RESOLUTION NO. 2020-71

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NEWPORT BEACH, CALIFORNIA, CERTIFYING THE SECOND ADDENDUM NO. ER2020-001 TO THE UPTOWN NEWPORT ENVIRONMENTAL IMPACT REPORT (SCH NO. 2010051094) MODIFYING MITIGATION MEASURES AND APPROVING A MITIGATION MONITORING AND REPORTING PROGRAM FOR THE UPTOWN NEWPORT PLANNED COMMUNITY PROJECT LOCATED AT 4311-4321 JAMBOREE ROAD (PA2020-003)

WHEREAS, an application was filed by TSG-Parcel 1, LLC ("Applicant") with respect to property located at 4311 through 4321 Jamboree Road, and described as Assessor's Parcel Nos. 445-134-01 through 445-134-33, 445-133-07 and 445-133-08 ("Property");

WHEREAS, on February 26, 2013, the City Council approved the Uptown Newport Planned Community which consists of a mixed-use planned community of up to 1,244 residential units, 11,500 square feet of neighborhood-serving retail space, and two one-acre public parks to be developed in two phases ("Project");

WHEREAS, additionally, the City Council adopted Resolution No. 2013-21 certifying Environmental Impact Report ER2012-001 (SCH No. 2010051094) ("EIR") and approving a Mitigation Monitoring and Reporting Program ("MMRP") that was prepared in compliance with the California Environmental Quality Act as set forth in the California Public Resources Code Section 21000 et seq. ("CEQA") and its implementing State regulations as set forth in Title 14, Division 6, Chapter 3 of the California Code of Regulations ("CEQA Guidelines") and City Council Policy K-3 for the Uptown Newport Planned Community;

WHEREAS, on March 23, 2017, the Planning Commission adopted Resolution No. 2052 approving an Addendum to the EIR ("Addendum No. 1") and amendment to Master Site Development Review No. SD2017-001 to allow alternative locations and phasing of the commercial component of the Project;

WHEREAS, Addendum No. 1 evaluated the Project, as modified, and determined that no new environmental impacts and no impacts of greater severity would result from approval and implementation of the Project, as modified, pursuant to Section 21166 of CEQA and Section 15162 of the CEQA Guidelines;

WHEREAS, the EIR included a comprehensive review of regulatory requirements for hazardous materials and identified five extremely hazardous substances that are used by TowerJazz Semiconductor Facility ("TowerJazz") and stored on the Property. The EIR disclosed and evaluated the potential for these five substances to impact surrounding uses or the Phase 1 residential use of the Project. An "off-site consequence assessment" was prepared to evaluate the potential risks, and only one of the substances, anhydrous ammonia, posed a health risk. Mitigation measures in the EIR included installation of a new replacement ammonia tank at a minimum of 200 feet from the nearest existing or proposed residential structure with mitigation safeguards in order to reduce the potential impacts to a level that is less than significant;

WHEREAS, the existing anhydrous ammonia tank is still being utilized by TowerJazz, and no residential structures have been constructed within 200 feet of the tank in compliance with the mitigation monitoring and reporting program, however, TowerJazz has expressed concerns that conversion to a new tank would entail a complex qualification process that could disrupt their manufacturing operations;

WHEREAS, therefore, a modified mitigation measure has been proposed as an alternative solution such that instead of a new replacement tank, plans have been developed to enclose the existing, 2,230-gallon, above-ground, pressurized, anhydrous ammonia tank by constructing a room/enclosure around it inside its current building ("Modified Mitigation Measure");

WHEREAS, the ammonia tank would still be removed as part of Phase 2 demolition of the TowerJazz facility;

WHEREAS, a revised ammonia risk analysis for the existing ammonia tank at TowerJazz and an Offsite Consequence Analysis Technical Review Report were prepared based on the updated plans to construct the ammonia tank enclosure/room as provided in Appendix A of the Second Addendum No. ER2020-001 to model the potential impact to the proposed adjacent Uptown Newport residential development in the event of a release from the existing anhydrous ammonia tank and to review the Modified Mitigation Measure;

WHEREAS, the Fire Marshal of the City of Newport Beach has reviewed the revised off-site consequence assessment provided in Appendix A to the Second Addendum No. ER2020-001 and found the Modified Mitigation Measure to be acceptable with incorporation of the recommended conditions identified therein;

WHEREAS, the required standard conditions and design features have been identified and restated in the Second Addendum No. ER2020-001 as appropriate;

WHEREAS, the Modified Mitigation Measure would reduce the potential release of ammonia in the event of a malfunction or failure of the ammonia tank, and ultimately reduce potential exposure from such a release to TowerJazz employees and contractors, adjacent commercial users, and existing and future residents within the Property;

WHEREAS, two additional non-substantive changes are proposed to clarify and refine Mitigation Measures 7-3 and 7-4;

WHEREAS, according to Section 21166 of CEQA and Section 15162 of the CEQA Guidelines, when an EIR has been certified for a project, no subsequent EIR is required unless: 1) substantial changes to the project are proposed which will require major revisions to the EIR; 2) substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions to the EIR; and/or 3) new information, which was not known and could not have been known at the time the EIR was certified becomes available which would result in new or more severe environmental impacts than previously addressed in the EIR;

WHEREAS, the Modified Mitigation Measure and clarifications to Mitigation Measures 7-3 and 7-4 do not meet the aforementioned conditions because the Modified Mitigation Measure is limited to a revised design and refined mitigation for the anhydrous ammonia tank on-site. Pursuant to Section 15162 and 15164 the following facts support the adoption of the Second Addendum No. ER2020-001:

a. There have been no substantial project changes that would require major revisions to the previous EIR due the involvement of new significant environmental effects. The proposed change is limited to one mitigation measure and would not constitute a substantial project change;

b. The proposed change will not result in a substantial increase in the severity of any previously identified environmental impacts. The potential impacts associated with this modified project would either be the same or less than those described in the EIR;

c. There are no substantial changes to the circumstances under which the project would be undertaken that would result in new or more severe environmental impacts than previously addressed in the EIR;

d. Since the certification of EIR in 2013, no new information of substantial importance has become available that was not known and that could not have been known with the exercise of reasonable diligence at the time of adoption. Thus, no new information indicates that mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one of more significant effects of the project, but the project proponent or City decline to adopt the mitigation measures or alternatives; or mitigation measures or alternatives that are considerably different from those analyzed in the certified EIR would substantially reduce one or more significant effects on the environmental but the project proponent declines to adopt the mitigation or alternative; and

e. The proposed change would not result in any new or more severe significant impacts which are individually limited, but cumulatively considerable, when viewed in connection with planned or proposed development in the immediate vicinity;

WHEREAS, in accordance with Section 15164 of the CEQA Guidelines, the Second Addendum No. ER2020-001 is the appropriate environmental documentation; and

WHEREAS, a public meeting was held by the City Council on July 28, 2020, in the Council Chambers located at 100 Civic Center Drive, Newport Beach, California. A notice of time, place and purpose of the public meeting was given in accordance with the Ralph M. Brown Act and by providing written notice to the adjacent properties. Evidence, both written and oral, was presented to, and considered by, the City Council at this public meeting.

NOW, THEREFORE, the City Council of the City of Newport Beach resolves as follows:

Section 1: The City Council hereby certifies the Second Addendum No. ER2020-001 (SCH No. 2010051094) including technical appendix, which is attached here to as Exhibit "A" and incorporated herein by reference and the revised MMRP which is attached here to as Exhibit "B" and incorporated herein by reference. EIR Addendum No. ER2020-001 consists of the EIR Addendum and Technical Appendix.

Section 2: The recitals provided in this resolution are true and correct and are incorporated into the operative part of this resolution.

Section 3: If any section, subsection, sentence, clause or phrase of this resolution is, for any reason, held to be invalid or unconstitutional, such decision shall not affect the validity or constitutionality of the remaining portions of this resolution. The City Council hereby declares that it would have passed this resolution, and each section, subsection, sentence, clause or phrase hereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid or unconstitutional.

Section 4: The City Council finds that judicial challenges to the City's CEQA determinations and approvals of land use projects are costly and time consuming. In addition, project opponents often seek an award of attorneys' fees in such challenges. As project applicants are the primary beneficiaries of such approvals, it is appropriate that such applicants should bear the expense of defending against any such judicial challenge, and bear the responsibility for any costs, attorneys' fees, and damages which may be awarded to a successful challenger.

Section 5: This resolution shall take effect immediately upon its adoption by the City Council, and the City Clerk shall certify the vote adopting the resolution.

ADOPTED this 28th day of July, 2020.

Brad Avery
Mayor Pro Tem

ATTEST:

Leilani I. Brown
City Clerk

APPROVED AS TO FORM:
CITY ATTORNEY'S OFFICE

For Aaron C. Harp
City Attorney

Attachments:
A. Uptown Newport EIR Addendum (PlaceWorks Inc., 2020)
B. Revised MMRP (PlaceWorks Inc., 2020)

EXHIBIT A

July 2020 | 2nd Addendum to the Uptown Newport EIR
SCH No. 2010051094

UPTOWN NEWPORT ANHYDROUS AMMONIA TANK ENCLOSURE

City of Newport Beach

Prepared for:

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PLACEWORKS

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APPENDICES

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Abbreviations and Acronyms

AAQS	ambient air quality standards
AB	Assembly Bill
AELUP	airport environs land use plan
afy	acre-feet per year
ALUC	airport land use commission
AQMP	air quality management plan
BMP	best management practices
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CNEL	Community Noise Equivalent Level
CO_2e	carbon dioxide equivalent
dBA	A-weighted decibel
du	dwelling units
EIR	environmental impact report
EPA	Environmental Protection Agency (US)
ESA	environmental site assessment
FAA	Federal Aviation Administration
GHG	greenhouse gases
GPA	general plan amendment
ITE	Institute of Transportation Engineers
JWA	John Wayne Airport
LEED	Leadership in Energy and Environmental Design
LOS	level of service
LRA	local responsibility area
LST	localized significance thresholds
L_{eq}	equivalent continuous noise level
MS4	municipal separate storm sewer system
MT	metric ton
NBFD	Newport Beach Fire Department
NBPD	Newport Beach Police Department

Abbreviations and Acronyms

NPDES	National Pollution Discharge Elimination System
OCMA	Orange County Museum of Art
PCDP	Planned Community Development Plan
ppd	pounds per day
PPV	peak particle velocity
RHNA	regional housing needs assessment
RPS	Renewable Portfolio Standard
RTP/SCS	regional transportation plan / sustainable communities strategy
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SoCAB	South Coast Air Basin
SoCal Gas	Southern California Gas Company
SRA	state responsibility area
SWPPP	Stormwater Pollution Prevention Plan
TMDL	total maximum daily load
TPO	Traffic Phasing Ordinance
VMT	vehicle miles traveled
VOC	volatile organic compound
WQMP	water quality management plan

1. Introduction

This document is the 2nd Addendum to the previously certified Uptown Newport Environmental Impact Report (State Clearinghouse No. 2010051094) for the approved Uptown Newport project (Approved Project). It serves as the environmental review for new modifications to the Uptown Newport project (Modified Project) related to the existing anhydrous ammonia tank. This 2nd Addendum has been prepared as required pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines. The EIR was prepared to address the environmental impacts associated with the Approved Project and was certified by the Newport Beach City Council on February 26, 2013. The 1st Addendum to the certified EIR was prepared to address relocation of the 11,500 square feet (SF) of retail space within the project site. Approved in March 2017, that Addendum addressed both the redistribution of the retail within the project site and alternate phasing for the retail use development. The analysis concluded that no changes to mitigation measures were required.

Pursuant to the provisions of CEQA and the State CEQA Guidelines, the City of Newport Beach is the lead agency with the responsibility of deciding whether or not to approve the requested action. This Addendum addresses minor changes to the Approved Project.

1.1 PURPOSE OF THIS ADDENDUM

1.1.1 CEQA Requirements

According to Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines, when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR or negative declaration shall be prepared for the project unless the lead agency determines that one or more of the following conditions are met:

1. Substantial project changes are proposed that will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

2. Substantial changes would occur with respect to the circumstances under which the project is undertaken that require major revisions to the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

3. New information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified or the negative declaration was adopted shows any of the following:

a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration.

b. Significant effects previously examined will be substantially more severe than identified in the previous EIR.

c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.

d. Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

Preparation of an Addendum to an EIR is appropriate when none of the conditions specified in Section 15162 (above) are present and some changes or additions to the previously certified EIR are necessary.

After careful consideration of the potential environmental impacts of the Modified Project, together with the EIR, the City of Newport Beach, as lead agency, has determined that none of the conditions requiring preparation of a subsequent or supplement to an EIR have occurred. The modifications to the Approved Project are limited to a revised design and refined mitigation for the anhydrous ammonia tank on-site; would not have any reasonably foreseeable environmental consequences beyond that analyzed in the EIR; and do not change the conclusions of the EIR, involve new significant effects or substantially increase the severity of previously identified significant effects. Moreover, the mitigation measures (refined as appropriate) would adequately mitigate the Modified Project. The City, therefore, has determined that the circumstances described in CEQA Guidelines Section 15164 apply to the Modified Project, and a 2nd Addendum to the 2013 EIR is appropriate.

Since certification of the EIR as addended, CEQA Guidelines Appendix G has been revised to include specific sections on wildfire and energy. This Addendum includes these topical sections (see Section 1.1.3, *CEQA Checklist Update*). These additional analyses are appropriate for inclusion in the Addendum, but none result in new or increased significant impacts that would require preparation of a subsequent or supplement to the EIR pursuant to Section 15162 of the CEQA Guidelines.

1.1.2 Scope of Subsequent Analysis

The scope of the review for project-related impacts for this Addendum is limited to changes between the Approved Project and Modified Project. The 2013 EIR as addended and its approved mitigation effectively serve as the baseline for the environmental impact analysis of the Modified Project. As required by CEQA, this Addendum also addresses changes in circumstances or new information that would potentially require major revisions of the EIR by potentially involving new environmental impacts.

Additionally, this Addendum is the primary reference document for the formulation and implementation of a mitigation monitoring and reporting plan for the Modified Project. All applicable measures from the mitigation

monitoring program approved in the 2013 EIR and refined in this Addendum have been incorporated into this document. This document is intended to provide sufficient information to allow the City of Newport Beach and any other permitting agencies to evaluate the potential impacts from construction and operation of the Modified Project.

1.1.3 CEQA Checklist Update

On December 28, 2018, the State of California Office of Administrative Law approved updated CEQA Guidelines to be implemented as of January 1, 2019. The updated guidelines include an update to the Appendix G Checklist, which is used as the basis for topical environmental review by the City of Newport Beach. This Addendum has been prepared to fully address the requirements of the updated guidelines. It follows the updated Appendix G checklist and provides explanations, as necessary, to the conclusions of the 2013 EIR.

1.2 ENVIRONMENTAL DOCUMENTATION

This Addendum relies on the environmental analysis in the 2013 EIR as addended. The public review period for the EIR was from September 10, 2012, to October 24, 2012. The Newport Beach City Council certified the EIR on February 26, 2013. A Notice of Determination was filed with both the Orange County Clerk's Office and the State Clearinghouse. The 1st Addendum to the Uptown Newport EIR (related to relocating/redistributing 11,500 SF retail uses within the project site) was approved by the Planning Commission at its public hearing on March 23, 2017.

This Addendum incorporates by reference the 2013 EIR as addended and the technical documents that relate to the Modified Project or provide additional information concerning the environmental setting of the Modified Project. The information in this Addendum is based on the following technical studies and/or planning documents:

- City of Newport Beach General Plan (2006) and Municipal Code (2020)
- Certified Environmental Impact Report for the approved Uptown Newport project (certified February 26, 2013)
- Addendum to the Uptown Newport Environmental Impact Report, March 2017

These documents, including the EIR and 1st Addendum, are available for review at the City of Newport Beach Planning Division, 100 Civic Center Drive, Newport Beach, California 92660. The EIR, 1st Addendum to the EIR, and General Plan and Municipal Code are also available on the City's website.

1.3 CONTENT AND ORGANIZATION OF THIS ADDENDUM

This Addendum relies on the CEQA Guidelines' Appendix G checklist, which addresses environmental issues topic by topic. Section 5, *Environmental Analysis*, is organized into three sections:

1. Introduction

- **Environmental Factors Not Affected by the Modified Project.** A list of the topics not affected by the Modified Project and why.
- **Environmental Factors Potentially Affected by the Modified Project.** The topics that could be affected by the Modified Project are analyzed in detail under these subheadings:
  - Summary of Impacts Identified in the Certified EIR
  - Impacts Associated with the Modified Project
  - Conditions of Approval and Project Design Features (if applicable)
  - Adopted Mitigation Measures Applicable to the Modified Project
  - Level of Significance After Mitigation
- **New Topics Under 2018 CEQA Checklist.** Analysis of energy and wildfire impacts.

Where necessary, mitigation measures have been updated, refined, and/or supplemented to ensure mitigation is implemented as intended for the Modified Project. Such changes are shown in ~~strike-out~~/**underlined bold** format and will be incorporated into the final mitigation monitoring program for the Uptown Newport project.

2. Environmental Setting

2.1 PROJECT LOCATION

The 25.05-acre project site is within the Airport Area of the City of Newport Beach, County of Orange, California. It is situated approximately 0.6 mile southeast of John Wayne Airport and occupies Assessor's Parcel Nos. 445-134-01 through -33, 445-133-07, and 445-133-08. It is on the west side of Jamboree Road, between Birch Street and the intersection of Von Karman Avenue and MacArthur Boulevard.

Regional access to the site is from State Route 73 (SR-73) via Jamboree Road to the south and Interstate 405 (I-405) via Jamboree Road to the north, as shown on Figure 1, *Regional Location*. Vehicular access to the site is from Jamboree Road, Fairchild Road, Birch Street, and Von Karman Avenue. MacArthur Boulevard and Von Karman Avenue pass west of the site, and Birch Street passes to the north (see Figure 2, *Local Vicinity*, and Figure 3, *Aerial Photograph*).

2.2 ENVIRONMENTAL SETTING

Existing site and surrounding land uses are depicted in Figure 3, *Aerial Photograph*. The project site is currently in transition in accordance with the phased Uptown Newport Development Plan approved in 2013. As described in Section 3.1.2, *Development Status*, below, portions of Phase 1 have been developed and the office building portion (Half Dome building) of the TowerJazz operation has been demolished. The primary TowerJazz semi-conductor manufacturing plant remains operational in the northern portion of the project site (3311,452 square feet). A Southern California Edison (SCE) substation remains along the southwestern boundary of the project site.

2.2.1 Surrounding Land Use

The site is surrounded to the north, west, and south by commercial and office uses of the Campus Office Park development within the Koll Center Newport property. To the north are clusters of office buildings ranging from one to fifteen stories in height, and three restaurants. To the west are office buildings ranging from one to four stories high, landscaped areas, and two man-made lakes. To the south are two 20-story office buildings, surface parking, and a fast-food restaurant. Jamboree Road forms the eastern boundary of the project site, and beyond Jamboree Road is undeveloped open space on the north campus of the University of California, Irvine (UCI). The UCI Child Development Center and San Joaquin Freshwater Marsh Reserve are also located across Jamboree Road.

2. Environmental Setting

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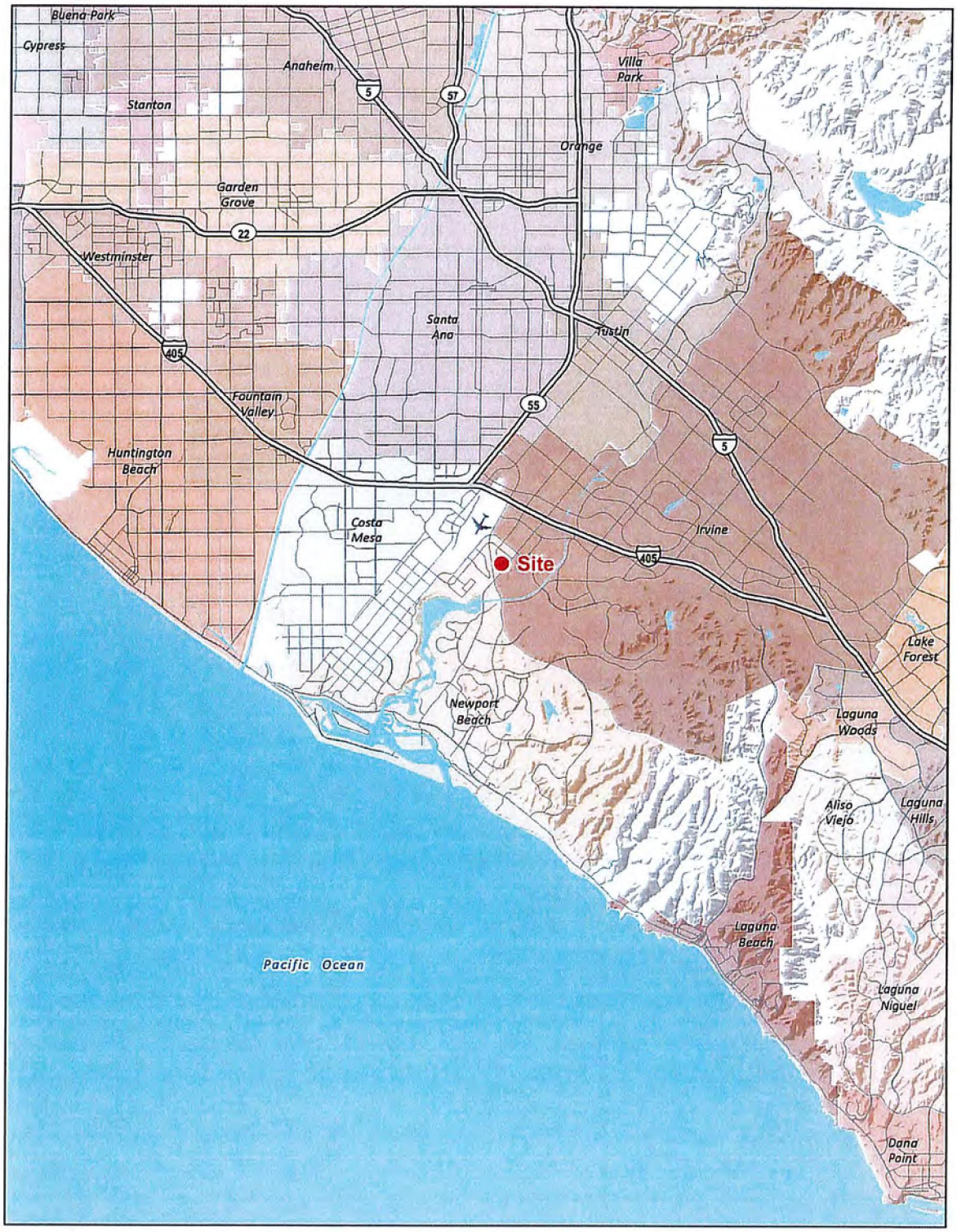
Figure 1 - Regional Location



Note: Unincorporated county areas are shown in white.

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Scale (Miles)

Source: ESRI, 2016

PlaceWorks

2. Environmental Setting

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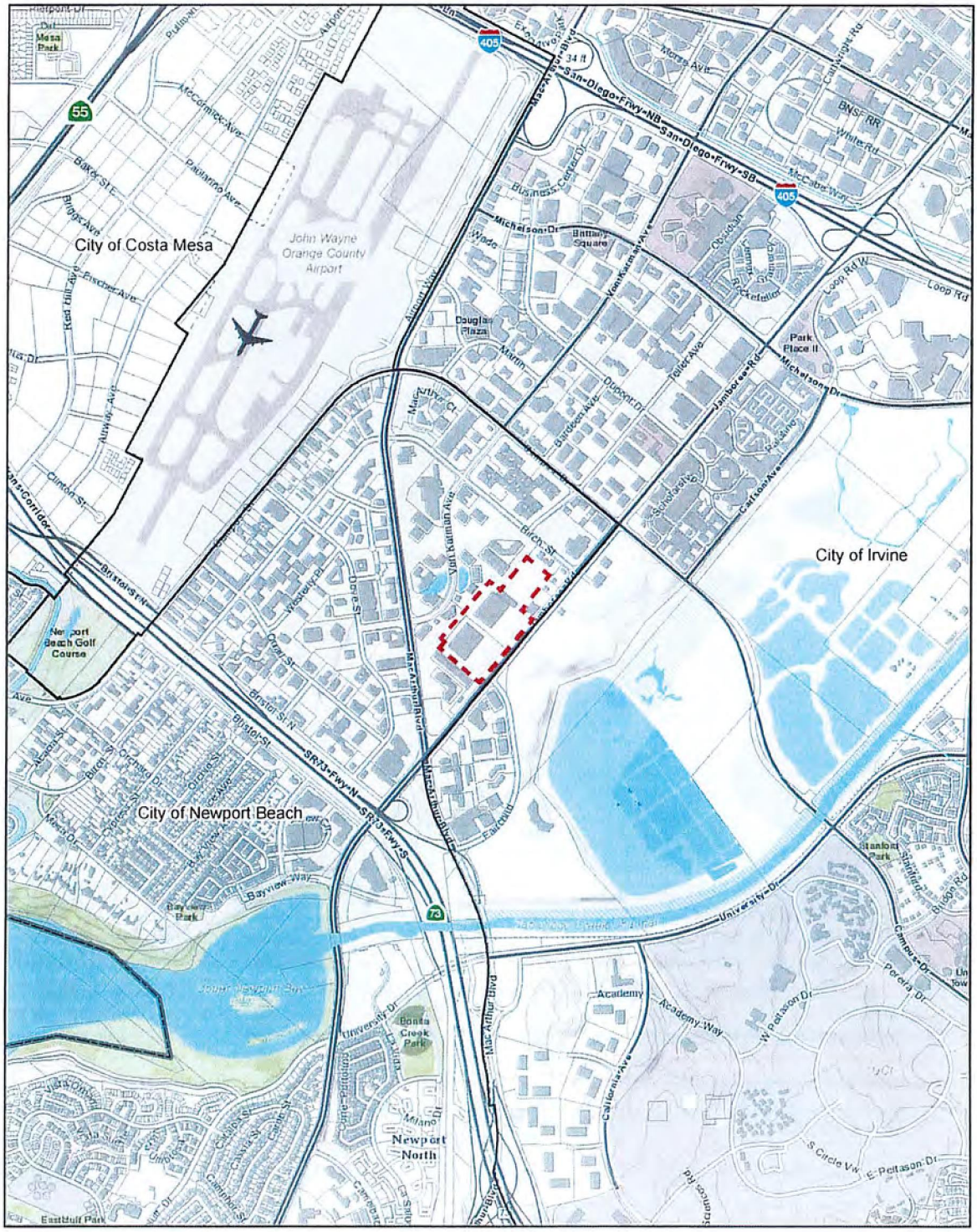
Figure 2 - Local Vicinity



Source: ESRI, 2016

PlaceWorks

2. Environmental Setting

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Figure 3 - Aerial Photograph

Source: ESRI, 2016

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2. Environmental Setting

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3. Project Description

3.1 APPROVED PROJECT

Land Use

The Uptown Newport project is approved as a multifamily residential community with neighborhood-serving retail uses in the Airport Area of Newport Beach. The Approved Project allows for up to 1,244 residential units, 11,500 square feet of retail, and two acres of park area. The project included adoption of the Uptown Newport Planned Community Development Plan (PCDP) and was designed to occur in two distinct project phases. At buildout, the Approved Project is projected to house approximately 2,724 residents and employ approximately 26 people in the retail component. Figure 4, *Approved Site Plan and Phasing Plan*, depicts land uses as summarized in Table 1, *Approved Project Land Use Summary*. Figure 4A, *Modified Project Site Plan*, depicts the changes to the location for retail uses as approved in 2017 (EIR Addendum No. 1).

Table 1 Approved Project Land Use Summary

	Phase 1	Phase 2	Total
Number of Units	680	564	1,244
Park Area (ac.)	1.00	1.00	2.00
Retail (sf)	11,500*	0	11,500
On-Street Parking Stalls	59	34	93
Total Area (ac.)	**12.29**	**12.76**	**25.05**

*Addendum No. 1 (as shown on Figure 4A) specifies relocation of 6,500 SF of retail within Phase 1 and provides option for remaining 5,000 SF retail to be developed in Phase 2.

Project Phasing

TowerJazz is a tenant and operates a semiconductor manufacturing facility on the property. The development phasing of the Uptown Newport project is tied to the lease agreement with this tenant. The analysis in the certified EIR assumed that Phase 1 of the project would commence in 2013 and be completed by 2018. At the time, TowerJazz's lease was set to expire in 2017, with a potential to extend the lease until March 2027. Uptown Newport Phase 2 is contingent upon the cessation and demolition of the TowerJazz manufacturing facility. To evaluate the worst-case impacts and potential overlap of Phase 1 and Phase 2 construction and demolition activities, the EIR assumed that Phase 2 could commence as early as spring 2017 with buildout through 2021 but also addressed the potential for the TowerJazz facility to continue after the development of Phase 1 and the potential impacts of the Phase 1 development operating adjacent to the TowerJazz facility. The EIR also addressed the potential for construction in both phases and construction and occupation to occur concurrently.

