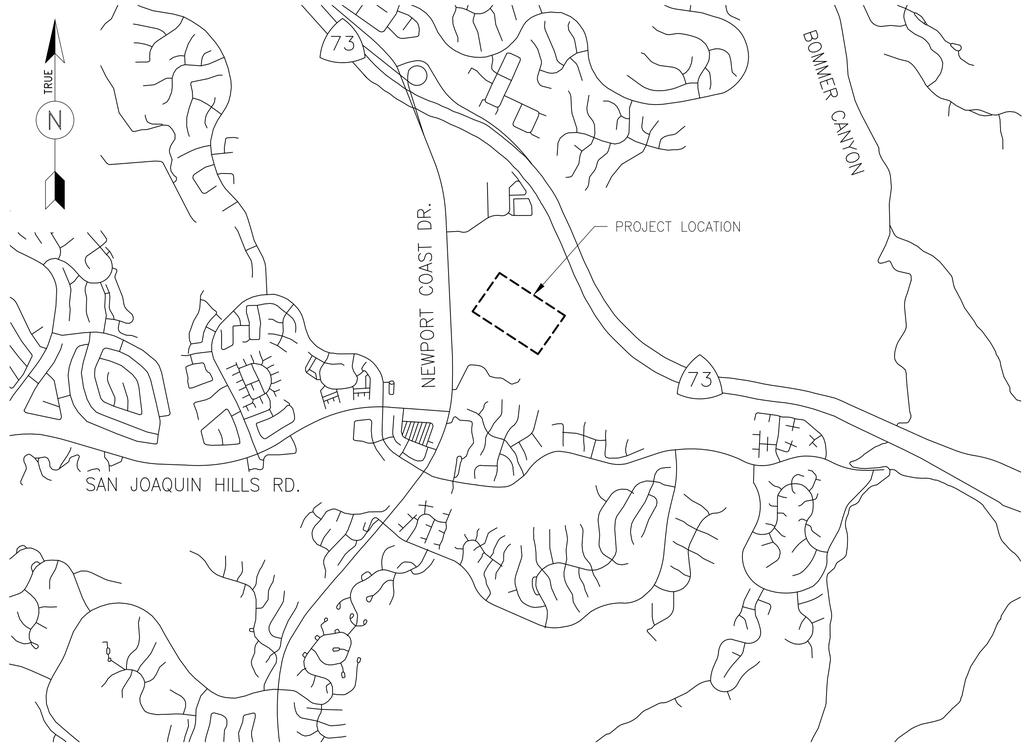
Appendix A

Facility Plans

POINT OF RECIEPT
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

REV	DATE	DRAWN	CHECKED	PRJ APV	SCG APV	ENG FILE NO	DESCRIPTION	WOA
B	10/15/21	GKC	BKD	PD	SQL	*	ISSUED FOR 30% REVIEW	89395
A	09/23/21	GKC	BDK	PD	SQL	*	ISSUED FOR 10% REVIEW	89395

	BY	DATE
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
SCG ENG APV:	S. LY	09/23/21

ENG FILE NO: *
WOA: 89395.000
DWG CLASS:
DWG DIST:
SCALE: NONE

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POINT OF RECIEPT
BIOME RULE 45 – COYOTE CANYON
DRAWING LIST

20662 NEWPORT BEACH DRIVE — NEWPORT BEACH

DRAWING NUMBER 34250-1001-D-PIP — REV B

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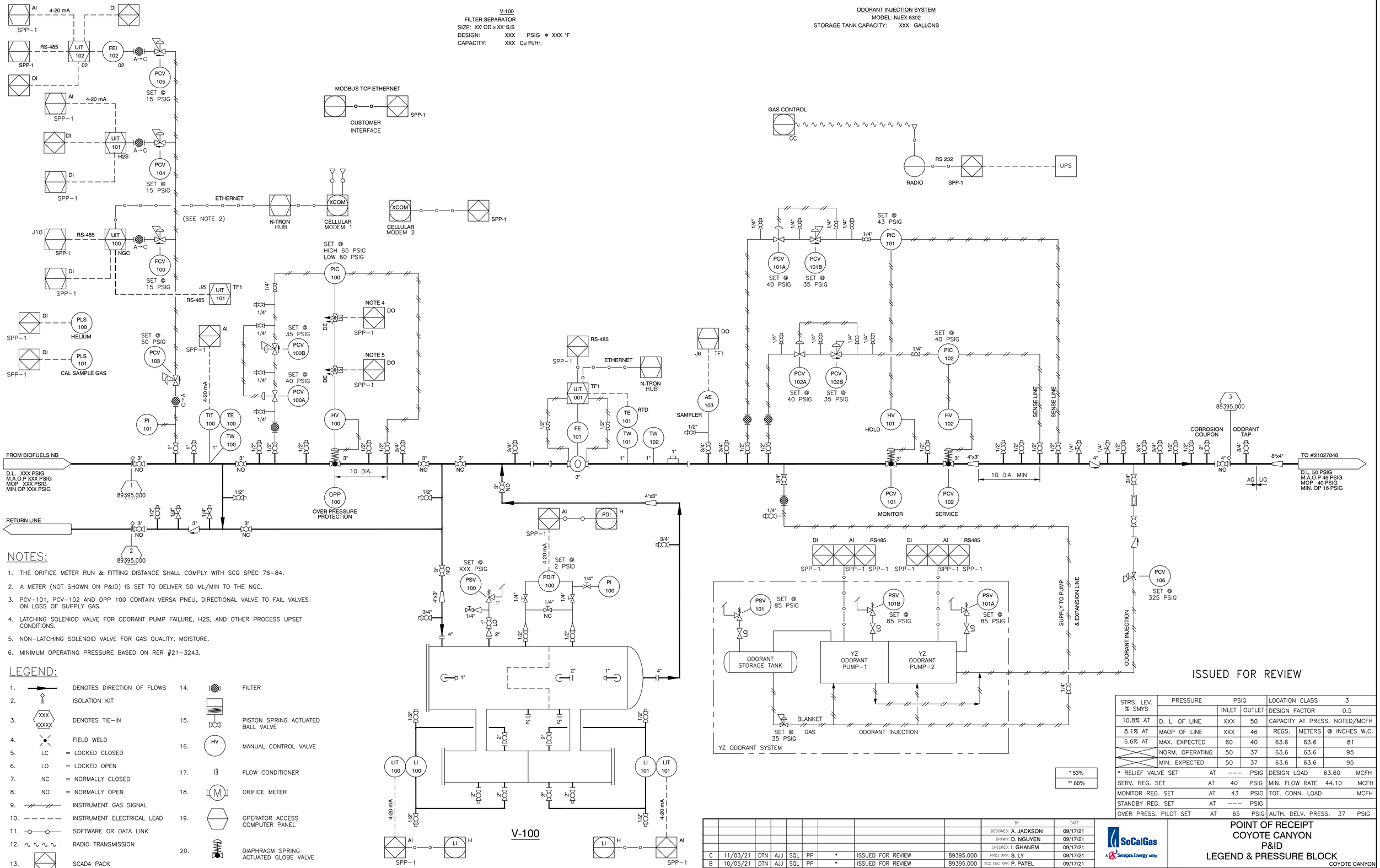
V-100
FILTER SEPARATOR
SIZE: XX' OD x XX' S/S
DESIGN: XXX PSIG @ XXX °F
CAPACITY: XXX Cu Ft/Hr.

ODORANT INJECTION SYSTEM
MODEL: NJEX 6302
STORAGE TANK CAPACITY: XXX GALLONS



NOTES:

1. THE ORIFICE METER RUN & FITTING DISTANCE SHALL COMPLY WITH SCG SPEC 76-84.
2. A METER (NOT SHOWN ON P&ID) IS SET TO DELIVER 50 ML/MIN TO THE NGC.
3. PCV-101, PCV-102 AND OPP 100 CONTAIN VERSA PNEU, DIRECTIONAL VALVE TO FAIL VALVES ON LOSS OF SUPPLY GAS.
4. LATCHING SOLENIOD VALVE FOR ODORANT PUMP FAILURE, H2S, AND OTHER PROCESS UPSET CONDITIONS.
5. NON-LATCHING SOLENOID VALVE FOR GAS QUALITY, MOISTURE.
6. MINIMUM OPERATING PRESSURE BASED ON RER #21-3243.

LEGEND:

1. DENOTES DIRECTION OF FLOWS
2. ISOLATION KIT
3. XXX / XXXXX — DENOTES TIE-IN
4. FIELD WELD
5. LC = LOCKED CLOSED
6. LO = LOCKED OPEN
7. NC = NORMALLY CLOSED
8. NO = NORMALLY OPEN
9. INSTRUMENT GAS SIGNAL
10. INSTRUMENT ELECTRICAL LEAD
11. SOFTWARE OR DATA LINK
12. RADIO TRANSMISSION
13. SCADA PACK
14. FILTER
15. PISTON SPRING ACTUATED BALL VALVE
16. HV — MANUAL CONTROL VALVE
17. FLOW CONDITIONER
18. M — ORIFICE METER
19. OPERATOR ACCESS COMPUTER PANEL
20. DIAPHRAGM SPRING ACTUATED GLOBE VALVE

* 53%
** 60%

STRS. LEV. % SMYS	PRESSURE	PSIG		LOCATION CLASS	3	
		INLET	OUTLET	DESIGN FACTOR	0.5	
10.8% AT	D. L. OF LINE	XXX	50	CAPACITY AT PRESS. NOTED/MCFH		
8.1% AT	MAOP OF LINE	XXX	46	REGS.	METERS	@ INCHES W.C.
6.6% AT	MAX. EXPECTED	60	40	63.6	63.6	81
	NORM. OPERATING	50	37	63.6	63.6	95
	MIN. EXPECTED	50	37	63.6	63.6	95
* RELIEF VALVE SET	AT --- PSIG			DESIGN LOAD	63.60	MCFH
SERV. REG. SET	AT 40 PSIG			MIN. FLOW RATE	44.10	MCFH
MONITOR REG. SET	AT 43 PSIG			TOT. CONN. LOAD		MCFH
STANDBY REG. SET	AT --- PSIG					
OVER PRESS. PILOT SET	AT 65 PSIG			AUTH. DELV. PRESS.	37	PSIG

ISSUED FOR REVIEW

REV	DATE	DRAWN	CHECKED	PRJ APV	SCG APV	ENG FILE NO	DESCRIPTION	WOA
C	11/03/21	DTN	AJJ	SQL	PP	*	ISSUED FOR REVIEW	89395.000
B	10/05/21	DTN	AJJ	SQL	PP	*	ISSUED FOR REVIEW	89395.000
A	09/23/21	DTN	AJJ	SQL	PP	*	ISSUED FOR REVIEW	89395.000

	BY	DATE
DESIGNED:	A. JACKSON	09/17/21
DRAWN:	D. NGUYEN	09/17/21
CHECKED:	I. GHANEM	09/17/21
PROJ APV:	S. LY	09/17/21
SCG ENG APV:	P. PATEL	09/17/21
ENG FILE NO:	*	
WOA:	89395.000	

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POINT OF RECEIPT
COYOTE CANYON
P&ID
LEGEND & PRESSURE BLOCK
COYOTE CANYON

DWG CLASS: 38 DWG DIST: 303
SCALE: NONE
DRAWING NUMBER 34250-2001-D-PID
REV C

PLANT N

EXISTING WALL

GATE

SITE LIMITS

PIPEWAY

EXISTING FLARE YARD

EXISTING UNDERGROUND LINES (TYP.)

NEW 8'x10' VERIZON GENERATOR ENCLOSURE

NEW VERIZON & T-MOBILE MONOPOLE

NEW 8'x11' T-MOBILE EQUIPMENT ENCLOSURE

EXISTING BUILDING

RESERVED FOR SO. CAL GAS

60'-0"

12'-0"

100'-0"

24'-0"

POINT OF RECEIPT

FOR PLOT PLAN SEE DWG: 2450-3002-D-PIP

NEW 8"PIPELINE

EXISTING 8" SERVICE LINE

TP XX

NEW UNDERGROUND COAX JOINT TRENCH

FUTURE AT&T BACKUP GENERATOR

EXISTING CONDUIT TRENCH

ISSUED FOR REVIEW

30% REVIEW

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.

0 200' 400'

SCALE: 1" = 200'-0"

REV	DATE	DRAWN	CHECKED	PRJ APV	SCG APV	ENG FILE NO	DESCRIPTION	WOA
B	10/15/21	GKC	BDK	PD	SQL	*	ISSUED FOR 30% REVIEW	89395
A	09/23/21	GKC	BDK	PD	SQL	*	ISSUED FOR 10% REVIEW	89395

	BY	DATE
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
SCG ENG APV: S. LY		09/23/21
ENG FILE NO: *		
WOA: 89395.000		

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DWG CLASS: DWG DIST: SCALE: 1"=200'

POINT OF RECIEPT
BIOME RULE 45 – COYOTE CANYON
SITE PLAN

20662 NEWPORT BEACH DRIVE NEWPORT BEACH

DRAWING NUMBER 34250-3001-D-PIP REV B

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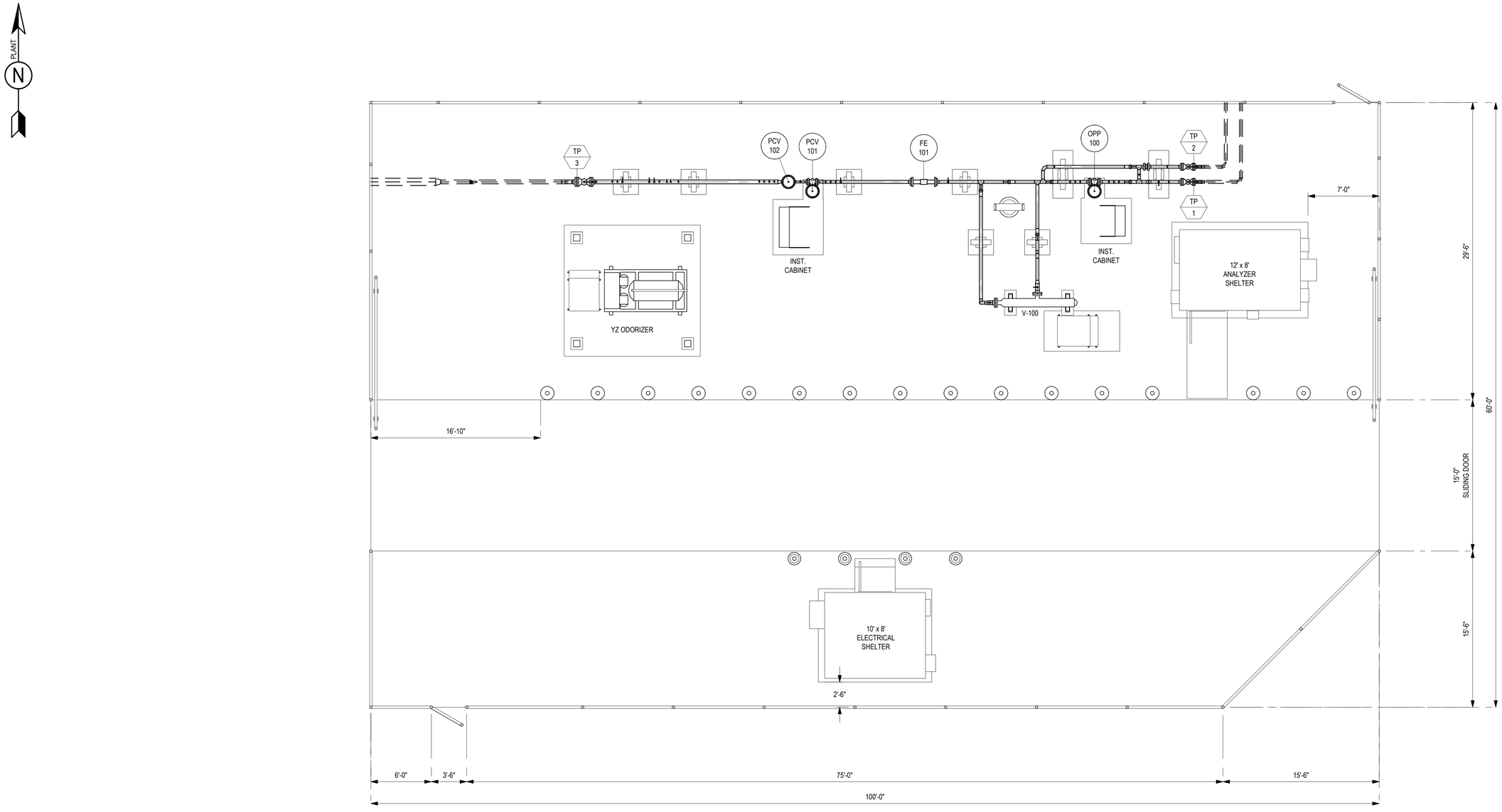

ISSUED FOR 30% REVIEW

NOTES:

1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET AND INCHES.

0 5' 10'

SCALE: 3/16" = 1'-0"

REV NO	DATE	DRAWN	CHK'D	PROJ APV	SCG ENG APV	ENG FILE NO	DESCRIPTION	WOA
B	10/15/21	GKC	BDK	PD	SQL	*	ISSUED FOR 30% REVIEW	89395.000
A	09/23/21	GKC	BDK	PD	SQL	*	ISSUED FOR 10% REVIEW	89395.000

	BY	DATE
DESIGNED:	G. CASILLAS	09/20/21
DRAWN:	G. CASILLAS	09/20/21
CHECKED:	B. KIKAWA	09/23/21
PROJ APV:	P. DISOMMA	09/23/21
SCG ENG APV:	S. LY	

ENG FILE NO: *

WOA: 89395.000

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DWG CLASS: DWG DIST:

SCALE: 3/16" = 1'-0"

POINT OF RECEIPT
BIOME RULE 45 - COYOTE CANYON
PLOT PLAN

20662 NEWPORT BEACH DR. NEWPORT BEACH

DRAWING NUMBER: 34250-3002-D-PIP

REV B

Appendix B

Equipment Specifications/Standards

Thermal Oxidizer

ARCHAEA ENERGY

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

CONIFER SYSTEMS

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@conifersytems.com
832.370.0358

Your Sales Representative
Cary Allen
Technical Director
callen@conifersystems.com
832.374.5089

TABLE OF CONTENTS

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 CO_2 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-NOx 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 *(return from heating)*
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_2O	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 *(as Hexane, C_6H_{14})*	0.14% or 24.56 lb/hr
- ***Hydrogen Sulfide, H_2S	<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_2O	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 *(as Hexane, C_6H_{14})*	0.00% or 0.00 lb/hr
- ***Hydrogen Sulfide, H_2S	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 Ss = 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 NO_2

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 NOx 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	
Dilution Air Fan	
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
Cooling Air Fan	
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 Bradly 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 Bradly 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 ¼” 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 *(volumetric basis)*	~0.5 Seconds @ 1,800°F and maximum flow rate
Total Combustion Chamber Volume *(mixing zone & combustion zone)*	~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	
Membrane Gas Process Isolation Valve	
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
TSA Return Process Isolation Valve	
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
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JOHN ZINK HAMWORTHY COMBUSTION®

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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% 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: ..... 135.3°F
Flow Rate: ..... 3,000 SCFM (design normalized at 42.7% CH_4)
Minimum: ..... 1,100 SCFM (design normalized at 42.7% CH_4)
Heat Release (HHV): ..... 77.8 MMBTU/hr (design at 42.7% CH_4)
Heat Release (LHV): ..... 69.9 MMBTU/hr (design at 42.7% CH_4)

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% 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: ..... 108.4°F
Flow Rate: ..... 3,000 SCFM (design normalized at 42.7% CH_4)
Minimum: ..... 1,100 SCFM (design normalized at 42.7% CH_4)
Heat Release (HHV): ..... 77.8 MMBTU/hr (design at 42.7% CH_4)
Heat Release (LHV): ..... 69.9 MMBTU/hr (design at 42.7% CH_4)

.

Flare Gas Stream 3

Type: ..... Mode 2B - membrane gas
Staging: ..... both stages
Composition: ..... 70.4% CH_4 +/- 1% (design)
balance CO_2, air, inerts, less than 5% O_2
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% CH_4)
Minimum: ..... 650 SCFM (design normalized at 70.4% CH_4)
Heat Release (HHV): ..... 73.9 MMBTU/hr (design at 70.4% CH_4)
Heat Release (LHV): ..... 66.5 MMBTU/hr (design at 70.4% CH_4)

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% O_2**
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 auxiliary 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 H_2O (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 H_2O
- Outlet Pressure: ..... 15 inches of H_2O
- 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-Vue (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: ..... CH_4 and O_2
- 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, ½" 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%
NOx, lb / MMBTU[(1)]	0.025	0.025
CO, lb / MMBTU[(2)]	0.06	0.05
VOC Destruction Efficiency [(3)]	98%	98%

[(1)] Excludes NOx 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, NOx, 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%
NOx, lb / MMBTU[(1)]	0.06	0.08
CO, lb / MMBTU[(2)]	0.15	0.2
VOC Destruction Efficiency [(3)]	98%	98%

[(1)] Excludes NOx from fixed nitrogen.
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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% 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: ..... 135.3°F
Flow Rate: ..... 3,000 SCFM (design normalized at 42.7% CH_4)
Minimum: ..... 1,100 SCFM (design normalized at 42.7% CH_4)
Heat Release (HHV): ..... 77.8 MMBTU/hr (design at 42.7% CH_4)
Heat Release (LHV): ..... 69.9 MMBTU/hr (design at 42.7% CH_4)

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% 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: ..... 108.4°F
Flow Rate: ..... 3,000 SCFM (design normalized at 42.7% CH_4)
Minimum: ..... 1,100 SCFM (design normalized at 42.7% CH_4)
Heat Release (HHV): ..... 77.8 MMBTU/hr (design at 42.7% CH_4)
Heat Release (LHV): ..... 69.9 MMBTU/hr (design at 42.7% CH_4)

.

Flare Gas Stream 3

Type: ..... Mode 2B - membrane gas
Staging: ..... both stages
Composition: ..... 70.4% CH_4 +/- 1% (design)
balance CO_2, air, inerts, less than 5% O_2
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% CH_4)
Minimum: ..... 650 SCFM (design normalized at 70.4% CH_4)
Heat Release (HHV): ..... 73.9 MMBTU/hr (design at 70.4% CH_4)
Heat Release (LHV): ..... 66.5 MMBTU/hr (design at 70.4% CH_4)

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% O_2**
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 auxiliary 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 H_2O (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 H_2O
- Outlet Pressure: ..... 15 inches of H_2O
- 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-Vue (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: ..... CH_4 and O_2
- 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, ½" 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%
NOx, lb / MMBTU[(1)]	0.025	0.025
CO, lb / MMBTU[(2)]	0.06	0.05
VOC Destruction Efficiency [(3)]	98%	98%

[(1)] Excludes NOx 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.

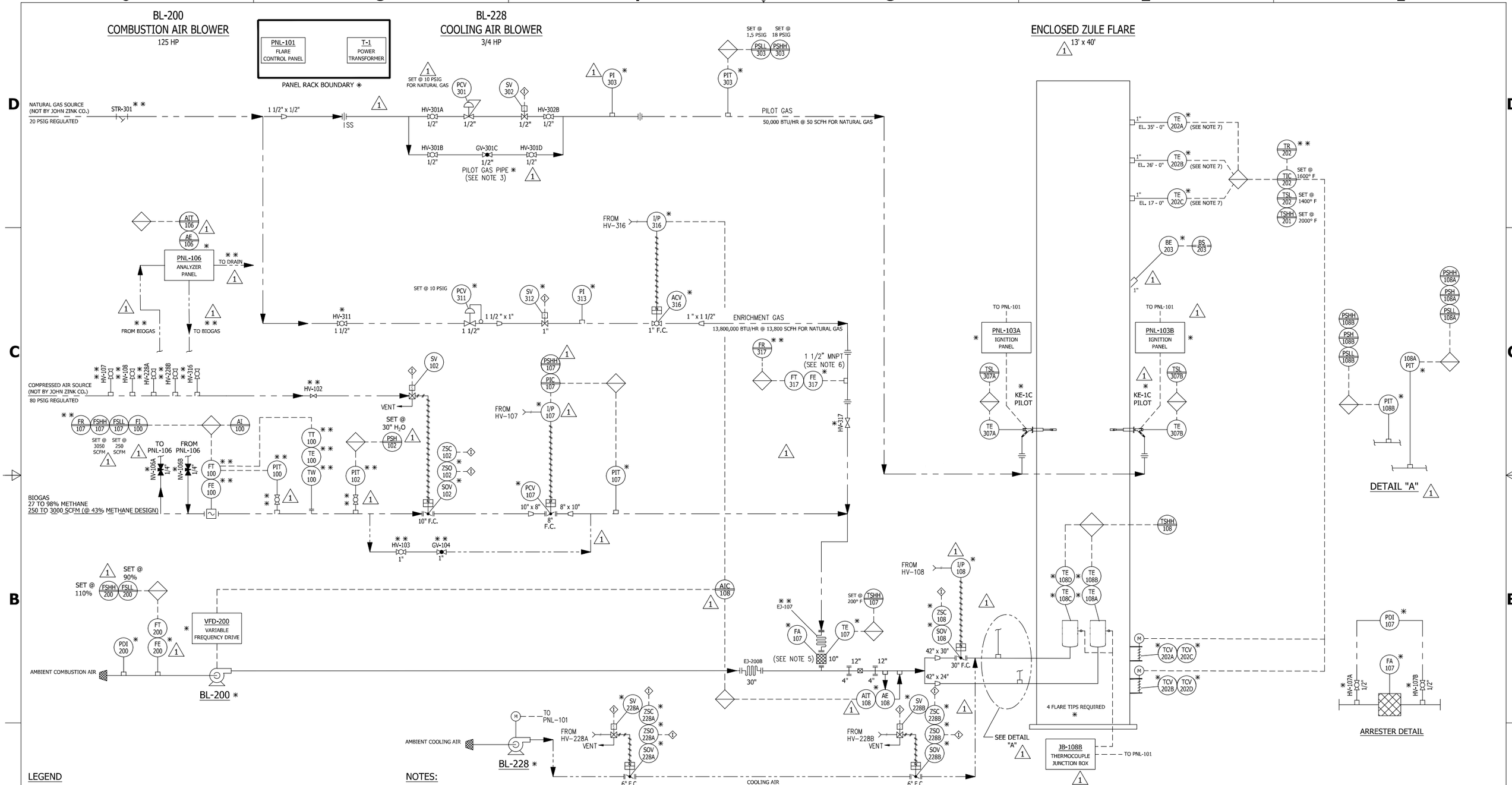
NOTE: *Expected emissions are based on field tests of operating units and the higher heating value (HHV) of the gas. Destruction efficiency, NOx, and CO emissions shown are valid for combustion of specified gas only. Expected emissions are not guaranteed unless expressly stated elsewhere in this proposal.*

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%
NOx, lb / MMBTU[(1)]	0.06	0.08
CO, lb / MMBTU[(2)]	0.15	0.2
VOC Destruction Efficiency [(3)]	98%	98%

[(1)] Excludes NOx 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, NOx, 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
- REMOTE PANEL MOUNTED NORMALLY ACCESSIBLE TO OPERATOR
- LOCAL PANEL MOUNTED NORMALLY ACCESSIBLE TO OPERATOR
- REMOTE SUB-PANEL MOUNTED NORMALLY INACCESSIBLE TO OPERATOR
- LOCAL SUB-PANEL MOUNTED NORMALLY INACCESSIBLE TO OPERATOR
- LOCATED IN PROCESSOR (PLC)
- INTERLOCK TO/FROM CONTROL PANEL.
- PIPE & FITTINGS BY OTHERS (NOT BY KOCH ENGINEERED SOLUTIONS)
- ELECTRICAL INTERCONNECTIONS
- INSTRUMENT CONTROL AIR LINE
- PIPE & FITTINGS BY KOCH ENGINEERED SOLUTIONS

NOTES:

1. ✳ SUPPLIED BY JOHN ZINK CO. AND SHIPPED LOOSE FOR FIELD INSTALLATION
   ✳✳ SUPPLIED BY OTHERS (NOT BY JOHN ZINK CO.)
2. ELECTRICAL AREA CLASSIFICATION: NON-HAZARDOUS: CLASS 1, DIVISION 2 GROUP D, (FLARE ONLY).
3. MOUNT PILOT GAS PIPE WITHIN 5 FT OF FLARE INLET FLANGE.
4. THERMOCOUPLE WIRE AND IGNITION WIRE SUPPLIED BY JOHN ZINK CO. AND SHIPPED LOOSE FOR FIELD INSTALLATION.
5. LOCATE ARRESTER AT FLANGE INLET FLANGE WITH 5 INTERNAL PIPE DIAMETERS OF STRAIGHT UNDISTURBED FLOW UPSTREAM.
6. LOCATE FLOW ELEMENT WITH 10 INTERNAL PIPE DIAMETERS OF STRAIGHT UNDISTURBED FLOW UPSTREAM AND 5 INTERNAL PIPE DIAMETERS DOWNSTREAM.
7. SELECTION OF TEMPERATURE CONTROL THERMOCOUPLE (TE-202) DEPENDS ON METHANE CONTENT AND GAS FLOW. IMPROPER OPERATION MAY RESULT IF INCORRECT ELEVATION IS SELECTED.
8. APPLY UNDERWRITERS LABORATORIES LABEL (UL 508A) TO EACH PANEL PNL-101.

REV	DESCRIPTION	DWN	CHK	APPV	DATE
1	PER CUSTOMER COMMENT	LMS	TM	BMP	06NOV23
0	INITIAL RELEASE	ADH	TM	BMP	14AUG23

FOR PARTS AND SERVICE: WWW.JOHNZINKHAMWORTHY.COM
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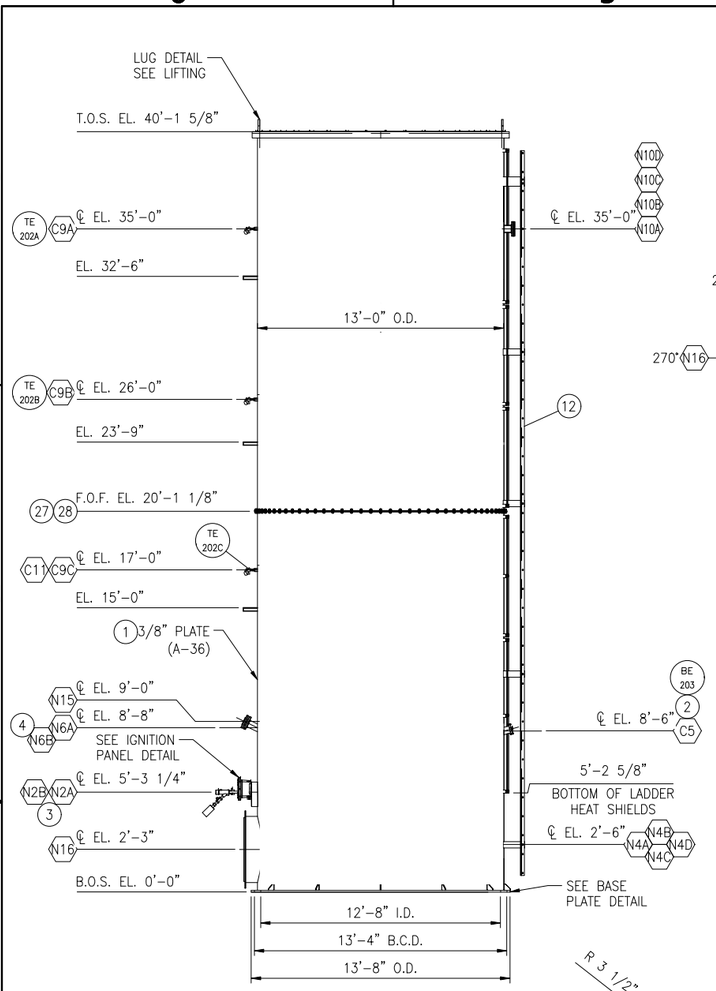
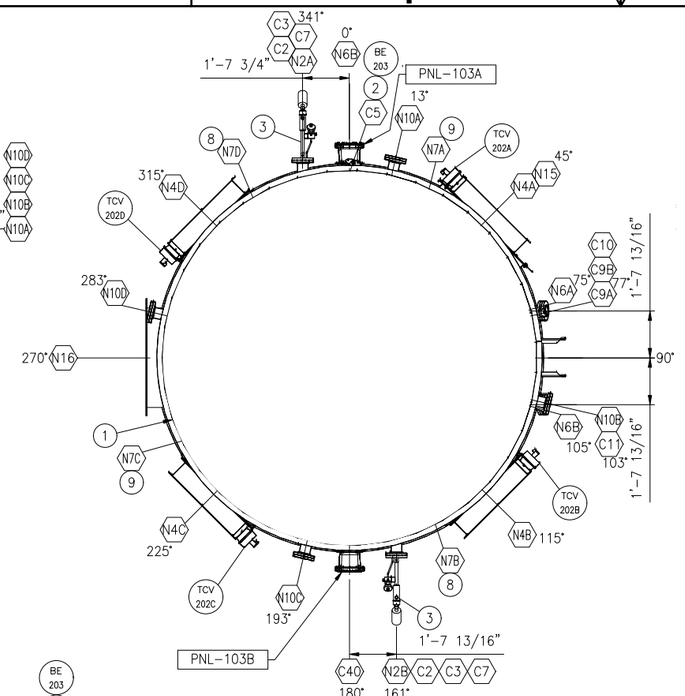
JOHN ZINK HAMWORTHY COMBUSTION®
A KOCH ENGINEERED SOLUTIONS COMPANY
JOHN ZINK COMPANY, LLC

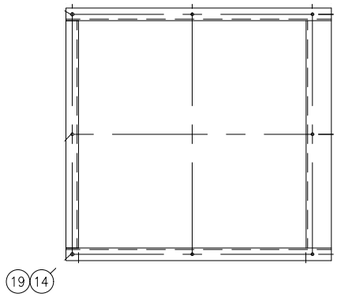
FOR: ARCHAEA ENERGY	TITLE: PIPING AND INSTRUMENT DIAGRAM ENCLOSED ZULE® BIOGAS FLARE
USER: COYOTE CANYON LANDFILL	
JOBSITE: NEWPORT BEACH, CA	
	CUSTOMER TAG: / ITEM NO:
PO NO: HLD-11156	
PROJECT NO: F00008644	THIRD ANGLE: / DRAWING NUMBER: K00209629-BG00-001-1500-001 / REV 1
ASSET NO: K00209629	



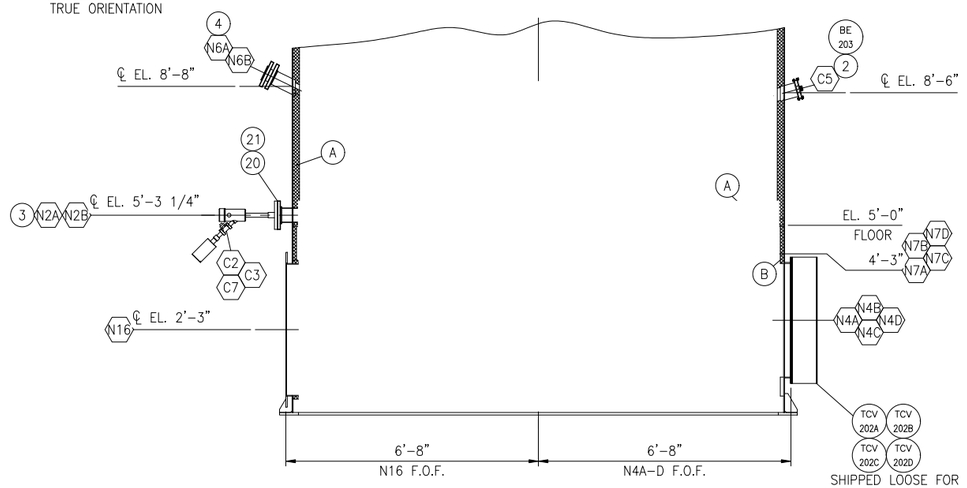
ELEVATION
NOT TRUE ORIENTATION



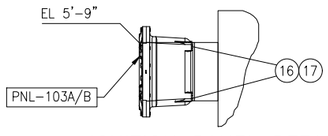
PLAN VIEW
TRUE ORIENTATION



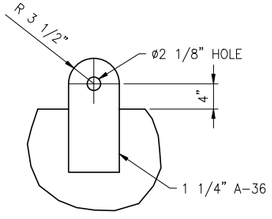
HINGED DAMPER FRAME DETAIL



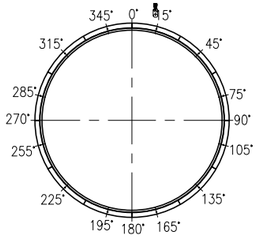
PARTIAL SECTIONAL ELEVATION
NOT TRUE ORIENTATION



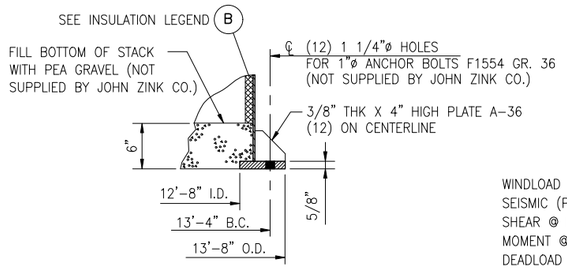
IGNITION PANEL DETAIL
SHIP LOOSE FOR FIELD INSTALLATION



LIFTING LUG DETAIL
(2 REQ'D. LOCATED AT 45° AND 225°)
(NOTE: CUT OFF LUGS AFTER STACK ERECTION)



FOUNDATION BOLT PATTERN



BASE PLATE DETAIL

GENERAL NOTES
1. TAG NUMBERS TO BE PRECEDED BY JOHN ZINK ASSET NUMBER.
2. FLARE ASSEMBLY IS NOT TO BE USED AS AN ANCHOR POINT FOR CUSTOMER PIPING.
3. PRE-TENSION ANCHOR BOLTS BY THE "TURN OF THE NUT" METHOD/AISC.
4. BOLT HOLES TO STRADDLE NORMAL CENTER LINES UNLESS NOTED.