3. Project Description

Ammonia Tank

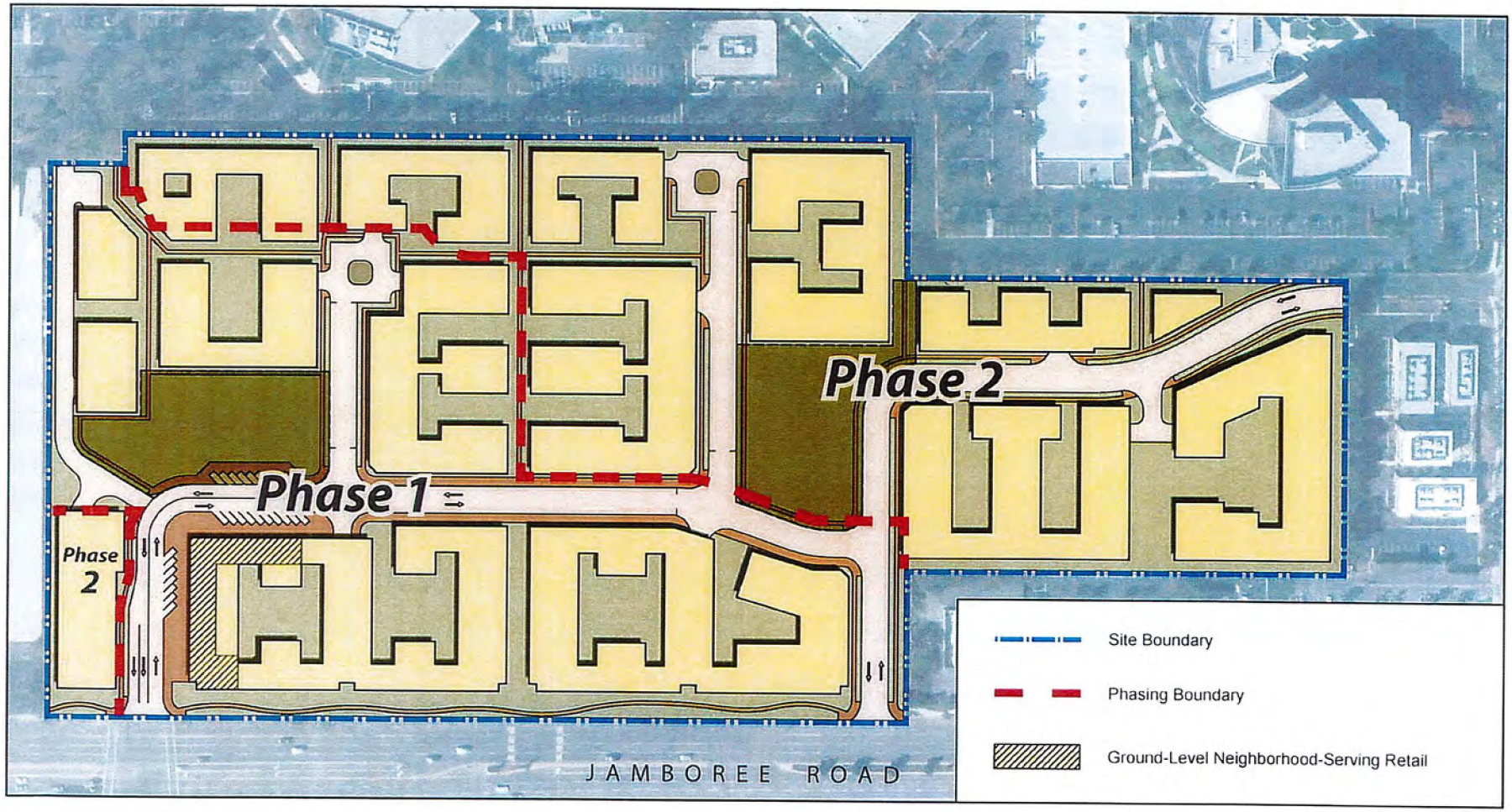
The project site was historically used for the development and manufacture of radio components, then semiconductors for telecommunication equipment, including facsimiles, modems, and high-speed data transmission equipment. As a result, soil and groundwater were impacted by volatile organic compounds (VOCs) in the north and northwest portions of the site (due to historical releases of solvents from underground storage tanks). The EIR details the potential threats associated with: 1) past hazardous substances at the project site to ground, groundwater, or surface water; 2) the risk of soil gas and soil vapor intrusion into proposed buildings; and 3) the potential risk associated with other hazardous materials on the project site (industrial-related chemical storage, asbestos, lead, etc.). The detailed analysis of these hazards is in Draft EIR Section 5.7, *Hazards and Hazardous Materials*, supported by numerous technical reports in Draft EIR, Appendix H. The EIR included mitigation measures to reduce all potential hazards and hazardous materials to less than significant.

The EIR included a comprehensive review of regulatory requirements for hazardous materials and identified five extremely hazardous substances that are used by TowerJazz and stored on the project site. The 2013 EIR disclosed and evaluated the potential for these five substances to impact surrounding uses or the Phase 1 residential use of the Approved Project. An "off-site consequence assessment" was prepared to evaluate the potential risks, and only one of the substances, anhydrous ammonia, posed a health risk. Mitigation measures in the EIR included installation of a new ammonia tank at a minimum of 200 feet from the nearest existing or proposed residential structure with mitigation safeguards such as automatic shut-off valves, excess flow valves, restrictive flow orifices, toxic gas detection system, automatic sprinkler system, water deluge system, alarm system and double containment piping. These measures mitigated the potential impact to less than significant.

Development Status

The former TowerJazz office building (Half Dome building) was demolished and the Phase 1 portion of the site graded. Two of the residential apartment buildings along Jamboree Road (4201 and 4301 Jamboree Road) have been completed and have certificates of occupancy. The south building (4201) contains 227 units and the north building (4301) contains 231 units. The Phase 1 park (Uptown Park) has also been completed. The commercial component planned in the southern corner and one of the anticipated residential buildings behind the park have been submitted and are under review by the Planning Division (as of May 2020). The second residential building adjacent to Uptown Park has not been submitted for review.

Figure 4 - Approved Site Plan and Phasing Plan



Source: Shopoff Management, Inc. 2011

3. Project Description

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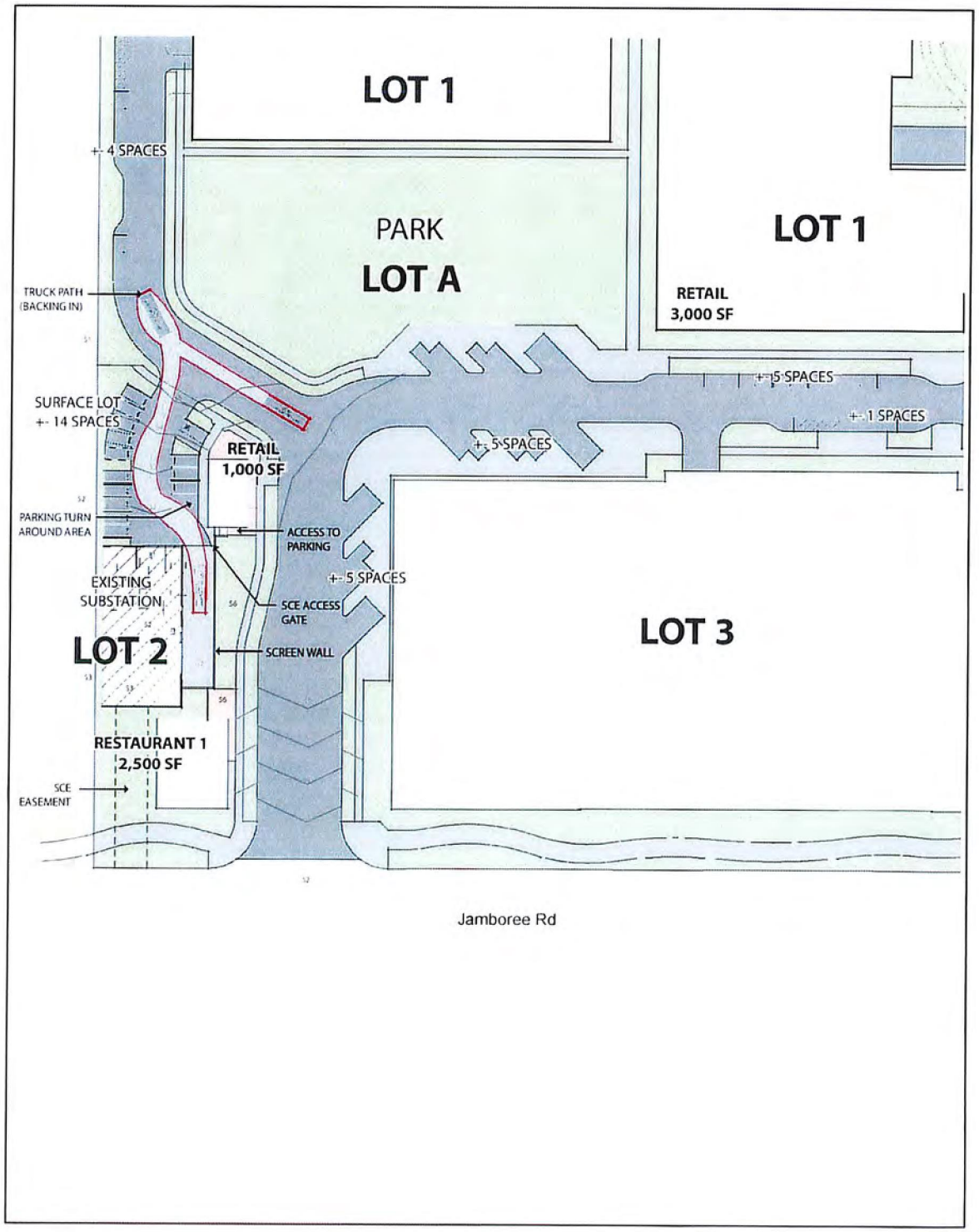
Figure 4a - Modified Project Site Plan



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Scale (Feet)

Source: Shopoff Realty Investment, 2017

PlaceWorks

3. Project Description

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3.2 MODIFIED PROJECT

The only modification proposed to the Approved Project is related to the existing anhydrous ammonia tank. As described under Section 3.1, *Approved Project, Project Description*, the EIR included a mitigation measure to install a new anhydrous ammonia tank with mitigation safeguards a minimum of 200 feet from existing or proposed residential structures. As of April 2020, the existing tank is still being utilized by TowerJazz, and no residential structures have been constructed within 200 feet of the tank in compliance with the adopted mitigation monitoring and reporting program. However, TowerJazz personnel have expressed concerns that a switchover to a new tank would entail a complex qualification process that could disrupt their manufacturing operations. The Modified Project, therefore, has been proposed as an alternate solution. Instead of a new replacement tank, plans have been developed to enclose the existing, 2,230-gallon, above-ground, pressurized, anhydrous ammonia tank by constructing a room/enclosure around it inside its current building. The ammonia tank would still be removed as part of Phase 2 demolition of the TowerJazz facility..

The existing tank is southeast of the TowerJazz cooling towers, approximately 5 feet from the closest Uptown Newport property boundary and 35 feet from the closest proposed residential building (see Figure 5, *Site Layout and Ammonia Tank Location*). The tank is in a partially enclosed structure (three walls and a roof) that also contains the acid neutralization tanks for TowerJazz's wastewater system. The tank has been operating for over 20 years, and both Uptown Newport and TowerJazz have emergency notification protocols in place. The existing tank storage area is also equipped with safety equipment including a mitigation system and alarm, discussed below.

The Modified Project involves completely enclosing the existing ammonia tank in a separate room/enclosure that would be approximately 11.5 feet wide, 22 feet long, and 16 feet high within the existing structure. As discussed above, currently the tank is partially enclosed on three sides with a roof overhead. As described in this Addendum (Section 5.2.2, *Hazard and Hazardous Materials*) and detailed in the risk analysis for the existing ammonia tank (Appendix A), any release from the tank would be constrained by the enclosed room. The existing ammonia tank is also equipped with these safety features:

- Water deluge spray system that consists of water nozzles above the tank that effectively knock down any vapors from an unintentional release.
- Ammonia leak detector that alarms at a concentration of 25 mg/liter and activates the water deluge system at 35 mg/liter.
- A flame detector connected to the gas sensor controller.
- Pressure relief valves, pressure sensors, level indicators, leak sensors, shutoff valves, and an ammonia control panel.
- Excess flow valves that automatically shut off flow in the pipe when excess flow rates are detected in the line.
- Emergency shutoff with a remote release cable.

- Diking around tank with a drain sump.
- An eye wash station.
- An ammonia tank monitor and control panel with emergency deluge activation.

The proposed enclosure would reduce the potential release of ammonia due to a malfunction or failure of the ammonia tank, and potential exposure from such a release to TowerJazz employees and contractors, adjacent commercial users, and existing and future residents within Uptown Newport.

As shown in Figure 6, *Proposed Room Enclosure – Anhydrous Ammonia Tank*, the proposed enclosure would include:

- The addition of interior and exterior walls with doors and ceiling to create an airtight enclosure.
- The modification of the floor to drain to a sump that discharges to the existing acid waste neutralization system.
- The installation of emergency controls and ammonia detectors both inside and outside the new enclosure.
- Two (2) existing emergency shutoff valves are located between the tank and the production building to isolate the piping between the tank and the production building. In addition, a third emergency shutoff valve is located at the ammonia tank control panel immediately outside the proposed enclosure. The emergency shutoff valves are solenoid valves that close when the ammonia tank deluge system is activated and are controlled by the alarm control panel.

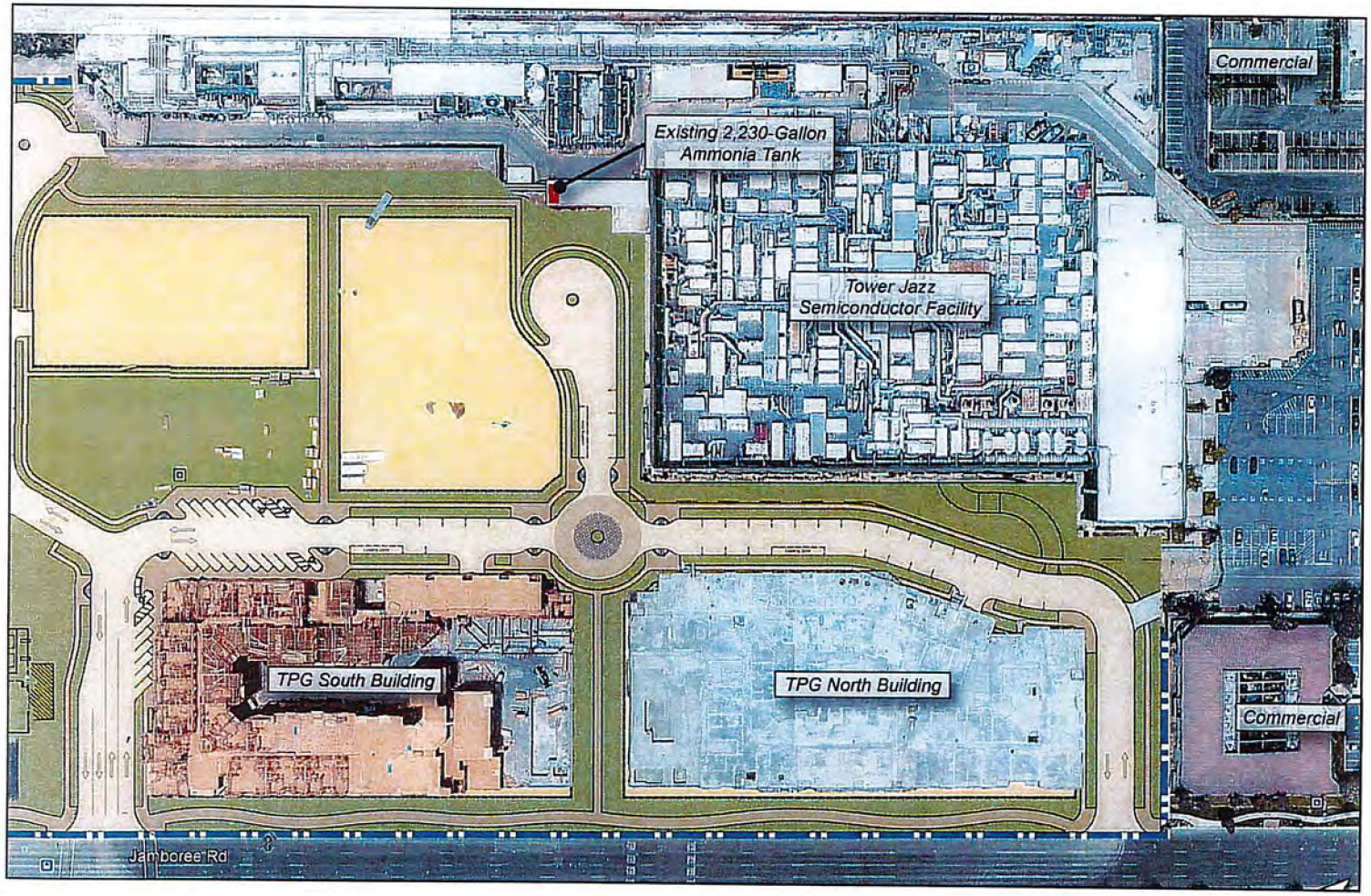
This Addendum would also modify Mitigation Measure 7-2 of the 2013 EIR (see Section 5.2.2, *Hazards and Hazardous Materials*). The modified measure would also be included in an updated Mitigation Monitoring and Reporting Program.).

3.3 DISCRETIONARY APPROVALS REQUIRED

The following discretionary approvals are required to implement the Modified Project:

- Approval of this Addendum to the Uptown Newport Environmental Impact Report (State Clearinghouse No. 2010051094)
- Approval of an Updated Mitigation Monitoring and Reporting Program (MMRP) for the Uptown Newport Project.

Figure 5 - Site Layout and Ammonia Tank Location



Base Map Source: Google Earth, 2019

3. Project Description

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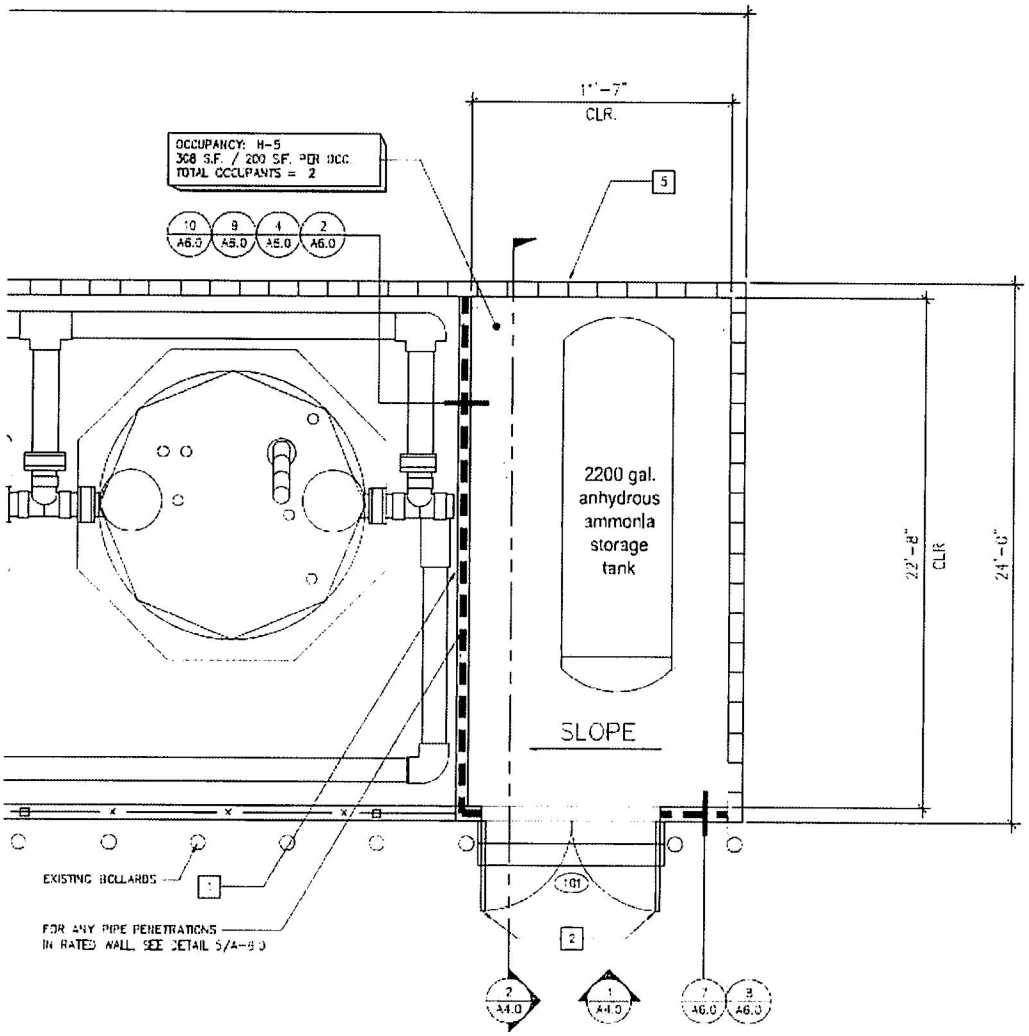
Figure 6 **Proposed Room Enclosure – Anhydrous Ammonia Tank**



3. Project Description

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4. Environmental Checklist

4.1 BACKGROUND

1. **Project Title:** Uptown Newport Anhydrous Ammonia Tank Enclosure

2. **Lead Agency Name and Address:**
   City of Newport Beach
   100 Civic Center Drive
   Newport Beach, CA 92660

3. **Contact Person and Phone Number:**
   Liz Westmoreland, Associate Planner
   (949) 644-3234

4. **Project Location:**
   The 25.05-acre project site is in the Airport Area of Newport Beach. It is approximately 0.6 mile southeast of John Wayne Airport and occupies Assessor's Parcel Nos. 445-134-01 through -33, 445-133-07, and 445-133-08. It is on the west side of Jamboree Road, between Birch Street and the intersection of Von Karman Avenue and MacArthur Boulevard.

5. **Project Sponsor's Name and Address:**
   TSG – Parcel 1, LLC
   Brian G. Rupp, Executive Vice President, Development
   2 Park Plaza, Suite 700
   Irvine, CA 92614

6. **General Plan Designation:** Mixed Use Horizontal (MU-H2)

7. **Zoning:** Uptown Newport Planned Community (PC58): Planned Community Development Plan

8. **Description of Project**:
   Building enclosure of existing anhydrous ammonia tank to improve safety and off-site consequence analysis at the TowerJazz Facility, including modification of Mitigation Measure 7-2 of the Uptown Newport EIR.

9. **Surrounding Land Uses and Setting**:
   The site is surrounded to the north, west, and south by landscaped areas, parking lots, small restaurants, and multistory office buildings. Across Jamboree Road is undeveloped open space on the north campus of UCI. The San Joaquin Freshwater Marsh Reserve is east of the project site across Jamboree Road.

10. **Other Public Agencies Whose Approval Is Required**: None

4.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist on the following pages [None].

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

4.3 DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☒ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	*Date*
Printed Name	*For*

4.4 EVALUATION OF ENVIRONMENTAL IMPACTS

In Chapter 5, *Environmental Analysis*, the environmental checklist identifies the environmental effects of the Modified Project in comparison with the Approved Project. This comparative analysis has been undertaken pursuant to the provisions of CEQA to provide the factual basis for determining whether any changes in the project or its circumstances or any new information requires additional environmental review or preparation of a subsequent or supplemental EIR. The textual changes to the EIR would not involve new significant environmental impacts; a substantial increase in severity of significant impacts previously identified; substantial changes in the circumstances under which the project is undertaken that result in new impacts or a substantial increase in the severity of significant impacts; or new information of substantial importance, as meant by CEQA Guidelines Section 15162. Therefore, this Addendum is the appropriate means to document these textual changes. The bases for the findings listed in the Environmental Checklist are explained in Chapter 5.

4.4.1 Terminology Used in the Checklist

For each question in the Environmental Checklist, a determination of the level of significance of the impact is provided. Impacts are categorized into the following categories:

- **No Impact.** A designation of *No Impact* is given when the Modified Project would cause no changes to the environment as compared to the original project analyzed in the EIR.

- **Changes or Additions.** An Addendum to the EIR is required if changes or additions are necessary and none of the criteria for a subsequent EIR are met (CEQA Guidelines § 15164).

- **New Mitigation or Alternative to Reduce Significant Effect Is Declined.** A Subsequent EIR is required if new information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the EIR was certified shows that mitigation measures or alternatives previously found not to be feasible would in fact be feasible (or new mitigation measures or alternatives are considerably different) and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative (CEQA Guidelines § 15162). A Supplement to an EIR can be prepared if the criterion for a Subsequent EIR is met, but only minor additions or changes would be necessary to make the EIR adequately apply to the Modified Project (CEQA Guidelines § 15163).

- **New Information Showing Greater Significant Effects Than Previous EIR.** A Subsequent EIR is required if new information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the EIR was certified shows 1) the project would have one or more significant effects not discussed in the EIR; 2) significant effects previously examined would be substantially more severe than shown in the EIR; or 3) mitigation measures or alternatives previously found not to be feasible would in fact be feasible (or new mitigation measures or alternatives are considerably different) and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative (CEQA Guidelines § 15162).

4. Environmental Checklist

- **Substantial Change in Project or Circumstances Resulting in New Significant Effects.** A Subsequent EIR is required when 1) substantial project changes are proposed or substantial changes to the circumstances under which the project would be undertaken, 2) those changes would result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects, and 3) changes require major revisions to the EIR (CEQA Guidelines § 15162).

5. Environmental Analysis

This section provides the significance conclusions for each environmental topic in the CEQA Guidelines' Appendix G checklist as well as the evidence to substantiate those conclusions. Section 5.1 includes a list of environmental factors that will not be affected by the Modified Project along with a brief substantiation. Section 5.2 provides an expanded discussion associated with environmental factors that would potentially be affected by the Modified Project. Section 5.3 addresses potential incremental impacts due to the Modified Project related to the new topics under the 2018 CEQA Guidelines.

5.1 ENVIRONMENTAL FACTORS NOT AFFECTED BY THE MODIFIED PROJECT

Since the modifications to the Approved Project are limited to the revised design and mitigation for the existing anhydrous ammonia tank, the Modified Project would not affect most of the environmental factors listed in Appendix G. For these factors, the Addendum does not detail the analysis from the 2013 EIR or the existing mitigation for the project; instead, these factors are listed in Table 2 with a brief substantiation.

Table 2 Environmental Factors Not Affected

Environmental Topic	Substantiation
Aesthetics	The Modified Project includes the installation of an enclosure inside an existing building and therefore would have no impacts on aesthetics.
Agriculture and Forestry Resources	The Modified Project involves constructing a room/enclosure in the building the ammonia tank currently occupies and would not impact agricultural and forestry resources.
Biological Resources	The Modified Project would not involve any new ground disturbance, and all changes would be within the confines of an existing building. Therefore, there would be no impacts to biological resources.
Cultural Resources	The Modified Project involves changes within the confines of an existing building. Modifications to the TowerJazz facility would not be a significant historic impact because the building is less than 50 years old. Furthermore, the Modified Project does not involve any new ground disturbance, and no impacts to archeological resources would arise.
Geology and Soils	The Modified Project would not involve any new ground disturbance and includes the addition of interior and exterior walls with doors, floor modifications, and the installation of emergency controls and ammonia detectors within an existing building. None of these activities would impact the geology or soils on site or disrupt paleontological resources.
Hydrology and Water Quality	The activities associated with the installation of an enclosure within an existing building would not affect site hydrology or have any new or increased impact on water quality on site. No impacts to hydrology and water quality would arise.
Land Use and Planning	Proposed improvements would be limited to constructing a room/enclosure within an existing TowerJazz building to enclose an existing anhydrous ammonia tank. The project modification would not physically divide an established community and would not conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The improvement would be reviewed and approved by the Newport Beach Fire Department and Planning Department. Therefore, no impacts to land use and planning would arise.
Mineral Resources	The Modified Project involves constructing a room/enclosure in the building the ammonia tank currently occupies and would not impact mineral resources.

Table 2 Environmental Factors Not Affected

Environmental Topic	Substantiation
Noise	Construction of an enclosure within the existing building associated with the Modified Project would be temporary, short term, and would result in a minimal noise impact. The EIR includes mitigation measures to reduce noise levels from the TowerJazz facility and to reduce vibration levels at the TowerJazz facility. There would be no long-term, operational noise impacts associated with project modification. Therefore, the Modified Project would have no impacts to noise.
Population and Housing	Constructing a room/enclosure in the building the ammonia tank currently occupies would have no impact on population and housing.
Public Services	The addition of interior and exterior walls with doors, ceiling, floor modifications, and the installation of emergency controls and ammonia detectors would have no effect on the demand for police, schools, parks, and libraries. The Newport Beach Fire Department requested that the project applicant update the model of potential airborne ammonia concentrations to assess the potential impact to the proposed adjacent Uptown Newport residential development in the event of a release from the existing anhydrous ammonia tank. The results of the revised risk analysis indicate that the estimated ammonia concentrations from an accidental release from the existing ammonia tank within an enclosed building would not result in concentrations of concern at the Uptown Newport property. Therefore, the Modified Project would have no impact on fire services.
Recreation	The activities associated with the installation of an enclosure within an existing building would have no effect on recreation.
Transportation	The Modified Project would not alter project traffic and would have no impact on transportation. It would not generate additional vehicle trips and would not affect vehicle miles traveled (VMT).
Tribal Cultural Resources	The Modified Project involves changes within the confines of the TowerJazz building and does not involve any new ground disturbance. Therefore, no impacts to tribal cultural resources impacts would arise.
Utilities and Service Systems	The addition of interior and exterior walls with doors, floor modifications, and the installation of emergency controls and ammonia detectors would have no effect on the demand for water, electricity, and natural gas and would not affect wastewater and solid waste generation. Therefore, there would be no impacts to utilities and service systems.

5.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED BY THE MODIFIED PROJECT

This section has expanded discussions for environmental factors that would potentially be affected by the Modified Project—air quality, and hazards and hazardous materials. For these environmental factors, the Addendum briefly summarizes the conclusions of the 2013 EIR and discusses whether the Modified Project is consistent with the findings in the 2013 EIR. Mitigation measures that are referenced in this section are from the certified 2013 EIR.

5.2.1 Air Quality

5.2.1.1 SUMMARY OF IMPACTS IDENTIFIED IN THE CERTIFIED EIR

Phase 1

The Approved Project is a residential project with more than 500 dwelling units and changes in the population, housing, or employment growth projections associated with this project have the potential to affect the Southern California Association of Governments' (SCAG's) demographic projections and therefore the assumptions in South Coast Air Quality Management District's (AQMD's) air quality management plan

(AQMP). However, the 2013 certified EIR found that the Approved Project would be considered consistent with the AQMP.

The Approved Project would be constructed in two phases and construction of the two phases could overlap. The 2013 certified EIR found that the Phase 1 construction activities would exceed South Coast AQMD's regional significance thresholds for NO_x during grading and paving activities and when construction activities of both phases overlap. Emissions of NO_x are precursors to the formation of O_3. In addition, NO_x is a precursor to the formation of particulate matter (PM_{10} and $PM_{2.5}$). Consequently, emissions of NO_x that exceed the South Coast AQMD regional significance thresholds would contribute to the O_3, NO_2, and particulate matter (PM_{10} and $PM_{2.5}$) nonattainment designation of the South Coast Air Basin (SoCAB) under the national and California ambient air quality standards (AAQS). The Approved Project was found to significantly contribute to the nonattainment designations of the SoCAB and the City Council adopted a statement of overriding considerations related to this project impact.