DESIGN DATA

WINDLOAD (PER ASCE 7-10, EXP. C)	115 M.P.H.
SEISMIC (PER IBC-2012)	SITE CLASS C OR D
SHEAR @ BASE	10 Kip
MOMENT @ BASE	250 K-FT
DEADLOAD	34,530 LB
SHELL DESIGN TEMPERATURE	500° F
CORROSION ALLOWANCE	0.0

PARTS LIST

ITEM	QTY	MATERIAL DESCRIPTION	MK: NO	PART NO	MATERIAL
1	1	ENCLOSED ZULE FLARE	BGBF-001-7001-0		
2	1	SWIVEL SCANNER MOUNT ASSEMBLY	ST12431-1	1415604	
3	2	KE-1C PILOT ASSEMBLY	BGBI-001-3002-0		
4	2	3 1/2" SIGHT PORT	D-ST-1275-1	0050054	
5	4	FLAME BRIDGE	BGBF-001-7025-0		310 SS
6	4	24" BOTTOM FLARE TIP	ST12148-1	1163802	304 SS
7	4	24" TOP FLARE TIP	ST12150-1	1297258	304 SS
8	2	PILOT CANISTER ASSEMBLY	BGBF-001-7024-0		CERAMIC
9	2	CANISTER ASSEMBLY	BGBF-001-7024-1	1245924	CERAMIC
10	8	GASKET: ROPE 24" x 1/16" THK.		-	NON-ASB
11	1	MANIFOLD EXTENSION	BGBF-001-7001-2		
12	1	GALVANIZED LADDER WITH PERSONNEL PROTECTION	ST11907-1	-	
		CLIMBING SAFETY SYSTEM			
13	1	COOLING AIR BLOWER TRANSITION	CMDU-001-7012-2		A-36
14	8	BOLT, HEX HD: 3/8" x 1 1/4" LG (PLATED)		BLH-109J003C0125	A-307
15	24	NUT, REG HX: 3/8-11NC (PLATED)		0008546	A-307
16	8	BOLT, HEX HD: 1/4" x 1" LG (PLATED)		BLH-109J002C010	A-307
17	8	NUT, REG HEX: 1/4-20NC (PLATED)		0008544	A-307
18	24	SCREW, FLAT HD. SL: 3/8-NC x 1" LG. (PLATED)		0002999	A-307
19	8	WING NUT: 3/8-16NC (PLATED)		0008563	A-307
20	16	BOLT, HEX HD: 5/8-NC x 4" LG (PLATED)		BLH-109J006C040	A-307
21	144	NUT, REG HX: 5/8-11NC (PLATED)		0008548	A-307

NOZZLE LEGEND

MK	QTY	DESCRIPTION
N1	1	GAS CONNECTION: FLG 10" 150# FF
N2A,B	2	PILOT MTG CONN: FLG 4" 150# RF
N3	1	COMBUSTION AIR INLET: 24" (SHEET 2)
N4A-D	4	HINGED DAMPER FRAME - SEE DETAIL
N6A,B	2	SIGHT PORT: 3 1/2" FLANGED
N7A-D	4	FLARE TIP CONN: 24" PLATE FLANGE
N8	4	COOLING AIR BLOWER INLET: FLG 6" 150# RF
N10A-D	4	SAMPLE PORT CONN: 4" RF WITH BLIND
N15	1	MANWAY: 48" x 48" (SEE DETAIL SHEET 2)
N16	1	MANIFOLD EXTENSION: 42" PLATE FLANGE
N17A	1	ACCESS: FLG 24" 150# RF WITH BLIND FLG (SHEET 2)
N17B,C	2	ACCESS: FLG 12" 150# RF WITH BLIND FLG (SHEET 2)
N18A,B	2	DRAIN: FLG 4" 150# RF WITH BLIND (SHEET 2)
C2	2	PILOT GAS CONN: 1/2" FNPT
C3	2	PILOT CONDUIT CONN: 1/2" FNPT
C5	1	SCANNER CONN: 1" MNPT
C7	4	PILOT THERMOCOUPLE CONN: 3/4" FNPT
C9A-11	4	THERMOCOUPLE CONN: 1" FNPT (C11 WITH PLUG)
C18A-D	4	PRESSURE CONN: 1" FNPT WITH PLUG
C19A-B	2	ANALYZER CONN: 3/4" FNPT
C40	1	THERMOCOUPLE WIRE: 2" COUPLING FNPT
C41A-D	4	THERMOCOUPLE CONN: 1/2" FNPT

LIFTING NOTES
A: MAIN CRANE AT TOP REQUIRES SPREADER BAR, (NOT SUPPLIED BY JOHN ZINK CO.)
B: LIFTING LUGS DESIGNED FOR 25 TON CROSBY ANCHOR SHACKLE AND VERTICAL SLINGS.
C. TAILING CRANE AT BOTTOM REQUIRES SPREADER BAR (NOT SUPPLIED BY JOHN ZINK CO.)

INSULATION LEGEND
A: (1) OVERLAPPING LAYER OF 1" THICK 8 LB DENSITY, 2300° F. BACKED WITH (1) LAYER, 1" THICK 6 LB DENSITY, 2300° F. ON INCONEL PINS AND KEEPERS.
B: (1) OVERLAPPING LAYER OF 1" THICK 6 LB DENSITY, 2300° F. ON INCONEL PINS AND KEEPERS.
C: AFTER INSTALLING INSULATION, APPLY INORGANIC SODIUM SILICATE RIGIDIZER SOLUTION TO ALL EXPOSED SURFACES ABOVE FLOOR.

SHT: 1	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

GENERAL TOLERANCE LEGEND (UNLESS NOTED OTHERWISE)

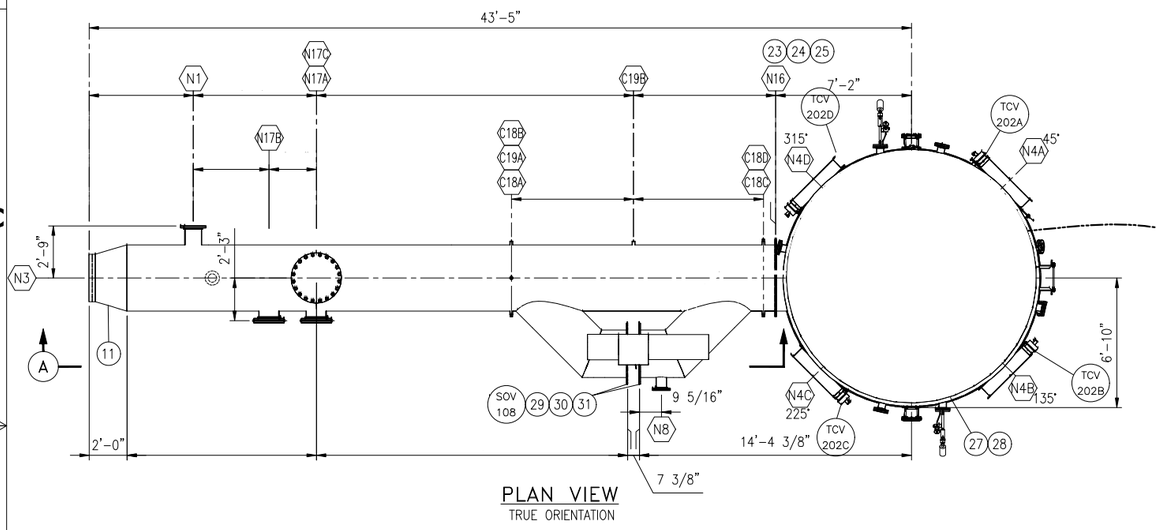
SHEET METAL (FLAT)	±0.01563"/0.4mm	SAWING:	±0.0625"/1.6mm
SHEET METAL (FORMED)	±0.0625"/1.6mm/1°	PIPING CONNECTIONS (X,Y,Z):	±0.25"/6mm
TILE:	±0.125"/3mm	PIPING CONNECTIONS (FLG ROTATION):	±0.5°
MACHINING:	±0.01563"/0.4mm	PIPING CONNECTIONS (FLG FACE TILT):	±0.5°
GENERAL ASSEMBLY:	±0.375"/10mm	SPOOL ASSEMBLY:	see MTOL 1006

JOHN ZINK HAMWORTHY COMBUSTION

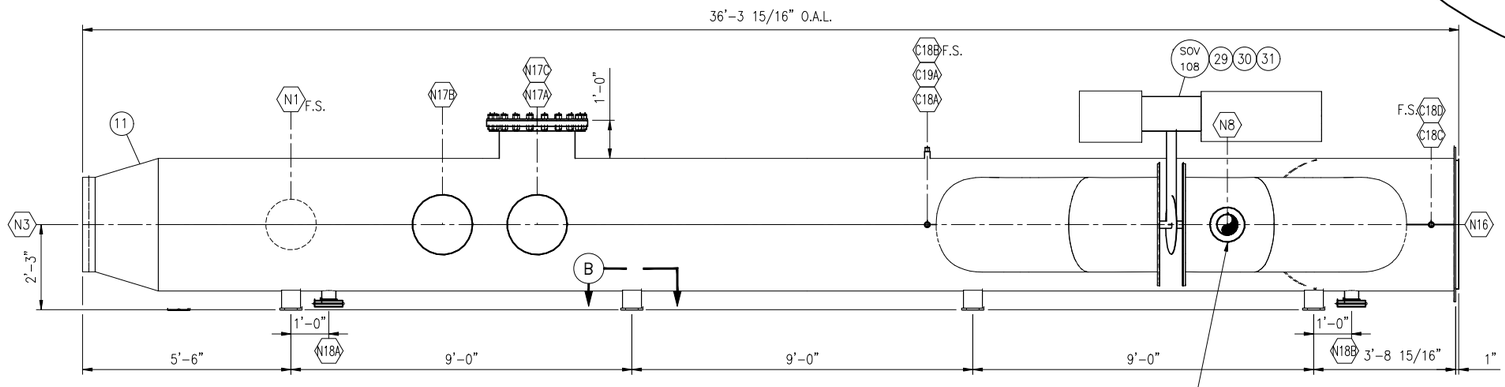
JOHN ZINK COMPANY, LLC

FOR: ARCHAEA ENERGY	TITLE: ENCLOSED ZULE FLARE 13'-0" O.D. X 40' H.
USER: COYOTE CANYON LANDFILL	
JOBSITE: NEWPORT BEACH, CA	
PO NO: HLD-11156	CUSTOMER TAG: / ITEM NO:
PROJECT NO: F00008644	DRAWING NUMBER: K00209629-BGBF-001-3001-001 / REV 1
ASSET NO: K00209629	

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

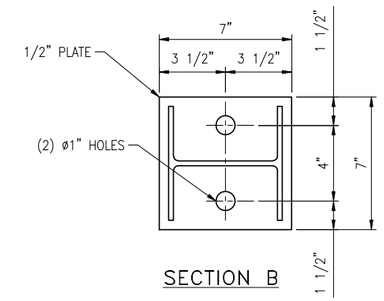


PLAN VIEW
TRUE ORIENTATION



ELEVATION VIEW "A"
MIXING CHAMBERMK: BGBF-001-7001-2

COOLING AIR BLOWER TRANSITION
MK: CMDU-001-7012-2



SECTION B

SHT: 2 of 2

REV	DESCRIPTION	DWN	CHK	APPV	DATE
1	REVISED PER CUSTOMER CHANGE ORDER	MWR	TM	JPR	10 NOV 23
0	INITIAL RELEASE	MWR	TM	JPR	22 AUG 23

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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MACHINING:	±0.01563"/0.4mm	PIPING CONNECTIONS (FLG FACE TILT):	±0.5°
GENERAL ASSEMBLY:	±0.375"/10mm	SPOOL ASSEMBLY:	see MTOL 1006

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JOHN ZINK COMPANY, LLC

FOR: ARCHAEA ENERGY	TITLE: ENCLOSED ZULE FLARE 13'-0" O.D. X 40' H.
USER: COYOTE CANYON LANDFILL	
JOBSITE: NEWPORT BEACH, CA	
	CUSTOMER TAG: / ITEM NO:
PO NO: HLD-11156	
PROJECT NO: F00008644	DRAWING NUMBER: K00209629-BGBF-001-3001-002 REV 1
ASSET NO: K00209629	

H2S Scrubber

Guild Associates, Inc.

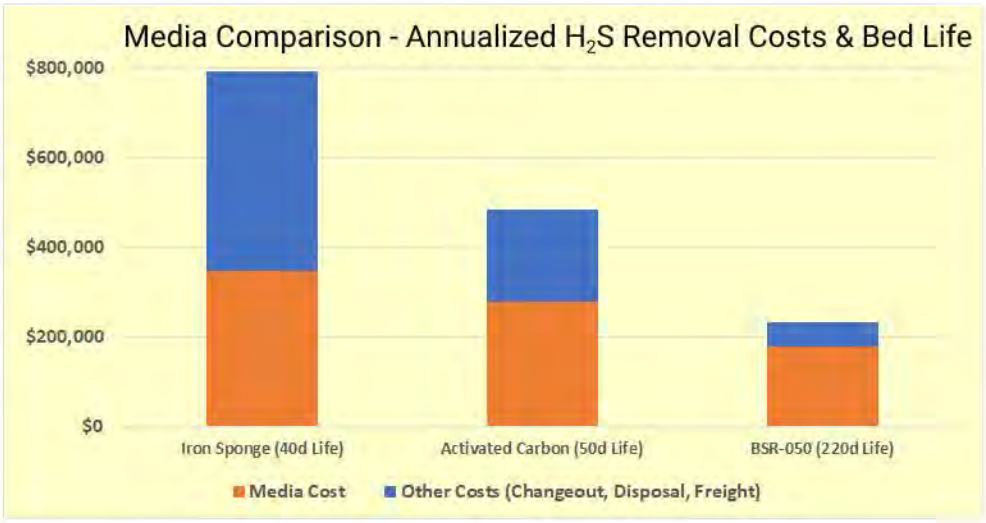
BSR-050 Hydrogen Sulfide Removal Media

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 H_2S 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 H_2S 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 H_2S 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 H_2S 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 factility 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.

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.

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

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

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:

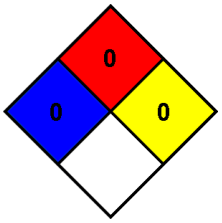
: 09/18/2017

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

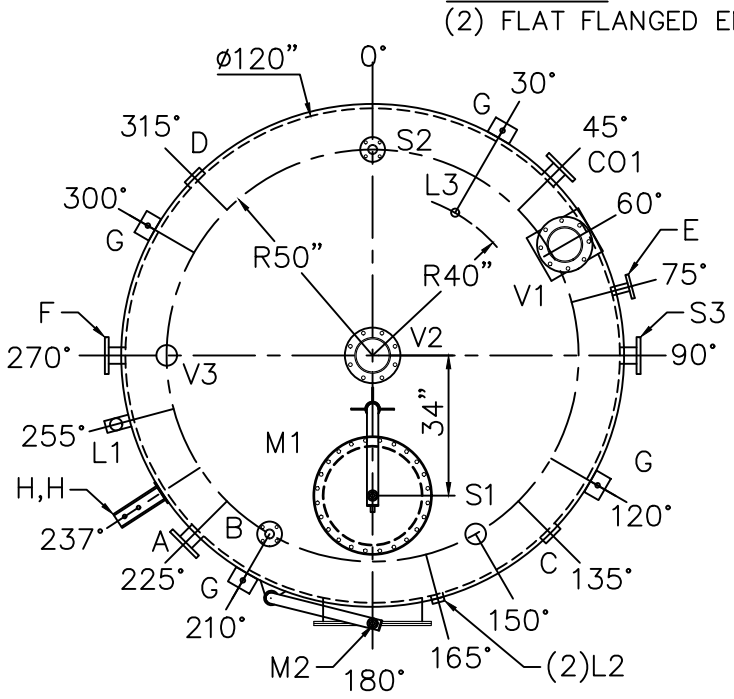
TOUCH UP OF FINISHED PAINT IS REQUIRED BY INSTALLATION CONTRACTOR. TOUCH UP PAINT SHIPPED WITH TANK.

NOTES

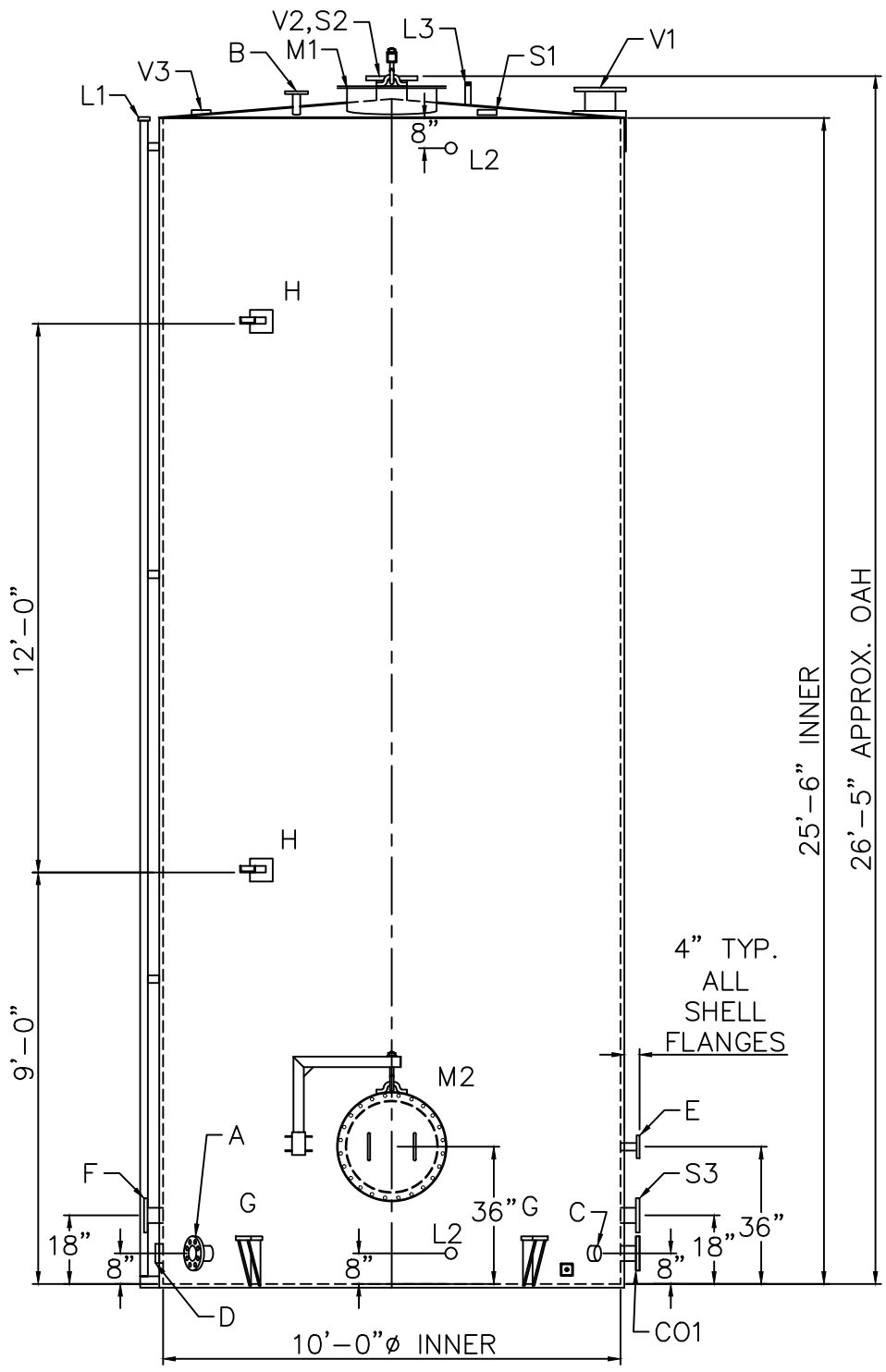
1. SEE PLAN VIEW FOR TRUE ORIENTATION AND LOCATION OF FITTING
2. LIFTING LUGS FOR UNLOADING UNIT & STANDING UNIT UPRIGHT TO BE PLACED AS NEEDED BY FABRICATION SHOP
3. A 3x3x¼" STEEL GROUNDING LUG WITH A ⅝"ø HOLE IN CENTER TO BE PLACED ON SHELL AT BOTTOM OF TANK IN LINE WITH LIFTING LUGS

SHIPPING LUGS AS NEEDED

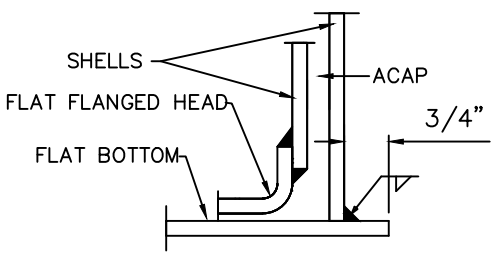
SHIP LOOSE
(2) FLAT FLANGED EMERGENCY VENTS 8 OZ.



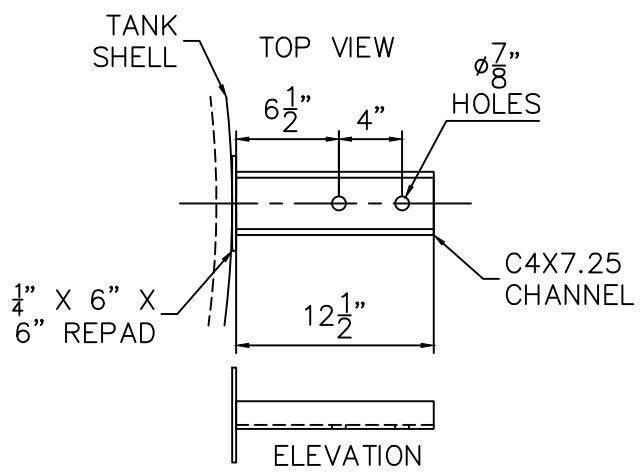
PLAN VIEW



ELEVATION VIEW



BOTTOM JOINT DETAIL



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, 5/16"FLANGE, ¼"NECK, 7/16"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

HIGHLAND TANK & MFG CO.

Highland Tank

UNLESS NOTED, TOLERANCES ARE +/– 1"

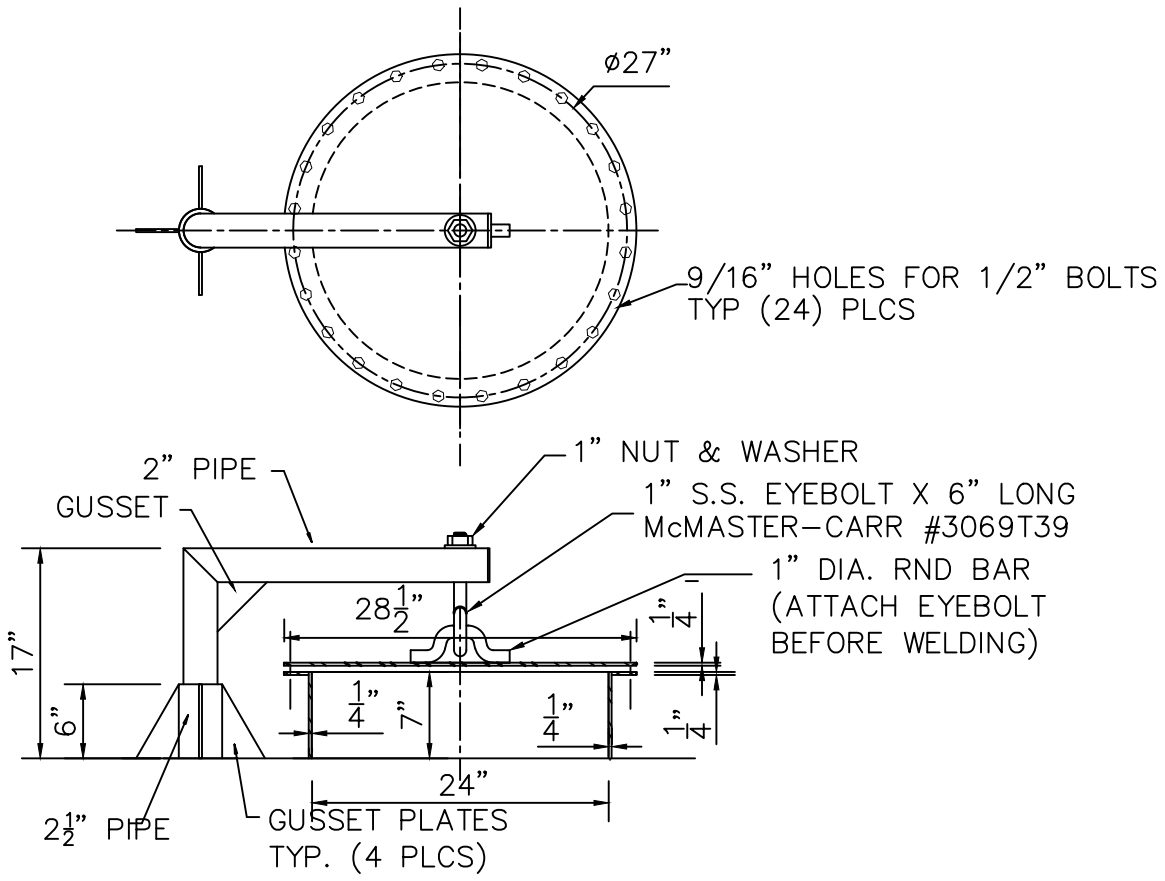
15,000 GAL 120"ø DW VERTICAL

QUOTE NO: 544212

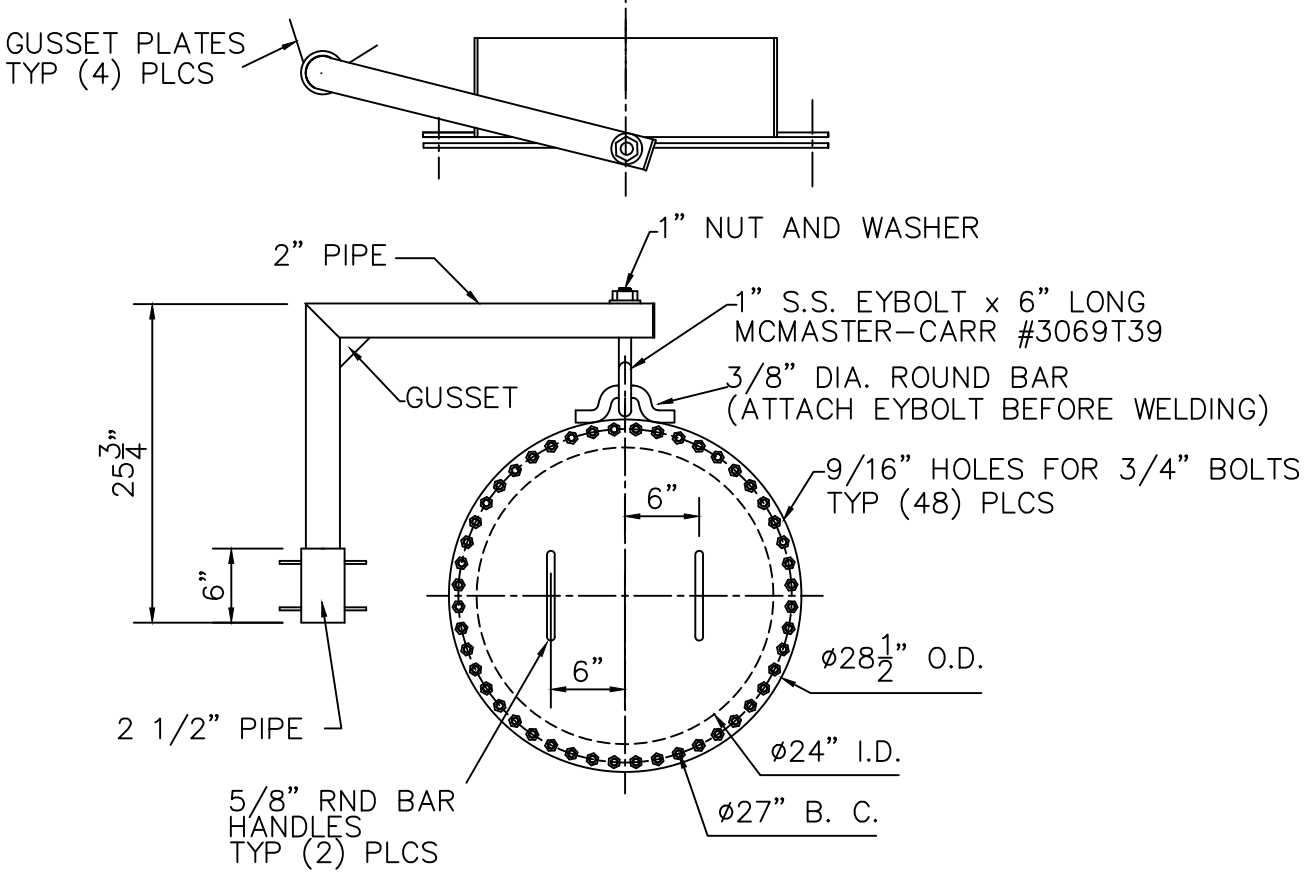
CHK'D BY:

SCALE:	DATE:	DWG. BY:	DWG. NO.:
1/4"=1'-0"	8/16/23	002	124756–1

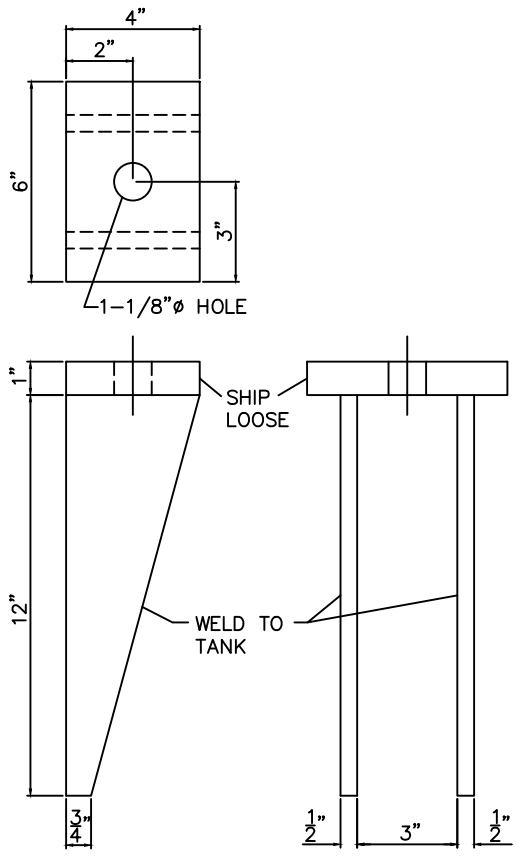
TOUCH UP OF FINISHED PAINT IS REQUIRED BY INSTALLATION CONTRACTOR. TOUCH UP PAINT SHIPPED WITH TANK.



ROOF DAVIT DETAIL
(ITEM-M1)



SHELL MANWAY DAVIT DETAIL
(ITEM-M2)



HOLD DOWN LUG AVLUGB

DRAWING 2 OF 2
SHEET-1 TANK DETAILS
SHEET-2 DAVIT, HOLD DOWN
LUG DETAILS

Highland Tank

UNLESS NOTED, TOLERANCES ARE +/- 1"

15,000 GAL 120"ø DW VERTICAL

QUOTE NO: 544212

CHK'D BY:

SCALE:	DATE:	DWG. BY:	DWG. NO.:
1/4"=1'-0"	8/16/23	002	124756-2

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/ft^3.
- 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

Emergency Backup Generator

GENERAC | INDUSTRIAL POWER

STATEMENT OF EXHAUST EMISSIONS
2024 Spark-Ignited Generators
Industrial Series - SCAQMD Certified, Stationary Emergency

	Model	Engine (L)	Engine Emissions Designation	EPA Engine Family	Fuel	Catalyst Required	SCAQMD CEP #	EPA Certificate #	Grams/bhp-hr.				Rated RPM	BHP	Fuel Flow (lb/hr)
									THC	NMHC	NOx	CO			
Small Spark Ignited Engine (SSIE) Small Off-Road Engines (SORE)	QTA25	2.4	A02.4GCN029A0	RGNXB02.4MDI	NG	No	Not Required	RGNXB02.4MDI-046	1.40	N/A	4.32	85.00	1,800	38	16.52
	QTA25	2.4	A02.4GCV032A0	RGNXB02.4MDI	LPG			RGNXB02.4MDI-046	N/A	2.11	2.33	92.66	1,800	43	17.59
Large Spark Ignited Engines (LSIE)	SG035, 40, 45, 50NA	4.5	C04.5SPN054A0	RGNXB04.5MJJ	NG		618432	RGNXB04.5MJJ-043	0.20	0.02	0.05	0.92	1,800	76	23.7
	SG035, 40, 45, 50NA	4.5	C04.5SPV054A0	RGNXB04.5MJJ	LPG		618432	RGNXB04.5MJJ-043	0.02	0.01	0.17	0.13	1,800	76	26
	SG050T, 60, 70, 80	4.5	C04.5SPN099A0	RGNXB04.5MJJ	NG		623270	RGNXB04.5MJJ-043	0.11	0.01	0.17	0.16	1,800	132	43.68
	SG050T, 60, 70, 80	4.5	C04.5SPV099A0	RRGNXB04.5MJJ	LPG		623270	RGNXB04.5MJJ-043	0.03	N/A	0.13	0.20	1,800	132	46.61
	SG080, 100	9.0	E08.9GSN111A1	RGNXB08.92O1	NG		598551	RGNXB08.92O1-047	0.18	0.00	0.01	0.25	1,800	153	53.1
	SG080, 100 (LPF)	9.0	E08.9MSN116A1	RGNXB08.92O1	NG		598558	RGNXB08.92O1-047	0.11	0.00	0.12	0.03	1,800	153	53.24
	SG080, 100	9.0	F08.9GSV106A0	RGNXB08.92O2	LPV		642064	RGNXB08.92O2-028	0.01	N/A	0.21	0.22	1,800	156	54.36
	SG080, 100	9.0	F08.9GSV106A0	RGNXB08.92O2	LPL		642064	RGNXB08.92O2-028	0.03	N/A	0.00	0.36	1,800	156	55.27
	SG130, 150	9.0	E08.9MSN170A0	RGNXB08.92O3	NG		618434	RGNXB08.92O3-029	0.14	0.00	0.10	0.74	1,800	229	86.37
	SG130, 150	9.0	F08.9MSV169A0	RGNXB08.92O4	LPV		606652	RGNXB08.92O4-030	0.02	N/A	0.03	0.09	1,800	230	85.37
	SG175	14.2	E14.2MSN227A3	RGNXB14.22C1	NG		618436	RGNXB14.22C1-031	0.24	0.00	0.12	0.21	1,800	304	101.16
	SG/MG150, 200	14.2	E14.2MSN227A3	RGNXB14.22C1	NG		618436	RGNXB14.22C1-031	0.24	0.00	0.12	0.21	1,800	304	101.16
	SG230, 250	14.2	E14.2MSN279A3	RGNXB14.22C1	NG	Yes	618438	RGNXB14.22C1-031	0.15	0.00	0.35	0.41	1,800	374	141.71
	SG/MG250	14.2	E14.2MSN279A3	RGNXB14.22C1	NG		618438	RGNXB14.22C1-031	0.15	0.00	0.35	0.41	1,800	374	141.71
	SG275,300	14.2	E14.2MSN343A3	RGNXB14.22C1	NG		618440	RGNXB14.22C1-031	0.03	0.00	0.04	0.32	1,800	460	140.33
	MG300	14.2	E14.2MSN343A3	RGNXB14.22C1	NG		618440	RGNXB14.22C1-031	0.03	0.00	0.04	0.32	1,800	460	140.33
	SG/MG350, 400	21.9	E21.9MSN474A4	RGNXB21.92C1	NG		618441	RGNXB21.92C1-032	0.07	0.00	0.26	0.21	1,800	636	176
	SG/MG350,400 (LPF)	21.9	E21.9MSN474A5	RGNXB21.92C1	NG		618442	RGNXB21.92C1-032	0.30	0.00	0.06	0.12	1,800	636	214
	SG/MG400,450	21.9	E21.9MSN0502A4	RGNXB21.92C3	NG		618441	RGNXB21.92C3-033	0.08	0.00	0.06	0.10	1,800	673	209
	SG/MG400,450 (LPF)	21.9	E21.9MSN0502A5	RGNXB21.92C3	NG		618441	RGNXB21.92C3-033	0.19	0.00	0.05	0.17	1,800	673	224
	SG/MG500	25.8	E25.8MSN580A4	RGNXB21.92C3	NG		593192	RGNXB21.92C3-034	0.16	0.00	0.03	0.60	1,800	778	280
	SG/MG500 (LPF)	25.8	E25.8MSN580A5	RGNXB25.82C1	NG		606658	RGNXB25.82C1-034	0.19	0.00	0.06	0.57	1,800	778	280
	SG/MG625	33.9	E33.9MSN677A0	RGNXB33.92C1	NG		601949	RGNXB33.92C1-035	0.13	0.00	0.01	0.22	1,800	909	325
	SG/MG750	33.9	E33.9MSN803A0	RGNXB33.92C1	NG		606655	RGNXB33.92C1-035	0.18	0.00	0.15	0.92	1,800	1077	417
	SG/MG1000	49.0	E49.0ASN1100A0	RGNXB49.02C1	NG		625240	RGNXB49.02C1-036	0.11	0.00	0.03	0.65	1,800	1475	427