Furthermore, buildout of the Approved Project would result in direct and indirect criteria air pollutant emissions from transportation, energy (e.g., natural gas use), and area sources (e.g., gas fireplaces, aerosols, and landscaping equipment). However, criteria air pollutant emissions generated by Phase 1 of the proposed project were found not to cumulatively contribute to nonattainment designations of the SoCAB. The 2013 certified EIR also found that when building construction activities in Phase 1 overlap with site improvement construction activities in Phase 2 fugitive particulate matter emissions have the potential to expose sensitive receptors to substantial concentrations of $PM_{2.5}$. The results of the health risk assessment indicate that the incremental cancer and non-cancer risks would not exceed South Coast AQMD's thresholds. Additionally, CO hotspots were found not to be an environmental impact of concern for the Approved Project and localized air quality impacts related to mobile-source emissions were less than significant.

During construction activities, emissions from off-road equipment, such as diesel exhaust, may generate some odors; however, these would be low in concentration, temporary, and not expected to affect a substantial number of people. No substantial long-term odors would be generated. Restaurants could generate odors, but such odors would not be considered objectionable and would be required to comply with Rule 403. The Approved Project would also not expose proposed land uses to substantial odors from adjacent land uses.

Phase 2

Phase 2 of the Approved Project was found to be consistent with the AQMP. However, the 2013 certified EIR found that the Phase 2 construction activities would exceed South Coast AQMD's regional significance thresholds for NO_x during grading and paving activities and when construction activities of both phases overlap. The Approved Project was found to significantly contribute to the nonattainment designations of the SoCAB during Phase 2. Furthermore, criteria air pollutant emissions generated by Phase 2 of the proposed project were found not to cumulatively contribute to nonattainment designations of the SoCAB however, Phase 2 would have the potential to expose sensitive receptors to substantial concentrations of $PM_{2.5}$ when the two phases overlap. The results of the health risk assessment indicate that the incremental cancer and non-cancer risks would not exceed South Coast AQMD's thresholds. Additionally, CO hotspots were found not to be an environmental impact of concern and localized air quality impacts related to mobile-source emissions were less

than significant. The construction and operational phases were also found not to produce substantial long-term or any objectionable odors.

5.2.1.2 IMPACTS ASSOCIATED WITH THE MODIFIED PROJECT

Would the proposed project:

Environmental Issues	Substantial Change in Project or Circumstances Resulting in New Significant Effects	New Information Showing Greater Significant Effects than Previous EIR	New Mitigation or Alternative to Reduce Significant Effect is Declined	Changes or Additions	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?					X
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?				X	
c) Expose sensitive receptors to substantial pollutant concentrations?				X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?				X	

Comments:

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

Phase 1

No Impact. The Modified Project would not cause any changes to the population, housing, or employment growth projections in the SCAG region, and would therefore have no impacts on South Coast AQMD's AQMP.

Phase 2

No Impact. No changes are proposed in Phase 2. Thus, no impact related to the AQMP in comparison to the Approved Project would occur.

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

Phase 1

Changes or Additions. The construction phase of the Modified Project would be limited to building an enclosed room/enclosure (approximately 11.5 feet wide, 22 feet long, and 16 feet high) within an existing building. Emissions from construction of the building enclosure and proposed modifications would be minimal and would be less than significant. The modifications to the project (enclosure of the tank) would not alter

Tower Jazz operations or result in any change in criteria pollutant emissions. The proposed airtight enclosure would contain any gases from the tank. Should a release occur, the enclosure would contain the gas, and the water system would neutralize the gas, changing it into a liquid that would be captured in the floor drain system. There would be no emissions into the atmosphere.

Phase 2

No Impact. No changes to the Approved Project are proposed for Uptown Newport Phase 2. Thus, no air quality impacts would occur.

c) Expose sensitive receptors to substantial pollutant concentrations?

Phase 1

Changes or Additions. See discussion under Section 5.2.2 (b), below. The EIR was supported by an Offsite Consequence Analysis that addressed the potential impacts of a chemical release from the TowerJazz facility and concluded that the impact would be less than significant with mitigation. A revised ammonia risk analysis for the existing ammonia tank was conducted to fulfill a request by the Newport Beach Fire Department to model potential airborne ammonia concentrations and to review a design that could minimize disruption to TowerJazz from a switchover to a new tank. The purpose of the updated analysis was to assess the potential impact to existing and future Uptown Newport residents and surrounding land uses in the event of a release from the existing anhydrous ammonia tank, including with the proposed design. The analysis found that, in the case of a release, maximum ammonia concentrations would be below the toxic thresholds established by California Accidental Release Program (CalARP) and below the California Occupational Safety and Health Administration's (Cal/OSHA's) established permissible exposure limits (PELs) (see Appendix A, *Uptown Newport Risk Analysis for Existing Ammonia Tank*).

Furthermore, Section 5.2.2.4 includes a revision to an existing mitigation measures to continue to reduce the impact from a release of ammonia to all existing and future residents, including sensitive receptors, to less than significant.

Phase 2

No Impact. No changes to the Approved Project are proposed for Uptown Newport Phase 2. The ammonia tank would be removed as part of Phase 2 development, and there would be no further potential for future exposure. Thus, there would be no impact changes relative to sensitive receptor impacts for this phase.

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

Phase 1

Changes or Additions. Anhydrous ammonia is a clear, colorless gas with a pungent irritating odor and, according to Cal/OSHA, ammonia has an odor detection threshold of 5 to 50 parts per million (ppm). As indicated in Section 5.2.2 (b), the revised ammonia risk analysis demonstrated that the maximum outdoor ammonia concentration at the Uptown Newport property would be 4.45 ppm. This would be below any level

of concern and would be just below the range of values for odor perception (5 to 50 ppm) for outdoor residential occupants. Therefore, impacts would be less than significant.

Phase 2

No Impact. No changes to the Approved Project are proposed for Uptown Newport Phase 2. The ammonia tank would be removed as part of Phase 2 development, and therefore there would be no potential for odor impacts.

5.2.1.3 CONDITIONS OF APPROVAL AND PROJECT DESIGN FEATURES

No conditions of approval or project design features were outlined in the certified EIR relating to Air Quality.

5.2.1.4 ADOPTED MITIGATION MEASURES APPLICABLE TO THE MODIFIED PROJECT

2-1 The construction contractor shall use construction equipment rated by the United States Environmental Protection Agency as having Tier 3 or higher exhaust emission limits for nonemergency equipment over 50 horsepower. Tier 3 engines between 50 and 750 horsepower are available for 2006 to 2008 model years. After January 1, 2015, nonemergency equipment over 50 horsepower shall be equipment meeting the Tier 4 standards, if available. A list of construction equipment by type and model year shall be maintained by the construction contractor onsite. A copy of each unit's certified Tier specification shall be provided at the time of mobilization of each applicable unit of equipment. Prior to construction, the City of Newport Beach shall ensure that all demolition and grading plans clearly show the requirement for United States Environmental Protection Agency Tier 3 or higher emissions standards for construction equipment over 50 horsepower during ground-disturbing activities. In addition, the construction contractor shall properly service and maintain construction equipment in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board's Rule 2449.

2-2 The construction contractor shall implement the following measures or provide evidence to the City of Newport Beach that implementation would not be feasible:

- If electricity is not available onsite, generators, welders, and air compressors shall use alternative fuels (i.e., electric, natural gas, propane, solar).
- Construction parking shall be configured to minimize traffic interference.
- Construction trucks shall be routed away from congested streets and sensitive receptors.
- Construction activities that affect traffic flow on the arterial system shall be scheduled to off-peak hours to the extent practicable.
- Temporary traffic controls, such as a flag person(s), shall be provided, where necessary, to maintain smooth traffic flow.

- Large shipments of construction materials and/or equipment requiring use of heavy-heavy duty tractor trailers (e.g., 53-foot truck) shall use EPA-certified SmartWay trucks.

2-3 Prior to issuance of a grading permit, the construction contractor shall provide a statement to the City of Newport Beach that the construction contractor shall support and encourage ridesharing and transit incentives for the construction crew, such as carpools, shuttle vans, transit passes, or secured bicycle parking for construction workers.

2-4 The construction contractor shall prepare a dust control plan and implement the following measures during ground-disturbing activities for fugitive dust control in addition to South Coast Air Quality Management District Rule 403 to reduce particulate matter emissions. The City of Newport Beach shall verify compliance that these measures have been implemented during normal construction site inspections.

- During all grading activities, the construction contractor shall reestablish ground cover on the construction site through seeding and watering.
- During all construction activities, the construction contractor shall sweep streets with Rule 1186–compliant, PM10-efficient vacuum units on a daily basis if silt is carried over to adjacent public thoroughfares or occurs as a result of hauling.
- During all construction activities, the construction contractor shall maintain a minimum 24-inch freeboard on trucks hauling dirt, sand, soil, or other loose materials, and tarp materials with a fabric cover or other cover that achieves the same amount of protection.
- During all construction activities, the construction contractor shall water exposed ground surfaces and disturbed areas a minimum of every three hours on the construction site and a minimum of three times per day. Recycled water should be used, if available.
- During site preparation, the construction contractor shall stabilize stockpiled materials. Stockpiles within 300 feet of occupied buildings shall not exceed 8-feet in height, must have a road bladed to the top to allow water truck access, or must have an operational water irrigation system that is capable of complete stockpile coverage.
- During all construction activities, the construction contractor shall limit onsite vehicle speeds on unpaved roads to no more than 15 miles per hour.

2-5 The construction contractor during Phase 2 activities shall adhere to one of the following if construction of Phase 1 overlaps with construction of Phase 2:

- The construction contractor shall install Level 2 Verified Diesel Emission Control Strategies (VDES) diesel particulate filters (DPF) on large off-road equipment that have engines rated 50 hp or greater during grading, utilities installation, paving, and concrete activities that overlap with Phase 1 building construction. A list of construction equipment by type and model year and type of DPF shall be maintained by the construction contractor onsite. Or

- Phase 2 site improvements (grading, utilities installation, paving, and concrete construction subphases) shall not overlap with Phase 1 building construction.

The City of Newport Beach shall verify compliance that one of these measures has been implemented during normal construction site inspections.

2-6 The construction contractor shall post a sign at the entrance to the construction site. The sign shall identify the designated contact person, telephone number, and email address for construction-related complaints. Upon receipt of a compliant, the complaint shall be investigated and corrective action shall be taken, if needed. The construction contractor shall file a report to the City of Newport Beach of the nature of the compliant and action taken to remedy the complaint within two working days. A log of the complaints and resolutions to the complaints shall be maintained onsite.

2-7 The construction contractor shall use haul trucks and/or require subcontractors to use haul trucks that are 2010 or newer for demolition and construction (C&D) debris removal offsite and soil haul, unless evidence is provided by the contractor/subcontractor that such trucks are not readily available at the time of issuance of a demolition and/or grading permit.

5.2.1.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Modified Project would only result in minor changes or additions in comparison to the Approved Project. Impacts would be less than significant. The Modified Project would not have any reasonably foreseeable environmental consequences beyond that analyzed in the EIR and does not change the conclusions of the EIR, involve new significant effects, or substantially increase the severity of previously identified significant effects. No revisions or additional mitigation measures are required. The adopted air quality mitigation measures as reproduced in Section 5.2.1.4 remain valid and will be included in the updated Mitigation Monitoring and Reporting Program for Uptown Newport.

5.2.2 Hazards and Hazardous Materials

5.2.2.1 SUMMARY OF IMPACTS IDENTIFIED IN THE CERTIFIED EIR

A Phase 1 Environmental Site Assessment (ESA) and Vapor Intrusion Health Risk Assessment (HRA) were prepared for Phase 1 and Phase 2 of the Approved Project and included as EIR Appendix H.

Phase 1

Potential Release of Hazardous Materials

From TowerJazz Facility

The TowerJazz manufacturing facility would remain operational after Phase 1 of the Approved Project is developed and occupied. Phase 1 residents could be exposed to potential chemical-related hazards of the TowerJazz operation for up to 13 years depending on whether the TowerJazz facility lease is renewed.

The EIR was supported by an Offsite Consequence Analysis (OCA). The OCA assessed the potential impacts of a chemical release from the TowerJazz facility on Uptown Newport Phase 1 residents. The analysis indicated that for the worst-case scenario, the toxic endpoints would extend to the residential receptors in Phase 1 for each of the chemicals analyzed. This scenario, however, is very conservative because no credit was taken for existing mitigation measures or safety features, it did not consider the probability of the release occurring, it assumed wind would be blowing directly toward the receptor, and residents typically would be indoors during nighttime hours. Existing safety measures include an automatic sprinkler system, toxic gas monitoring system, and automatic control valves. The alternative release scenarios indicated that the toxic endpoints would not extend to the Phase 1 residential receptors, with the exception of anhydrous ammonia. At its current location, the anhydrous ammonia tank is 35 feet from the nearest proposed Phase 1 residential building. As noted above, the tank would be removed prior to occupancy by Phase 2 residences. Without mitigation, occupants of Phase 1 would be within the 192-foot distance to the toxic endpoint of a chemical release of anhydrous ammonia, and the impact was determined to be significant before mitigation.

From Construction and Grading Activities

The Phase 1 portion of the project site is not listed in environmental databases searched as part of the ESA for the project. Based on the ESA and vapor intrusion studies, potential sources of contamination in the Phase 1 portion of the site are limited to the migration of volatile organic compounds (VOCs) in soil gas and groundwater from the former underground storage tank (UST) areas in the Phase 2 portion of the site.

The detected VOC concentrations in the upper groundwater zone continue to decrease. As part of the conditions for Phase 1 development, the Regional Water Quality Control Board (RWQCB) would require continued monitoring and sampling of selected wells in the Phase 1 portion of the site. Additional groundwater remediation is scheduled for the Phase 2 portion of the site. In the unlikely event that additional VOC migration were to occur from the Phase 2 area to the Phase 1 portion of the site, in situ groundwater mitigation could effectively be conducted.

From Asbestos and Lead Paint

Given the age of the TowerJazz facility and Half Dome building, there are likely both asbestos-containing materials and lead-based paint in the buildings. The Half Dome building (constructed between 1952 and 1965), would be demolished as part of Phase 1. Demolition of the building could disturb asbestos-containing materials (ACM) and/or lead-based paint (LBP). The building, therefore, would require inspection for these materials prior to demolition, and ACM in amounts over 100 square feet must abated, contained, and disposed in accordance with South Coast Air Quality Management District (SCAQMD) Rule 1403. Lead must also be contained during demolition activities.

From Vapor Intrusion

Based on the analysis and findings in the ESA, the Phase 1 portion of the site has not been significantly impacted by subsurface soil and groundwater contamination. Potential sources of contamination of the Phase 1 portion have been identified to be limited to the migration of VOCs in soil gas and groundwater from the former UST areas in the Phase 2 portion of the site.

5. Environmental Analysis

For Phase 1, basement parking depths are anticipated to be 5 to 18 feet below the existing grade. Based on the anticipated subgrade elevations for the parking, 5-, 10-, and 15-foot sampling depths were used in the vapor intrusion modeling. Soil-gas samples were collected from both nested and single-well soil gas probes located in the perimeter area of the contaminated soil and groundwater in the Phase 2 portion of the site. Probe locations were selected to represent the highest potential source of contamination from the Phase 2 area.

The estimated vapor intrusion risk and hazards in the proposed subsurface parking garages and for proposed structures constructed at or above the existing grades are below the acceptable risk and hazard limits for residential exposure. The vapor intrusion HRA concludes that residents and visitors of the Phase 1 development as proposed would not be exposed to unacceptable levels of VOCs as a result of vapor intrusion into buildings.

Exposure to Electric and Magnetic Fields

The potential hazards related to Phase 1 resident exposure to electric and magnetic fields (EMF) from the Southern California Edison (SCE) substation located at the southwestern corner of the Uptown Newport site was addressed in the EIR. A more detailed assessment of potential EMF exposure for the project was included in the first EIR Addendum. An electromagnetic frequency survey was conducted and included as Addendum Appendix A to determine whether relocation of retail uses proximate to the SCE substation would adversely impact workers and visitors.

EIR Conclusions. The strongest EMF associated with a substation comes from the transmission power lines entering and leaving the substation. The strength of EMF within the substation, such as transformers, reactors, and capacitor banks, decreases rapidly with increasing distance.

California does not have specific regulations regarding electrical effects from transmission lines or substations. However, the California Department of Education (CDE) has established setback distances of 100 feet from 50 to 133 kV transmission power lines for new school siting. Conservatively assuming this standard to be applicable to a power substation, which should have much lower EMF levels, the nearest Phase 1 residence would be approximately 135 feet from the substation, which is beyond the setback distance of 100 feet. Therefore, no adverse health impacts should occur to residents in the Phase 1 development from EMF associated with the power substation.

Addendum and EMF Survey Findings. Under the modified project for the EIR Addendum, 3,500 SF of retail use would be relocated to Lot 2 adjacent to the SCE substation within Phase 1. The approved project did not anticipate any development on Lot 2 until Phase 2 of the project when the substation would be demolished. An EMF survey was conducted in anticipation of potential concerns related to potential EMF exposure from the nearby SCE substation and associated 66 kilovolt transmission line.

The EMF survey consisted of measuring magnetic field strength at outdoor locations across portions of the project site in the vicinity of the SCE substation and proposed restaurant and retail uses of the modified site plan. The survey determined that the proposed retail structure would have an average EMF exposure level of 0.5 milligauss (mG), and the proposed restaurant structure would have an average EMF exposure level of 5.3 mG. The retail structure EMF level would be less than typical average exposures expected due to routine daily

activities. The restaurant structure level would experience levels higher than the average exposure of approximately 1 mG. However, EMF exposure levels were determined to result in less than significant hazards to the public or environment. The Addendum and its Appendix A summarize the reasons for this conclusion, including that 1) after 40 years of research, none of the scientific organizations have concluded that exposure to EMF is a demonstrated cause of long-term health effects, and 2) because exposure duration would be much less than durations assumed in cited epidemiology studies.

Phase 2

Potential Release of Hazardous Materials

From TowerJazz Facility

Phase 2 would involve the demolition of the TowerJazz facility and its related operational hazardous materials. Phase 2 residents and visitors, therefore, would not be impacted by potential chemical releases associated with this facility.

From Construction and Grading Activities

Although soil and groundwater remediation activities are ongoing (soil vapor extraction [SVE] and in situ chemical oxidation [ISCO]), contaminated soil and groundwater are still present within the Phase 2 area of the project site. The lead oversight agency for the remediation is the California RWQCB. Phase 2 building permits could not be issued until the RWQCB provides a "No Further Action" (NFA) declaration or a Letter of Allowance for residential construction. Phase 2 development, including ground disturbance that could impact Phase 1 residences, could not occur without the approval and oversight of the RWQCB.

From Asbestos and Lead Paint

The TowerJazz building would be demolished prior to development of Phase 2 improvements. This building was constructed between 1968 and 1972 and likely contains ACM and/or LBP. As with Phase 1, prior to demolition, this building would be inspected for these materials, and appropriate abatement and disposal would be conducted in accordance with SCAQMD regulations.

From Vapor Intrusion

The vapor intrusion HRA was limited to Phase 1 of the proposed project. The ESA concluded that potential soil vapor intrusion of VOCs north and northwest of the TowerJazz building would be a significant concern for development of Phase 2. Following ongoing and future remediation activities, Phase 2 building permits could not be issued until the RWQCB provides a "No Further Action" declaration or a Letter of allowance for residential construction. Depending on the risk levels present after SVE and ISCO treatments, it would be determined whether excavation and removal of contaminated soils is necessary. Such excavation would occur after demolition of the TowerJazz building.

5. Environmental Analysis

Exposure to Electric and Magnetic Fields

The SCE substation would be demolished as part of Phase 2 development. Since the substation will cease to operate, EMF will not pose a health risk to surrounding residents during Phase 2. Therefore, no impact would occur.

5.2.2.2 IMPACTS ASSOCIATED WITH THE MODIFIED PROJECT

Would the proposed project:

Environmental Issues	Substantial Change in Project or Circumstances Resulting in New Significant Effects	New Information Showing Greater Significant Effects than Previous EIR	New Mitigation or Alternative to Reduce Significant Effect is Declined	Changes or Additions	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?					X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?					X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X	

Comments:

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

Phase 1

Changes or Additions. Similar to the Approved Project, construction of the Modified Project would require the use of hazardous materials such as oil, diesel, fuels, greases, paints, and cleaning materials. However, the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard. These activities would also be short term or one time in nature. Additionally, the project applicant and construction contractor would be required to comply with existing federal, state, and local regulations of several agencies, including the Department of Toxic Substances Control (DTSC), the US Environmental Protection Agency (EPA), OSHA, Caltrans, the Newport Beach Fire Department (NBFD), and the Orange County Environmental Health Division (OCEMD).[1] Compliance with applicable laws and regulations governing the use, storage, and transportation of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner, and would minimize the potential for safety impacts to occur. Therefore, hazards to the public or the environment arising from the routine use, transport, or storage of hazardous materials during project construction would be less than significant.

Operation of the Modified Project would involve use of only small amounts of hazardous materials for cleaning and maintenance purposes and the continued use of the existing anhydrous ammonia tank (which is addressed below). Commercial-grade chemicals would be required to be transported, used, and disposed of consistent with current local, state and federal laws and regulations of several agencies, including DTSC, EPA, OSHA, NBFD, and OCEMD. Compliance with applicable laws and regulations governing the use, storage, and transportation of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts to occur. Therefore, hazards to the public or the environment arising from the routine use, transport, or storage of hazardous materials during project operation would be less than significant.

Phase 2

No Impact. No changes to the Approved Project are proposed for Uptown Newport Phase 2. Thus, no impact related to the routine transport, use, or disposal of hazardous materials would occur.

1 The Environmental Health Division is the Certified Unified Program Agency (CUPA) for the County of Orange; the Certified Unified Program coordinates and makes consistent enforcement of several federal and state regulations governing hazardous materials. The Newport Beach Fire Department is a Participating Agency in the CUPA, and is responsible for hazardous materials disclosure information and business emergency planning.

5. Environmental Analysis

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

Phase 1

Changes or Additions.

Potential Release of Hazardous Materials

A revised ammonia risk analysis for the existing ammonia tank at the TowerJazz Semiconductor Facility and an Offsite Consequence Analysis Technical Review Report were prepared based on the updated plans to enclose the tank by constructing a room/enclosure (see Appendix A and B, respectively). The analysis was prepared to fulfill a request by the Newport Beach Fire Department to model the potential impact to the proposed adjacent Uptown Newport residential development in the event of a release from the existing anhydrous ammonia tank and to review the proposed design that could minimize disruption to TowerJazz from a switchover to a new tank.

The purpose of the revised ammonia risk analysis was to:

- Evaluate potential releases from the existing 2,230-gallon anhydrous ammonia tank within an enclosed building that is located approximately 5 feet from the closest Uptown Newport property boundary and 35 feet from the closest proposed residential building.
- Conduct updated computer modeling to determine worst-case[2] and alternative[3] accident release scenarios.
- Generate ammonia concentration contours within the Uptown Newport property.
- Evaluate the risks associated with the explosive potential of ammonia within a proposed confined enclosure.

The California Accidental Release Prevention (CalARP) lists a toxic endpoint defined as the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair an individual's ability to take protective action. The toxic endpoint for ammonia is 200 ppm. Furthermore, OSHA establishes PELs, which are the legal limits for exposure of an employee to chemical substances or physical agents. The PEL value for ammonia is 25 ppm.

[2] This includes the instantaneous release of the entire contents of the entire ammonia tank.
[3] Assumes a break in the vapor feed line to the tank.

The contours of the maximum one-hour outdoor ammonia concentrations are shown on Figure 7, *Maximum Ammonia Tank Contours at Uptown Newport Property*. The maximum concentration on the Uptown Newport property for the modified project (with tank enclosure) was 1.06 ppm. It occurs at the southern corner of the ammonia tank building and only extends about 9 feet from the edge of the tank building. This occurs in a proposed area of landscaping next to the cul-de-sac. The ammonia concentrations decrease rapidly from the edge of the ammonia tank building with a maximum outdoor concentration of approximately 0.3 to 0.5 ppm at the nearest building. The average outdoor ammonia concentration across the Uptown Newport property was 0.08 ppm. The modeled maximum values are well below the toxic endpoint of 200 ppm and well below the PEL value of 25 ppm. The maximum values are also below the odor threshold for ammonia of 5 ppm.

The short-term concentrations (e.g., one-minute averages) were also calculated. The resultant maximum one-minute outdoor ammonia concentration at the Uptown Newport property would be 4.45 ppm. This would be below any level of concern and would be just below the range of values for odor perception (5 to 50 ppm) for outdoor residential occupants.

The proposed ammonia tank room/enclosure would include the following design features:

- Enclosed room sealed against the roof.
- Liquid containment volume and/or system designed to handle flows from a deluge event.
- Double door in front, with interlock to ammonia detection alarm.
- Ventilation fan with at least 6 air changes per hour (ACH).
- Self-Contained Breathing Apparatus (SCBA) cabinet outside of room.
- Fabricated sump with pump to collect drainage from the deluge event and pump it to the existing acid waste neutralization system/wastewater treatment area, which already takes drainage from the existing tank.

The deluge system would activate if an ammonia vapor concentration of 35 ppm is detected within the room. With these design features, the potential for the accumulation of ammonia-air to reach lower flammability limits (LFLs) and cause a fire or deflagration is minimized.

Even though the impact of an accidental release of ammonia was found to be less than significant with mitigation, the existing Uptown Newport alarm system and emergency response plan would be activated in the case of an emergency release so that appropriate response actions can be taken. Contact names and numbers for the Newport Beach Fire Department, on-site operations and maintenance personnel, and the safety officer of the TowerJazz facility are provided in the emergency response plan. Mitigation measures were included in the 2013 certified EIR (as shown below) to further reduce impacts to less than significant, and a modification is proposed to allow the enclosed design for the tank to minimize disruption to TowerJazz from a replacement tank.

Exposure to Electric and Magnetic Fields

The Modified Project would not introduce new residents to the project site and would not alter any potential impacts related to the SCE substation or EMFs in comparison to impacts as analyzed in the EIR and the first Addendum to the EIR..

Phase 2

No Impact.

Potential Release of Hazardous Materials

During Phase 2 of the Approved Project, the ammonia tank would be removed. No changes to the Approved Project are proposed for Uptown Newport Phase 2.

Exposure to Electric and Magnetic Fields

The SCE substation would be demolished as part of Phase 2 development. Additionally, no new development is proposed in Phase 2 under the Modified Project. Thus, no health risk impacts from EMFs would occur.

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

Phase 1

No Impact. There are no schools within 0.25 mile of the project site. University of California, Irvine is the closest school to the project site; however, it is more than 0.25 mile from the site. No impact would occur.

Phase 2

No Impact. The analysis under Phase 1 would also apply to Phase 2. No changes to the Approved Project are proposed for Uptown Newport Phase 2.

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

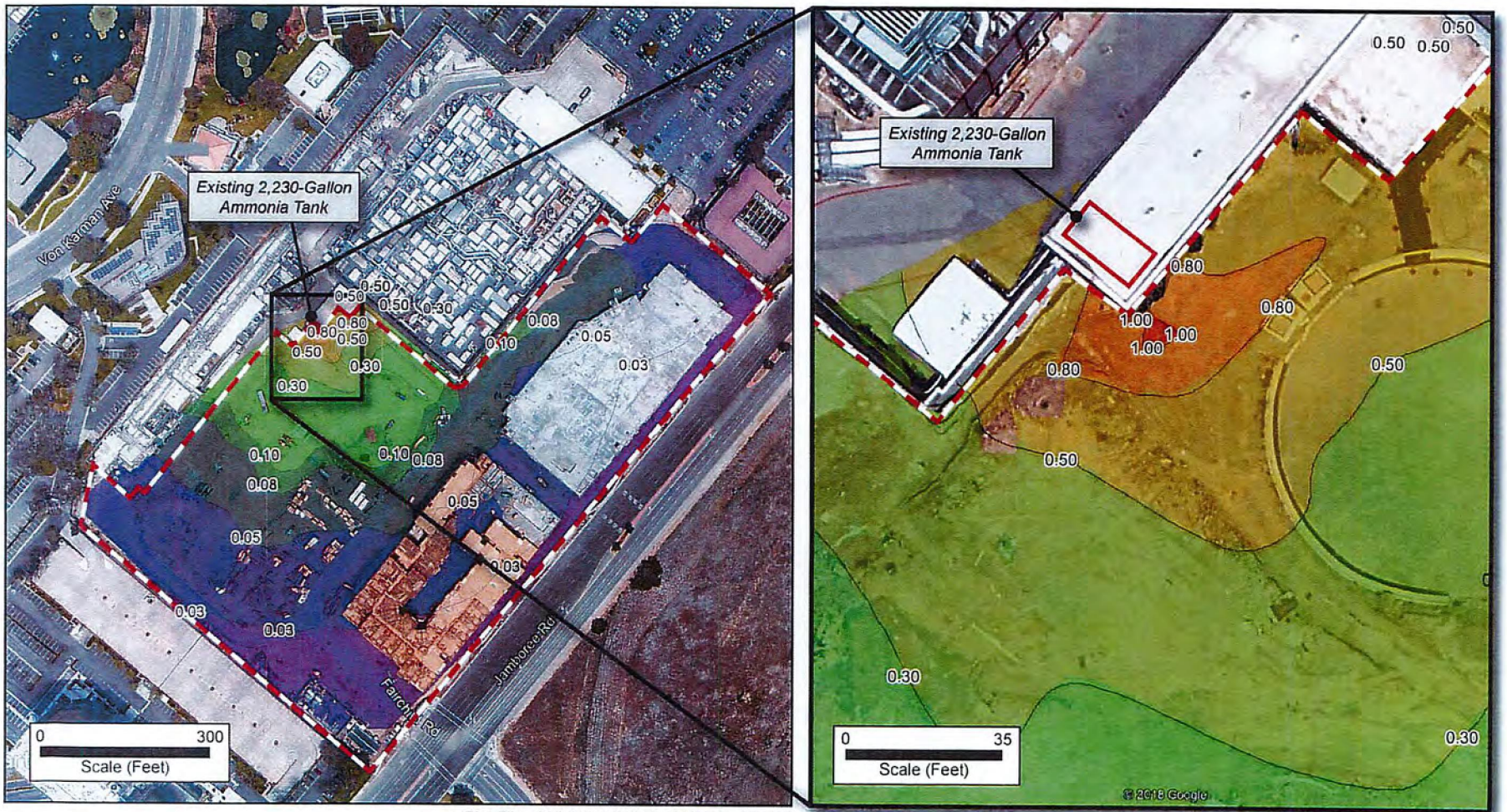
Phase 1

Changes or Additions. The Modified Project would be developed within the same footprint as Phase 1 of the Approved Project. Development of the Modified Project would not introduce new significant impacts or increase significant impacts. Implementation of the City's existing conditions of approval and adopted mitigation measures from the Approved Project would continue to minimize impacts to less than significant levels.