NG: Natural Gas
LPV: Liquid Propane Vapor
LPL: Liquid Propane Liquid

LPG: Liquid Propane Vapor or Liquid Propane Liquid
LPF: Units with Optional Low Pressure Fuel System
Refer to Page 2 for Definitions and Advisory Notes

N/A: Not Applicable
Engine BHP is taken from Engine Emissions Certification Results

Part No. A0005031827
Rev. C 3/5/24

STATEMENT OF EXHAUST EMISSIONS
2024 Spark-Ignited Generators
Industrial Series - SCAQMD Certified, Stationary Emergency

2024 EPA SPARK-IGNITED EXHAUST EMISSIONS DATA

Effective since 2009, the EPA has implemented exhaust emissions regulations on stationary spark-ignited (gaseous) engine generators for emergency applications. All Generac spark-ignited gensets, including SG, MG, QTA, QT and RG series gensets that are built with engines manufactured in 2009 and later meet the requirements of 40CFR part 60 subpart JJJJ and are EPA certified. These generator sets are labeled as EPA Certified with decals affixed to the engines' valve covers.

The attached documents summarize the general information relevant to EPA certification on these generator sets. This information can be used for submittal data and for permitting purposes, if required. These documents include the following information:

EPA Engine Family
The EPA Engine Family is assigned by the Manufacturer under EPA guidelines for certification purposes and appears on the EPA certificate.

Catalyst Required
Indicates whether a three-way catalyst (TWC) and Air/Fuel Ratio control system are required on the generator set to meet EPA certification requirements. Generally, units rated 80kW and smaller do not require a TWC to meet EPA certification requirements. Please note that some units that do not require a TWC to meet EPA requirements do need one if the California SCAQMD option is selected. Please see "California SCAQMD" below for additional information on this option.

Combination Catalyst or Separate Catalyst
SG and MG series generator sets typically utilize a single combination catalyst/silencer as part of meeting EPA certification requirements. Many QT and RG series generator sets use the same engines as SG series units, but have different exhaust configurations that require the use of conventional silencers with additional separate catalysts installed.

EPA Certificate Number
Upon certification by the EPA, a Certificate Number is assigned by the EPA.

Emissions Actuals - Grams/bhp-hr
Actual exhaust emission data for Total Hydrocarbons (THC), Nitrogen Oxides (NOx) and Carbon Monoxide (CO) that were submitted to EPA and are official data of record for certification. This data can be used for permitting if necessary. Values are expressed in grams per brake horsepower-hour; to convert to grams/kW-hr, multiply by 1.341. Please see advisory notes below for further information.

California Units, SCAQMD CEP Number
A separate low-emissions option is available on many Generac gaseous-fueled generator sets to comply with the more stringent South Coast Air Quality Management District requirements that are recognized in certain areas in California. Gensets that include this option are also EPA Certified.

General Advisory Note to Dealers
The information provided here is proprietary to Generac and its' authorized dealers. This information may only be disseminated upon request, to regulatory governmental bodies for emissions permitting purposes or to specifying organizations as submittal data when expressly required by project specifications, and shall remain confidential and not open to public viewing. This information is not intended for compilation or sales purposes and may not be used as such, nor may it be reproduced without the expressed written permission of Generac Power Systems, Inc.

Advisory Notes on Emissions Actuals
- The stated values are actual exhaust emission test measurements obtained from units representative of the generator types and engines described.
- Values are official data of record as submitted to the EPA and SCAQMD for certification purposes. Testing was conducted in accordance with prevailing EPA protocols, which are typically accepted by SCAQMD and other regional authorities.
- No emission values provided are to be construed as guarantees of emissions levels for any given Generac generator unit.
- Generac Power Systems, Inc. reserves the right to revise this information without prior notice.
- Consult state and local regulatory agencies for specific permitting requirements.
- The emissions performance data supplied by the equipment manufacturer is only one element required toward completion of the permitting and installation process. State and local regulations may vary on a case-by-case basis and must be consulted by the permit applicant/equipment owner prior to equipment purchase or installation. The data supplied herein by Generac Power Systems, Inc. cannot be construed as a guarantee of installability of the generator set.
- The emission values provided are the result of multi-mode, weighted scale testing in accordance with EPA testing regulations, and may not be representative of any specific load point.
- The emission values provided are not to be construed as emission limits.

SG200 | 14.2L | 200 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency and Non-Emergency

GENERAC | INDUSTRIAL POWER

DEMAND RESPONSE READY

Standby Power Rating
200 kW, 250 kVA, 60 Hz

Demand Response Rating
200 kW, 250 kVA, 60 Hz

Prime Power Rating
180 kW, 225 kVA, 60 Hz

ISO 9001:2008

USA ENGINEERED & BUILT* *Assembled in the USA using domestic and foreign parts

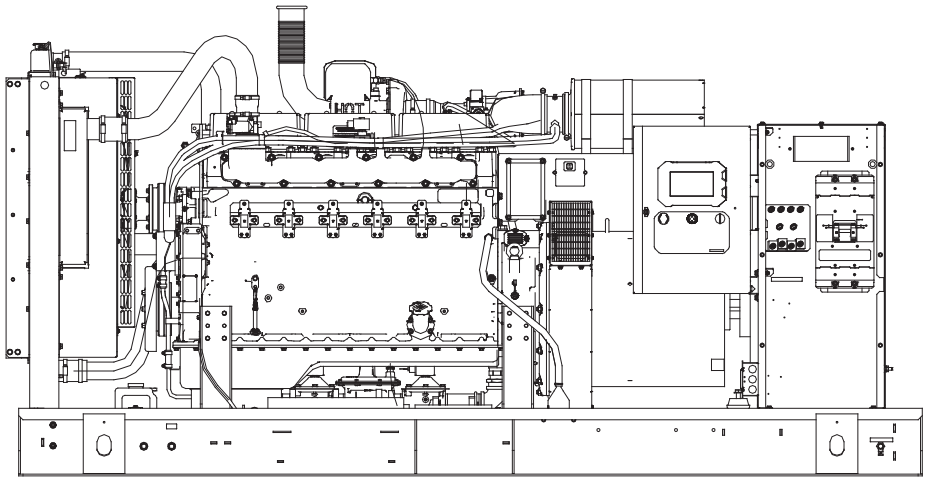


Image used for illustration purposes only

Codes and Standards

Not all codes and standards apply to all configurations. Contact factory for details.

- UL2200, UL6200, UL1236, UL489
- CSA C22.2
- BS5514 and DIN 6271
- SAE J1349
- NFPA 37, 70, 99, 110
- NEC700, 701, 702, 708
- ISO 3046, 7637, 8528, 9001
- NEMA ICS10, MG1, 250, ICS6, AB1
- ANSI C62.41
- IBC 2009, CBC 2010, IBC 2012, ASCE 7-05, ASCE 7-10, ICC-ES AC-156 (2012)

Powering Ahead

Generac ensures superior quality by designing and manufacturing most of its generator components, such as alternators, enclosures, control systems and communications software. Generac also makes its own spark-ignited engines, and you'll find them on every Generac gaseous-fueled generator. We engineer and manufacture them from the block up — all at our facilities throughout Wisconsin. Applying natural gas and LP-fueled engines to generators requires advanced engineering expertise to ensure reliability, durability and necessary performance. By designing specifically for these dry, hotter-burning fuels, the engines last longer and require less maintenance. Building our own engines also means we control every step of the supply chain and delivery process, so you benefit from single-source responsibility.

Plus, Generac Industrial Power's distribution network provides all parts and service so you don't have to deal with third-party suppliers. It all leads to a positive owner experience and higher confidence level. Generac spark-ignited engines give you more options in commercial and industrial generator applications as well as extended run time from utility-supplied natural gas.

SG200 | 14.2L | 200 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency and Non-Emergency

GENERAC® | INDUSTRIAL POWER

STANDARD FEATURES

DEMAND RESPONSE READY

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Fan Guard (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Silencer (Enclosed Unit Only)
- Oil Temperature Indication and Alarm

Fuel System

- NPT Fuel Connection on Frame
- Primary and Secondary Fuel Shutoff

Cooling System

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension

Electrical System

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- Main Line Circuit Breaker
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Permanent Magnet Excitation
- Sealed Bearing
- Amortisseur Winding
- Full Load Capacity Alternator

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby and Demand Response Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Units Only)
- Ready to Accept Full Load in <10 Seconds

ENCLOSURE (If Selected)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuated Enclosures)
- Gasketed Doors
- Upward Facing Discharge Hood (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

CONTROL SYSTEM

Power Zone® Pro Sync Controller

Program Functions

- NFPA 110 Level 1 Compliant
- Engine Protective Functions
- Alternator Protective Functions
- Digital Engine Governor Control
- Digital Voltage Regulator
- Multiple Programmable Inputs and Outputs
- Remote Display Capability
- Remote Communication via Modbus® RTU, Modbus TCP/IP, and Ethernet 10/100
- Alarm and Event Logging with Real Time Stamping
- Expandable Analog and Digital Inputs and Outputs
- Remote Wireless Software Update Capable
- Wi-Fi®, Bluetooth®, BMS and Remote Telemetry
- Built-In Programmable Logic Eliminates the Need for External Controllers Under Most Conditions
- Ethernet Based Communications Between Generators
- Programmable I/O Channel Properties
- Built-In Diagnostics

Protections

- Low Oil Pressure
- Low Coolant Level
- High/Low Coolant Temperature
- Sensor Failure
- Oil Temperature
- Over/Under Speed
- Over/Under Voltage
- Over/Under Frequency
- Over/Under Current
- Over Load
- High/Low Battery Voltage
- Battery Charger Current
- Phase to Phase and Phase to Neutral Short Circuits (I^2T Algorithm)

7 Inch Color Touch Screen Display

- Resistive Color Touch Screen
- Sunlight Readable (1400 NITS)
- Easily Identifiable Icons
- Multi-Lingual
- On Screen Editable Parameters
- Key Function Monitoring
- Three Phase Voltage, Amperage, kW, kVA, and kVAr
- Selectable Line to Line or Line to Neutral Measurements
- Frequency
- Engine Speed
- Engine Coolant Temperature
- Engine Oil Pressure
- Engine Oil Temperature
- Battery Voltage
- Hourmeter
- Warning and Alarm Indication
- Diagnostics
- Maintenance Events/Information

SG200 | 14.2L | 200 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency and Non-Emergency

GENERAC® | INDUSTRIAL POWER

CONFIGURABLE OPTIONS

DEMAND RESPONSE READY

ENGINE SYSTEM

- ○ Engine Coolant Heater
- ○ Baseframe Cover/Rodent Guard
- ○ 2 Stage Air Cleaner
- ○ Oil Heater
- ○ Air Filter Restriction Indicator
- ○ Radiator Stone Guard (Open Set Only)
- ○ Level 1 Fan and Belt Guards (Enclosed Units Only)

FUEL SYSTEM

- ○ NPT Flexible Fuel Line

ELECTRICAL SYSTEM

- ○ 10A UL Listed Battery Charger
- ○ Battery Warmer

ALTERNATOR SYSTEM

- ○ Alternator Upsizing
- ○ Anti-Condensation Heater
- ○ Tropical Coating

CIRCUIT BREAKER OPTIONS

- ○ Main Line Circuit Breaker
- ○ 2nd Main Line Circuit Breaker
- ○ 3rd Main Line Circuit Breaker
- ○ Shunt Trip and Auxiliary Contact
- ○ Electronic Trip Breakers

GENERATOR SET

- ○ Demand Response Rating
- ○ Extended Factory Testing (3-Phase Only)
- ○ 12 Position Load Center
- ○ Vapor Recovery Heater

ENCLOSURE

- ○ Weather Protected Enclosure
- ○ Level 1 Sound Attenuated
- ○ Level 2 Sound Attenuated
- ○ Level 2 Sound Attenuated with Motorized Dampers
- ○ Steel Enclosure
- ○ Aluminum Enclosure
- ○ Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- ○ AC/DC Enclosure Lighting Kit
- ○ Enclosure Heaters (with Motorized Dampers Only)
- ○ IBC Certification
- ○ Door Open Alarm Switch

CONTROL SYSTEM

- ○ NFPA 110 Level 1 Compliant 21-Light Remote Annunciator
- ○ Remote Relay Assembly (8 or 16)
- ○ Remote E-Stop (Break Glass-Type, Surface Mount)
- ○ Remote E-Stop (Red Mushroom-Type, Surface Mount)
- ○ Remote E-Stop (Red Mushroom-Type, Flush Mount)
- ○ 10A Engine Run Relay
- ○ Ground Fault Annunciator
- ○ 100 dB Alarm Horn
- ○ 120V GFCI and 240V Outlets
- ○ Damper Alarm Contacts (with Motorized Dampers Only)

WARRANTY (Standby Gensets Only)

- ○ 2 Year Extended Limited Warranty
- ○ 5 Year Limited Warranty
- ○ 5 Year Extended Limited Warranty
- ○ 7 Year Extended Limited Warranty
- ○ 10 Year Extended Limited Warranty

ENGINEERED OPTIONS

ENGINE SYSTEM

- ○ Coolant Heater Ball Valves
- ○ Fluid Containment Pans

CONTROL SYSTEM

- ○ Battery Disconnect Switch

ALTERNATOR SYSTEM

- ○ 3rd Main Line Circuit Breaker
- ○ 4th Main Line Circuit Breaker

GENERATOR SET

- ○ Special Testing
- ○ Battery Box

SG200 | 14.2L | 200 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency and Non-Emergency

GENERAC | INDUSTRIAL POWER

APPLICATION AND ENGINEERING DATA

DEMAND RESPONSE READY

ENGINE SPECIFICATIONS

General

Make	Generac
Cylinder #	6
Type	In-line
Displacement - in^3 (L)	864.71 (14.2)
Bore - in (mm)	5.31 (135)
Stroke - in (mm)	6.50 (165)
Compression Ratio	9.5:1
Intake Air Method	Turbocharged/Aftercooled
Number of Main Bearings	7
Connecting Rods	Steel Alloy
Cylinder Head	Cast Iron
Cylinder Liners	Ductile Iron
Ignition	Electronic
Piston Type	Aluminum
Crankshaft Type	Ductile Iron
Lifter Type	Solid
Intake Valve Material	Special Heat-Resistant Steel
Exhaust Valve Material	High Temp Steel Alloy
Hardened Valve Seats	High Temp Steel Alloy

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full-Flow Cartridge
Crankcase Capacity - qt (L)	36.2 (34.3)

Cooling System

Cooling System Type	Pressurized Closed Recovery
Fan Type	Pusher
Fan Speed - RPM	1,894
Fan Diameter - in (mm)	30 (762)

Fuel System

Fuel Type	Natural Gas
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure - in H_2O (kPa)	7 - 11 (1.7 - 2.7)

Engine Electrical System

System Voltage	24 VDC
Battery Charger Alternator	57.5 A
Battery Size	See Battery Index 0161970SBY
Battery Voltage	24 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	K0200124Y21
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5% (3-Phase)
Telephone Interference Factor (TIF)	<50

Standard Excitation	Permanent Magnet
Bearings	Sealed Ball
Coupling	Direct via Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

SG200 | 14.2L | 200 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency and Non-Emergency

GENERAC® | INDUSTRIAL POWER

OPERATING DATA

DEMAND RESPONSE READY

POWER RATINGS - NATURAL GAS

	Standby/Demand Response	Prime
Single-Phase 120/240 VAC @1.0pf	200 kW/200 kVA Amps: 833	180 kW/180 kVA Amps: 750
Three-Phase 120/208 VAC @0.8pf	200 kW/250 kVA Amps: 695	180 kW/225 kVA Amps: 625
Three-Phase 120/240 VAC @0.8pf	200 kW/250 kVA Amps: 602	180 kW/225 kVA Amps: 542
Three-Phase 277/480 VAC @0.8pf	200 kW/250 kVA Amps: 301	180 kW/225 kVA Amps: 271
Three-Phase 346/600 VAC @0.8pf	200 kW/250 kVA Amps: 241	180 kW/225 kVA Amps: 217

MOTOR STARTING CAPABILITIES (skVA)

skVA vs. Voltage Dip

277/480 VAC	30%	208/240 VAC	30%
K0200124Y21	478	K0200124Y21	361
K0250124Y21	630	K0250124Y21	506
K0300124Y21	790	K0300124Y21	609

FUEL CONSUMPTION RATES*

Natural Gas – scfh (m^3/hr)

Percent Load	Standby/Demand Response	Prime
25%	960 (27.2)	900 (25.5)
50%	1,440 (40.8)	1,320 (37.4)
75%	1,980 (56.1)	1,800 (51.0)
100%	2,460 (69.7)	2,280 (64.6)

* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

		Standby/Demand Response	Prime
Air Flow (Fan Air Flow Across Radiator)	scfm (m^3/min)	9,162 (259.4)	9,162 (259.4)
Coolant Flow	gpm (Lpm)	90 (340.7)	90 (340.7)
Coolant System Capacity	gal (L)	11 (39.7)	11 (39.7)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)		See Bulletin No. 0199270SSD	
Maximum Radiator Backpressure	in H_2O (kPa)	0.5 (0.12)	0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby/Demand Response	Prime
Flow at Rated Power - scfm (m^3/min)	390 (11.0)	362 (10.3)

ENGINE

		Standby/Demand Response	Prime
Rated Engine Speed	RPM	1,800	1,800
Horsepower at Rated kW**	hp	304	274
Piston Speed	ft/min (m/min)	1,950 (594)	1,950 (594)
BMEP	psi (kPa)	155 (1,065)	139 (959)

EXHAUST

		Standby/Demand Response	Prime
Exhaust Flow (Rated Output)	scfm (m^3/min)	1,327 (38)	1,213 (34)
Max. Backpressure (Post Silencer)	inHg (kPa)	0.75 (2.54)	0.75 (2.54)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1,378 (748)	1,350 (732)

** Refer to “Emissions Data Sheet” for maximum bHP for EPA and SCAQMD permitting purposes.
Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.
Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, and DIN6271 standards.
Standby - See Bulletin 0187500SSB
Demand Response - See Bulletin 10000018250
Prime - See Bulletin 0187510SSB

SG200 | 14.2L | 200 kW

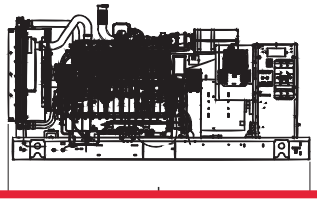
INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency and Non-Emergency

GENERAC | INDUSTRIAL POWER

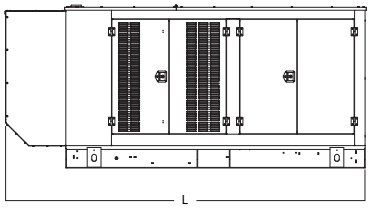
DIMENSIONS AND WEIGHTS*

DEMAND RESPONSE READY



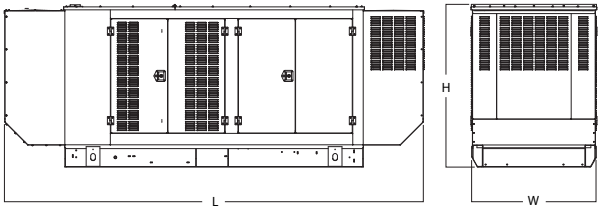
OPEN SET (Includes Exhaust Flex)

L x W x H - in (mm)	128.0 (3,251) x 52.9 (1,344) x 62.3 (1,582)
Weight - lbs (kg)	5,281 - 6,031 (2,395 - 2,735)



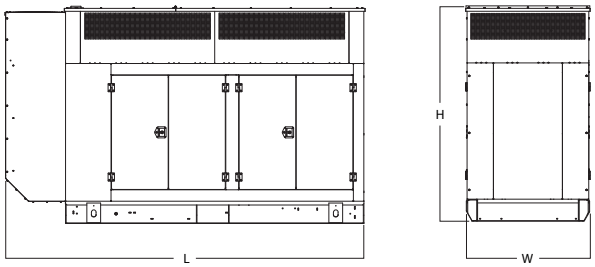
WEATHER PROTECTED ENCLOSURE

L x W x H - in (mm)	154.4 (3,922) x 54.0 (1,372) x 69.8 (1,773)
Weight - lbs (kg)	Steel: 6,261 - 7,596 (2,839 - 3,445) Aluminum: 5,795 - 6,786 (2,628 - 3,078)



LEVEL 1 SOUND ATTENUATED ENCLOSURE

L x W x H - in (mm)	179.9 (4,569) x 54.0 (1,372) x 69.8 (1,773)
Weight - lbs (kg)	Steel: 6,566 - 8,059 (2,978 - 3,655) Aluminum: 5,926 - 7,000 (2,688 - 3,175)



LEVEL 2 SOUND ATTENUATED ENCLOSURE

L x W x H - in (mm)	154.4 (3,922) x 54.0 (1,372) x 93.3 (2,370)
Weight - lbs (kg)	Steel: 6,801 - 8,632 (3,084 - 3,915) Aluminum: 6,027 - 7,247 (2,733 - 3,287)

* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings.

SPEC SHEET

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53189
P: (262) 544-4811

Part No. 10000038976
Rev. B 02/28/2020

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					ft/m		
Commercial	1722.44	1722.44	1804.46	1804.46	0.3048		
Residential	1492.78	1492.78	1394.36	1394.36			
Meters							
Commercial	525	525	550	550			
Residential	455	455	425	425			
MICR						**Total**	PASS?
Commercial	1.74E-08	4.28E-10	1.63E-09	9.75E-09		2.92E-08	YES
Residential	2.41E-07	8.33E-09	4.74E-08	1.69E-07		4.66E-07	YES
Hazard Index							
Acute HI	3.85E-03	4.95E-05	2.19E-04	3.00E-03		7.12E-03	YES
Chronic HI	1.13E-02	2.24E-03	6.58E-03	1.15E-02		3.16E-02	YES
Chronic 8-hr HI	2.07E-03	4.94E-05	1.60E-04	1.48E-03		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 | Ext. | Fax #
Phone #

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 | Ext. | Fax #
Phone #

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 *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

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) (●) No ( ) Yes

12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment? (●) No ( ) 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? (●) 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:
DocuSigned by:
Derek Kramer
6E1831BA93C0402...

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:
12/19/2023

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

South Coast Air Quality Management District

Form 400-CEQA
California Environmental Quality Act (CEQA) Applicability

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

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.	○	⊙	**A request for a change of operator only (without equipment or process change modifications)?**
2.	○	⊙	**A functionally identical permit unit replacement with no increase in equipment unit rating or emissions?**
3.	○	⊙	**A change of daily VOC permit limit to a monthly VOC permit limit?**
4.	○	⊙	**Equipment damaged as a result of a disaster during state of emergency?**
5.	○	⊙	**A Title V** (e.g., SCAQMD Regulation XXX) **permit renewal without equipment or process change modifications?**
6.	○	⊙	**A Title V administrative permit revision?**
7.	○	⊙	**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.	○	⊙	**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.	○	⊙	**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.	○	⊙	**Is this project part of a larger project?** If "Yes" is checked, attach a separate sheet to briefly describe the larger project.
4.	○	⊙	**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.	○	⊙	**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.	○	⊙	**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 (OEHHA) or have a combination of OEHHA-approved and non-approved CPs or RELs.

Section C – Review of Impacts Which May Trigger Further CEQA (concluded)

	Yes	No	
7.	⊙	○	**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.	○	⊙	**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.	○	⊙	**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.	○	⊙	**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.	○	⊙	**Will the project cause an increase of emissions from marine vessels, trains and/or airplanes?**
12.	○	⊙	**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.	○	⊙	**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.	○	⊙	**Will the project result in the need for more than 350 new employees?**
15.	○	⊙	**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.	○	⊙	**Will the project result in an increase in customer traffic by more than 700 visits per day?**
17.	○	⊙	**Will the project result in temporary or permanent noise or vibration in excess of what is allowed by the applicable local noise ordinance?**
18.	○	⊙	**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.	○	⊙	**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.	○	⊙	**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.	○	⊙	**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: DocuSigned by: Derek Kramer 8E1831BA93C0402...	2. Title of Responsible Official of Firm: Chief Operating Officer
3. Print Name of Responsible Official of Firm: Derek Kramer	4. Date Signed: 12/19/2023
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 Manafer
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

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 91765-0944
Tel: (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: Conifer Systems

Model No.: TRO-65-60-051

Type

( ) Catalytic Oxidizer
( ) Thermal (direct fired) Oxidizer
( ) Recuperative Oxidizer w/ Heat Exchanger (Catalytic)
(•) Recuperative Oxidizer w/ Heat Exchanger (Thermal)
( ) Regenerative Thermal Oxidizer (RTO) - Number of Chambers: _____

Is a concentrator for VOC part of the design? (•) No ( ) Yes If Yes, also complete 400-E-2b.

For Regenerative Oxidizer, choose type of media:
( ) Ceramic Saddles ( ) Monolith ( ) Other _____

For Recuperative Oxidizer, choose type of heat exchanger:
(•) Shell and Tube ( ) Plate ( ) Other _____

For Catalytic Oxidizer

Catalyst Manufacturer: _____

Type of Catalyst: ( ) Low Temperature Catalyst ( ) Commercial Noble Metal ( ) 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? ( ) No ( ) Yes
If Yes, check the type(s):

[ ] Halogens [ ] Heavy Metals [ ] Silicones [ ] Sulfur Compounds [ ] Particulate Matter
[ ] PCBTF [ ] Phosphorous Compounds [ ] Other _____

Type of Burners and Fuel

[x] Natural Gas Fired — Rating: 7,500,000 BTU/hr

No. of Burners: 1 — Rating: 7,500,000 BTU/hr per burner

[ ] Other: _____ — 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? ( ) Yes (•) No

If Yes, indicate type:

[ ] Cyclone [ ] Precooler [ ] Preheater [ ] Knock-Out Chamber [ ] Baghouse
[ ] Inline Filters (Pressure drop of clean filters: _____ in. H_2O) [ ] Other: _____

Dimensions of pre-treatment device:

W _____ in. x L _____ in. x H _____ in. or Diameter _____ in. x H _____ in.

South Coast Air Quality Management District

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? ○ No ◉ Yes If Yes, indicate type: Natural Gas

Fuel Usage: ◉ Cubic Feet Per Hour (ft^3/hr) ○ Gallons/Hour (gal/hr)

Maximum	Minimum	Average
7500	1875	1875

Exhaust Blower

Rating: 25 HP Flow Capacity: 2150 SCFM Draft: ○ Forced ○ 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? ○ Yes ◉ No

Operating Conditions

	Maximum	Minimum	Average
Operating Temperature (°F):	1800	1500	1600
Exit Gas Temperature (°F):			748

Operating Schedule

Normal: 24 hours/day 7 days/week 52 weeks/yr

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

Title: Project Manager Company Name: SCS Engineers

Name: Maria Bowen

Phone #: (619) 455-9518 Fax #: (562) 492-9292

Email: mbowen@scsengineers.com

Contact Info

Name: Nevin Edwards

Title: Air Permitting Mgr Company Name: BCCB, LLC

Phone #: (724) 766-8388 Fax #:

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 91765-0944
Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator To Appears 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 Nearby

Is 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 feet

Stack Inside Diameter: 38.00 inches **Stack Flow:** 11,205 acfm **Stack Temperature:** 1,600 °F

Rain 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/Openings

Distance to nearest residence or sensitive receptor*: 1,369 feet

Distance 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.

South Coast Air Quality Management District

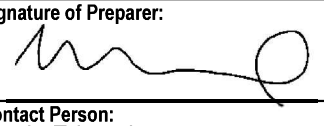
Form 400-PS

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.

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submittfgfed with this application is true and correct.

Signature of Preparer:	Title of Preparer:	Preparer's Phone #: (619) 455-9518 Preparer's Email: mbowen@scsengineers.com
	Project Manager	

Contact Person:	Contact's Phone#: (724) 766-8388	Date Signed:
Nevin Edwards	Contact's Fax#:	12/14/2023
Contact's Email: nedwards@archaea.energy		

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Receptor Map

TOx Sensitive Receptor Distances
Biofuels Coyote Canyon Biogas

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 | Ext. | Fax #
Phone #

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 | Ext. | Fax #
Phone #

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 *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

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? (●) No ( ) 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) 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:
DocuSigned by:
Derek Kramer
DE1831BA93C0402...

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:
12/19/2023

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

South Coast Air Quality Management District

Form 400-CEQA
California Environmental Quality Act (CEQA) Applicability

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

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.	○	◉	**A request for a change of operator only (without equipment or process change modifications)?**
2.	○	◉	**A functionally identical permit unit replacement with no increase in equipment unit rating or emissions?**
3.	○	◉	**A change of daily VOC permit limit to a monthly VOC permit limit?**
4.	○	◉	**Equipment damaged as a result of a disaster during state of emergency?**
5.	○	◉	**A Title V** (e.g., SCAQMD Regulation XXX) **permit renewal without equipment or process change modifications?**
6.	○	◉	**A Title V administrative permit revision?**
7.	○	◉	**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.	○	◉	**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.	○	◉	**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.	○	◉	**Is this project part of a larger project?** If "Yes" is checked, attach a separate sheet to briefly describe the larger project.
4.	○	◉	**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.	○	◉	**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.	○	◉	**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 (OEHHA) or have a combination of OEHHA-approved and non-approved CPs or RELs.

Section C – Review of Impacts Which May Trigger Further CEQA (concluded)

	Yes	No	
7.	◉	○	**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.	○	◉	**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.	○	◉	**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.	○	◉	**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.	○	◉	**Will the project cause an increase of emissions from marine vessels, trains and/or airplanes?**
12.	○	◉	**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.	○	◉	**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.	○	◉	**Will the project result in the need for more than 350 new employees?**
15.	○	◉	**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.	○	◉	**Will the project result in an increase in customer traffic by more than 700 visits per day?**
17.	○	◉	**Will the project result in temporary or permanent noise or vibration in excess of what is allowed by the applicable local noise ordinance?**
18.	○	◉	**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.	○	◉	**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.	○	◉	**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.	○	◉	**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: DocuSigned by: Derek Kramer 0E1631BA93C0402...	2. Title of Responsible Official of Firm: Chief Operating Officer
3. Print Name of Responsible Official of Firm: Derek Kramer	4. Date Signed: 12/19/2023
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 91765-0944
Tel: (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):

(●) Fixed Location ( ) Various Locations

Section B - Equipment Description

Equipment

Manufacturer: John Zink or equivalent

Model No.: ZULE

Type

( ) Elevated (●) Ground Level ( ) Pit

How is Flare Assisted? ( ) Air Assisted ( ) Steam Assisted (●) Non-Assisted

Operation (See Rule 1118 for definition)

( ) Clean Service Flare ( ) Emergency Service Flare (●) General Service Flare

Dimension

Flare Height: 40 ft. **Flare Tip Inside Diameter:** 10 ft.

Design Criteria for Waste Gas Stream

Retention Time at Normal Operating Temperature: 1 secs at 1800 °F

Combustion Chamber Volume: 4367 cubic feet

Design Waste Stream Flow: 3000 scfm

Btu: 77,800,000

	Maximum	Minimum
Velocity At Tip: (feet per second)	1170	
Flow Rate: (scfm)	3000	

For Steam Injection

	Maximum	Minimum
Steam Pressure (psig):		

Design Basis for Steam Injected: _____ lb steam/lb Hydrocarbons

Total Steam Flow Rate: _____ pounds/hour **Number of Jets:** _____

Temperature: _____ °F **Diameter of Jets:** _____ inches **Velocity:** _____ feet per second

For Water Injection

Number of Water Jets: _____ **Diameter of Water Jets:** _____ inches

	Maximum	Minimum
Water Pressure (psig):		
Total Water Flow Rate (gpm):		

Auxiliary Fuel Data (e.g. gas injection, duct burner)

Auxiliary fuel available? (●) No ( ) Yes **If Yes, indicate type:** _____

Number of Pilots: _____ **Fuel Rate per pilot** (at 70 °F & 14.7 psia): _____ SCFM

Fuel Usage: ( ) Cubic Feet Per Hour (ft^3/hr) ( ) Gallons/Hour (gal/hr)

Maximum	Minimum	Average

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.

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

Material	Flow Rate (at 70 °F & 14.7 psia) (scfm) 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

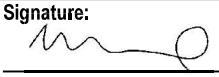
Normal:	2	hours/day	7	days/week	52	weeks/yr
Maximum:	24	hours/day	7	days/week	52	weeks/yr

The flare will not operate at maximum operating scenario concurrently.

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: Manager Project **Company Name:** SCS Engineers

Name: Maria Bowen

Phone #: (619) 455-9518 **Fax #:** (562) 492-9292

Email: mbowen@scsengineers,com

Contact Info

Name: Nevin Edwards

Title: Air Permitting Mgr. **Company Name:** Archaea Energy

Phone #: (724) 766-8388 **Fax #:**

Email: nedwards@archaea.energy

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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

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Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944
Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator To Appears 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 Nearby

Is 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: 40.00 feet (above ground level) **What is the height of the closest building nearest the stack?** 10 feet

Stack Inside Diameter: 12.00 inches **Stack Flow:** 24,992 acfm **Stack Temperature:** 1,600 °F

Rain 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/Openings

Distance to nearest residence or sensitive receptor*: 1,394 feet

Distance to nearest business: 1,804 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.

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.

Section D - Authorization/Signature			
I hereby certify that all information contained herein and information submittfgfed 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 Email:** nedwards@archaea.energy	**Contact's Phone#:** (726) 766-8388 **Contact's Fax#:**	**Date Signed:** 12/14/2023	

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

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 91765-0944

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 | Ext. | Fax #
Phone #

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 | Ext. | Fax #
Phone #

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 *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

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 ( ) Yes

12. Has a Notice of Violation (NOV) or a Notice to Comply (NC) been issued for this equipment? (●) No ( ) 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)
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:
DocuSigned by:
Derek Kramer
6E1831BA93C0402...

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:
12/19/2023

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

South Coast Air Quality Management District

Form 400-CEQA
California Environmental Quality Act (CEQA) Applicability

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

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.	○	⊙	**A request for a change of operator only (without equipment or process change modifications)?**
2.	○	⊙	**A functionally identical permit unit replacement with no increase in equipment unit rating or emissions?**
3.	○	⊙	**A change of daily VOC permit limit to a monthly VOC permit limit?**
4.	○	⊙	**Equipment damaged as a result of a disaster during state of emergency?**
5.	○	⊙	**A Title V** (e.g., SCAQMD Regulation XXX) **permit renewal without equipment or process change modifications?**
6.	○	⊙	**A Title V administrative permit revision?**
7.	○	⊙	**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.	○	⊙	**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.	○	⊙	**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.	○	⊙	**Is this project part of a larger project?** If "Yes" is checked, attach a separate sheet to briefly describe the larger project.
4.	○	⊙	**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.	○	⊙	**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.	○	⊙	**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 (OEHHA) or have a combination of OEHHA-approved and non-approved CPs or RELs.