Phase 2

No Impact. No changes to the Approved Project are proposed for Uptown Newport Phase 2. The ammonia tank would be removed as part of Phase 2 development, Thus, no impact would occur.

Figure 7 - Maximum Ammonia Tank Contours at Uptown Newport Property



Base Map Source: Google Earth, 2019

5. Environmental Analysis

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

Phase 1

No Impact. The project site is approximately 0.6 mile east of John Wayne Airport and is within the airport environs land use plan (AELUP) for the airport. The site is within the area where building heights are regulated per Federal Aviation Administration (FAA) Part 77 regulations. The highest building permitted onsite is 206 feet above mean sea level (OCALUC 2008). The Modified Project involves modifications within the TowerJazz facility and would not affect the implementation of the AELUP. No impact would occur.

Phase 2

No Impact. The Modified Project does not propose any changes to the Approved Project for Phase 2. No impact would occur.

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

Phase 1

Changes or Additions. The City of Newport Beach has an Emergency Operations Plan that is implemented and coordinated by the Newport Beach Fire Department. Storage of construction materials and construction equipment related to the Modified Project is prohibited on City property, including City streets, without a permit from the City Public Works Department. Project construction and operation would comply with City requirements regarding storage on City property, including City streets. Construction material and equipment would not be staged or stored on City roadways. The Modified Project would not interfere with emergency access to, or evacuation from, surrounding properties, and impacts would be less than significant.

Phase 2

No Impact. The Modified Project does not propose any changes to the Approved project for Phase 2. No impact would occur.

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

Phase 1

Changes or Additions. There is no native habitat susceptible to burning in wildland fires on the site. Project development would not place buildings or structures at substantial risk from wildland fires, and impacts would be less than significant.

Phase 2

No Impact. No changes to the Approved Project are proposed for Phase 2. No impact would occur.

5.2.2.3 CONDITIONS OF APPROVAL AND PROJECT DESIGN FEATURES

Conditions of Approval

The following hazards-related Conditions of Approval were included in the certified EIR for the project:

The project would be subject to compliance with the Newport Beach Fire Department Guidelines and City of Newport Beach Fire Code (City Municipal Code Chapter 9.04). Specific Conditions of Approval pursuant to these requirements would be specified by the Newport Beach Fire Department, and would include compliance with the following California Fire Code (CFC) requirements:

- **Sections 318.1 (Amendment).** A geological study from a state-licensed and department-approved individual or firm will be required due to the proximity of the proposed project to a semiconductor manufacturing facility. [This Condition of Approval is still applicable.]

- **Section 2704.1.1 (Amendment).** No person shall use or store any amount of extremely hazardous substances equal to or greater than the disclosable amounts as listed in Appendix A, part 355, Title 40 of the Code of Federal Regulation in a residential zone or adjacent to property developed with residential uses.

For the 2013 certified EIR, compliance to CFC Section 318.1 (Amendment) was assured by Mitigation Measure 7-1 (see Section 5.2.2.4) and compliance with CFC 27014.11 (Amendment) was assured by Mitigation Measure (MM) 7-2. This MM has been refined for the modified project as shown in the ~~strikeout~~/**bold** text in Section 5.22.4.

The certified EIR did not include any hazards-related project design features (PDFs)

Project Design Features

The ammonia tank enclosure as described for the modified project shall incorporate the following design features:

- The addition of interior and exterior walls with doors and ceiling to create an airtight enclosure.

- The modification of the floor to drain to a sump that discharges to the existing acid waste neutralization system.

- The installation of emergency controls and ammonia detectors both inside and outside the new enclosure.

- Two (2) existing emergency shutoff valves are located between the tank and the production building to isolate the piping between the tank and the production building. In addition, a third emergency shutoff valve is located at the ammonia tank control panel immediately outside the proposed enclosure. The emergency shutoff valves are solenoid valves that close when the ammonia tank deluge system is activated and are controlled by the alarm control panel.

5.2.2.4 ADOPTED MITIGATION MEASURES APPLICABLE TO THE MODIFIED PROJECT

The following Mitigation Measures were adopted with the project when the EIR was certified in 2013. As previously noted, none of the mitigation measures were changed in the Addendum that was approved in 2017. As shown in strikeout/**bold** text, the measures below have been refined to adequately mitigate the potential impacts of the proposed modified project as described in this 2nd Addendum. The recommended changes to the measures have been incorporated into an updated Mitigation Monitoring and Reporting Program (MMRP) that would be approved in conjunction with approval of this 2nd Addendum. The updated MMRP also indicates measures which have already been completed to the City's satisfaction.

7-1 In compliance with CFC Section 381.1 (Amendment), prior to issuance of building permits for Phase 1, the project applicant shall submit a geologic study from a state-licensed and department-approved individual or firm to the Newport Beach Fire Department Fire Prevention Division for review and approval (due to the proximity of the proposed project to a semiconductor facility). **[*completed*]**

7-2 Prior to issuance of any **grading** building permit for **residential buildings within 200 feet of the anhydrous ammonia tank,** ~~Phase 1,~~ the applicant shall **perform the following to satisfy the Newport Beach Fire Department under Section 9.04.400 of Newport Beach Fire Code** ~~demonstrate compliance with CFC Section 27041.1 (Amendment)~~, (which prohibits the storage of any amount of extremely hazardous substances equal to or greater than the disclosable amounts listed in Appendix A, Part 355, Title 40, of the Code of Federal Regulations in a residential zone or adjacent to property developed with residential uses **unless mitigation measures are implemented and maintained, as required by the fire code official).**[4] ~~Compliance shall be demonstrated to the satisfaction of the Newport Beach Fire Department and shall include the following:~~

- **Construct an airtight enclosure around** ~~Installation of a new~~ **the** anhydrous ammonia tank **(approximately 11.5 feet wide, 22 feet long, and 16 feet high).** ~~at a minimum distance of 200 feet from the nearest existing or proposed residential structure (including the adjacent Koll property project). The new tank shall be approved by the Newport Beach Fire Department, and the tank and installation shall include mitigation safeguards such as: automatic shut-off valves, excess flow valves, restrictive flow orifices, toxic gas detection system, automatic sprinkler system, water deluge system, alarm system, and double containment piping. An updated Offsite Consequence Analysis (OCA) shall be prepared to the satisfaction of the Fire Department prior installation of the new tank.~~

[4] Per City of Newport Beach Fire Code Section 104.1 General: The fire code official is hereby authorized to enforce the provisions of this code and shall have the authority to render interpretations of this code, and to adopt policies, procedures, rules and regulations in order to clarify the application of its provisions. Such interpretations, policies, procedures, rules and regulations shall be in compliance with the intent and purposed of this code and shall not have the effect of waiving requirements specifically provided for in this code.

- ~~In the event a new anhydrous ammonia tank is not installed or the existing tank relocated, no residential structures shall be constructed within 200 feet of the anhydrous ammonia tank.~~

- ~~Demonstration of maintenance of industry best practices and provision of minimum EPGR-2 separation distances as defined by the EPA for any extremely hazardous substances (EHS) in excess of disclosable amounts. The use of the term "adjacent to" (per CFC Section 27041.1 (Amendment) shall be interpreted to be a greater distance than an offsite consequence analysis would require as a safe EPGR-2 (or an equivalent and accepted standard) separation distance (ibid).~~

- **A seismic assessment for the ammonia tank and piping system process conducted by a qualified engineer per Region I LEPC (Local Emergency Planning Commission) Guidance for CalARP Program Seismic Assessments.**

- **Ensure the proposed ammonia tank enclosure is designed and constructed with proper ventilation, including:**

  - **Detailed ventilation calculations.**

  - **Emergency back-up power for the ammonia tank.**

- **Design and properly size the proposed ammonia tank containment sump and/or system to contain and/or convey the estimated deluge water and the maximum amount of ammonia produced.**

7-3 Prior to the issuance of **any type of** occupancy permits, the applicant shall demonstrate to the satisfaction of the City of Newport Beach Fire Department that the following disclosures and emergency notification procedures/programs are in place:

- Disclosure to potential Uptown Newport residences that hazardous chemicals are used and stored at the adjacent TowerJazz facility.

- Inclusion of property manager or authorized representative of the Uptown Newport residential community to the emergency notification list of the TowerJazz Business Emergency Plan.

- Program to inform/train the property manager or authorized representative of the Uptown Newport residential community in emergency response and evacuation procedures and to incorporate ongoing coordination between the Uptown Newport representative and TowerJazz to assure proper action in the event of an accident at the facility (shelter in place and/or evacuation routes).

- Upgrade TowerJazz emergency alarm system to include concurrent notification to Uptown Newport residents of chemical release. Provisions of the alarm system and emergency notification procedure shall be reviewed and approved by the City of Newport Beach Fire Department.

7-4 Prior to the introduction of a new extremely hazardous substance (EHS) or increase in quantity of any existing EHS at TowerJazz, an updated OCA shall be prepared and reviewed and authorized by the City of Newport Beach Fire Department. Any new EHS shall be appropriately located and the installation designed with all necessary mitigation safeguards specified by the City of Newport Beach Fire Department **and the Orange County Health Care Agency.**

7-5 Prior to the issuance of building permits for development within Phase 1, the project applicant shall obtain a "No Further Action" declaration or Letter of Allowance for residential construction for Phase 1 from the Regional Water Quality Control Board. **[*completed*]**

7-6 The project applicant shall submit copies of applicable reports and plans as submitted to the RWQCB for remedial activities within the Phase 2 portion of the project site to the City of Newport Beach Community Development Department. Such copies shall include remediation action plans and annual soil and groundwater remediation progress reports.

7-7 Prior to the issuance of building permits for development within Phase 2, the project applicant shall obtain a "No Further Action" declaration or Letter of Allowance for residential construction for Phase 2 from the Regional Water Quality Control Board.

7-8 Prior to issuance of demolition permits, the project applicant shall have the following inspections and assessments conducted for the Half Dome building (Phase 1) and TowerJazz building (Phase 2) and shall provide the Community Development Department with a copy of the report of each investigation or assessment.

- The applicant shall retain a certified lead inspector/assessor to inspect buildings onsite including any structures at the SCE substation for lead-based paint (LBP). The inspector/assessor's report shall describe regulatory requirements for lead containment applicable to any LBP discovered onsite.
- The applicant shall retain a licensed or certified asbestos consultant to inspect buildings onsite including any structures at the SCE substation for asbestos-containing materials (ACM). The asbestos consultant's report shall include requirements for abatement, containment, and disposal of ACM in South Coast Air Quality Management District Rule 1403.

7-9 Prior to the issuance of building permits for Phase 2, the project applicant shall retain a registered environmental assessor or other professional qualified to conduct a human health risk assessment (HHRA) of potential volatile organic compound contamination. The HHRA shall be conducted under the guidance and review of the Regional Water Quality Control Board. Approval of tentative tract map(s) for Phase 2 shall not occur until the project applicant obtains a "No Further Action" declaration or a Letter of Allowance for residential construction from the Regional Water Quality Control Board.

7-10 Prior to issuance of a building permits for Phase 2 development, the project applicant shall demonstrate to the Community Development Department that contamination in soil and groundwater on Phase 2 has been remediated to meet the cleanup goal for the site for total volatile organic compounds set by the State Water Resources Control Board and shall have obtained a "No Further Action" declaration or Letter of Allowance for residential construction from the Regional Water Quality Control Board.

7-11 Prior to the issuance of demolition permits for Phase 2, the construction dates for the SCE Substation shall be confirmed. If the facility was constructed prior to the 1980's, a certified inspector approved by the City of Newport Beach Fire Department shall be retained to test for PCBs and related hazardous materials. If PCBs or other hazardous materials are determined to be present, a mitigation program to abate, contain and dispose of the materials shall be prepared and approved by the City Fire Department. Such program shall be implemented prior to the issuance of Phase 2 building permits.

5.2.2.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Modified Project would only result in minor changes or additions in comparison to the Approved Project; with implementation of the updated mitigation measures listed above, impacts would be less than significant. The Modified Project would not have any reasonably foreseeable environmental consequences beyond that analyzed in the EIR and does not change the conclusions of the EIR, involve new significant effects, or substantially increase the severity of previously identified significant effects.

5.3 NEW TOPICS UNDER THE 2018 UPDATED CEQA GUIDELINES

This section addresses potential incremental impacts of the Modified Project for the topics of energy and wildfire, which were introduced with the 2018 update of the CEQA Guidelines.

5.3.1 Energy

5.3.1.1 SUMMARY OF IMPACTS IDENTIFIED IN THE 2013 CERTIFIED EIR

The requirement to analyze energy in environmental checklists as a standalone section did not become effective until the recent amendments and updates to the state guidelines for implementing CEQA, which were approved by the Office of Administrative Law on December 28, 2018, and became effective January 1, 2019. The updated CEQA Guidelines, which include changes to the CEQA checklist questions, became effective after the certification date of the 2013 certified EIR by the Newport Beach City Council.

However, the 2013 certified EIR included an analysis of the Approved Project's impacts on public services or utilities, which included electricity and natural gas. Specifically, the analysis was in Section 5.15, *Utilities and Service Systems*, of the 2013 certified EIR. As concluded in the 2013 certified EIR, impacts to electricity and natural gas services as a result of development of the Approved Project were found to be less than significant. The updated CEQA guidelines questions in the new energy section are provided below; and the prior analysis (as applicable) is carried through to this new energy section for context, discussion, and comparison purposes.

5.3.1.2 IMPACTS ASSOCIATED WITH THE MODIFIED PROJECT

Would the project:

Issues	Substantial Change in Project or Circumstances Resulting in New Significant Effects	New Information Showing Greater Significant Effects than Previous EIR	New Mitigation or Alternative to Reduce Significant Effect is Declined	Changes or Additions	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?				X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X	

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

Changes or Additions. Following is a comparison of energy-related impacts associated with the Modified Project and Approved Project.

Construction

The incremental construction energy for the Modified Project relative to the Approved Project would be nominal and limited to the energy required to construct a new enclosed room (approximately 11.5 feet wide by 22 feet long and 16 feet high) within an existing building. Impacts would be less than significant.

Operation

The operational phase of the Modified Project would not require an increase in demand for energy compared to the Approved Project. Therefore, this phase would have no impacts.

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

Changes or Additions. Under the Modified Project, the existing anhydrous ammonia tank would continue to serve the TowerJazz manufacturing facility. This modification to the Approved Project would not obstruct a local plan for renewable energy or energy efficiency.

Therefore, impacts would be less than significant and no mitigation measures are necessary. There are no changes or new significant information that would require preparation of an EIR.

5.3.1.3 ADOPTED MITIGATION MEASURES APPLICABLE TO THE MODIFIED PROJECT

The standalone energy section is new in this Addendum; therefore, no mitigation measures were identified in the 2013 certified EIR and none are required.

5.3.1.4 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No mitigation measures were identified because all impacts would be less than significant. The Modified Project would not have any reasonably foreseeable environmental consequences beyond that analyzed in the EIR and does not change the conclusions of the EIR, involve new significant effects, or substantially increase the severity of previously identified significant effects.

5.3.2 Wildfire

5.3.2.1 SUMMARY OF IMPACTS IDENTIFIED IN THE 2013 CERTIFIED EIR

Since preparation of the EIR, CEQA Guidelines Appendix G has been revised to include a specific section on wildfire.

5.3.2.2 IMPACTS ASSOCIATED WITH THE MODIFIED PROJECT

Would the project:

Issues	Substantial Change in Project or Circumstances Resulting in New Significant Effects	New Information Showing Greater Significant Effects than Previous EIR	New Mitigation or Alternative to Reduce Significant Effect is Declined	Changes or Additions	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?					X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?					X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?					X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?					X

Comments:

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if located in or near state responsibility areas or lands classified as very high fire hazard severity zones.

Wildland fire protection in California is the responsibility of the state, local, and federal governments. In State Responsibility Areas (SRA), the State of California has the primary financial responsibility for the prevention

and suppression of wildland fires. SRAs cover over 31 million acres, for which the State Department of Forestry and Fire Protection (CAL FIRE) provides a basic level of wildland fire prevention and protection services.

Fire protection for local responsibility areas (LRA) is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local government (CalFIRE 2013). CAL FIRE is mandated by California Public Resources Code Sections 4201 to 4204 and California Government Code Sections 51175 to 51189 to identify fire hazard severity zones for all communities in California. Local governments accept CAL FIRE's determination or make other, local determinations.

The project site is in an urbanized area and is outside of the Very High Fire Hazard Severity Zone. The project site is also not in or near an SRA or LRA (OCPB 2020).

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

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

No Impacts. As demonstrated above, the project site is not in or near an SRA or LRA or lands classified as high fire hazard severity zones; therefore, no impacts would occur and no mitigation measures are necessary.

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

No Impacts. The project site is not in or near and SRA or LRA or lands classified as high fire hazard severity zones; therefore, no impacts would occur and no mitigation measures are necessary.

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

No Impacts. The project site is not in or near and SRA or LRA or lands classified as high fire hazard severity zones; therefore, no impacts would occur and no mitigation measures are necessary.

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

No Impacts. The project site is not in or near and SRA or LRA or lands classified as high fire hazard severity zones; therefore, no impacts would occur and no mitigation measures are necessary. The property is not located in downslope, downstream flooding, or landslide areas that could increase post-fire slope instability or drainage changes.

5.3.2.3 ADOPTED MITIGATION MEASURES APPLICABLE TO THE MODIFIED PROJECT

The standalone wildfire section is new in this Addendum; therefore, no mitigation measures would have been identified in the 2013 certified EIR, and none are required.

5.3.2.4 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No mitigation measures were identified because all impacts would be less than significant. The Modified Project would not have any reasonably foreseeable environmental consequences beyond that analyzed in the EIR and does not change the conclusions of the EIR, involve new significant effects, or substantially increase the severity of previously identified significant effects.

5.4 MANDATORY FINDINGS OF SIGNIFICANCE

5.4.1 Summary of Impacts Identified in the 2013 Certified EIR

The 2013 certified EIR included analyses on biological resources, cultural resources, air quality, hazards and hazardous materials and cumulative impacts. For purposes of this Addendum, the Appendix G mandatory findings of significance are addressed below as to the potential incremental impacts of the Modified Project.

5.4.2 Impacts Associated with the Modified Project

	Issues	Substantial Change in Project or Circumstances Resulting in New Significant Effects	New Information Showing Greater Significant Effects than Previous EIR	New Mitigation or Alternative to Reduce Significant Effect is Declined	Changes or Additions	No Impact
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?					X
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)					X
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X	

Comments:

a) **Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict**

the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

No Impact. As shown in Table 2, *Environmental Factors Not Affected*, for biological resources, cultural resources, geology and soils, and tribal cultural resources, and discussed throughout this Addendum, the Modified Project would not change the environmental impacts identified for the Approved Project in the 2013 certified EIR and would not degrade the quality of the environment.

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

Changes or Additions. As discussed throughout this Addendum, the incremental differences of the proposed modifications under the Modified Project to that of the Approved Project would not result in substantial increases in demands or new significant cumulative impacts. The modifications to the project are not cumulatively considerable.

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

Changes or Additions. As analyzed in Section 5.2.1, *Air Quality*, and Section 5.2.2, *Hazards and Hazardous Materials*, the Modified Project would not cause substantial adverse effects to human beings, and impacts would be less than significant.

5. Environmental Analysis

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7. References

California Department of Forestry and Fire Protection (CAL FIRE). 2013. Frequently Asked Questions. https://answers.callfire.com/hc/en-us/sections/360001189133-Frequently-Asked-Questions.

Newport Beach, City of. 2012, September. Uptown Newport Environmental Impact Report. SCH No. 2010051094. Prepared by The Planning Center|DC&E.

Orange County Public Works (OCPB). 2020, March 5 (accessed). OC Community Development Very High Fire Hazard Severity Zone Map. https://cms.ocgov.com/gov/pw/cd/building/firehazard.asp.

Southern California Edison (SCE). July ,2019. 2018 Power Content Label. https://www.sce.com/sites/default/files/inline-files/2018SCEPCL.pdf.

7. References

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Appendix A Uptown Newport Risk Analysis for Existing Ammonia Tank

Appendix

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Uptown Newport Risk Analysis for Existing Ammonia Tank

Revised September 2019

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1. Introduction

1.0 PURPOSE

This report presents the results of a revised ammonia risk analysis for the existing ammonia tank at the TowerJazz Semiconductor Facility, based on the current plans to enclose the tank by constructing a room within an existing building. This analysis is not part of the TowerJazz Risk Management Plan (RMP) nor a replacement for the RMP, which was prepared by EORM (2018). This analysis has been prepared to fulfill a request by the Newport Beach Fire Department to model potential airborne ammonia concentrations to assess the potential impact to the proposed adjacent Uptown Newport residential development in the event of a release from the existing anhydrous ammonia tank.

The report has been prepared for TSG Parcel 1, LLC, who is the master developer for the Uptown Newport mixed-use project. The project is located adjacent to the TowerJazz Semiconductor Facility, which will continue to operate during construction and occupancy of Phase 1 of the project. During Phase 2 of the project, the TowerJazz facility will be closed and demolished during site clearance activities and the existing ammonia tank will no longer be operational.

A new ammonia tank installation is currently underway at the TowerJazz facility; the tank is located approximately 200 feet from the proposed residential/mixed use development. However, due to concerns by TowerJazz personnel that the switchover to the new tank would require a complex qualification process, TSG Parcel 1 has proposed that the existing ammonia tank be enclosed and utilized for ongoing operations at TowerJazz.

To minimize potential risk to TowerJazz employees and contractors, adjacent commercial users, and future residents and occupants of the Uptown Newport project during the transition period while the existing ammonia tank is still in use, it has been decided to enclose the existing ammonia tank within an existing building to reduce the potential exposure to ammonia emissions. This revised ammonia risk analysis presents the results of additional modeling to determine the potential impact of releases from the existing ammonia tank located within an enclosed building to Uptown Newport occupants.

1.1 SITE LOCATION AND PROJECT DESCRIPTION

The 25-acre project site is within the Airport Area of the City of Newport Beach, Orange County, California. It is on the east side of Jamboree Road, between Birch Street and the intersection of Von Karman Avenue and MacArthur Boulevard. Phase 1 of the Uptown Newport project includes a 458-unit luxury apartment project; up to 174 for-sale condominiums; 6,500 square feet of restaurant and retail uses; and a one-acre public park. The layout for the Phase 1 development is shown on Figure 1 as well as the location of the existing 2,230-gallon ammonia tank.

1.2 REPORT OBJECTIVES AND METHODOLOGY

The purpose of this revised risk analysis is to:

- Evaluate potential releases from the existing 2,230-gallon anhydrous ammonia tank that is located approximately 5 feet from the closest Uptown Newport property boundary and 35 feet from the closest proposed residential building.
- The analysis will be based on the tank being enclosed within a separate room of the existing building that houses the existing ammonia tank.
- Conduct computer modeling using USEPA's RMP computer program to determine worst-case and alternative accident release scenarios.
- Conduct more sophisticated computer modeling of potential ammonia releases, using the USEPA AERMOD computer model, to generate ammonia concentration contours within the Uptown Newport property.
- Evaluate the risks associated with the explosive potential of ammonia within a confined building.

As per previous discussions with the Newport Beach Fire Department during the preparation of the off-site consequence analysis (The Planning Center, 2012), the methodology used in this report includes the following for each ammonia tank scenario:

- Worst-case scenario – analyzed using USEPA's computer model RMP*Comp, nighttime meteorological conditions (Stability Class F and wind speed of 1.5 m/sec) and instantaneous release of the entire contents of the entire ammonia tank.
- Alternative-case scenario – analyzed using USEPA's computer model RMP*Comp with daytime meteorological conditions (Stability Class D and wind speed of 3.0 m/sec) and assuming a break in the vapor feed line to the tank
- Ammonia concentration contours at the Uptown Newport property from the existing ammonia tank – analyzed using USEPA's AERMOD model, which accounts for site-specific meteorological conditions and the release of ammonia within an entirely enclosed building (i.e., volume source)
- The impacts and risks to Phase 1 residential receptors were determined using the toxic endpoint for anhydrous ammonia of 0.14 mg/l (200 ppm), as specified in the CalARP regulations. Alternate toxic endpoints, such as the California Permissible Exposure Limits (PELs) of 25 ppm for ammonia were also evaluated.

1.3 REFERENCES USED

The following references were used to develop accident scenarios and evaluate risk to occupants of the Phase 1 Uptown Newport project:

- *Risk Management Program Guidance for Offsite Consequence Analysis.* US Environmental Protection Agency (USEPA). March 2009. EPA Report No. 550-8-99-009.
- *Technical Background Document for Offsite Consequence Analysis for Anhydrous Ammonia, Aqueous Ammonia, Chlorine, and Sulfur Dioxide.* USEPA. April 1999
- *Appendix E: Supplemental Risk Management Program Guidance for Ammonia Refrigeration Facilities.* USEPA, May 2004.
- *RMP*Comp.* USEPA computer model, Version 2.01, for performing offsite consequence analysis required under USEPA's Risk Management Program (RMP) rule. 2012. Website: http://www.epa.gov/oem/content/rmp/rmp_comp.htm
- *Areal Location Hazardous Atmosphere (ALOHA) Computer Model.* 2007.
- Lakes Environmental, 2019. *AERMOD View Plume Dispersion Model, Version 9.6.5.*
- Guidelines for Chemical Process Quantitative Risk Analysis. American Institute of Chemical Engineers. 2000.

2. Hazard Assessment

2.0 ANHYDROUS AMMONIA CHARACTERISTICS

Anhydrous ammonia is a clear, colorless gas with a pungent irritating odor; its chemical formula is NH_3. Ammonia is easily liquefied by applying low pressure to the confined gas; this form is called anhydrous ammonia. The vapor density of ammonia is 0.59; therefore, ammonia typically is lighter than air and quickly disperses into the atmosphere when released. However, when large amounts of liquid ammonia are released to the atmosphere at once, the ammonia is initially cold and heavier than air. When first released from its liquid storage tank, ammonia may be visible as a white fog caused by condensed atmospheric moisture.

As a result of ammonia's affinity to water, ammonia gas can be irritating to the eyes, throat, and breathing passages. Ammonia in either the vapor or liquid state primarily affects the eyes, lungs, and skin. Symptoms can include burning of the eyes, nose, and throat after breathing even small amounts. With higher doses, coughing or choking may occur. Exposure to high levels of anhydrous ammonia can cause swelling of the throat and/or chemical burns to the lungs. Most people recover from a single low exposure to anhydrous ammonia without any delayed or long-term effects. Anhydrous ammonia is not known to cause cancer.

According to the Occupational Safety and Health Administration (OSHA), ammonia has an odor detection threshold of 5 to 50 ppm. The pungent and distinctive odor of the vapor, even at low concentrations, provides adequate warning so that no person would voluntarily remain in concentrations which are hazardous.

The California Accidental Release Program (CalARP) lists a toxic endpoint (i.e., a safe distance for analysis) for ammonia of 0.14 mg/l, or 200 ppm. The toxic endpoint is defined as the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair an individual's ability to take protective action.

The California Occupational Safety and Health Administration (OSHA) establishes permissible exposure limits (PELs), which are the legal limits for exposure of an employee to chemical substances or physical agents. The PEL for ammonia is 25 ppm for a time weighted average (TWA) over an 8-hour exposure period. The short-term exposure limit (STEL) is 35 ppm for 15 minutes. These limits do not apply to emergency exposure situations but give an indication of what levels of ammonia may be of concern.

2.1 EXISTING AMMONIA STORAGE TANK LOCATION AND OPERATIONAL SAFETY PROVISIONS

Anhydrous ammonia is currently stored in a 2,230-gallon above-ground pressurized tank located southeast of the TowerJazz cooling towers (Figure 1). The storage tank is located within a partially enclosed structure with three walls and a roof that also contains the acid neutralization tanks for TowerJazz's wastewater system.

The proposed plan is to completely enclose the existing ammonia tank in a separate room that would be approximately 11.5 feet wide, 22 feet long, and 16 feet high within the existing structure. Although the ammonia tank is about 5 feet from the nearest property boundary and 35 feet from the closest proposed building of the Uptown Newport project, any release from the tank would be constrained by the enclosed structure.

The existing ammonia tank is equipped with the following safety features:

- Water deluge spray system that consists of water nozzles above the tank that effectively knock down any vapors from an unintentional release
- Ammonia leak detector that alarms at a concentration of 25 mg/l and activates the water deluge system at 35 mg/l
- Flame detector connected to gas sensor controller
- Pressure relief valves, pressure sensors, level indicators, leak sensors, shutoff valves, and ammonia control panel
- Excess flow valves that automatically shut off flow in the piping when excess flow rates are detected in the line
- Emergency shutoff with remote release cable
- Diking around tank with drain sump
- Eye wash station
- Ammonia tank monitor and control panel with emergency deluge activation
- The ammonia tank alarm will be tied to the central alarm system of Uptown Newport residences.

2.2 ACCIDENT SCENARIOS – EXISTING AMMONIA TANK

2.2.1 RMP*Comp Worst-Case Scenario

For the worst-case scenario, the procedures described in the USEPA OCA guidance document (1999) were used. It was assumed that all the anhydrous ammonia in the tank was released over a period of 10 minutes and the release took place during worst-case meteorological conditions (Stability Class F and wind speed of 1.5 m/sec). The release was modeled using the computer program RMP*Comp. The RMP*Comp worst case scenario assumes partial credit for release within an enclosed space, which was used in this model run. The RMP*Comp model defines an enclosed space as a building or shed with openings to the outside and in direct contact with outside air. This results in conservative results, since the actual building will be completely enclosed and not in direct contact with outside air. However, a completely enclosed building scenario is not available in the RMP*Comp model.