Section C – Review of Impacts Which May Trigger Further CEQA (concluded)

	Yes	No	
7.	◉	○	**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.	○	◉	**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.	○	◉	**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.	○	◉	**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.	○	◉	**Will the project cause an increase of emissions from marine vessels, trains and/or airplanes?**
12.	○	◉	**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.	○	◉	**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.	○	◉	**Will the project result in the need for more than 350 new employees?**
15.	○	◉	**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.	○	◉	**Will the project result in an increase in customer traffic by more than 700 visits per day?**
17.	○	◉	**Will the project result in temporary or permanent noise or vibration in excess of what is allowed by the applicable local noise ordinance?**
18.	○	◉	**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.	○	◉	**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.	○	◉	**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.	○	◉	**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: DocuSigned by: Derek Kramer 6E1831BA93C0402...	2. Title of Responsible Official of Firm: Chief Operating Officer
3. Print Name of Responsible Official of Firm: Derek Kramer	4. Date Signed: 12/19/2023
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 91765-0944
Tel: (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

( ) Fixed Regenerative Beds ( ) Traveling Bed Adsorbers/Rotary Concentrators

(•) Disposable/Rechargeable Canisters ( ) Fluidized Adsorbers

Number of beds: 1 **Capacity of each bed:** 20000 pounds of adsorbent

Arrangement, if 2 or more beds: ( ) In Series ( ) In Parallel

Adsorbent Material

(•) Granulated Activated Carbon ( ) Synthetic Adsorbent Trade name:

( ) Zeolite, Molecular Sieve ( ) Others:

Adsorbent Capacity: 1.4 (pound of vapor/pound of adsorbent)

Depth of Adsorbent in Bed: ft. in.

Adsorbent Vessel Dimensions

Diameter: 8 ft in. **Height:** 15 ft in.

Or

Width: ft in. **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.

See attached PFD.

Gas Stream

Inlet Flow Rate: 3000 SCFM **Temperature:** 100 °F **Pressure:** 15.7 psia

Does gas stream contain Rule 1401 toxic air contaminants? (•) No ( ) Yes **If Yes, list below:**

Are Ketones or Aldehydes present? (•) No ( ) Yes

Relative humidity: %

Cycle time for adsorption: hours

Lower explosive limit of mixture: ppmv **or** % volume

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.

Section C - Gas Stream Characteristics (cont.)

Regeneration

Is the adsorbent material regenerated on-site? ○ Yes ◉ No

On-site Regeneration by:

○ Steam ○ Air ○ Inert gas ○ Process gas ○ Other_____

Cycle time for regeneration:_____ hours

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).

Instrumentation

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:	24	hours/day	7	days/week	52 weeks/yr
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

Email: mbowen@scsengineers.com

Contact Info

Name: Nevin Edwards

Title: Air Permitting Mgr **Company Name:** Archaea Energy

Phone #: (724) 766-8388 **Fax #:**

Email: nedwards@archaea.energy

THIS IS A PUBLIC DOCUMENT

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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 | Ext. | Fax #
Phone #

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 | Ext. | Fax #
Phone #

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

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- ( ) 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 *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

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? (●) No ( ) 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) 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:
DocuSigned by:
Derek Kramer
6E1831BA93C0482...

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:
12/19/2023

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

South Coast Air Quality Management District

Form 400-CEQA
California Environmental Quality Act (CEQA) Applicability

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

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.	○	⊙	**A request for a change of operator only (without equipment or process change modifications)?**
2.	○	⊙	**A functionally identical permit unit replacement with no increase in equipment unit rating or emissions?**
3.	○	⊙	**A change of daily VOC permit limit to a monthly VOC permit limit?**
4.	○	⊙	**Equipment damaged as a result of a disaster during state of emergency?**
5.	○	⊙	**A Title V** (e.g., SCAQMD Regulation XXX) **permit renewal without equipment or process change modifications?**
6.	○	⊙	**A Title V administrative permit revision?**
7.	○	⊙	**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.	○	⊙	**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.	○	⊙	**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.
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4.	○	⊙	**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.
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6.	○	⊙	**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 (OEHHA) or have a combination of OEHHA-approved and non-approved CPs or RELs.

Section C – Review of Impacts Which May Trigger Further CEQA (concluded)

	Yes	No	
7.	⊙	○	**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.	○	⊙	**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.	○	⊙	**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.	○	⊙	**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.	○	⊙	**Will the project cause an increase of emissions from marine vessels, trains and/or airplanes?**
12.	○	⊙	**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.	○	⊙	**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.	○	⊙	**Will the project result in the need for more than 350 new employees?**
15.	○	⊙	**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.	○	⊙	**Will the project result in an increase in customer traffic by more than 700 visits per day?**
17.	○	⊙	**Will the project result in temporary or permanent noise or vibration in excess of what is allowed by the applicable local noise ordinance?**
18.	○	⊙	**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.	○	⊙	**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.	○	⊙	**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.	○	⊙	**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: DocuSigned by: Derek Kramer 6E1831BA93C0402...		2. Title of Responsible Official of Firm: Chief Operating Officer	
3. Print Name of Responsible Official of Firm: Derek Kramer		4. Date Signed: 12/19/2023	
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 | Ext. | Fax #
Phone #

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 | Ext. | Fax #
Phone #

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 *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

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? (●) No ( ) 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) 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:
DocuSigned by:
Derek Kramer
0E1831BA33C0402...

18. Title of Responsible Official:
Chief Operating Officer

19. I wish to review the permit prior to issuance. ( ) No (●) Yes
(This may cause a delay in the application process.)

20. Print Name:
Derek Kramer

21. Date: 12/19/2023

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

South Coast Air Quality Management District

Form 400-CEQA
California Environmental Quality Act (CEQA) Applicability

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
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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.	○	⊙	**A request for a change of operator only (without equipment or process change modifications)?**
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Section C – Review of Impacts Which May Trigger Further CEQA (concluded)

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1. Signature of Responsible Official of Firm: DocuSigned by: Derek Kramer 6E183 1BA93C0402...	2. Title of Responsible Official of Firm: Chief Operating Officer
3. Print Name of Responsible Official of Firm: Derek Kramer	4. Date Signed: 12/19/2023
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-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 91765-0944
Tel: (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 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)

( ) External Floating Roof Tank (EFRT) ( ) Internal Floating Roof Tank (IFRT) ( ) Horizontal Tank (HT)
(●) Vertical Fixed Roof Tank (VFRT) ( ) 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? ( ) Yes (●) No
Is Tank Underground? ( ) Yes (●) No
Net Throughput (gal/year): 200000
Self Support Roof: (●) Yes ( ) No

Number of Columns? 1
Effective Column Diameter: ( ) 9" by 7" Built Up Column - 1.1 ( ) 8" Diameter Pipe - 0.7 ( ) Unknown - 1

External Shell Condition: (●) Good ( ) Poor
Internal Shell Color: ( ) Light Rust ( ) Dense Rust ( ) Gunite Lining
External Shell Color: (●) White/White ( ) Aluminum/Specular ( ) Aluminum/Diffuse ( ) Gray/Light ( ) Gray/Medium ( ) 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: (●) Good ( ) Poor
Paint Color/Shade: (●) White/White ( ) Aluminum/Diffuse ( ) Gray/Light ( ) Aluminum/Specular ( ) Gray/Medium ( ) Red/Primer

Roof Characteristics (Floating Roof Tank)

Roof Type: ( ) Pontoon ( ) Double Deck ( ) Dome Roof (Height ____ ft.) (●) Cone Roof (Height 26.5 ft.)
Roof Fitting Category: ( ) Typical (●) Detail
Roof Height (ft.): 26.5

Roof Paint Condition: (●) Good ( ) Poor
Roof Color/Shade: (●) White/White ( ) Aluminum/Diffuse ( ) Gray/Light ( ) Aluminum/Specular ( ) Gray/Medium ( ) Red/Primer

Deck Characteristics (Floating Roof Tank)

Deck Type: ( ) Welded ( ) Bolted
Deck Fitting Characteristics: ( ) Typical ( ) Detailed (Complete Deck Seam)

Construction:	Deck Seam Length (ft.):	Deck Seam:
( ) Sheet		( ) 5 ft. wide ( ) 6 ft. wide ( ) 7 ft. wide
( ) Panel		( ) 5 x 7.5 ft. ( ) 5 x 12 ft.

Tank Construction and Rim -Seal System (Floating Roof Tank)

Tank Construction: (●) Welded ( ) Riveted
Primary Seal: ( ) Mechanical Shoe ( ) Liquid Mounted ( ) Vapor Mounted
Secondary Seal: ( ) Rim Mounted ( ) None ( ) Shoe Mounted

Breather Vent Setting

Vacuum Setting (psig):
Pressure Setting (psig):

* **Section D of the application MUST be completed.**

South Coast Air Quality Management District

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 91765-0944
Tel: (909) 396-3385
www.aqmd.gov

Section B - Tank Information (cont.)

Site Selection

Nearest Major City: Newport Beach

Daily Average Ambient Temperature (°F): 62 Annual Average Minimum Temperature (°F): 56

Annual Average Maximum Temperature (°F): 67 Average Wind Speed (mph): _____

Annual Average Solar Insulation Factor (Btu / (ft^3 * ft * day)): _____

Tank Contents

Chemical Category: (•) Organic Liquids ( ) Crude Oil ( ) Petroleum Distillates

Liquid: (•) Single ( ) Multiple

If Multiple, Select Speciation Option: ( ) Full Speciation ( ) Partial Speciation ( ) Various Weight Speciation ( ) None

Section C - Operation Information

Vapor Control

Vapor Control During Loading or Unloading: ☐ Sparger ☐ Vapor Balance System ☐ Vapor Return Line ☐ 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				☐	☐	☐
Pressure				☐	☐	☐
Vaccum				☐	☐	☐
Open	1			☐	☒	☐

Materials

Name all liquids, vapors, gases, or mixtures of such material to be stored in this tank:
Liquid RNG condensate

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 8.33 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)
1 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

South Coast Air Quality Management District

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.

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

5. Ladder Well (36" diameter)
- _____ Sliding Cover, Gasketed
- _____ Sliding Cover, Ungasketed

6. Rim Vent (6" diameter)
- _____ Weighted Mechanical Actuation, Gasketed
- _____ Weighted Mechanical Actuation, Ungasketed

7. Roof Drain (3" diameter)
- _____ Open
- _____ 90% Close

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

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
Name: Maria Bowen	
Title: Project Manager	**Company Name:** SCS Engineers
Phone #: (619) 455-9518	**Fax #:**
Email: mbowen@scsengineers.com	

Contact Info

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. ☐

South Coast Air Quality Management District

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 91765-0944
Tel: (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 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)

( ) External Floating Roof Tank (EFRT) ( ) Internal Floating Roof Tank (IFRT) ( ) Horizontal Tank (HT)
(●) Vertical Fixed Roof Tank (VFRT) ( ) 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? ( ) Yes (●) No
Is Tank Underground? ( ) Yes (●) No
Net Throughput (gal/year): 200000
Self Support Roof: (●) Yes ( ) No

Number of Columns? 1
Effective Column Diameter: ( ) 9" by 7" Built Up Column - 1.1 ( ) 8" Diameter Pipe - 0.7 ( ) Unknown - 1

External Shell Condition: (●) Good ( ) Poor

Internal Shell Color: ( ) Light Rust ( ) Dense Rust ( ) Gunite Lining

External Shell Color: (●) White/White ( ) Aluminum/Specular ( ) Aluminum/Diffuse ( ) Gray/Light ( ) Gray/Medium ( ) 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: (●) Good ( ) Poor

Paint Color/Shade: (●) White/White ( ) Aluminum/Diffuse ( ) Gray/Light ( ) Aluminum/Specular ( ) Gray/Medium ( ) Red/Primer

Roof Characteristics (Floating Roof Tank)

Roof Type: ( ) Pontoon ( ) Double Deck ( ) Dome Roof (Height____ ft.) (●) Cone Roof (Height 26.5 ft.)

Roof Fitting Category: ( ) Typical (●) Detail

Roof Height (ft.): 26.5

Roof Paint Condition: (●) Good ( ) Poor

Roof Color/Shade: (●) White/White ( ) Aluminum/Diffuse ( ) Gray/Light ( ) Aluminum/Specular ( ) Gray/Medium ( ) Red/Primer

Deck Characteristics (Floating Roof Tank)

Deck Type: ( ) Welded ( ) Bolted

Deck Fitting Characteristics: ( ) Typical ( ) Detailed (Complete Deck Seam)

Construction:	Deck Seam Length (ft.):	Deck Seam:
( ) Sheet		( ) 5 ft. wide ( ) 6 ft. wide ( ) 7 ft. wide
( ) Panel		( ) 5 x 7.5 ft. ( ) 5 x 12 ft.

Tank Construction and Rim -Seal System (Floating Roof Tank)

Tank Construction: (●) Welded ( ) Riveted

Primary Seal: ( ) Mechanical Shoe ( ) Liquid Mounted ( ) Vapor Mounted

Secondary Seal: ( ) Rim Mounted ( ) None ( ) Shoe Mounted

Breather Vent Setting

Vacuum Setting (psig):

Pressure Setting (psig):

* **Section D of the application MUST be completed.**

South Coast Air Quality Management District

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:
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P.O. Box 4944
Diamond Bar, CA 91765-0944
Tel: (909) 396-3385
www.aqmd.gov

Section B - Tank Information (cont.)

Site Selection

Nearest Major City: Newport Beach

Daily Average Ambient Temperature (°F): 62 Annual Average Minimum Temperature (°F): 56

Annual Average Maximum Temperature (°F): 67 Average Wind Speed (mph): _____

Annual Average Solar Insulation Factor (Btu / (ft^3 * ft * day)): _____

Tank Contents

Chemical Category: (•) Organic Liquids ( ) Crude Oil ( ) Petroleum Distillates

Liquid: (•) Single ( ) Multiple

If Multiple, Select Speciation Option: ( ) Full Speciation ( ) Partial Speciation ( ) Various Weight Speciation ( ) None

Section C - Operation Information

Vapor Control

Vapor Control During Loading or Unloading: ☐ Sparger ☐ Vapor Balance System ☐ Vapor Return Line ☐ 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				☐	☐	☐
Pressure				☐	☐	☐
Vaccum				☐	☐	☐
Open	1			☐	☒	☐

Materials

Name all liquids, vapors, gases, or mixtures of such material to be stored in this tank:
Liquid RNG condensate

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 8.33 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.

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_____ 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

South Coast Air Quality Management District

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

5. Ladder Well (36" diameter)
- _____ Sliding Cover, Gasketed
- _____ Sliding Cover, Ungasketed

6. Rim Vent (6" diameter)
- _____ Weighted Mechanical Actuation, Gasketed
- _____ Weighted Mechanical Actuation, Ungasketed

7. Roof Drain (3" diameter)
- _____ Open
- _____ 90% Close

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
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- _____ 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)**

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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
Name: Maria Bowen	
Title: Project Manager	**Company Name:** SCS Engineers
Phone #: (619) 455-9518	**Fax #:**
Email: mbowen@scsengineers.com	

Contact Info

Name: Nevin Edwards	
Title: Air Permitting Mgr.	**Company Name:** Archaea
Phone #: (724) 766-8388	**Fax #:**
Email: newards@archaea.energy	

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Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

Emergency Backup Generator

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 | Env.Data and New Dev Mr
Contact Name | Title

(724) 766-8388 | Ext. | Fax #
Phone #

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

Steven Boor | Chief Operating Officer
Contact Name | Title

(970) 749-9827 | Ext. | Fax #
Phone #

E-Mail: sboor@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 *

Existing or Previous Permit/Application
If you checked any of the items in 7c., you MUST provide an existing Permit or Application Number:

* A Higher Permit Processing Fee and additional Annual Operating Fees (up to 3 full years) may apply (Rule 301(c)(1)(D)(i)).

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):
Emergency Generator

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? (●) No ( ) 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) 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:
Steven Boor
DocuSigned by: 83BA495CCB09470...

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:
Steven Boor

21. Date: 6/24/2024

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

South Coast Air Quality Management District

Form 400-CEQA
California Environmental Quality Act (CEQA) Applicability

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944

Tel: (909) 396-3385
www.aqmd.gov

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: Emergency Generator

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.	○	◉	**A request for a change of operator only (without equipment or process change modifications)?**
2.	○	◉	**A functionally identical permit unit replacement with no increase in equipment unit rating or emissions?**
3.	○	◉	**A change of daily VOC permit limit to a monthly VOC permit limit?**
4.	○	◉	**Equipment damaged as a result of a disaster during state of emergency?**
5.	○	◉	**A Title V** (e.g., SCAQMD Regulation XXX) **permit renewal without equipment or process change modifications?**
6.	○	◉	**A Title V administrative permit revision?**
7.	○	◉	**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.	○	◉	**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.	○	◉	**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.	○	◉	**Is this project part of a larger project?** If "Yes" is checked, attach a separate sheet to briefly describe the larger project.
4.	○	◉	**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.	○	◉	**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.	○	◉	**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 (OEHHA) or have a combination of OEHHA-approved and non-approved CPs or RELs.

Section C – Review of Impacts Which May Trigger Further CEQA (concluded)

	Yes	No	
7.	◉	○	**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.	○	◉	**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.	○	◉	**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.	○	◉	**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.	○	◉	**Will the project cause an increase of emissions from marine vessels, trains and/or airplanes?**
12.	○	◉	**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.	○	◉	**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.	○	◉	**Will the project result in the need for more than 350 new employees?**
15.	○	◉	**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.	○	◉	**Will the project result in an increase in customer traffic by more than 700 visits per day?**
17.	○	◉	**Will the project result in temporary or permanent noise or vibration in excess of what is allowed by the applicable local noise ordinance?**
18.	○	◉	**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.	○	◉	**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.	○	◉	**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.	○	◉	**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: DocuSigned by: Steven Boor	2. Title of Responsible Official of Firm: Chief Operating Officer
3. Print Name of Responsible Official of Firm: Steven Boor	4. Date Signed: 6/24/2024
5. Phone # of Responsible Official of Firm: (970) 749-9827 / 6. Fax # of Responsible Official of Firm:	7. Email of Responsible Official of Firm: sboor@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: 6/11/2024
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–13a

Emergency Internal Combustion Engine

This form must be accompanied by a completed Application for a Permit to Construct/Operate -Form 400A

Mail Application To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765
Tel: (909) 396-3385
www.aqmd.gov

Permit to be issued to (Business name of operator to appear on permit):

Street location where the equipment will be operated (for equipment which will be moved to various location in SCAQMD's jurisdiction, please list the initial location site):

Section A: Equipment Information

Internal Combustion Engine

Manufacturer: Generac Industrial Power

Model No.: SG200

Serial No.:

EPA Family No.: RGNXB14.22C1

Manufacturer Maximum Rating: 304 BHP @ _____ RPM

Date of Manufacture: _____(mm/dd/yyyy)

Date of Installation: _____(mm/dd/yyyy)

For an ICE manufactured after 7/18/94, please provide manufacturer's specification.