The results, which are provided in Appendix A, indicate that the ammonia toxic endpoint of 200 ppm would extend approximately 0.9 miles, or 4,572 feet. The nearest outdoor residential receptor in Phase 1 of the proposed development would be approximately 5 feet from the ammonia storage location. Therefore, occupants of the Uptown Newport project could have the potential to be adversely impacted under this conservative worst-case scenario. Worst-case scenarios do not account for the probability of a catastrophic release occurring. Industry data indicate that the probability of a catastrophic ammonia vessel failure is 3.0 x 10^{-8}/year, or once every 33 million years (Marine Research Scientists, 2007).

2.2.2 RMP*Comp Alternative Release Scenario

The USEPA RMP and CalARP protocols indicate that an alternative release scenario, based on more realistic assumptions and mitigating measures, can be used to determine potential impacts. For this alternative release scenario, a break in the vapor feed line from the anhydrous ammonia storage tank was assumed. This is the same alternative release scenario used in the previous PlaceWorks risk analyses (Planning Center, 2012; PlaceWorks, 2018).

There is an excess flow valve for the existing tank that is designed to close when the flow rate from the existing tank exceeds 9.38 lb/min. This was therefore assumed to be the maximum possible flow rate in the line for the alternative scenario analysis; actual operating flow rates will be lower than this amount. Based on the presence of automated alarms, toxic gas detection systems, ammonia diffusion system, and automatic shutoff valves, it is anticipated that the duration of any release of ammonia would be much less than one minute. However, a one-minute release duration was assumed for this hazard assessment.

There also is a high-volume water spray system surrounding the tank that is designed to activate upon detection of ammonia in the atmosphere. The water spray is intended to intercept the released ammonia vapor and effectively knock down the plume and convert most of the ammonia into aqueous form for subsequent discharge to a sump within the building. The control efficiency of the water spray system is estimated to be 90 percent or greater at releases less than 660 lb.min (AIChE, 2000). Credit can be taken for active mitigation systems, such as water spray systems and automatic shutoff valves, when evaluating alternative release scenarios.

The RMP*Comp results for the alternative release scenario, which is presented in Appendix A, indicates a toxic endpoint distance of <0.1 mile, or approximately 528 feet. The RMP*Comp model does not calculate distances of less than 0.1 mile. Therefore, to more realistically model potential ammonia releases from the existing tank, a more sophisticated model, AERMOD, was used to 1) account for a release of ammonia from an enclosed building, 2) account for site-specific meteorological conditions over a 5-year period, and 3) generate ammonia concentration contours over the entire Uptown Newport property.

2.2.3 AERMOD Alternative Release Scenario

Although releases of anhydrous ammonia are typically evaluated using heavy gas models, such as RMP*Comp, ALOHA, SLAB, or DEGADIS, the neutrally and positively buoyant model AERMOD was used for this alternative release scenario for the following reasons. The alternative release scenario assumes a complete rupture of the one-inch pipe that is connected to the vapor space of the anhydrous ammonia tank and extends into the TowerJazz facility. The ammonia vapor is lighter than air and therefore AERMOD can be used to

accurately predict vapor emissions from this release scenario. Also, the heavy gas models cited above do not have the capability to 1) model a release from inside of a building, 2) use five years of site-specific meteorological data to predict worst-case concentrations, or 3) generate ammonia concentration contours across the site.

The USEPA RMP Guidance for Offsite Consequence Analysis (2009) states that for gases liquefied under pressure, the release can be assumed to be primarily gas if the hole in the head space of the tank is well above the liquid level or the release is from a pipeline. In these cases, USEPA guidance states that the release rate from the hole or pipeline can be assumed to be the release rate to air. If a different alternative release scenario was evaluated for this report, such as a one-inch hole in the liquid portion of the tank, it could result in a two-phase dense gas release. However, the release would be contained within the building and the automatic activation of the water deluge system would "knock down" the vapor/aerosol mixture resulting in a pool of aqueous ammonia that then would be collected in the sump and processed through the on-site wastewater treatment system. The amount of ammonia vapor that remains in the air for this scenario could then be modeled as a lighter than air gas.

The USEPA RMP Guidance also allows for alternative release scenarios to use passive mitigation measures, such as a release within an enclosed building, and/or active mitigation measures, such as automatic shutoff valves that would reduce the duration of a release or a water spray system that would reduce the amount of airborne ammonia vapor. For this alternative release scenario which assumes a complete rupture of the one-inch ammonia vapor line, the release was assumed to occur within an enclosed building with the excess flow valve on the pipeline limiting the duration of release. The excess flow valve would close automatically with a detected drop in pressure such as a line break. However, for this analysis, the duration of the release was assumed to continue for a period of one minute. The water deluge system was assumed to result in a 90 percent reduction in vapor concentrations (AIChE, 1997; USEPA, 2009).

The results of this analysis, which are described in detail in the following paragraphs, are conservative for the following reasons:

1) The amount of vapor released was assumed to be constant over a one-minute period, although the release rate from the pipeline break would decrease rapidly as the pressure in the line decreases

2) Once the ammonia vapor is released within the building, the model assumes that the walls of the building are removed, and the ammonia vapor is freely dispersed into the atmosphere

3) The model does not account for the building ventilation requirements (i.e., at least six air exchanges per hour) that would result in reduced ammonia concentrations

4) The reported result in the following paragraphs is the worst-case (i.e., highest) concentration at the site, based on five years of site-specific meteorological data with approximately 44,000 hourly weather readings. The prevailing winds at the site are typically to the northeast and away from the residential development.

2. Hazard Assessment

AERMOD is a USEPA and SCAQMD approved atmospheric dispersion model that accounts for actual meteorological data and building conditions to estimate chemical concentrations in simple and complex terrain. Although this model is not typically used in RMP evaluations because of the detailed weather and terrain inputs that are required, AERMOD or its predecessor ISC3, have been used for ammonia plume dispersion modeling Daly et al, 2013; Beck, 2007).

For this release scenario, the emission rate was estimated to be 0.94 lb/min over a one-hour period, accounting for the 90% reduction in ammonia vapor concentrations with the water deluge system. The ammonia vapor emissions were modeled as a volume source, based on the dimensions of the enclosed room. This is conservative, because the AERMOD model assumes that the ammonia vapors are mixed within the volume of the room and then the walls of the room are removed and the vapors disperse into the atmosphere. No credit is taken for ventilation within the room or the fact that the room is totally enclosed.

Meteorological data provided by the South Coast Air Quality Management District (SCAQMD) for the John Wayne Airport meteorological station (2012-2016) were used to represent local weather conditions and prevailing winds. According to the wind rose for the John Wayne Airport Monitoring Station, presented in Appendix A, the prevailing wind direction in the area of the project site is to the northeast. Therefore, for most of the time, an accidental release from the ammonia tank would typically be away from the project site.

The AERMOD model was run to determine the maximum one-hour ammonia concentration over a 5-year period of meteorological data. The model accounts for 43,800 different data points during that time period (one-hour met data including wind speed and direction) to determine the maximum concentration. The maximum one-hour ammonia concentration occurred at a specific date and time (i.e., July 29, 2015 at 10:00 am) with the wind at a speed of 0.51 m/sec and blowing to the southeast (i.e., toward the Uptown Newport receptors). The wind rose for the maximum one-hour ammonia concentration is provided in Appendix A.

The AERMOD model also considered the spatial distribution of the release source in relation to the project site. To accommodate the model's Cartesian grid format, direction-dependent calculations were obtained by identifying the Universal Transverse Mercator (UTM) coordinates for each source. In addition, digital elevation model (DEM) data for the area were obtained and included in the model runs to account for complex terrain. The results of the AERMOD model run are provided in Appendix A and summarized herein.

The maximum reported one-hour outdoor ammonia concentration on the Uptown Newport property was reported to be 1.06 ppm. It occurs at the southern corner of the ammonia tank building and only extends about 9 feet from the edge of the building. This occurs in a proposed area of landscaping next to the cul-de-sac.

The contours of the maximum outdoor ammonia concentrations are shown on Figure 2. The ammonia concentrations decrease rapidly from the edge of the ammonia tank building with a maximum outdoor concentration of approximately 0.3 to 0.5 ppm at the nearest building. The average outdoor ammonia concentration across the Uptown Newport property was 0.08 ppm. The modeled maximum values are well below the toxic endpoint of 200 ppm and well below the PEL value of 25 ppm. The maximum values are also below the odor threshold for ammonia of 5 ppm.

Short-term concentrations (e.g., one-minute averages) also were calculated for this analysis. Air quality measurements and atmospheric turbulence theory show that short-term concentrations may fluctuate above or below the hourly average. The following formula can be used to estimate the maximum short-term concentration from the hourly average value, as a peak to mean ratio:

$$\frac{C_{T1}}{C_{T2}} = \left(\frac{T1}{T2}\right)^{-0.35}$$

where for example, if T2 = 60 minutes and T1 = 1 minute, the formula indicates that the peak one-minute average concentration (C_{T1}) during a 60-minute period is equal to 4.2 times the 60-minute average concentration (C_{T2}). Therefore, the hourly average concentration can be multiplied by 4.2 to represent the maximum, worst-case one-minute concentration. The resultant maximum one-minute outdoor ammonia concentration at the Uptown Newport property would be 4.45 ppm. This would be below any level of concern and would be just below the range of values for odor perception (5 to 50 ppm) for outdoor residential occupants.

Another potential concern is the exposure of construction workers to ammonia concentrations due to an accidental release from the existing ammonia tank. Since the existing ammonia tank is closer to the site and has a greater release rate, the worker exposure is focused on this scenario.

Results of the AERMOD modeling indicate that ammonia concentrations from a release of the existing ammonia tank nearest to the project site would result in short-term concentrations of much less than 25 ppm (i.e., one-hour concentration of 1.06 ppm and one-minute concentration of 4.45 ppm). Therefore, an accidental release from the existing ammonia tank would not result in ammonia concentrations that could adversely impact on-site construction workers.

2.3 EXPLOSIVE POTENTIAL OF AMMONIA

At the request of the Newport Beach Fire Department, the potential for ammonia vapors to explode within a confined space was evaluated. The Department of Transportation (DOT) classifies anhydrous ammonia as a non-flammable gas because its temperature of ignition is greater than 1,560 F and the ammonia/air mixture must be between 15 and 28 percent ammonia vapor for ignition. However, anhydrous ammonia can only burn in a confined space, not outdoors in the open without a supporting flame.

However, in order to ignite ammonia, an ignition source with a minimum energy of 680 mJ is needed as compared to methane, propane, and ethane requiring only 0.21-0.26 mJ and hydrogen gas requiring only 0.02 mJ. The fire process is typically short-lived. After just a few seconds of fire, a certain amount of oxygen in the room is used up and the ammonia/atmospheric oxygen balance is no longer flammable. The fire dies out if no other material is ignited.

The International Institute of Ammonia Refrigeration (IIAR) states that the ignition of ammonia-air mixtures can result in a deflagration but will not result in a detonation (IIAR, 2002). A deflagration is a fire in which a flame travels rapidly but at subsonic speed through a gas. While the action of deflagration is to push air in front of it, objects do not explode because the rate of combustion is relatively slow. Examples of deflagration include internal combustion engines, natural gas stoves, fireworks, and gunpowder in a firearm. The overpressure from

a deflagration is less than 7.25 pounds per square inch (psi). This contrasts with detonation, where an explosion moves outward at supersonic speed, resulting in the destruction of objects in its path and resulting in shock waves and overpressure.

It is possible for an ammonia tank to rupture or "explode" due to overfilling or over-pressurization, but this is a physical explosion rather than the ignition and deflagration of an ammonia-air mixture. Most incidents in the literature where ammonia tanks have ruptured or "exploded" involve ammonia nurse tanks which are found in outdoor agricultural settings and the tanks were overfilled and/or over-pressurized.

A review of nationwide OSHA ammonia incidents from 2000 to 2018 was conducted to determine if any incidents involved the ignition of ammonia-air mixtures within a building resulting in an explosion (OSHA, 2019). Of the 266 reported incidents involving ammonia, there were only four cases that included explosions and none of these cases involved the ignition of ammonia-air mixtures within a building. One case involved a flash fire/explosion from an employee cutting into an ammonia cooling system that had not been purged with an acetylene torch. Two cases involved the over-pressurization and explosion of equipment (an ammonia compressor and a heat exchanger). And the fourth case involved an accident during transfer of ammonia from a truck to an ammonia nurse tank that resulted in the over-pressurization and explosion of the nurse tank.

For an ammonia-air deflagration to occur in a confined space, such as the ammonia tank storage building, an ammonia leak must continue for a significant time period until the flammability limit of 15 percent ammonia vapor is reached in the confined space. Then, there must be an ignition source, which could be a spark from a motor or the heat of a welding or cutting torch. The subsequent flash fire/deflagration event could damage equipment and the building but likely would not result in significant blast overpressures. Adherence to the IIAR-2 (2014) standards for ventilation of ammonia machinery rooms would prevent the accumulation of ammonia-air vapors, as described in more detail below. In addition, vapor accumulation would cause the ammonia sensor in the enclosed ammonia tank room to trigger an alarm and activate the deluge system, which would greatly reduce the potential for ammonia-air vapors to accumulate.

The design of the enclosed ammonia tank room will be in accordance with the applicable State and local codes, such as IIAR-2 (2014) *Standard for Safe Design of Closed-Circuit Ammonia Refrigeration Systems* and the IIAR *Guidelines for Ammonia Machinery Room Ventilation*. The codes and guidance document require ventilation for the following purposes:

- To purge ammonia vapors from the machinery room in emergency situations to help prevent the concentration of ammonia from reaching the lower flammability limit (LFL), minimizing the possibility of a deflagration
- To prevent excessive temperature rise (or limit temperature) in the machinery room during normal operation due to equipment-generated heat
- To provide fresh air for machinery room occupants
- To maintain the machinery room under negative pressure
- To enhance ammonia detector responsiveness.

The proposed design of the ammonia tank room will include the following:

- Totally enclosed room sealed against the roof
- Liquid containment volume for a deluge event
- Double door in front, with interlock to ammonia detection alarm
- Separate door at back of room with ladder down to main operation level of process area
- Ventilation fan with at least 6 air changes per hour (ACH)
- SCBA cabinet outside of room
- Fabricated sump with pump to collect drainage from the deluge event and pump it to the wastewater treatment area.

The deluge system will activate when an ammonia vapor concentration of 35 ppm is detected within the room. With these design features, the potential for the accumulation of ammonia-air to reach LFLs and cause a fire or deflagration is minimized.

To confirm that the machinery room would not result in ammonia concentrations that could cause a fire or deflagration, the ALOHA model was run, assuming night-time meteorological conditions and a congested environment (i.e., a building or enclosed room). It was conservatively assumed that the ammonia leak would continue at a rate of 0.94 lb/min for one hour (i.e., the excess flow rate valve did not shut off flow from the tank) and the emergency ventilation system did not activate. The results, which are provided in Appendix A, indicate that concentrations would not reach the LFL at any time and therefore, there would be no potential for a fire or deflagration. The ALOHA model was also run for another more conservative scenario and assumed that the water deluge system did not operate, the excess flow rate valve did not shut off, and the emergency ventilation system did not activate, resulting in a flow rate of 9.4 lb/min for one hour. The results also indicate that concentrations within the building would not reach the LFL at any time and no fire or deflagration would result.

2.4 SUMMARY AND RECOMMENDATIONS

The results of the revised risk analysis indicate that the estimated ammonia concentrations from an accidental release from the existing ammonia tank within an enclosed building would not result in concentrations of concern at the Uptown Newport property. The maximum outdoor one-hour ammonia concentration was estimated to be 1.06 ppm and occurred within a small area next to the ammonia tank building. According to the AERMOD results, this maximum one-hour concentration occurs only one time during a 5-year period of hourly meteorological data. It occurs during a period of low wind speed (0.51 m/sec) with a wind direction toward the southeast. As stated previously, these results are conservative because it assumes a release of all of the ammonia vapor within the room directly into the atmosphere, when in reality the room will be sealed.

The maximum one-minute outdoor ammonia concentration was modeled to be 4.45 ppm and the average outdoor concentrations across the Uptown Newport property was estimated to be 0.08 ppm. Modeled outdoor ammonia concentrations are well below the CalARP toxic endpoint of 200 ppm and also are below 8-hour OSHA worker exposure levels of 25 ppm. Therefore, a release of ammonia during Phase 1 of the Uptown Newport project would not pose a risk to on-site construction workers or residential occupants. During Phase 2 of the project, the TowerJazz facility would be shut down and the ammonia tanks removed.

Even though the impact of an accidental release of ammonia was found to be less than significant, the Uptown Newport alarm system and emergency response plan will be activated in the case of an emergency release so that appropriate response actions can be taken. Contact names and numbers for the Newport Beach Fire Department, on-site operations and maintenance personnel, and the safety officer of the TowerJazz facility are provided in an emergency response plan.

3. References

American Institute of Chemical Engineers (AIChE), 2000. *Guidelines for Chemical Process Quantitative Risk Analysis, Second Edition.* New York, New York. 750 pp.

AIChE, 1997. *Guidelines for Post-Release Mitigation Technology in the Chemical Process Industry.* New York: American Institute of Chemical Engineers Center for Chemical Process Safety (CCPS). Prepared by Arthur D. Little, Inc.

Beck, 2007. *Ammonia Release Plume Dispersion Modeling, Community Awareness & Emergency Response.* In, Ammonia Technical Manual.

Daly, A., P. Zannetti & M. Jennings, 2013. *Accident Reconstruction and Plume Modeling of an Unplanned Ammonia Release.* Published in WIT Transactions on Ecology and The Environment, Volume 174.

EORM, 2018. *TowerJazz Semiconductor Combined Risk Management Plan for Various Chemical Systems.* Dated June 2018.

Federal Emergency Management Agency (FEMA), 1989. Handbook of Chemical Hazard Analysis Procedures. Prepared by Federal Emergency Management Agency, U.S. Department of Transportation, and U.S. Environmental Protection Agency. Washington, DC.

International Institute of Ammonia Refrigeration (IIAR), 2002. *Guidelines for Ammonia Machinery Room Ventilation.* Dated June, 2002.

IIAR, 2015. *ANSI/IIAR2 – Standard for Safe Design of Closed-Circuit Ammonia Refrigeration Systems.*

Marine Research Scientists, 2007. *Anhydrous Ammonia Consequence Modeling Analysis: Evaluation of an Accidental Anhydrous Ammonia Release from the Chevron Richmond Refinery and Consequences in the Point Molate Area.* Dated January 2007.

Occupational Safety and Health Administration (OSHA), 2019. Accident Search Results, Ammonia, from 2000 to 2018. Website: https://www.osha.gov/pls/imis/accidentsearch.search?sic=&sicgroup=&naics=&acc_description=&acc_abstract=&acc_keyword=%22Ammonia%22&inspnr=&fatal=&officetype=&office=&startmonth=&startday=&startyear=&endmonth=&endday=&endyear=&keyword_list=on&p_sort=event_date&p_desc=ASC

The Planning Center, 2012. *Off-Site Consequence Analysis for TowerJazz Semiconductor Facility.* Prepared for the City of Newport Beach, dated August 2012.

The Planning Center/DC&E, 2012. *Technical Memorandum, Additional Ammonia Runs.* Submitted to Kevin Kitch, Newport Beach Fire Department. Dated August 23, 2012.

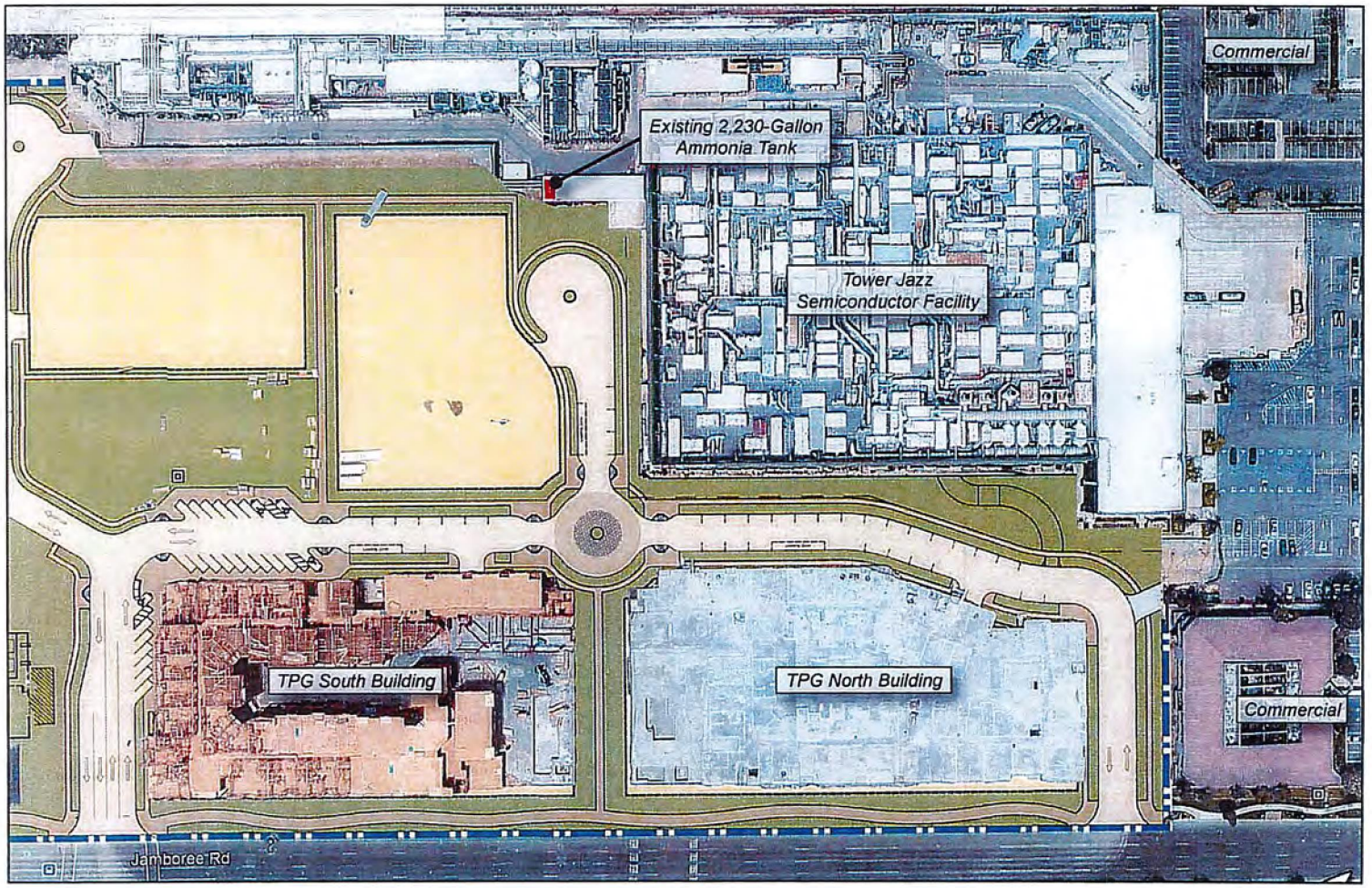
PlaceWorks, 2018. *Technical Memorandum, Addendum to Uptown Newport Risk Analysis.* Dated September 11, 2018.

10. References

US Environmental Protection Agency (USEPA), 2016. ALOHA (Areal Locations of Hazardous Atmospheres) computer model, Version 5.4.7, at USEPA website: http://www.epa.gov/emergencies/content/cameo/aloha.htm.

USEPA, 2009. *Risk Management Program Guidance for Offsite Consequence Analysis.* Office of Solid Waste and Emergency Response. EPA Report No. 550-B-99-009. Dated March 2009.

Figure 1 - Site Layout and Ammonia Tank Location



Base Map Source: Google Earth, 2019

PlaceWorks

Figure 2 - Maximum Ammonia Tank Contours at Uptown Newport Property

Project Boundary

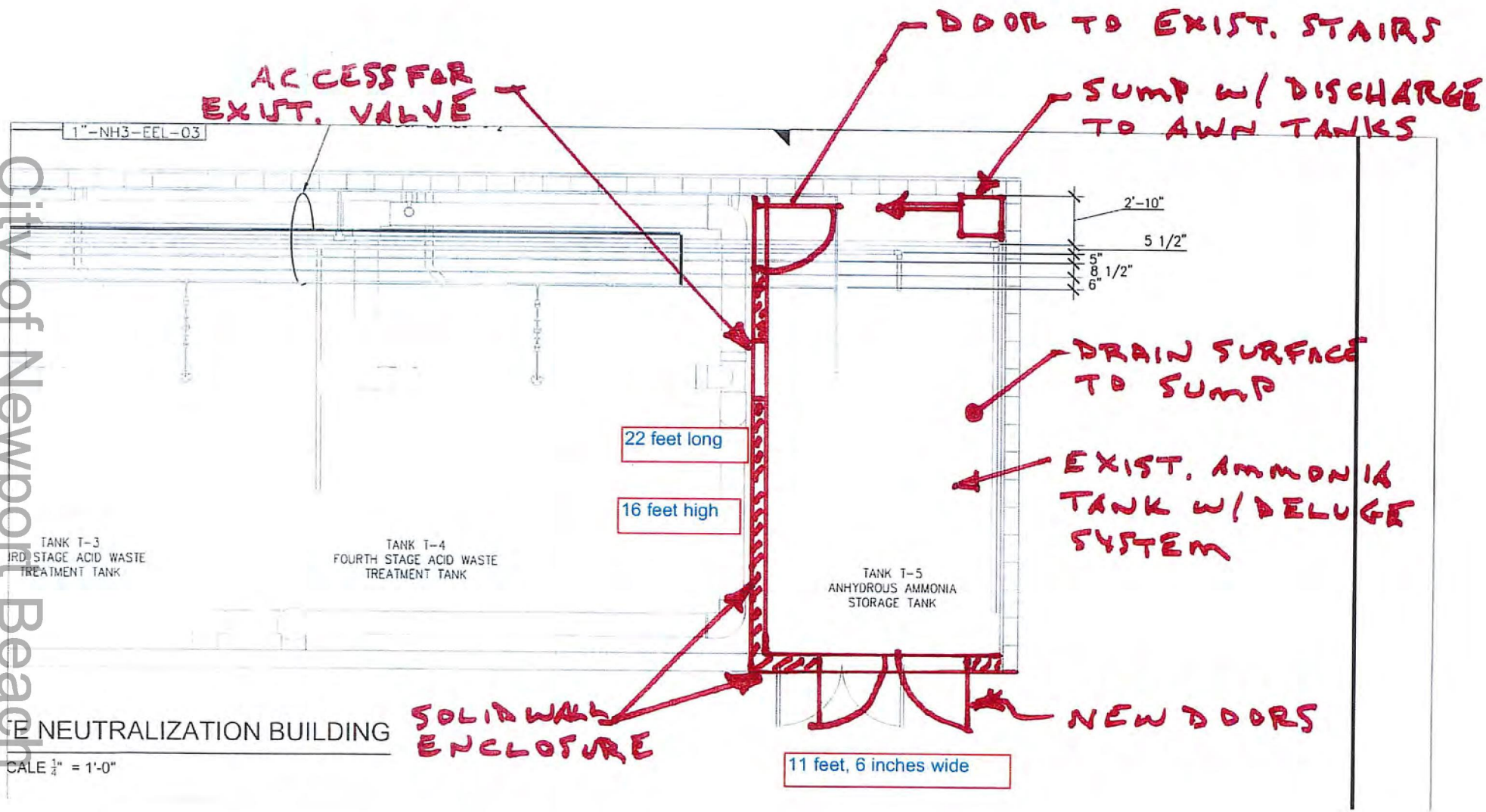
Plot File of High 1st High 1-Hr Values for Source Group: Tank PPM
Max: 1.06 (PPM) at (420206.10, 3725063.99)

0.02 0.03 0.05 0.08 0.10 0.30 0.50 0.80 1.00 1.06

Base Map Source: Google Earth, 2019

PlaceWorks

Appendix A. Risk Analysis Calculations



RMP COMP WORST CASE SCENARIO

OFF-SITE CONSEQUENCE ANALYSIS CALCULATIONS

Anhydrous Ammonia - Worst Case Scenario

Storage capacity of tank	2,230	gallons	
Maximum fill rate of tank	85	%	
Maximum volume stored onsite	1,896	gallons	
Density of anhydrous ammonia @ 60F	5.15	lb/gal	
Pounds of ammonia stored onsite	9,762	lb	
No passive mitigation considered for worst-case scenario			
Duration of release	10	min	per OCA guidance
Release rate	976.2	lb/min	
Wind Speed	1.5	m/sec	
Stability Class	F		
Temperature	77	F	
Toxic endpoint	200	ppm	
RMP*Comp - distance to	0.9	miles	
toxic endpoint of 200 ppm	4,752	feet	
Distance to nearest residential receptor	5	ft	
Potential impacts to nearest receptor	Yes		

RMP*Comp: Results of Consequence Analysis

Scenario Summary
Mar 19, 2019

Chemical:	Ammonia (anhydrous)
CAS number:	7664-41-7
Threat type:	Toxic Gas
Scenario type:	Worst-case
Physical state:	Liquefied under pressure
Quantity released:	9762 pounds
Release duration:	10 min
Release rate:	537 pounds per minute
Mitigation measures:	Release in enclosed space, in direct contact with outside air
Surrounding terrain type:	Urban surroundings (many obstacles in the immediate area)
Toxic endpoint:	0.14 mg/L; basis: ERPG-2

Estimated distance to toxic endpoint: 0.9 miles (1.4 kilometers)

----------ASSUMPTIONS ABOUT THIS SCENARIO----------

Wind speed:	1.5 meters/second (3.4 miles/hour)
Stability class:	F
Air temperature:	77 degrees F (25 degrees C)

RMP COMP ALTERNATIVE SCENARIO

OFF-SITE CONSEQUENCE ANALYSIS CALCULATIONS

Anhydrous Ammonia - Alternative Release Scenario

Scenario assumes discharge from rupture of 1-inch gas line
Flow restricted by excess flow valve

Specifications on excess control valve from vendor - Rego Products
Valve ID - A8013D and A8013D

Vapor flow rate at 90 psig that triggers closure	12,510	ft^3/hr
	208.5	ft^3/min
Density of anhydrous ammonia vapor	0.045	lb/ft^3
Maximum flow rate with break in 1-inch gas line	9.38	lb/min

Active mitigation considered for alternative release scenario

QR_M = (1-FR) x QR
FR = Fractional reduction resulting from mitigation

Control efficiency of water deluge system	90 %	AIChE, 1997
QR_M = mitigated release rate (lb/min)	0.94 lb/min	
Duration of release	1.00 min	time to activate automatic shutoff valves and water deluge system

Wind Speed	1.5	m/sec
Average nighttime temperature - Newport Beach	56	F
Relative Humidity (nighttime conditions)	80	%
Urban or Rural	Urban	
Ht of release - conservatively assume same height as Phase I receptor in multi-story building	Ground level	

RMP*Comp - distance to toxic endpoint of 200 ppm	<0.1	miles
	<528	feet

RMP*Comp: Results of Consequence Analysis

Scenario Summary
Mar 19, 2019

Chemical:	Ammonia (anhydrous)
CAS number:	7664-41-7
Threat type:	Toxic Gas
Scenario type:	Alternative
Physical state:	Liquefied under pressure
Release duration:	1 minutes
Release rate:	0.94 pounds per min
Mitigation measures:	Release in enclosed space, in direct contact with outside air
Surrounding terrain type:	Urban surroundings (many obstacles in the immediate area)
Toxic endpoint:	0.14 mg/L; basis: ERPG-2

Estimated distance to toxic endpoint: <0.1 miles (<0.16 kilometers); report as 0.1 mile

----------ASSUMPTIONS ABOUT THIS SCENARIO----------

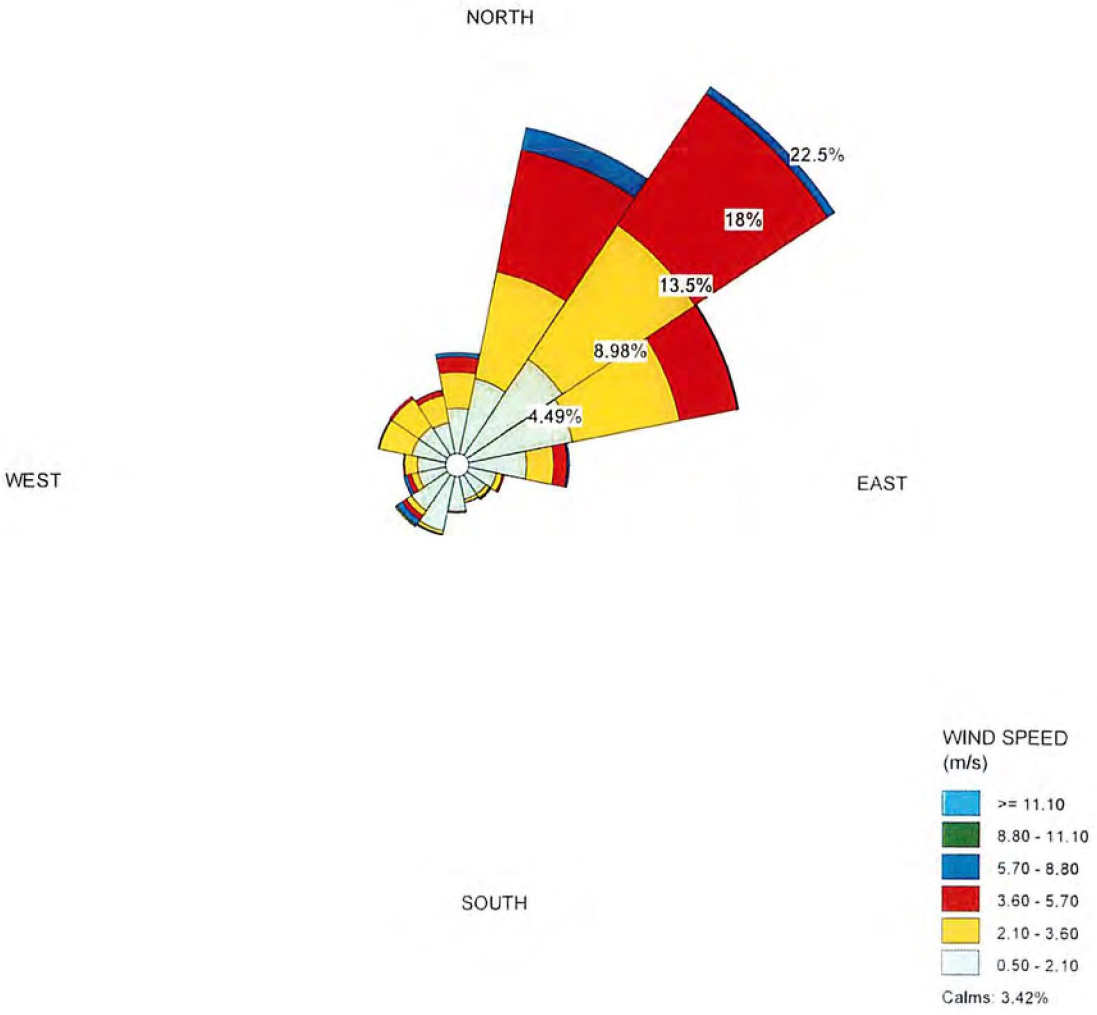
Wind speed:	3 meters/second (6.7 miles/hour)
Stability class:	D
Air temperature:	77 degrees F (25 degrees C)

WIND ROSE PLOT

John Wayne International Airport
2012-2016

DISPLAY

Wind Speed
Flow Vector (blowing to)



COMMENTS	DATA PERIOD	COMPANY NAME
All Hours	**Start Date: 1/1/2012 - 00:00** **End Date: 12/31/2016 - 23:59**	
		MODELER
	CALM WINDS	TOTAL COUNT
	3.42%	**43602 hrs.**
	AVG. WIND SPEED	DATE
	2.43 m/s	**3/29/2018**

PROJECT NO

WRPLOT View - Lakes Environmental Software

Results Summary

Uptown Newport - Existing Tank Only
Tank Modeling

Concentration - Source Group: TANK

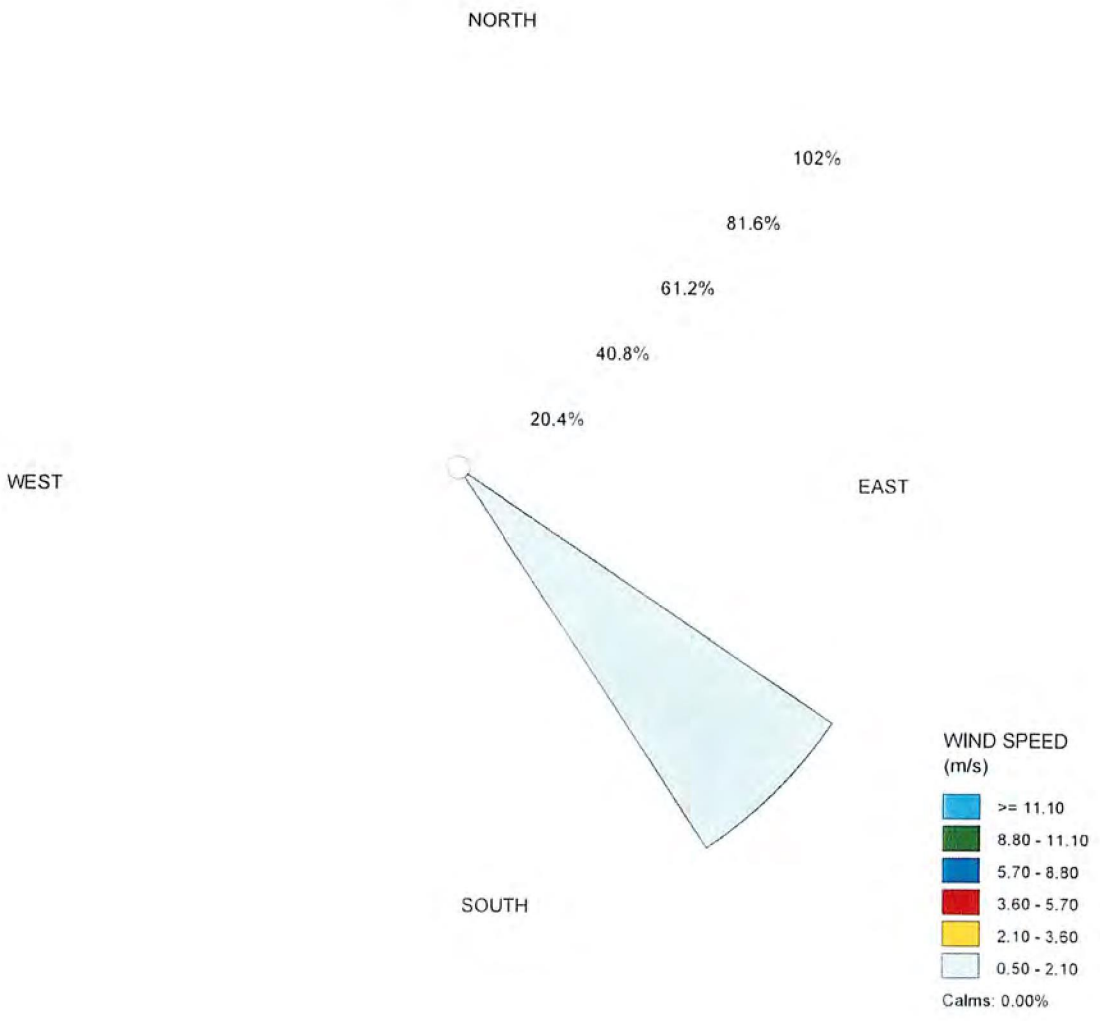
Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	734.87254	ug/m^3	420206.10	3725063.99	15.61	0.00	15.61	7/29/2015, 10
1-HR	1ST	1.05510	PPM	420206.10	3725063.99	15.61	0.00	15.61	7/29/2015, 10

WIND DIRECTION FOR MAXIMUM ONE-HOUR CONCENTRATION

WIND ROSE PLOT

John Wayne International Airport Meteorological Station
2015/07/29 Hour 10 (10AM-11AM)

DISPLAY
Wind Speed
Flow Vector (blowing to)



COMMENTS
Max 1-hr

DATA PERIOD
Start Date: 7/29/2015 - 10:00
End Date: 7/29/2015 - 10:00

COMPANY NAME

MODELER

CALM WINDS
0.00%

TOTAL COUNT
1 hrs.

AVG. WIND SPEED
0.51 m/s

DATE
4/2/2019

PROJECT NO
SHOP-10.0

WRPLOT View - Lakes Environmental Software

```
*** AERMOD - VERSION  18081 ***   *** Uptown Newport - Existing Tank Only                    ***        03/19/19
*** AERMET - VERSION  16216 ***   *** Tank Modeling                                          ***        15:55:36
                                                                                                       PAGE    1
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                        ***     MODEL SETUP OPTIONS SUMMARY       ***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**Model Is Setup For Calculation of Average CONCentration Values.

  --  DEPOSITION LOGIC  --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
**Model Uses NO WET DEPLETION.  WETDPLT  =  F

**Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
  for Total of    1 Urban Area(s):
  Urban Population =   3010232.0 ;  Urban Roughness Length =  1.000 m

**Model Uses Regulatory DEFAULT Options:
       1. Stack-tip Downwash.
       2. Model Accounts for ELEVated Terrain Effects.
       3. Use Calms Processing Routine.
       4. Use Missing Data Processing Routine.
       5. No Exponential Decay.
       6. Urban Roughness Length of 1.0 Meter Assumed.

**Other Options Specified:
       ADJ_U*   - Use ADJ_U* option for SBL in AERMET
       CCVR_Sub - Meteorological data includes CCVR substitutions
       TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of:  OTHER

**Model Calculates  1 Short Term Average(s) of:   1-HR

**This Run Includes:      1 Source(s);       1 Source Group(s); and     525 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:      1 VOLUME source(s)
                and:      0 AREA type source(s)
                and:      0 LINE source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with      0 line(s)

**Model Set To Continue RUNning After the Setup Testing.
```

```
**The AERMET Input Meteorological Data Version Date:  16216

**Output Options Selected:
        Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
        Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
        Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    17.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                              ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =      3.6 MB of RAM.

**Input Runstream File:          aermod.inp
**Output Print File:             aermod.out

**Detailed Error/Message File:   uptownnew.err
**File for Summary of Results:   uptownnew.sum
```

```
*** AERMOD - VERSION  18081 ***   *** Uptown Newport - Existing Tank Only                    ***        03/19/19
*** AERMET - VERSION  16216 ***   *** Tank Modeling                                          ***        15:55:36
                                                                                                       PAGE    2
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                                *** VOLUME SOURCE DATA ***

            NUMBER EMISSION RATE                          BASE     RELEASE    INIT.     INIT.   URBAN  EMISSION RATE
  SOURCE     PART.  (GRAMS/SEC)      X          Y         ELEV.    HEIGHT     SY        SZ      SOURCE  SCALAR VARY
    ID       CATS.                (METERS)   (METERS)  (METERS) (METERS)  (METERS)  (METERS)           BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

TANK            0   0.11844E+00  420204.4  3725070.4    15.6      4.88      1.76      2.27      YES



                                          *** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID                                                SOURCE IDs
-----------                                                ----------

 TANK       TANK        ,



                                          *** SOURCE IDs DEFINED AS URBAN SOURCES ***

 URBAN ID   URBAN POP                                      SOURCE IDs
 --------   ---------                                      ----------

             3010232.   TANK        ,
```

```
*** AERMOD - VERSION  18081 ***    *** Uptown Newport - Existing Tank Only                    ***        03/19/19
*** AERMET - VERSION  16216 ***    *** Tank Modeling                                         ***        15:55:36
                                                                                                       PAGE    5
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                  *** DISCRETE CARTESIAN RECEPTORS ***
                                  (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                              (METERS)

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(	420122.6,	3724925.5,	15.7,	15.7,	0.0);	(420132.6,	3724925.5,	15.8,	15.8,	0.0);
(	420142.6,	3724925.5,	15.9,	15.9,	0.0);	(420152.6,	3724925.5,	15.7,	15.7,	0.0);
(	420162.6,	3724925.5,	15.7,	15.7,	0.0);	(420172.6,	3724925.5,	15.7,	15.7,	0.0);
(	420182.6,	3724925.5,	15.7,	15.7,	0.0);	(420192.6,	3724925.5,	15.6,	15.6,	0.0);
(	420202.6,	3724925.5,	15.5,	15.5,	0.0);	(420212.6,	3724925.5,	15.5,	15.5,	0.0);
(	420222.6,	3724925.5,	15.4,	15.4,	0.0);	(420232.6,	3724925.5,	15.4,	15.4,	0.0);
(	420242.6,	3724925.5,	15.5,	15.5,	0.0);	(420252.6,	3724925.5,	15.6,	15.6,	0.0);
(	420262.6,	3724925.5,	15.7,	15.7,	0.0);	(420272.6,	3724925.5,	15.7,	15.7,	0.0);
(	420282.6,	3724925.5,	15.8,	15.8,	0.0);	(420292.6,	3724925.5,	16.0,	16.0,	0.0);
(	420302.6,	3724925.5,	16.1,	16.1,	0.0);	(420312.6,	3724925.5,	16.5,	17.3,	0.0);
(	420102.6,	3724935.5,	15.6,	15.6,	0.0);	(420112.6,	3724935.5,	15.7,	15.7,	0.0);
(	420122.6,	3724935.5,	15.6,	15.6,	0.0);	(420132.6,	3724935.5,	16.1,	16.1,	0.0);
(	420142.6,	3724935.5,	15.9,	15.9,	0.0);	(420152.6,	3724935.5,	15.7,	15.7,	0.0);
(	420162.6,	3724935.5,	15.7,	15.7,	0.0);	(420172.6,	3724935.5,	15.7,	15.7,	0.0);
(	420182.6,	3724935.5,	15.7,	15.7,	0.0);	(420192.6,	3724935.5,	15.6,	15.6,	0.0);
(	420202.6,	3724935.5,	15.5,	15.5,	0.0);	(420212.6,	3724935.5,	15.5,	15.5,	0.0);
(	420222.6,	3724935.5,	15.4,	15.4,	0.0);	(420232.6,	3724935.5,	15.4,	15.4,	0.0);
(	420242.6,	3724935.5,	15.4,	15.4,	0.0);	(420252.6,	3724935.5,	15.5,	15.5,	0.0);
(	420262.6,	3724935.5,	15.5,	15.5,	0.0);	(420272.6,	3724935.5,	15.7,	15.7,	0.0);
(	420282.6,	3724935.5,	15.8,	15.8,	0.0);	(420292.6,	3724935.5,	15.9,	15.9,	0.0);
(	420302.6,	3724935.5,	16.1,	16.1,	0.0);	(420312.6,	3724935.5,	16.2,	17.4,	0.0);
(	420322.6,	3724935.5,	16.7,	16.7,	0.0);	(420092.6,	3724945.5,	15.7,	15.7,	0.0);
(	420102.6,	3724945.5,	15.7,	15.7,	0.0);	(420112.6,	3724945.5,	15.7,	15.7,	0.0);
(	420122.6,	3724945.5,	15.6,	15.6,	0.0);	(420132.6,	3724945.5,	15.9,	15.9,	0.0);
(	420142.6,	3724945.5,	15.7,	15.7,	0.0);	(420152.6,	3724945.5,	15.7,	15.7,	0.0);
(	420162.6,	3724945.5,	15.7,	15.7,	0.0);	(420172.6,	3724945.5,	15.6,	15.6,	0.0);
(	420182.6,	3724945.5,	15.6,	15.6,	0.0);	(420192.6,	3724945.5,	15.6,	15.6,	0.0);
(	420202.6,	3724945.5,	15.5,	15.5,	0.0);	(420212.6,	3724945.5,	15.5,	15.5,	0.0);
(	420222.6,	3724945.5,	15.5,	15.5,	0.0);	(420232.6,	3724945.5,	15.4,	15.4,	0.0);
(	420242.6,	3724945.5,	15.3,	15.3,	0.0);	(420252.6,	3724945.5,	15.4,	15.4,	0.0);
(	420262.6,	3724945.5,	15.5,	15.5,	0.0);	(420272.6,	3724945.5,	15.6,	15.6,	0.0);
(	420282.6,	3724945.5,	15.7,	15.7,	0.0);	(420292.6,	3724945.5,	15.9,	15.9,	0.0);
(	420302.6,	3724945.5,	16.0,	16.0,	0.0);	(420312.6,	3724945.5,	16.2,	16.2,	0.0);
(	420322.6,	3724945.5,	16.3,	17.4,	0.0);	(420332.6,	3724945.5,	16.8,	16.8,	0.0);
(	420082.6,	3724955.5,	15.6,	15.6,	0.0);	(420092.6,	3724955.5,	15.6,	15.6,	0.0);
(	420102.6,	3724955.5,	15.6,	15.6,	0.0);	(420112.6,	3724955.5,	15.7,	15.7,	0.0);
(	420122.6,	3724955.5,	15.7,	15.7,	0.0);	(420132.6,	3724955.5,	15.7,	15.7,	0.0);
(	420142.6,	3724955.5,	15.7,	15.7,	0.0);	(420152.6,	3724955.5,	15.7,	15.7,	0.0);
(	420162.6,	3724955.5,	15.6,	15.6,	0.0);	(420172.6,	3724955.5,	15.6,	15.6,	0.0);
(	420182.6,	3724955.5,	15.6,	15.6,	0.0);	(420192.6,	3724955.5,	15.6,	15.6,	0.0);
(	420202.6,	3724955.5,	15.5,	15.5,	0.0);	(420212.6,	3724955.5,	15.5,	15.5,	0.0);
(	420222.6,	3724955.5,	15.5,	15.5,	0.0);	(420232.6,	3724955.5,	15.4,	15.4,	0.0);
(	420242.6,	3724955.5,	15.3,	15.3,	0.0);	(420252.6,	3724955.5,	15.3,	15.3,	0.0);

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*** AERMOD - VERSION  18081 ***   *** Uptown Newport - Existing Tank Only                    ***        03/19/19
*** AERMET - VERSION  16216 ***   *** Tank Modeling                                          ***        15:55:36
                                                                                                       PAGE    7
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                  *** DISCRETE CARTESIAN RECEPTORS ***
                                  (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                               (METERS)

( 420262.6, 3724955.5,     15.4,     15.4,     0.0);    ( 420272.6, 3724955.5,     15.5,     15.5,     0.0);
( 420282.6, 3724955.5,     15.7,     15.7,     0.0);    ( 420292.6, 3724955.5,     15.8,     15.8,     0.0);
( 420302.6, 3724955.5,     15.9,     15.9,     0.0);    ( 420312.6, 3724955.5,     16.1,     16.1,     0.0);
( 420322.6, 3724955.5,     16.3,     16.3,     0.0);    ( 420332.6, 3724955.5,     16.4,     17.4,     0.0);
( 420342.6, 3724955.5,     17.0,     17.0,     0.0);    ( 420072.6, 3724965.5,     15.4,     15.4,     0.0);
( 420082.6, 3724965.5,     15.4,     15.4,     0.0);    ( 420092.6, 3724965.5,     15.5,     15.5,     0.0);
( 420102.6, 3724965.5,     15.6,     15.6,     0.0);    ( 420112.6, 3724965.5,     15.7,     15.7,     0.0);
( 420122.6, 3724965.5,     15.7,     15.7,     0.0);    ( 420132.6, 3724965.5,     15.7,     15.7,     0.0);
( 420142.6, 3724965.5,     15.7,     15.7,     0.0);    ( 420152.6, 3724965.5,     15.6,     15.6,     0.0);
( 420162.6, 3724965.5,     15.6,     15.6,     0.0);    ( 420172.6, 3724965.5,     15.6,     15.6,     0.0);
( 420182.6, 3724965.5,     15.6,     15.6,     0.0);    ( 420192.6, 3724965.5,     15.6,     15.6,     0.0);
( 420202.6, 3724965.5,     15.5,     15.5,     0.0);    ( 420212.6, 3724965.5,     15.5,     15.5,     0.0);
( 420222.6, 3724965.5,     15.5,     15.5,     0.0);    ( 420232.6, 3724965.5,     15.5,     15.5,     0.0);
( 420242.6, 3724965.5,     15.4,     15.4,     0.0);    ( 420252.6, 3724965.5,     15.4,     15.4,     0.0);
( 420262.6, 3724965.5,     15.4,     15.4,     0.0);    ( 420272.6, 3724965.5,     15.5,     15.5,     0.0);
( 420282.6, 3724965.5,     15.6,     15.6,     0.0);    ( 420292.6, 3724965.5,     15.7,     15.7,     0.0);
( 420302.6, 3724965.5,     15.9,     15.9,     0.0);    ( 420312.6, 3724965.5,     16.0,     16.0,     0.0);
( 420322.6, 3724965.5,     16.2,     16.2,     0.0);    ( 420332.6, 3724965.5,     16.3,     16.3,     0.0);
( 420342.6, 3724965.5,     16.6,     17.5,     0.0);    ( 420352.6, 3724965.5,     17.1,     17.1,     0.0);
( 420072.6, 3724975.5,     15.4,     15.4,     0.0);    ( 420082.6, 3724975.5,     15.3,     15.3,     0.0);
( 420092.6, 3724975.5,     15.3,     15.3,     0.0);    ( 420102.6, 3724975.5,     15.5,     15.5,     0.0);
( 420112.6, 3724975.5,     15.6,     15.6,     0.0);    ( 420122.6, 3724975.5,     15.7,     15.7,     0.0);
( 420132.6, 3724975.5,     15.7,     15.7,     0.0);    ( 420142.6, 3724975.5,     15.7,     15.7,     0.0);
( 420152.6, 3724975.5,     15.6,     15.6,     0.0);    ( 420162.6, 3724975.5,     15.6,     15.6,     0.0);
( 420172.6, 3724975.5,     15.6,     15.6,     0.0);    ( 420182.6, 3724975.5,     15.6,     15.6,     0.0);
( 420192.6, 3724975.5,     15.6,     15.6,     0.0);    ( 420202.6, 3724975.5,     15.6,     15.6,     0.0);
( 420212.6, 3724975.5,     15.6,     15.6,     0.0);    ( 420222.6, 3724975.5,     15.6,     15.6,     0.0);
( 420232.6, 3724975.5,     15.5,     15.5,     0.0);    ( 420242.6, 3724975.5,     15.5,     15.5,     0.0);
( 420252.6, 3724975.5,     15.4,     15.4,     0.0);    ( 420262.6, 3724975.5,     15.4,     15.4,     0.0);
( 420272.6, 3724975.5,     15.4,     15.4,     0.0);    ( 420282.6, 3724975.5,     15.6,     15.6,     0.0);
( 420292.6, 3724975.5,     15.7,     15.7,     0.0);    ( 420302.6, 3724975.5,     15.8,     15.8,     0.0);
( 420312.6, 3724975.5,     15.9,     15.9,     0.0);    ( 420322.6, 3724975.5,     16.0,     16.0,     0.0);
( 420332.6, 3724975.5,     16.2,     16.2,     0.0);    ( 420342.6, 3724975.5,     16.4,     16.4,     0.0);
( 420352.6, 3724975.5,     16.8,     17.8,     0.0);    ( 420082.6, 3724985.5,     15.5,     15.5,     0.0);
( 420122.6, 3724985.5,     15.7,     15.7,     0.0);    ( 420132.6, 3724985.5,     15.6,     15.6,     0.0);
( 420142.6, 3724985.5,     15.6,     15.6,     0.0);    ( 420152.6, 3724985.5,     15.6,     15.6,     0.0);
( 420162.6, 3724985.5,     15.6,     15.6,     0.0);    ( 420172.6, 3724985.5,     15.6,     15.6,     0.0);
( 420182.6, 3724985.5,     15.6,     15.6,     0.0);    ( 420192.6, 3724985.5,     15.6,     15.6,     0.0);
( 420202.6, 3724985.5,     15.6,     15.6,     0.0);    ( 420212.6, 3724985.5,     15.6,     15.6,     0.0);
( 420222.6, 3724985.5,     15.6,     15.6,     0.0);    ( 420232.6, 3724985.5,     15.6,     15.6,     0.0);
( 420242.6, 3724985.5,     15.6,     15.6,     0.0);    ( 420252.6, 3724985.5,     15.6,     15.6,     0.0);
( 420262.6, 3724985.5,     15.5,     15.5,     0.0);    ( 420272.6, 3724985.5,     15.5,     15.5,     0.0);
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(	420282.6,	3724985.5,	15.5,	15.5,	0.0);	(420292.6,	3724985.5,	15.7,	15.7,	0.0);
(	420302.6,	3724985.5,	15.7,	15.7,	0.0);	(420312.6,	3724985.5,	15.8,	15.8,	0.0);
(	420322.6,	3724985.5,	15.9,	15.9,	0.0);	(420332.6,	3724985.5,	16.1,	16.1,	0.0);
(	420342.6,	3724985.5,	16.3,	16.3,	0.0);	(420352.6,	3724985.5,	16.6,	16.6,	0.0);
(	420362.6,	3724985.5,	17.1,	17.8,	0.0);	(420132.6,	3724995.5,	15.6,	15.6,	0.0);
(	420142.6,	3724995.5,	15.6,	15.6,	0.0);	(420152.6,	3724995.5,	15.6,	15.6,	0.0);
(	420162.6,	3724995.5,	15.6,	15.6,	0.0);	(420172.6,	3724995.5,	15.6,	15.6,	0.0);
(	420182.6,	3724995.5,	15.6,	15.6,	0.0);	(420192.6,	3724995.5,	15.6,	15.6,	0.0);
(	420202.6,	3724995.5,	15.6,	15.6,	0.0);	(420212.6,	3724995.5,	15.6,	15.6,	0.0);
(	420222.6,	3724995.5,	15.6,	15.6,	0.0);	(420232.6,	3724995.5,	15.6,	15.6,	0.0);
(	420242.6,	3724995.5,	15.7,	15.7,	0.0);	(420252.6,	3724995.5,	15.7,	15.7,	0.0);
(	420262.6,	3724995.5,	15.6,	15.6,	0.0);	(420272.6,	3724995.5,	15.5,	15.5,	0.0);
(	420282.6,	3724995.5,	15.4,	15.4,	0.0);	(420292.6,	3724995.5,	15.5,	15.5,	0.0);
(	420302.6,	3724995.5,	15.6,	15.6,	0.0);	(420312.6,	3724995.5,	15.7,	15.7,	0.0);
(	420322.6,	3724995.5,	15.8,	15.8,	0.0);	(420332.6,	3724995.5,	16.0,	16.0,	0.0);
(	420342.6,	3724995.5,	16.2,	16.2,	0.0);	(420352.6,	3724995.5,	16.5,	16.5,	0.0);
(	420362.6,	3724995.5,	16.8,	16.8,	0.0);	(420372.6,	3724995.5,	17.3,	17.3,	0.0);
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(	420162.6,	3725005.5,	15.6,	15.6,	0.0);	(420172.6,	3725005.5,	15.6,	15.6,	0.0);
(	420182.6,	3725005.5,	15.6,	15.6,	0.0);	(420192.6,	3725005.5,	15.6,	15.6,	0.0);
(	420202.6,	3725005.5,	15.6,	15.6,	0.0);	(420212.6,	3725005.5,	15.6,	15.6,	0.0);
(	420222.6,	3725005.5,	15.6,	15.6,	0.0);	(420232.6,	3725005.5,	15.6,	15.6,	0.0);
(	420242.6,	3725005.5,	15.8,	15.8,	0.0);	(420252.6,	3725005.5,	15.8,	15.8,	0.0);
(	420262.6,	3725005.5,	15.5,	15.5,	0.0);	(420272.6,	3725005.5,	15.5,	15.5,	0.0);
(	420282.6,	3725005.5,	15.3,	15.3,	0.0);	(420292.6,	3725005.5,	15.3,	15.3,	0.0);
(	420302.6,	3725005.5,	15.4,	15.4,	0.0);	(420312.6,	3725005.5,	15.5,	15.5,	0.0);
(	420322.6,	3725005.5,	15.7,	15.7,	0.0);	(420332.6,	3725005.5,	15.9,	15.9,	0.0);
(	420342.6,	3725005.5,	16.1,	16.1,	0.0);	(420352.6,	3725005.5,	16.3,	16.3,	0.0);
(	420362.6,	3725005.5,	16.6,	16.6,	0.0);	(420372.6,	3725005.5,	16.9,	16.9,	0.0);
(	420382.6,	3725005.5,	17.5,	17.5,	0.0);	(420142.6,	3725015.5,	15.6,	15.6,	0.0);
(	420152.6,	3725015.5,	15.6,	15.6,	0.0);	(420162.6,	3725015.5,	15.6,	15.6,	0.0);
(	420172.6,	3725015.5,	15.6,	15.6,	0.0);	(420182.6,	3725015.5,	15.6,	15.6,	0.0);
(	420192.6,	3725015.5,	15.6,	15.6,	0.0);	(420202.6,	3725015.5,	15.6,	15.6,	0.0);
(	420212.6,	3725015.5,	15.6,	15.6,	0.0);	(420222.6,	3725015.5,	15.6,	15.6,	0.0);
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(	420252.6,	3725015.5,	15.8,	15.8,	0.0);	(420262.6,	3725015.5,	15.5,	15.5,	0.0);
(	420272.6,	3725015.5,	15.5,	15.5,	0.0);	(420282.6,	3725015.5,	15.4,	15.4,	0.0);
(	420292.6,	3725015.5,	15.2,	15.2,	0.0);	(420302.6,	3725015.5,	15.2,	15.2,	0.0);
(	420312.6,	3725015.5,	15.4,	15.4,	0.0);	(420322.6,	3725015.5,	15.5,	15.5,	0.0);
(	420332.6,	3725015.5,	15.7,	15.7,	0.0);	(420342.6,	3725015.5,	15.9,	15.9,	0.0);
(	420352.6,	3725015.5,	16.2,	16.2,	0.0);	(420362.6,	3725015.5,	16.4,	16.4,	0.0);
(	420372.6,	3725015.5,	16.7,	16.7,	0.0);	(420382.6,	3725015.5,	17.1,	17.1,	0.0);
(	420392.6,	3725015.5,	17.5,	17.5,	0.0);	(420152.6,	3725025.5,	15.6,	15.6,	0.0);
(	420162.6,	3725025.5,	15.6,	15.6,	0.0);	(420172.6,	3725025.5,	15.6,	15.6,	0.0);
(	420182.6,	3725025.5,	15.6,	15.6,	0.0);	(420192.6,	3725025.5,	15.6,	15.6,	0.0);
(	420202.6,	3725025.5,	15.6,	15.6,	0.0);	(420212.6,	3725025.5,	15.6,	15.6,	0.0);
(	420222.6,	3725025.5,	15.6,	15.6,	0.0);	(420232.6,	3725025.5,	15.7,	15.7,	0.0);
(	420242.6,	3725025.5,	15.6,	15.6,	0.0);	(420252.6,	3725025.5,	15.6,	15.6,	0.0);