ICE Emergency Function

◉ Electrical Generator ○ Fire Pump ○ Flood Control ○ Pump Driver ○ Compressor
○ Water Pump ○ Other _____

Type

◉ Fixed site ○ Portable

How Is This Type of Equipment Used? (Check All That Apply)

☑ Within Facility ☐ Off- Site ☐ Rental

Fuel

○ Diesel Oil ○ LPG ◉ Natural Gas ○ Other:

Cycle Type

○ Two Cycle ◉ Four Cycle

Combustion Type

○ Lean Burn ◉ Rich Burn

Engine Size

14.2 liters

No. of Cylinders

○ Four ◉ Six ○ Eight ○ Ten ○ Twelve ○ Sixteen ○ Other _____

Aspiration Type

○ Naturally Aspirated ○ Turbocharged ◉ Turbocharged/Aftercooled

Air Pollution Control

Check all that apply:

- ☐ Selective Catalytic Reduction (SCR)*
- ☐ Selective Non-catalytic Reduction (SNCR)*
- ☐ Non-selective Catalytic Reduction (NSCR)
- ☐ Diesel Particulate Filter (DPF)
- ☐ Catalytic Converter
- ☑ Air/Fuel Ratio Controller
- ☐ No Controls
- ☐ Other (specify)_____

Manufacturer: _____ Model No. _____

If already permitted, indicate Permit No. _____ Device No. _____ (RECLAIM and/or Title V Permits)

* Separate application is required.

Additional Information for Diesel Particulate Filter (DPF)

Filter Efficiency: _____ %

CARB Certified? ○ Yes ○ No

If Yes, provide a copy of the CARB Verification Certificate, or provide the Verification No. _____

Installing a backpressure relief system? ○ Yes ○ No

Section B: Operation Information

Fuel Consumption	**Maximum Load:** _____ gal/hr OR 2460 cu ft/hr	**Average Load:** _____ gal/hr OR 1980 cu ft/hr
Operating Schedule	**Normal:** _____ hours/day _____ days/week _____ weeks/year	
	Maximum: _____ hours/day _____ days/week _____ weeks/year	
	Testing & Maintenance: 50 hours/year	

Section C: Engine Data

Is the engine EPA certified?

◉ **Yes** **Provide a copy of EPA's Engine Certification.**

Choose one: ○ **Tier I** ○ **Tier II** ○ **Tier III** ○ **Tier IV (Interim)** ○ **Tier IV**

○ **No** **Provide a copy of the Manufacturer's Emissions Data.**

If manufacturer's emissions data is not available, provide available emissions data below. Provide supporting documents.

Carbon Monoxide (grams/bhp-hr)	Hydrocarbons (grams/bhp-hr)	Oxides of Nitrogen (grams/bhp-hr)	Hydrocarbons + Oxides of Nitrogen (grams/bhp-hr)	Particulate Matter (grams/bhp-hr)

Section D: Sensitive Receptors

A. Distance from engine stack to the fenceline of the nearest sensitive receptor (ie., long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools (K-12), playgrounds, child care centers, and athletic facilities):

Type of Facility	Name of Facility	Distance (feet)
Residence	Residence	1,385

Section E: Applicant Certification Statement

I hereby certify that all information contained herein and submitted with this application is true and correct.

SIGNATURE OF PREPARER:	TITLE OF PREPARER:	
	Project Manager	
CONTACT PERSON FOR INFORMATION ON THIS EQUIPMENT :	**CONTACT PERSON'S TELEPHONE NUMBER**	**DATE SIGNED:**
Nevin Edwards	(724) 766-8388	

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.

RULE EVALUATION

The internal combustion engine may be subject to the following rules:

SCAQMD Rules and Regulations	
Rule 212	Standards for Approving Permits and Issuing Public Notice
Rule 401	Visible Emissions
Rule 402	Nuisance
Rule 404	Particulate Matter – Concentration
Rule 431.1	Sulfur Content of Gaseous Fuels
Rule 431.2	Sulfur Content of Liquid Fuels Liquid fuels – sulfur content of 500 ppm by weight or less. Diesel fuel – sulfur content of 0.015% by weight or less.
Reg XIII	New Source Review
Rule 1401	New Source Review of Toxic Air Contaminants
Rule 1401.1	Requirements for New and Relocated Facilities Near Schools
Rule 1470	Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines
Rule 1472	Requirements for Facilities with Multiple Stationary Emergency Standby Diesel-Fueled Internal Combustion Engines
Rule 1714	Prevention of Significant Deterioration for Greenhouse Gases
Code of Federal Regulations	
40 CFR 60 Subpart III	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
40 CFR 60 Subpart JJJJ	Standards of Performance for New Stationary Sources
40 CFR 63 Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

SAMPLE CONDITIONS FOR EMERGENCY INTERNAL COMBUSTION ENGINES (GENERATORS)

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED.

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITIONS AT ALL TIMES.

3. THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF SCAQMD RULE 431.2, SCAQMD RULE 1470, 40CFR PART 60 SUBPART IIII AND 40 CFR PART 63 SUBPART ZZZZ, OR THE OPERATOR SHALL NOT USE ANY DIESEL FUEL UNLESS THE FUEL IS LOW SULFUR DIESEL FOR WHICH THE SULFUR CONTENT SHALL NOT EXCEED 15 PPM BY WEIGHT AS SUPPLIED BY THE SUPPLIER.

4. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING.

5. THE OPERATION OF ENGINE BEYOND 50 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE ELECTRICAL GRID OPERATOR OR ELECTRIC UTILITY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

6. AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.

7. ON OR BEFORE JANUARY 15TH OF EACH YEAR THE OPERATOR SHALL RECORD IN THE ENGINE OPERATING LOG:

   A. THE TOTAL HOURS OF ENGINE OPERATION FOR THE PREVIOUS CALENDAR YEAR, AND
   B. THE TOTAL HOURS OF ENGINE OPERATION FOR MAINTENANCE AND TESTING FOR THE PREVIOUS CALENDAR YEAR.

   ENGINE OPERATION LOG(S) SHALL BE RETAINED ON SITE FOR A MINIMUM OF FIVE CALENDAR YEARS AND SHALL BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR REPRESENTATIVE UPON REQUEST.

8. THE OPERATOR SHALL KEEP A LOG OF ENGINE OPERATIONS DOCUMENTING THE TOTAL TIME THE ENGINE IS OPERATED EACH MONTH AND THE SPECIFIC REASON FOR OPERATION AS:

   A. EMERGENCY USE
   A. MAINTENANCE AND TESTING
   C. OTHER (BE SPECIFIC)

   IN ADDITION, FOR EACH TIME THE ENGINE ISMANUALLY STARTED, THE LOG SHALL INCLUDE: THE DATE OF ENGINE OPERATION, THE START AND STOP TIME OF THE ENGINE, THE SPECIFIC REASON FOR OPERATION, AND THE TOTALIZING HOUR METER READING (IN HOURS AND TENTHS OF HOURS) AT THE BEGINNING AND THE END OF THE OPERATION.

9. THIS ENGINE SHALL NOT BE USED AS PART OF A DEMAND RESPONSE PROGRAM USING INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ITS ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.

10. THIS ENGINE SHALL NOT BE OPERATED MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING TO COMPLY WITH REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). ANYTHING IN EXCESS OF 50 HOURS SHALL BE ALLOWED ONLY IN THE EVENT OF AN EMERGENCY FIRE FIGHTING OPERATION.

For Fire pumps:

11. THIS ENGINE SHALL NOT BE OPERATED MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING TO COMPLY WITH REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). ANYTHING IN EXCESS OF 50 HOURS SHALL BE ALLOWED ONLY IN THE EVENT OF AN EMERGENCY FIRE FIGHTING OPERATION.

For Various Locations Equipment:

12. UPON THE FIFTH DAY AFTER PLACEMENT OF THIS EQUIPMENT INTO OPERATION AT A NEW SITE, THE DISTRICT SHALL BE NOTIFIED VIA TELEPHONE AT 877-810-6995 OF THE EXACT NATURE OF THE PROJECT AS FOLLOWS:

    A. THE PERMIT NUMBER OF THE PORTABLE EQUIPMENT.
    B. THE NAME AND TELEPHONE NUMBER OF A CONTACT PERSON.
    C. THE LOCATION WHERE THE PORTABLE EQUIPMENT WILL BE OPERATED.
    D. THE ESTIMATED TIME THE PORTABLE EQUIPMENT WILL BE LOCATED AT THE SITE.
    E. DESCRIPTION OF THE PROJECT.
    F. IF LESS THAN 1/4 MILE, THE DISTANCE TO THE NEAREST SENSITIVE RECEPTOR. SENSITIVE RECEPTORS ARE DEFINED AS LONG-TERM HEALTH CARE FACILITIES, REHABILITATION CENTERS, CONVALESCENT CENTERS, RETIREMENT HOMES, RESIDENCES, SCHOOLS, PLAYGROUNDS, CHILD CARE CENTERS, AND ATHLETIC FACILITIES.

13. THIS ENGINE AND ITS REPLACEMENT UNIT INTENDED TO PERFORM THE SAME OR SIMILAR FUNCTION, SHALL NOT RESIDE AT ANY ONE LOCATION FOR MORE THAN 12 CONSECUTIVE MONTHS. THE PERIOD DURING WHICH THE ENGINE AND ITS REPLACEMENT IS MAINTAINED AT A STORAGE FACILITY SHALL BE EXCLUDED FROM RESIDENCY TIME DETERMINATION.

14. THIS ENGINE SHALL NOT BE REMOVED FROM ONE LOCATION FOR A PERIOD OF TIME, AND THEN IT OR ITS EQUIVALENT ENGINE RETURNED TO THE SAME LOCATION, IN ORDER TO CIRCUMVENT THE PORTABLE ENGINE RESIDENCE TIME REQUIREMENTS.

15. IN ADDITION TO MAINTENANCE AND TESTING OF THIS ENGINE, THIS ENGINE SHALL ONLY BE USED FOR EITHER PROVIDING ELECTRICAL POWER TO PORTABLE OPERATIONS OR EMERGENCY POWER TO STATIONARY SOURCES. PORTABLE OPERATIONS ARE THOSE WHERE IT CAN BE DEMONSTRATED THAT BECAUSE OF THE NATURE OF THE OPERATION, IT IS NECESSARY TO PERIODICALLY MOVE THE EQUIPMENT FROM ONE LOCATION TO ANOTHER. EMERGENCIES AT STATIONARY SOURCES ARE THOSE THAT RESULT IN AN INTERRUPTION OF SERVICE OF THE PRIMARY POWER SUPPLY OR DURING STAGE II OR III ELECTRICAL EMERGENCIES DECLARED BY THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR.

South Coast Air Quality Management District

Form 400 - XPP

Express Permit Processing Request

Form 400-A, Form 400-CEQA and one or more 400-E-xx form(s) must accompany all submittals.

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):

Section B - Equipment Location Address

3. ◯ **Fixed Location** ◯ **Various Location**
(For equipment operated at various locations, provide address of initial site.)

20661 Newport Coast Drive
Street Address

Newport Beach, **CA** 92667
City State Zip

Nevin Edwards
Contact Name

Title

Phone # Ext. Fax #

E-Mail

Section C - Permit Mailing Address

4. Permit and Correspondence Information:
☑ Check here if same as equipment location address

20661 Newport Coast Drive
Address

Newport Beach, CA 92667
City State Zip

Nevin Edwards
Contact Name

Air Permitting Manager
Title

(724) 766-8388
Phone # Ext.

Fax #

nedwards@archaea.energy
E-Mail

Section D - Authorization/Signature

I understand that the Expedited Permit Processing fees must be submitted at the time of application submittal, and that the application may be subject to additional fees per Rule 301. I understand that requests for Express Permit Processing neither guarantees action by any specific date nor does it guarantee permit approval; that Express Permit Processing is subject to availability of qualified staff; and that once Express Permit Processing has commenced, the expedited fees will not be refunded. I hereby certify that all information contained herein and information submitted with the application are true and correct.

5. Signature of Responsible Official: DocuSigned by: Steven Boor B3BA495CCB09470...

6. Title of Responsible Official: Chief Operating Officer

7. Print Name of Responsible Official: Steven Boor

8. Date: 8/6/2024

9. Phone #: (970) 749-9827

10. Fax #:

Emergency Back up Generator

AQMD USE ONLY	APPLICATION TRACKING #		TYPE B C	EQUIPMENT CATEGORY CODE:	FEE SCHEDULE: $		VALIDATION
ENG. DATE A R	ENG. DATE	A R	CLASS I III	ASSIGNMENT Unit Engineer	CHECK/MONEY ORDER #	AMOUNT $	TRACKING #

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 91765-0944
Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator To Appears 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 Nearby

Is 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: 5.55 feet (above ground level) **What is the height of the closest building nearest the stack?** 15 feet

Stack Inside Diameter: 1.50 inches **Stack Flow:** 1,327 acfm **Stack Temperature:** 1,378 °F

Rain 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/Openings

Distance to nearest residence or sensitive receptor*: 1,385 feet

Distance to nearest business: 1,835 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.

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.

Section D - Authorization/Signature

I hereby certify that all information contained herein and information submittfgfed with this application is true and correct.

Signature of Preparer:	Title of Preparer:	Preparer's Phone #: (619) 455-9518 Preparer's Email: mbowen@scsengineers.com
	Project Manager	

Contact Person:	Contact's Phone#: (726) 766-8388	Date Signed:
Nevin Edwards		6/11/2024
Contact's Email: nedwards@archaea.energy	Contact's Fax#:	

THIS IS A PUBLIC DOCUMENT

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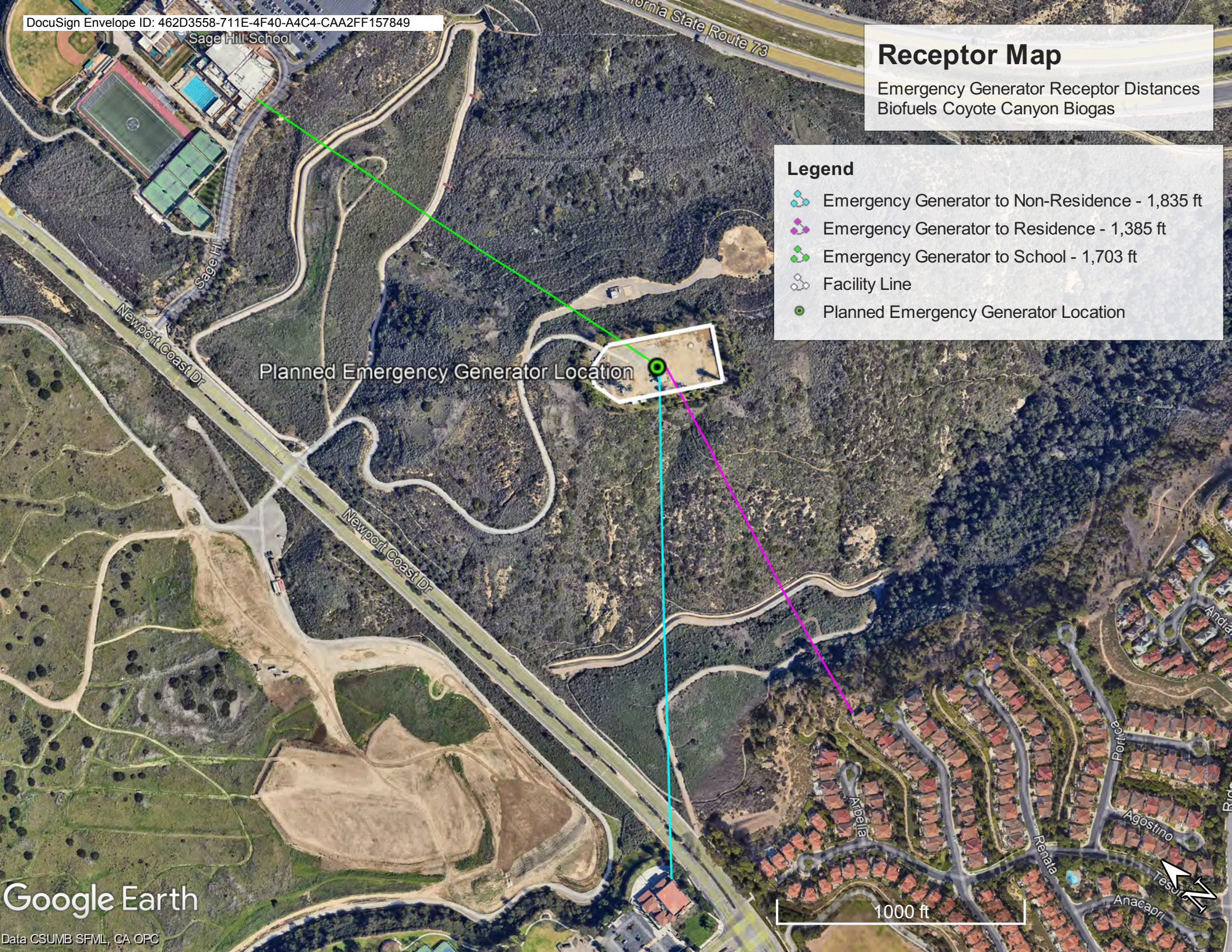
Check here if you claim that this form or its attachments contain confidential trade secret information. ☐

Receptor Map

Emergency Generator Receptor Distances
Biofuels Coyote Canyon Biogas

Legend

- Emergency Generator to Non-Residence - 1,835 ft
- Emergency Generator to Residence - 1,385 ft
- Emergency Generator to School - 1,703 ft
- Facility Line
- Planned Emergency Generator Location



Appendix

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