```
*** AERMOD - VERSION  18081 ***   *** Uptown Newport - Existing Tank Only                    ***        03/19/19
*** AERMET - VERSION  16216 ***   *** Tank Modeling                                          ***        15:55:36
                                                                                                       PAGE    9
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                  *** DISCRETE CARTESIAN RECEPTORS ***
                                  (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                              (METERS)

( 420262.6, 3725025.5,    15.6,    15.6,     0.0);    ( 420272.6, 3725025.5,    15.5,    15.5,     0.0);
( 420282.6, 3725025.5,    15.3,    15.3,     0.0);    ( 420292.6, 3725025.5,    15.0,    15.0,     0.0);
( 420302.6, 3725025.5,    15.1,    15.1,     0.0);    ( 420312.6, 3725025.5,    15.1,    15.1,     0.0);
( 420322.6, 3725025.5,    15.3,    15.3,     0.0);    ( 420332.6, 3725025.5,    15.5,    15.5,     0.0);
( 420342.6, 3725025.5,    15.7,    15.7,     0.0);    ( 420352.6, 3725025.5,    16.0,    16.0,     0.0);
( 420362.6, 3725025.5,    16.3,    16.3,     0.0);    ( 420372.6, 3725025.5,    16.5,    16.5,     0.0);
( 420382.6, 3725025.5,    16.8,    16.8,     0.0);    ( 420392.6, 3725025.5,    17.1,    17.1,     0.0);
( 420402.6, 3725025.5,    17.4,    17.4,     0.0);    ( 420162.6, 3725035.5,    15.6,    15.6,     0.0);
( 420172.6, 3725035.5,    15.6,    15.6,     0.0);    ( 420182.6, 3725035.5,    15.6,    15.6,     0.0);
( 420192.6, 3725035.5,    15.6,    15.6,     0.0);    ( 420202.6, 3725035.5,    15.6,    15.6,     0.0);
( 420212.6, 3725035.5,    15.6,    15.6,     0.0);    ( 420222.6, 3725035.5,    15.6,    15.6,     0.0);
( 420232.6, 3725035.5,    15.6,    15.6,     0.0);    ( 420242.6, 3725035.5,    15.5,    15.5,     0.0);
( 420252.6, 3725035.5,    15.6,    15.6,     0.0);    ( 420262.6, 3725035.5,    15.6,    15.6,     0.0);
( 420272.6, 3725035.5,    15.6,    15.6,     0.0);    ( 420282.6, 3725035.5,    14.8,    15.5,     0.0);
( 420302.6, 3725035.5,    14.7,    14.7,     0.0);    ( 420312.6, 3725035.5,    15.0,    15.0,     0.0);
( 420322.6, 3725035.5,    15.1,    15.1,     0.0);    ( 420332.6, 3725035.5,    15.3,    15.3,     0.0);
( 420342.6, 3725035.5,    15.5,    15.5,     0.0);    ( 420352.6, 3725035.5,    15.8,    15.8,     0.0);
( 420362.6, 3725035.5,    16.1,    16.1,     0.0);    ( 420372.6, 3725035.5,    16.4,    16.4,     0.0);
( 420382.6, 3725035.5,    16.7,    16.7,     0.0);    ( 420392.6, 3725035.5,    16.9,    16.9,     0.0);
( 420402.6, 3725035.5,    17.2,    17.2,     0.0);    ( 420412.6, 3725035.5,    17.3,    17.3,     0.0);
( 420172.6, 3725045.5,    15.7,    15.7,     0.0);    ( 420182.6, 3725045.5,    15.7,    15.7,     0.0);
( 420192.6, 3725045.5,    15.7,    15.7,     0.0);    ( 420202.6, 3725045.5,    15.7,    15.7,     0.0);
( 420212.6, 3725045.5,    15.7,    15.7,     0.0);    ( 420222.6, 3725045.5,    15.5,    15.5,     0.0);
( 420232.6, 3725045.5,    15.4,    15.4,     0.0);    ( 420242.6, 3725045.5,    15.4,    15.4,     0.0);
( 420252.6, 3725045.5,    15.6,    15.6,     0.0);    ( 420262.6, 3725045.5,    15.6,    15.6,     0.0);
( 420312.6, 3725045.5,    14.9,    14.9,     0.0);    ( 420322.6, 3725045.5,    14.9,    14.9,     0.0);
( 420332.6, 3725045.5,    15.1,    15.1,     0.0);    ( 420342.6, 3725045.5,    15.4,    15.4,     0.0);
( 420352.6, 3725045.5,    15.7,    15.7,     0.0);    ( 420362.6, 3725045.5,    15.9,    15.9,     0.0);
( 420372.6, 3725045.5,    16.2,    16.2,     0.0);    ( 420382.6, 3725045.5,    16.5,    16.5,     0.0);
( 420392.6, 3725045.5,    16.8,    16.8,     0.0);    ( 420402.6, 3725045.5,    17.0,    17.0,     0.0);
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( 420232.6, 3725055.5,    15.4,    15.4,     0.0);    ( 420242.6, 3725055.5,    15.4,    15.4,     0.0);
( 420252.6, 3725055.5,    15.6,    15.6,     0.0);    ( 420312.6, 3725055.5,    13.7,    15.3,     0.0);
( 420322.6, 3725055.5,    15.1,    15.1,     0.0);    ( 420332.6, 3725055.5,    15.0,    15.0,     0.0);
( 420342.6, 3725055.5,    15.3,    15.3,     0.0);    ( 420352.6, 3725055.5,    15.5,    15.5,     0.0);
( 420362.6, 3725055.5,    15.8,    15.8,     0.0);    ( 420372.6, 3725055.5,    16.1,    16.1,     0.0);
( 420382.6, 3725055.5,    16.4,    16.4,     0.0);    ( 420392.6, 3725055.5,    16.7,    16.7,     0.0);
( 420402.6, 3725055.5,    16.9,    16.9,     0.0);    ( 420412.6, 3725055.5,    16.9,    16.9,     0.0);
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( 420222.6, 3725065.5,    15.5,    15.5,     0.0);    ( 420232.6, 3725065.5,    15.6,    15.6,     0.0);
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( 420372.6, 3725065.5,  15.9,  15.9,  0.0);
( 420392.6, 3725065.5,  16.4,  16.4,  0.0);
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( 420362.6, 3725075.5,  15.5,  15.5,  0.0);
( 420382.6, 3725075.5,  16.0,  16.0,  0.0);
( 420402.6, 3725075.5,  16.2,  16.2,  0.0);
( 420422.6, 3725075.5,  16.6,  16.6,  0.0);
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( 420372.6, 3725085.5,  15.6,  15.6,  0.0);
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( 420382.6, 3725095.5,  15.5,  15.5,  0.0);
( 420402.6, 3725095.5,  16.0,  16.0,  0.0);
( 420422.6, 3725095.5,  16.3,  16.3,  0.0);
( 420442.6, 3725095.5,  16.8,  16.8,  0.0);
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( 420382.6, 3725105.5,  14.9,  14.9,  0.0);
( 420402.6, 3725105.5,  15.9,  15.9,  0.0);
( 420422.6, 3725105.5,  16.3,  16.3,  0.0);
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( 420382.6, 3725115.5,  14.7,  15.7,  0.0);
( 420402.6, 3725115.5,  15.8,  15.8,  0.0);
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( 420402.6, 3725125.5,  15.7,  15.7,  0.0);
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( 420191.2, 3725058.0,  15.6,  15.6,  0.0);
( 420225.1, 3725087.4,  15.7,  15.7,  0.0);
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( 420206.1, 3725064.0,  15.6,  15.6,  0.0);
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( 420177.6, 3725064.6,  15.5,  15.5,  0.0);
( 420322.6, 3725065.5,  14.1,  15.3,  0.0);
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( 420362.6, 3725065.5,  15.7,  15.7,  0.0);
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( 420402.6, 3725065.5,  16.5,  16.5,  0.0);
( 420422.6, 3725065.5,  16.8,  16.8,  0.0);
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( 420372.6, 3725075.5,  15.8,  15.8,  0.0);
( 420392.6, 3725075.5,  16.1,  16.1,  0.0);
( 420412.6, 3725075.5,  16.5,  16.5,  0.0);
( 420432.6, 3725075.5,  16.8,  16.8,  0.0);
( 420342.6, 3725085.5,  14.6,  15.4,  0.0);
( 420362.6, 3725085.5,  15.3,  15.3,  0.0);
( 420382.6, 3725085.5,  15.8,  15.8,  0.0);
( 420402.6, 3725085.5,  16.1,  16.1,  0.0);
( 420422.6, 3725085.5,  16.5,  16.5,  0.0);
( 420442.6, 3725085.5,  16.9,  16.9,  0.0);
( 420352.6, 3725095.5,  15.0,  15.0,  0.0);
( 420372.6, 3725095.5,  15.5,  15.5,  0.0);
( 420392.6, 3725095.5,  15.9,  15.9,  0.0);
( 420412.6, 3725095.5,  16.2,  16.2,  0.0);
( 420432.6, 3725095.5,  16.5,  16.5,  0.0);
( 420352.6, 3725105.5,  13.4,  15.5,  0.0);
( 420372.6, 3725105.5,  14.9,  15.3,  0.0);
( 420392.6, 3725105.5,  15.8,  15.8,  0.0);
( 420412.6, 3725105.5,  16.1,  16.1,  0.0);
( 420432.6, 3725105.5,  16.6,  16.6,  0.0);
( 420372.6, 3725115.5,  13.8,  15.6,  0.0);
( 420392.6, 3725115.5,  15.7,  15.7,  0.0);
( 420412.6, 3725115.5,  16.1,  16.1,  0.0);
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( 420163.9, 3725045.0,  15.6,  15.6,  0.0);
( 420186.0, 3725061.9,  15.6,  15.6,  0.0);
( 420205.3, 3725062.6,  15.6,  15.6,  0.0);
( 420287.0, 3725035.7,  13.8,  15.6,  0.0);
( 420224.5, 3725087.4,  15.7,  15.7,  0.0);
( 420199.7, 3725061.9,  15.6,  15.6,  0.0);
( 420186.7, 3725062.6,  15.6,  15.6,  0.0);
```

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*** AERMOD - VERSION  18081 ***   *** Uptown Newport - Existing Tank Only                         ***        03/19/19
*** AERMET - VERSION  16216 ***   *** Tank Modeling                                               ***        15:55:36
                                                                                                             PAGE  11
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                          *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                              (1=YES; 0=NO)

          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

   NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                      *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                              (METERS/SEC)

                                 1.54,    3.09,    5.14,    8.23,   10.80,
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*** AERMOD - VERSION  18081 ***   *** Uptown Newport - Existing Tank Only                    ***        03/19/19
*** AERMET - VERSION  16216 ***   *** Tank Modeling                                          ***        15:55:36
                                                                                                       PAGE  12
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

  Surface file:   ..\met data\KSNA_v9.SFC                                          Met Version:  16216
  Profile file:   ..\met data\KSNA_v9.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:    93184              Upper air station no.:     3190
                Name: UNKNOWN                                Name: UNKNOWN
                Year:   2012                                 Year:   2012

First 24 hours of scalar data
YR MO DY JDY HR     HO      U*      W*   DT/DZ ZICNV ZIMCH  M-O LEN     Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
12 01 01   1 01   -4.5  0.082 -9.000 -9.000 -999.    56.     11.0  0.12   2.65   1.00    0.87   62.    5.8  283.8    2.0
12 01 01   1 02   -3.5  0.073 -9.000 -9.000 -999.    47.      9.9  0.12   2.65   1.00    0.77   27.    5.8  283.1    2.0
12 01 01   1 03   -3.5  0.073 -9.000 -9.000 -999.    47.      9.9  0.12   2.65   1.00    0.77  336.    5.8  283.1    2.0
12 01 01   1 04   -3.3  0.070 -9.000 -9.000 -999.    45.      9.7  0.12   2.65   1.00    0.74   34.    5.8  283.1    2.0
12 01 01   1 05   -3.0  0.068 -9.000 -9.000 -999.    42.      9.4  0.12   2.65   1.00    0.70  154.    5.8  282.5    2.0
12 01 01   1 06 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.12   2.65   1.00    0.00    0.    5.8  282.0    2.0
12 01 01   1 07   -2.0  0.059 -9.000 -9.000 -999.    34.      9.0  0.12   2.65   1.00    0.55  343.    5.8  281.4    2.0
12 01 01   1 08   -2.6  0.066 -9.000 -9.000 -999.    40.      9.7  0.12   2.65   0.53    0.69   25.    5.8  281.4    2.0
12 01 01   1 09   21.6  0.133  0.252  0.010   27.   116.     -9.9  0.12   2.65   0.31    1.03  344.    5.8  282.5    2.0
12 01 01   1 10  115.6  0.162  0.713  0.008  114.   156.     -3.3  0.12   2.65   0.24    1.06  233.    5.8  286.4    2.0
12 01 01   1 11  160.9  0.126  1.129  0.005  325.   108.     -1.1  0.12   2.65   0.21    0.67  261.    5.8  291.4    2.0
12 01 01   1 12  187.0  0.138  1.467  0.005  614.   123.     -1.3  0.12   2.65   0.20    0.75  252.    5.8  294.9    2.0
12 01 01   1 13  186.9  0.189  1.755  0.005 1051.   197.     -3.3  0.12   2.65   0.20    1.23  280.    5.8  297.5    2.0
12 01 01   1 14  168.3  0.247  1.857  0.005 1383.   295.     -8.1  0.12   2.65   0.21    1.86  268.    5.8  299.2    2.0
12 01 01   1 15  115.3  0.275  1.688  0.005 1517.   346.    -16.3  0.12   2.65   0.24    2.25  248.    5.8  298.1    2.0
12 01 01   1 16   41.5  0.262  1.211  0.005 1552.   322.    -39.2  0.12   2.65   0.33    2.32  227.    5.8  295.9    2.0
12 01 01   1 17  -17.9  0.217 -9.000 -9.000 -999.   244.     52.0  0.12   2.65   0.60    2.18  227.    5.8  292.5    2.0
12 01 01   1 18  -24.7  0.250 -9.000 -9.000 -999.   300.     68.7  0.12   2.65   1.00    2.50  219.    5.8  288.8    2.0
12 01 01   1 19   -5.2  0.088 -9.000 -9.000 -999.    91.     12.0  0.12   2.65   1.00    0.94  201.    5.8  287.5    2.0
12 01 01   1 20   -3.5  0.073 -9.000 -9.000 -999.    47.     10.0  0.12   2.65   1.00    0.77  259.    5.8  287.0    2.0
12 01 01   1 21   -2.6  0.064 -9.000 -9.000 -999.    39.      9.1  0.12   2.65   1.00    0.65  264.    5.8  286.4    2.0
12 01 01   1 22   -4.4  0.081 -9.000 -9.000 -999.    55.     10.9  0.12   2.65   1.00    0.86  211.    5.8  285.9    2.0
12 01 01   1 23   -4.2  0.079 -9.000 -9.000 -999.    53.     10.7  0.12   2.65   1.00    0.84  247.    5.8  284.9    2.0
12 01 01   1 24   -7.1  0.103 -9.000 -9.000 -999.    80.     14.1  0.12   2.65   1.00    1.09  236.    5.8  283.8    2.0


First hour of profile data
YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
12 01 01 01    5.8 1   62.    0.87   283.8   99.0  -99.00  -99.00

F indicates top of profile (=1) or below (=0)
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*** AERMOD - VERSION  18081 ***   *** Uptown Newport - Existing Tank Only                    ***        03/19/19
*** AERMET - VERSION  16216 ***   *** Tank Modeling                                          ***        15:55:36
                                                                                                       PAGE  20
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                        *** THE SUMMARY OF HIGHEST  1-HR RESULTS ***

                                    ** CONC OF OTHER    IN MICROGRAMS/M**3                      **

GROUP ID                          AVERAGE CONC      DATE (YYMMDDHH)          RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  NETWORK GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

TANK     HIGH   1ST HIGH VALUE IS     734.87254  ON 15072910: AT (  420206.10,  3725063.99,    15.61,    15.61,    0.00)  DC

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR
```

```
*** AERMOD - VERSION  18081 ***    *** Uptown Newport - Existing Tank Only                    ***        03/19/19
*** AERMET - VERSION  16216 ***    *** Tank Modeling                                         ***        15:55:36
                                                                                                       PAGE  21

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of           0 Fatal Error Message(s)
A Total of           2 Warning Message(s)
A Total of        1864 Informational Message(s)

A Total of       43848 Hours Were Processed

A Total of        1500 Calm Hours Identified

A Total of         364 Missing Hours Identified (  0.83 Percent)


   ******** FATAL ERROR MESSAGES ********
              *** NONE ***


   ********   WARNING MESSAGES   ********
ME W186      68       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
ME W187      68       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

   ***********************************
   *** AERMOD Finishes Successfully ***
   ***********************************
```

Text Summary


```
SITE DATA:
  Location: NEWPORT BEACH, CALIFORNIA
  Building Air Exchanges Per Hour: 0.24 (sheltered double storied)
  Time: March 23, 2019  1116 hours PDT (using computer's clock)

CHEMICAL DATA:
  Chemical Name: AMMONIA
  CAS Number: 7664-41-7                    Molecular Weight: 17.03 g/mol
  AEGL-1 (60 min): 30 ppm   AEGL-2 (60 min): 160 ppm   AEGL-3 (60 min): 1100 ppm
  IDLH: 300 ppm      LEL: 150000 ppm       UEL: 280000 ppm
  Ambient Boiling Point: -28.2° F
  Vapor Pressure at Ambient Temperature: greater than 1 atm
  Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
  Wind: 1.5 meters/second from N at 3 meters
  Ground Roughness: urban or forest        Cloud Cover: 5 tenths
  Air Temperature: 56° F                   Stability Class: B
  No Inversion Height                      Relative Humidity: 50%

SOURCE STRENGTH:
  Direct Source: 0.94 pounds/min           Source Height: 0
  Release Duration: 60 minutes
  Release Rate: 0.94 pounds/min
  Total Amount Released: 56.4 pounds
  Note: This chemical may flash boil and/or result in two phase flow.
     Use both dispersion modules to investigate its potential behavior.

THREAT ZONE:
  Threat Modeled: Overpressure (blast force) from vapor cloud explosion
  Type of Ignition: ignited by spark or flame
  Level of Congestion: congested
  Model Run: Gaussian
  No explosion: no part of the cloud is above the LEL at any time
```

AMMONIA TANK BUILDING DEFLAGRATION
NO MITIGATION

Text Summary

ALOHA® 5.4.7

```
SITE DATA:
  Location: NEWPORT BEACH, CALIFORNIA
  Building Air Exchanges Per Hour: 0.24 (sheltered double storied)
  Time: March 23, 2019  1116 hours PDT (using computer's clock)

CHEMICAL DATA:
  Chemical Name: AMMONIA
  CAS Number: 7664-41-7                    Molecular Weight: 17.03 g/mol
  AEGL-1 (60 min): 30 ppm   AEGL-2 (60 min): 160 ppm   AEGL-3 (60 min): 1100 ppm
  IDLH: 300 ppm      LEL: 150000 ppm       UEL: 280000 ppm
  Ambient Boiling Point: -28.2° F
  Vapor Pressure at Ambient Temperature: greater than 1 atm
  Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
  Wind: 1.5 meters/second from N at 3 meters
  Ground Roughness: urban or forest        Cloud Cover: 5 tenths
  Air Temperature: 56° F                   Stability Class: B
  No Inversion Height                      Relative Humidity: 50%

SOURCE STRENGTH:
  Direct Source: 9.4 pounds/min            Source Height: 0
  Release Duration: 60 minutes
  Release Rate: 9.4 pounds/min
  Total Amount Released: 564 pounds
  Note: This chemical may flash boil and/or result in two phase flow.
     Use both dispersion modules to investigate its potential behavior.

THREAT ZONE:
  Threat Modeled: Overpressure (blast force) from vapor cloud explosion
  Type of Ignition: ignited by spark or flame
  Level of Congestion: congested
  Model Run: Gaussian
  No explosion: no part of the cloud is above the LEL at any time
```

EXHIBIT B

MITIGATION MONITORING AND REPORTING PROGRAM FOR:

UPTOWN NEWPORT ENVIRONMENTAL IMPACT REPORT AS ADDENDED WITH ADDENDUMS NO.'S 1 & 2

SCH NO.

2010051094

prepared for:

CITY OF NEWPORT BEACH

Contact:
Liz Westmoreland,
Associate Planner

prepared by:

PLACEWORKS

Contact:
JoAnn C. Hadfield
Principal, Environmental Services

NOVEMBER 2012, UPDATED JULY 2020

MITIGATION MONITORING AND REPORTING PROGRAM FOR:

UPTOWN NEWPORT

ENVIRONMENTAL IMPACT REPORT

SCH NO. 2010051094

prepared for:

CITY OF NEWPORT BEACH

3300 Newport Boulevard
Newport Beach, CA 92658
Tel: 949.644.3208

Contact:
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Website: www.planningcenter.com

Contact:
JoAnn C. Hadfield
Principal, Environmental Services

CNB-13.0E

NOVEMBER 2012
UPDATED JULY 2020

Table of Contents

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1. Mitigation Monitoring and Reporting Program

1.1 PURPOSE OF MITIGATION MONITORING & REPORTING PROGRAM

This Mitigation Monitoring and Reporting Program (MMRP) has been developed to provide a vehicle to monitor mitigation measures and conditions of approval outlined in the Draft Environmental Impact Report (DEIR), State Clearinghouse No. 2010051094. The MMRP has been prepared in conformance with Section 21081.6 of the Public Resources Code and the City of Newport Beach monitoring requirements. Section 21081.6 states:

a) When making findings required by paragraph (1) of subdivision (a) of Section 21081 or when adopting a mitigated negative declaration pursuant to paragraph (2) of subdivision (c) of Section 21080, the following requirements shall apply:

1) The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead or responsible agency, prepare and submit a proposed reporting or monitoring program.

2) The lead agency shall specify the location and custodian of the documents or other material which constitute the record of proceedings upon which its decision is based.

The State CEQA Guidelines Section 15097 provides clarification of mitigation monitoring and reporting requirements and guidance to local lead agencies on implementing strategies. The reporting or monitoring program must be designed to ensure compliance during project implementation. The City of Newport Beach is the lead agency for Uptown Newport and is therefore responsible for implementing the MMRP.

The MMRP is comprised of the mitigation measures, which serve to avoid, reduce, and/or fully mitigate potential environmental impacts. The MMRP has been identified and recommended through preparation of the DEIR with additional mitigation measures and modified measures resulting from a Responsible Agency proposing an alternative or an additional method to mitigate an impact. These additional measures have been analyzed and would not create any additional significant impacts, but will further lessen impacts anticipated to occur with implementation of the proposed project. The MMRP has been drafted to meet the requirements of Public Resources Code Section 21081.6, as fully enforceable monitoring programs.

1. Mitigation Monitoring and Reporting Program

The MMRP is comprised of the mitigation program and includes measures to implement and monitor the mitigation program. The MMRP defines the following for each mitigation measure outlined in Table 1, *Mitigation Monitoring Requirements*:

- **Definition of Mitigation.** In each case, the mitigation measure contains the criteria for mitigation, either in the form of adherence to certain adopted regulations or identification of the steps to be taken in mitigation.
- **Phasing.** As described below in Section 1.3, *Project Summary*, the proposed project will be developed in two phases (Phase 1 and 2). In each case, it is noted whether the mitigation measure is applicable to Phase 1 or 2, or both phases.
- **Responsible Party or Designated Representative.** In each case, unless where otherwise indicated, the project applicant is the responsible party for implementing the mitigation, while the City of Newport Beach or a designated representative is responsible for monitoring the performance and implementation of the mitigation measures. To guarantee that the mitigation measure will not be inadvertently overlooked, a supervising public official acting as the Designated Representative is the official who grants the permit or authorization called for in the performance. Where more than one official is identified, permits or authorization from all officials shall be required.
- **Timeframe.** In each case, a timeframe for performance of the mitigation measure, or review of evidence that mitigation has taken place, is provided. The performance points selected are designed to ensure that impact-related components of project implementation do not proceed without establishing that the mitigation is implemented or assured. All activities are subject to the approval of all required permits from local, state, and federal agencies with permitting authority over the specific activity.

The numbering system provided in Table 3-1 corresponds with the numbering system used in the DEIR. The last column of the MMRP table will be used by the parties responsible for documenting when implementation of the mitigation measure has been completed. The ongoing documentation and monitoring of mitigation compliance will be completed by the City of Newport Beach. The completed MMRP and supplemental documents will be kept on file at the City of Newport Beach Community Development Department.

1.2 PROJECT LOCATION

The 25.05-acre project site is within the Airport Business Area of the City of Newport Beach. It is bounded by Jamboree Road on the east and is within an area bounded by Birch Street on the north, and Von Karman Avenue and MacArthur Boulevard on the west. The site is currently developed with light industrial/manufacturing uses and associated surface parking lots.

1.3 PROJECT SUMMARY

The proposed Uptown Newport project would consist of mixed uses with up to 1,244 residential units, 11,500 square feet of neighborhood-serving retail space, and approximately two acres of park space. Residential product types would be for-sale and rent with a mix of townhomes, mid- and high-rise condominiums, and affordable housing. Proposed buildings would range from 30 feet to 75 feet in height; with residential towers up to 150 feet high. Of the 1,224 housing units, 184 units would be set aside for affordable housing. Two parks totaling approximately two acres would be developed and accessible to the public. Vehicular access to the site would be from Jamboree Road, Birch Street, and Von Karman Avenue.

The project would be developed in two phases. Phase 1 would involve demolition of the existing single-story office building at 4311 Jamboree Road to accommodate approximately 680 residential units, 11,500

square feet of neighborhood-serving commercial development, and a one-acre park. The TowerJazz Semiconductor facility (4321 Jamboree Road) would continue operating during construction and initial operation of Phase 1. Development of Phase 1 is projected to start in 2013 and be completed in 2018. Phase 2 would include demolition of the TowerJazz facility and construction of the remaining 564 residential units and a one-acre park. Timing for Phase 2 would be contingent on the existing lease of the TowerJazz building, which is currently set to expire in March 2017, but could be extended to as late as March 2027. The DEIR conservatively assumed that Phase 2 could commence as early as spring 2017 with buildout through 2021.

This MMRP has been updated to reflect revised mitigation measures as approved in the July 2020 Addendum to the Uptown Newport EIR certified in 2013. The Modified Project analyzed in the Addendum were limited to a proposed enclosure of, and improvements related to the TowerJazz anhydrous ammonia tank. The changes to mitigation measures are limited to 5.7. *Hazards and Hazardous Materials* Mitigation Measures. The changes are shown in ~~strikeout~~/**bold** text for ease of reference. An earlier Addendum, approved in 2017, addressed relocation of the 11,500 SF of retail uses within the project site. That Addendum did not include any changes to Mitigation Measures.

The project approvals required from the City include: Planned Community Development Plan amendment and adoption, Tentative Tract Map, Development Agreement, Traffic Study, Affordable Housing Implementation Plan, Phasing Plan, and Design Guidelines.

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Table 1
Mitigation Monitoring Requirements

	Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
5.2 Air Quality							
2-1	The construction contractor shall use construction equipment rated by the United States Environmental Protection Agency as having Tier 3 or higher exhaust emission limits for nonemergency equipment over 50 horsepower. Tier 3 engines between 50 and 750 horsepower are available for 2006 to 2008 model years. After January 1, 2015, nonemergency equipment over 50 horsepower shall be equipment meeting the Tier 4 standards, if available. A list of construction equipment by type and model year shall be maintained by the construction contractor onsite. A copy of each unit's certified Tier specification shall be provided at the time of mobilization of each applicable unit of equipment. Prior to construction, the City of Newport Beach shall ensure that all demolition and grading plans clearly show the requirement for United States Environmental Protection Agency Tier 3 or higher emissions standards for construction equipment over 50 horsepower during ground-disturbing activities. In addition, the construction contractor shall properly service and maintain construction equipment in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board's Rule 2449.	YES	YES	Project Applicant and Construction Contractor	During grading and construction	City of Newport Beach Community Development Department – Building Division	
2-2	The construction contractor shall implement the following measures or provide evidence to the City of Newport Beach that implementation would not be feasible: • If electricity is not available onsite, generators, welders, and air compressors shall use alternative fuels (i.e., electric, natural gas, propane, solar). • Construction parking shall be configured to minimize traffic interference. • Construction trucks shall be routed away from congested streets and sensitive receptors. • Construction activities that affect traffic flow on the arterial system shall be scheduled to off-peak hours to the extent practicable. • Temporary traffic controls, such as a flag person(s), shall be provided, where necessary, to maintain smooth traffic flow. • Large shipments of construction materials and/or equipment requiring use of heavy-heavy duty tractor trailers (e.g., 53-foot truck) shall use EPA-certified SmartWay trucks.	YES	YES	Project Applicant and Construction Contractor	During grading and construction	City of Newport Beach Community Development Department – Building Division	

Table 1
Mitigation Monitoring Requirements

	Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
2-3	Prior to issuance of a grading permit, the construction contractor shall provide a statement to the City of Newport Beach that the construction contractor shall support and encourage ridesharing and transit incentives for the construction crew, such as carpools, shuttle vans, transit passes, or secured bicycle parking for construction workers.	YES	YES	Project Applicant and Construction Contractor	Prior to issuance of grading permits	City of Newport Beach Community and Public Works Departments	
2-4	The construction contractor shall prepare a dust control plan and implement the following measures during ground-disturbing activities for fugitive dust control in addition to South Coast Air Quality Management District Rule 403 to reduce particulate matter emissions. The City of Newport Beach shall verify compliance that these measures have been implemented during normal construction site inspections. • During all grading activities, the construction contractor shall reestablish ground cover on the construction site through seeding and watering. • During all construction activities, the construction contractor shall sweep streets with Rule 1186–compliant, PM10-efficient vacuum units on a daily basis if silt is carried over to adjacent public thoroughfares or occurs as a result of hauling. • During all construction activities, the construction contractor shall maintain a minimum 24-inch freeboard on trucks hauling dirt, sand, soil, or other loose materials, and tarp materials with a fabric cover or other cover that achieves the same amount of protection. • During all construction activities, the construction contractor shall water exposed ground surfaces and disturbed areas a minimum of every three hours on the construction site and a minimum of three times per day. Recycled water should be used, if available. • During site preparation, the construction contractor shall stabilize stockpiled materials. Stockpiles within 300 feet of occupied buildings shall not exceed 8-feet in height, must have a road bladed to the top to allow water truck access, or must have an operational water irrigation system that is capable of complete stockpile coverage. • During all construction activities, the construction contractor shall limit onsite vehicle speeds on unpaved roads to no more than 15 miles per hour.	YES	YES	Project Applicant and Construction Contractor	During grading and construction	City of Newport Beach Community Development Department – Building Division	
2-5	The construction contractor during Phase 2 activities shall adhere to one of the following if construction of Phase 1 overlaps with construction of Phase 2: • The construction contractor shall install Level 2 Verified Diesel Emission Control Strategies (VDES) diesel particulate filters (DPF) on large off-road equipment that have engines rated 50 hp or greater during grading.	NO	YES	Project Applicant and Construction Contractor	During grading and construction	City of Newport Beach Community Development Department – Building Division	

Table 1
Mitigation Monitoring Requirements

	Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	utilities installation, paving, and concrete activities that overlap with Phase 1 building construction. A list of construction equipment by type and model year and type of DPF shall be maintained by the construction contractor onsite. Or • Phase 2 site improvements (grading, utilities installation, paving, and concrete construction subphases) shall not overlap with Phase 1 building construction. The City of Newport Beach shall verify compliance that one of these measures has been implemented during normal construction site inspections.						
2-6	The construction contractor shall post a sign at the entrance to the construction site. The sign shall identify the designated contact person, telephone number, and email address for construction-related complaints. Upon receipt of a compliant, the complaint shall be investigated and corrective action shall be taken, if needed. The construction contractor shall file a report to the City of Newport Beach of the nature of the compliant and action taken to remedy the complaint within two working days. A log of the complaints and resolutions to the complaints shall be maintained onsite.	YES	YES	Project Applicant and Construction Contractor	During grading and construction	City of Newport Beach Community Development Department – Building Division	
2-7	The construction contractor shall use haul trucks and/or require subcontractors to use haul trucks that are 2010 or newer haul trucks for demolition and construction (C&D) debris removal offsite and soil haul, unless evidence is provided by the contractor/subcontractor that such trucks are not readily available at the time of issuance of a demolition and/or grading permit.	YES	YES	Project Applicant and Construction Contractor	During grading and construction	City of Newport Beach Community Development Department – Building Division	
5.3 Biological Resources							
3-1	Prior to any proposed actions during the breeding season, January 31st through September 15th, the monitoring biologist shall conduct a pre-construction survey(s) to identify any active nests in and near the project area no more than three days prior to project initiation. If the biologist does not find any active nests that would be potentially impacted, the proposed action may proceed. Any active nests observed during the survey shall be mapped on a recent aerial photograph, including documentation of GPS coordinates. If the biologist finds an active nest within or adjacent to the action area and determines that the nest may be impacted, the biologist shall delineate an appropriate buffer zone around the nest using temporary plastic fencing or other suitable materials, such as barricade tape and traffic cones. The buffer zone shall range from a 300- to 500-foot radius at the discretion of the biologist. Only activities approved by the qualified biologist shall take place within the buffer zone until the nest is vacated. Once the nest is no longer active, the proposed action may proceed within the buffer zone.	YES	YES	Project Applicant and Monitoring Biologist	During grading and construction	City of Newport Beach Community Development Department – Planning Division	

Table 1
Mitigation Monitoring Requirements

	Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
5.4 Cultural Resources							
4-1	Prior to the issuance of grading permits, the project applicant shall demonstrate to the Community Development Department that an Orange County–certified professional archaeologist has been retained to monitor any potential impacts to archaeological or historic resources throughout the duration of any ground-disturbing activities at the project site. The archeologist shall develop a Cultural Resources Awareness Training program, which shall provide examples of the types of resources that might be encountered and detail procedures to be implemented in that event. The qualified archeologist shall be present at the pregrade meeting to present the training program to all earthmoving personnel and their supervisors and to discuss the monitoring, collection, and safety procedures of cultural resources, if any are found. If subsurface cultural resources are inadvertently discovered during ground-disturbing activities, the construction contractor shall ensure that all work stops within 25 feet of the find until the qualified archeologist can assess the significance of the find and, if necessary, shall develop appropriate treatment or disposition of the resources in consultation with the City of Newport Beach and a representative of the affected Native American tribe (Gabrielino). The archeological monitor shall have the authority to halt any project-related activities that may be adversely impacting potentially significant cultural resources. Suspension of ground disturbances in the vicinity of the discoveries shall not be lifted until an archeological monitor has evaluated the discoveries to assess whether they are classified as significant cultural resources, pursuant to the California Environmental Quality Act.	YES	YES	Project Applicant, Certified Paleontologist, and Construction Contractor	Prior to the issuance of grading permits	City of Newport Beach Community Development Department – Planning Division	
4-2	Prior to the issuance of grading permits, the project applicant shall demonstrate to the Community Development Department that an Orange County–certified professional paleontologist has been retained to monitor any potential impacts to paleontological resources throughout the duration of any ground-disturbing activities at the project site. The paleontologist shall review the project's final plans and develop and implement a Paleontological Mitigation Plan, which shall include the following minimum elements: • All earthmoving activities eight-feet or more below the current surface shall be monitored full-time by a qualified paleontological monitor. • If fossils are discovered, the paleontological monitor has the authority to temporarily divert work within 25 feet of the find to allow recovery of the fossils and evaluation of the fossil locality. • Fossil localities shall require documentation including stratigraphic columns and samples for micropaleontological analyses and for dating.	YES	YES	Project Applicant, Certified Paleontologist, and Construction Contractor	Prior to the issuance of grading permits	City of Newport Beach Community Development Department – Planning Division	

Table 1
Mitigation Monitoring Requirements

	Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	• Fossils shall be prepared to the point of identification and evaluated for significance. • Significant fossils shall be cataloged and identified prior to being donated to an appropnate repository. • The final report shall interpret any paleontological resources discovered in the regional context and provide the catalog and all specialists' reports as appendices.						
5.6 Geology and Soils							
6-1	Prior to issuance of any grading permits for the project, the project applicant shall have soil testing for expansion potential conducted by a professional engineering geologist or registered geotechnical engineer. The geologist or engineer shall prepare a report describing the sampling and testing; findings; any hazards related to the findings; and recommendations for reducing any hazards identified. The project applicant shall submit a copy of the report to the City of Newport Beach Community Development Department for review and approval by the City Building Division.	YES	YES	Project Applicant and Project Engineer	Prior to the issuance of grading permits	City of Newport Beach Community Development Department – Building Division	
5.7 Hazards and Hazardous Materials							
7-1	In compliance with CFC Section 381.1 (Amendment), prior to issuance of building permits for Phase 1, the project applicant shall submit a geologic study from a state-licensed and department-approved individual or firm to the Newport Beach Fire Department Fire Prevention Division for review and approval (due to the proximity of the proposed project to a semiconductor facility).	YES	NO	Project Applicant and Project Engineer	Prior to the issuance of building permits	City of Newport Beach Fire Department – Fire Prevention Division	
7-2	Prior to issuance of any **grading** building permit for **residential buildings within 200 feet of the anhydrous ammonia tank, ~~Phase 1,~~** the applicant shall **perform the following to satisfy the Newport Beach Fire Department under Section 9.04.400 of Newport Beach Fire Code ~~demonstrate compliance with CFC Section 27041.1 (Amendment)~~,** (which prohibits the storage of any amount of extremely hazardous substances equal to or greater than the disclosable amounts listed in Appendix A, Part 355, Title 40, of the Code of Federal Regulations in a residential zone or adjacent to property developed with residential uses **unless mitigation measures are implemented and maintained, as required by the fire code official).**[1] ~~Compliance shall be demonstrated to the satisfaction of the Newport Beach Fire Department and shall include the following:~~	YES	NO	Project Applicant and TowerJazz Personnel	Prior to the issuance of building permits	City of Newport Boach Fire Department – Fire Prevention Division	

[1] Per City of Newport Beach Fire Code Section 104.1 General: The fire code official is hereby authorized to enforce the provisions of this code and shall have the authority to render interpretations of this code, and to adopt policies, procedures, rules and regulations in order to clarify the application of its provisions. Such interpretations, policies, procedures, rules and regulations shall be in compliance with the intent and purposed of this code and shall not have the effect of waiving requirements specifically provided for in this code.

Table 1
Mitigation Monitoring Requirements

Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)

• Construct an airtight enclosure around ~~installation of a new~~ the anhydrous ammonia tank (approximately 11.5 feet wide, 22 feet long, and 16 feet high). ~~at a minimum distance of 200 feet from the nearest existing or proposed residential structure (including the adjacent Koll property project). The new tank shall be approved by the Newport Beach Fire Department, and the tank and installation shall include mitigation safeguards such as automatic shut-off valves, excess flow valves, restrictive flow orifices, toxic gas detection system, automatic sprinkler system, water deluge system, alarm system, and double containment piping. An updated Offsite Consequence Analysis (OCA) shall be prepared to the satisfaction of the Fire Department prior installation of the new tank.~~
 	
~~• In the event a new anhydrous ammonia tank is not installed or the existing tank relocated, no residential structures shall be constructed within 200 feet of the anhydrous ammonia tank.~~
~~• Demonstration of maintenance of industry best practices and provision of minimum EPCR 2 separation distances as defined by the EPA for any extremely hazardous substances (EHS) in excess of disclosable amounts. The use of the term "adjacent to" (per CFC Section 27041.1 (Amendment) shall be interpreted to be a greater distance than an offsite consequence analysis would require as a safe EPCR 2 (or an equivalent and accepted standard) separation distance (ibid).~~
 	
• A seismic assessment for the ammonia tank and piping system process conducted by a qualified engineer per Region I LEPC (Local Emergency Planning Commission) Guidance for CalARP Program Seismic Assessments.
 	
• Ensure the proposed ammonia tank enclosure is designed and constructed with proper ventilation, including:
 	
  • Detailed ventilation calculations.
 	
  • Emergency back-up power for the ammonia tank.						

Table 1
Mitigation Monitoring Requirements

	Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	• **Design and properly size the proposed ammonia tank containment sump and/or system to contain and/or convey the estimated deluge water and the maximum amount of ammonia produced.**						
7-3	Prior to the issuance of occupancy permits, the applicant shall demonstrate to the satisfaction of the City of Newport Beach Fire Department that the following disclosures and emergency notification procedures/programs are in place: • Disclosure to potential Uptown Newport residences that hazardous chemicals are used and stored at the adjacent TowerJazz facility. • Inclusion of property manager or authorized representative of the Uptown Newport residential community to the emergency notification list of the TowerJazz Business Emergency Plan. • Program to inform/train the property manager or authorized representative of the Uptown Newport residential community in emergency response and evacuation procedures and to incorporate ongoing coordination between the Uptown Newport representative and TowerJazz to assure proper action in the event of an accident at the facility (shelter in place and/or evacuation routes). • Upgrade TowerJazz emergency alarm system to include concurrent notification to Uptown Newport residents of chemical release. Provisions of the alarm system and emergency notification procedure shall be reviewed and approved by the City of Newport Beach Fire Department.	YES	NO	Project Applicant	Prior to the issuance of occupancy permits	City of Newport Beach Fire Department – Fire Prevention Division	
7-4	Prior to the introduction of a new extremely hazardous substance (EHS) or increase in quantity of any existing EHS at TowerJazz, an updated OCA shall be prepared and reviewed and authorized by the City of Newport Beach Fire Department. Any new EHS shall be appropriately located and the installation designed with all necessary mitigation safeguards specified by the City of Newport Beach Fire Department.	YES	NO	Project Applicant and TowerJazz Personnel	Prior to the introduction of a new extremely hazardous substance (EHS) or increase in quantity of any existing EHS at TowerJazz	City of Newport Beach Fire Department – Fire Prevention Division	
7-5	Prior to the issuance of building permits for development within Phase 1, the project applicant shall obtain a "No Further Action" declaration or Letter of Allowance for residential construction for Phase 1 from the Regional Water Quality Control Board.	YES	NO	Project Applicant and Project Engineer	Prior to the issuance of building permits	City of Newport Beach Fire Department – Fire Prevention Division	

Table 1
Mitigation Monitoring Requirements

	Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
7-6	The project applicant shall submit copies of applicable reports and plans as submitted to the RWQCB for remedial activities within the Phase 2 portion of the project site to the City of Newport Beach Community Development Department. Such copies shall include remediation action plans and annual soil and groundwater remediation progress reports.	NO	YES	Project Applicant	Prior to the issuance of grading permits	City of Newport Beach Community Development Department – Building Division	
7-7	Prior to the issuance of building permits for development within Phase 2, the project applicant shall obtain a "No Further Action" declaration or Letter of Allowance for residential construction for Phase 2 from the Regional Water Quality Control Board.	NO	YES	Project Applicant	Prior to the issuance of building permits	City of Newport Beach Community Development Department – Building Division	
7-8	Prior to issuance of demolition permits, the project applicant shall have the following inspections and assessments conducted for the Half Dome building (Phase 1) and TowerJazz building (Phase 2) and shall provide the Community Development Department with a copy of the report of each investigation or assessment. • The applicant shall retain a certified lead inspector/assessor to inspect buildings onsite for lead-based paint (LBP). The inspector/assessor's report shall describe regulatory requirements for lead containment applicable to any LBP discovered onsite. • The applicant shall retain a licensed or certified asbestos consultant to inspect buildings onsite for asbestos-containing materials (ACM). The asbestos consultant's report shall include requirements for abatement, containment, and disposal of ACM in South Coast Air Quality Management District Rule 1403.	YES	YES	Project Applicant and Construction Contractor	Prior to the issuance of demolition permits	City of Newport Beach Community Development Department – Building Division	
7-9	Prior to the issuance of building permits for Phase 2, the project applicant shall retain a registered environmental assessor or other professional qualified to conduct a human health risk assessment (HHRA) of potential volatile organic compound contamination. The HHRA shall be conducted under the guidance and review of the Regional Water Quality Control Board. Approval of tentative tract map(s) for Phase 2 shall not occur until the project applicant obtains a "No Further Action" declaration or a Letter of Allowance for residential construction from the Regional Water Quality Control Board.	NO	YES	Project Applicant and Registered Environmental Assessor or Other Professional	Prior to the issuance of building permits	City of Newport Beach Community Development Department – Building Division	

Table 1
Mitigation Monitoring Requirements

	Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
7-10	Prior to issuance of a building permits for Phase 2 development, the project applicant shall demonstrate to the Community Development Department that contamination in soil and groundwater on Phase 2 has been remediated to meet the cleanup goal for the site for total volatile organic compounds set by the State Water Resources Control Board and shall have obtained a "No Further Action" declaration or Letter of Allowance for residential construction from the Regional Water Quality Control Board.	NO	YES	Project Applicant and Project Engineer	Prior to the issuance of building permits	City of Newport Beach Community Development Department – Building Division	
7-11	Prior to the issuance of demolition permits for Phase 2, the construction dates for the SCE Substation shall be confirmed. If the facility was constructed prior to the 1980's, a certified inspector approved by the City of Newport Beach Fire Department shall be retained to test for PCBs and related hazardous materials. If PCBs or other hazardous materials are determined to be present, a mitigation program to abate, contain and dispose of the materials shall be prepared and approved by the City Fire Department. Such program shall be implemented prior to the issuance of Phase 2 building permits.	NO	YES	Project Applicant, Construction Contractor, and Certified Inspector	Prior to the issuance of demolition permits	City of Newport Beach Community Development Department and Fire Department	
5.10 Noise and Vibration							
10-1	The parking lot surface of all parking garages shall be textured to eliminate tire squeal noise. Ventilation equipment for the parking garages shall be designed to meet the City's noise limits for Zone III, not exceed a daytime maximum of 60 dBA Leq (or 80 dBA Lmax) and a nighttime maximum of 50 dBA Leq (or 70 dBA Lmax). This can be accomplished by selecting quieter equipment or by enclosing ventilation equipment.	YES	YES	Project Applicant, Project Engineer, and Construction Contractor	During construction	City of Newport Beach Community Development Department – Building Division	
10-2	Truck deliveries shall be restricted to the daytime hours between 7 AM and 10 PM.	YES	YES	Project Applicant and Construction Contractor	During grading and construction	City of Newport Beach Community Development Department	
10-3	Prior to issuance of building permits for Phase 1, a detailed acoustical study based on architectural plans shall be prepared by a qualified acoustical consultant and submitted to the Community Development Department for review and approval. The study shall demonstrate that all residential units would meet the 65 dBA CNEL exterior noise standard for all patios, balconies, and common outdoor living areas (playgrounds, parks, and swimming pools). The necessary noise reduction may be achieved by implementing noise control measures at the TowerJazz facility and at the receiver locations, as described in detail in the Technical Memorandum provided by Wilson Ihrig and Associates (Appendix J). The technical memorandum includes noise control measures that would be implemented at the rooftop mechanical equipment and at the cooling towers of the TowerJazz facility, summarized below:	YES	NO	Project Applicant and Acoustical Engineer/Consultant	Prior to the issuance of building permits	City of Newport Beach Community Development Department – Planning Division	

Table 1
Mitigation Monitoring Requirements

Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)

• Rooftop Mechanical Equipment Noise Control
  ○ Exhaust Fan Noise Control: The exhaust fan noise can be most effectively controlled by constructing noise barriers around three sides of each of the exhaust stacks, such that the barriers would be located between the stacks and the future Phase 1 development. In addition to a barrier, sound levels can be reduced by modifying the exhaust stack and fan.
  ○ Other Equipment: Other specific pieces of rooftop equipment can be treated with barriers lined with acoustical absorption. Ducts and pipes that radiate significant noise can be treated by adding mass to the duct walls, or lined with acoustical absorption or lead-loaded vinyl.
  ○ Screen: The performance of the existing sheet metal parapet wall/screen can be enhanced by treating the upper 8 feet of the screen with acoustical absorption.
 	
• Cooling Towers Noise Control
  ○ Relocation: Moving the cooling towers away from the Phase 1 development would be an effective approach to noise control.
  ○ Replacement: Replacement of the existing cooling towers can be considered, as new towers would have new coils with improved air flow and efficiency.
  ○ Additional Cooling Towers: Additional cooling towers would reduce the cooling demand on individual units, allowing the fans to operate at lower speed.
  ○ Fan Noise: The cooling tower fans appear to be the primary noise source. The fan noise emanates from the top of the cooling towers and from the coils. Waterfall noise, though not readily apparent, also transmits through the coils to the exterior. The following provisions may be applied to the existing cooling towers to reduce cooling tower noise: coil replacement, variable frequency drives, tip seals, aerodynamic fan blades, treatment of the discharge stack, acoustical louvers, and sound barriers.
 	
The measures described above, or some combination thereof, would reduce the exterior noise levels at units facing the TowerJazz facility to 65 dBA CNEL. The property owner/developer shall implement these noise control measures at the TowerJazz facility and demonstrate with noise level measurements that noise from the operation of mechanical equipment at the TowerJazz facility would not exceed 65 dBA CNEL at the property boundary or at the nearest receptors.						

Table 1
Mitigation Monitoring Requirements

	Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	In addition, the final grading and building plans shall incorporate the required noise barriers at common exterior areas and patios (glass/Plexiglas patio enclosures, wall, berm, or combination wall/berm) and at balconies (glass or Plexiglas balconies enclosure). Patio enclosures for units facing the TowerJazz facility would need acoustical absorption to absorb sound in the balcony. The property owner/developer shall install these barriers and enclosures.						
10-4	Prior to issuance of building permits for Phase 2, a detailed acoustical study based on architectural plans shall be prepared by a qualified acoustical consultant and submitted to the Community Development Department to demonstrate that all residential units would meet the 65 dBA CNEL exterior noise standard for all patios, balconies, and common outdoor living areas. The necessary noise reduction may be achieved by implementing noise control measures at the receiver locations. The final grading and building plans shall incorporate the require noise barriers (patio enclosure, wall, berm, or combination wall/berm), and the property owner/developer shall install these barriers and enclosures.	NO	YES	Project Applicant and Acoustical Engineer/Consultant	Prior to the issuance of building permits	City of Newport Beach Community Development Department – Planning Division	
10-5	Prior to issuance of building permits for each residential structure located within Phase 1, a detailed acoustical study based on architectural plans shall be prepared by a qualified acoustical consultant and submitted to the Community Development Department to demonstrate that all residential units would meet the 45 dBA CNEL interior noise standards for habitable rooms (i.e., bedrooms, living rooms, dens, kitchens) due to exterior noise from traffic, aircraft overflights, and stationary noise from the TowerJazz facility. The report shall evaluate the effects of the precise building placement and design materials used for construction. It shall describe and quantify the noise sources impacting the buildings, the amount of outdoor to indoor noise reduction provided by the structure, and any upgrades required to meet the interior noise standard. This standard must be achieved with the windows closed in conjunction with a fresh air mechanical ventilation or air conditioning system, and it may require upgraded construction methods and materials. According to the preliminary assessment provided by Wilson Ihrig and Associates, the required noise reduction at units facing the TowerJazz facility would be achieved with acoustically rated doors and windows with a Sound Transmission Class (STC) no greater than 35. The measures described in the report shall be incorporated into the architectural plans for the buildings and implemented with building construction.	YES	NO	Project Applicant and Acoustical Engineer/Consultant	Prior to the issuance of building permits	City of Newport Beach Community Development Department – Planning Division	
10-6	Prior to issuance of building permits for each residential structure located within Phase 2, a detailed acoustical study based on architectural plans shall be prepared by a qualified acoustical consultant and submitted to the Community	NO	YES	Project Applicant and Acoustical Engineer/Consultant	Prior to the issuance of building permits	City of Newport Beach Community Development	

Table 1
Mitigation Monitoring Requirements

	Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	Development Department to demonstrate that all residential units would meet the 45 dBA CNEL interior noise standards for habitable rooms (i.e., bedrooms, living rooms, dens, kitchens) with exterior noise from traffic and aircraft overflights. The report shall evaluate the effects of the precise building placement and design materials used for construction. It shall describe and quantify the noise sources impacting the buildings, the amount of outdoor to indoor noise reduction provided by the structure, and any upgrades required to meet the interior noise standard. This standard must be achieved with the windows closed in conjunction with a fresh air mechanical ventilation or air conditioning system, and it may require upgraded construction methods and materials. The measures described in the report shall be incorporated into the architectural plans for the buildings and implemented with building construction.					Department – Planning Division	
10-7	During Phase 1 construction, the construction contractor shall implement a vibration control program to reduce vibration levels at the TowerJazz facility. The Technical Memorandum prepared by Wilson Ihng and Associates includes several measures to control vibration at the TowerJazz facility, outlined below: • Pile Driving: o Augured piles shall be employed to the extent possible. Impact and vibratory pile drivers shall not be used during construction unless TowerJazz is consulted to avoid excessive vibration during operation of sensitive equipment. Constant frequency pile drivers might be acceptable if operated at sufficient distance from the TowerJazz facility and if demonstrated to not impact TowerJazz operations. • Heavy Construction Equipment: o Within 200 feet of the TowerJazz facility, wheel loaders and dozers shall be employed rather than the track-laying heavy equipment. Contractor training and notification should be conducted to minimize dozer blades and buckets being dropped on the ground for wheeled equipment operated within 200 feet of the TowerJazz facility. o Static rollers should be employed where compacting is required. To avoid excessive vibration during operation of sensitive equipment, vibratory rollers should not be used unless TowerJazz is consulted and ground vibration produced by such rollers is found to be acceptable to TowerJazz operations. o Hoe rams shall be not be used to break up concrete grade slabs within 100 feet of the TowerJazz facility and office uses adjacent to the project site. Concrete slabs can be sawed and lifted away to another	YES	NO	Project Applicant and Construction Contractor	During grading and construction	City of Newport Beach Community Development Department	

Table 1
Mitigation Monitoring Requirements

	Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	location where they may be broken up by the hoe ram. • Haul Trucks: Haul trucks shall be routed away, to the extent possible, from the TowerJazz facility. • Lay-Down Areas: Lay-down areas include material storing areas such as piles, steel shapes, and other heavy items. The lay-down area should be located in portions of the construction site that are at least 200 feet away from the TowerJazz facility. • Vibration Monitoring: Vibration monitoring shall be conducted in the TowerJazz building during development and construction of Phase 1. Vibration monitors shall be located in select locations where sensitive equipment is located in consultation with TowerJazz. The most appropriate location for monitoring would be at the building foundations along the exterior sides facing the construction work. Recommended thresholds for vibration monitoring have been developed based on past vibration monitoring at the TowerJazz facility during the seismic retrofit and on the vibratory characteristics of construction equipment that are anticipated to be used during construction of Phase 1. Recommended thresholds for vibration monitoring are: o A vibration level of 0.125 in/sec will trigger a warning that will notify the construction operator and TowerJazz; o A vibration level of 0.250 in/sec will trigger a warning that will notify the construction operator and TowerJazz of excessive vibration and that the construction activity that is causing the excessive vibration should be stopped. o Construction activity may recommence upon satisfactory assessment that the continued construction activity will not substantially affect the use of vibration- sensitive equipment or interfere with operations at the TowerJazz facility. Final protocol for notification to TowerJazz and construction equipment operators will be determined and documented in a vibration monitoring plan prepared prior to construction.						
10-8	Augured piles shall be employed to the extent possible. Impact and vibratory pile drivers shall not be used during construction within 75 feet of any building.	YES	YES	Project Applicant and Construction Contractor	During grading and construction	City of Newport Beach Community Development Department – Building Division	
10-9	The construction contractor shall ensure that all construction equipment onsite is properly maintained and tuned to minimize noise emissions.	YES	YES	Project Applicant and Construction Contractor	During grading and construction	City of Newport Beach Community Development Department – Building Division	

Table 1
Mitigation Monitoring Requirements

	Mitigation Measures	Applies to Phase 1	Applies to Phase 2	Responsibility for Implementation and Reporting	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
10-10	The construction contractor shall ensure that construction equipment is fit with properly operating mufflers, air intake silencers, and engine shrouds no less effective than as originally equipped by the manufacturer.	YES	YES	Project Applicant and Construction Contractor	During grading and construction	City of Newport Beach Community Development Department – Building Division	
10-11	The construction contractor shall locate all stationary noise sources (e.g., generators, compressors, staging areas) as far from residential and recreational receptor locations as is feasible	YES	YES	Project Applicant and Construction Contractor	During grading and construction	City of Newport Beach Community Development Department – Building Division	
10-12	Material delivery, soil haul trucks, equipment servicing, and construction activities shall be restricted to the hours set forth in the City of Newport Beach Municipal Code, Section 10.28.040	YES	YES	Project Applicant and Construction Contractor	During grading and construction	City of Newport Beach Community Development Department – Building Division	

STATE OF CALIFORNIA }
COUNTY OF ORANGE } ss.
CITY OF NEWPORT BEACH }

I, Leilani I. Brown, City Clerk of the City of Newport Beach, California, do hereby certify that the whole number of members of the City Council is seven; the foregoing resolution, being Resolution No. 2020-71, was duly introduced before and adopted by the City Council of said City at a regular meeting of said Council held on the 28th day of July, 2020; and the same was so passed and adopted by the following vote, to wit:

AYES: Mayor Pro Tem Brad Avery, Council Member Joy Brenner, Council Member Diane Dixon, Council Member Duffy Duffield, Council Member Jeff Herdman, Council Member Kevin Muldoon
NAYS: None
RECUSED: Mayor Will O'Neill

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed the official seal of said City this 29th day of July, 2020.

Leilani I. Brown
City Clerk
Newport Beach, California