INFORMATION TO SUPPLEMENT THE APPEAL

Section IX of Mitigating Negative Declaration (MND)- Hazard and Hazardous Material

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Section IX of MND

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Inadequacy of Section IX of Mitigating Negative Declaration (MND)- Hazard and Hazardous Material

1. INTRODUCTION

The majority of the residents of the West Hills Community were not made aware of the Fallbrook Point Project "Project" until late April of 2022 through a flyer that was handed out by one of the neighbors. The project had already been active through the City for months, and the residents were not contacted by the City or the Developer. In May of 2022, a group of homeowners immediate to the proposed project site formed a Work Group to obtain and distribute vital information about the project to the rest of the community. The Work Group calls itself Roscoe / Fallbrook Neighborhood Coalition "RFNC". The group established a web site, a face book page, loaded all the available City and Developer's Documents on the Website and conducted several community meetings to inform the community of what is planned to be built next door to their homes. The group collected over 500 signatures in a petition to oppose the "project" and submitted the petition to the West Hills Neighborhood Council (WHNC) and the LA City Planning Department. The Group made attempts to arrange a face to face meeting with the Developer, but the meeting was changed by the Developer to a virtual meeting and eliminated a large group of residents from participating and asking their questions. In that ONE virtual meeting however, the community expressed solid opposition to building the "Project" for various reasons including but not limited to: additional truck traffic in the neighborhood, additional noise and Pollution, creating an environment that would impact the Quality of Life for the residents, concerns about the contaminated soil under the foot print of the project, creating a nuisance, incompatibility of warehouses in the

middle of a quiet residential neighborhood, the warehouses being in conflict with the Q conditions (park like environment), and even proposing an alternative to the warehouses were expressed. The Developer, Staley Investment, rejected all the options and concerns of the community.

The City of LA Planning Department was contacted by several residents expressing concerns, and were guided to provide their written concerns with no deadline given to the community to provide written comments. The RFNC responded to the MND in writing with valid points of concern, and sent their response to the City Planning Department as they were directed. However, in an email the City Planning informed the group that the comment period had been closed and our concerns would be "public Records". RFNC was greatly disappointed that the City Planning did not consider their concerns, and one day after that information issued a "Conditional Approval" of the "Project". On the same day, an out of court Agreement between Department of Toxic Substances Control "DTSC" and Raytheon, the owner of the Corporate Point property (8433 Fallbrook Ave. Canoga Park, CA) was made public. The nature of this agreement is basically that the entire property must be tested and cleaned out of toxic and hazardous material with a final report to be issued at the end. (See Exhibit E).

2. HISTORY OF SITE: OWNERS AND OPERATORS

Exhibit A shows the history of ownership of the Corporate Point property, that we obtained from the historical information. It shows that this site has changed owners and operators several times and also the zoning change from the original Agricultural and progressed to its current zoning identified as Industrial.

Companies such as Atomics International, Rocketdyne, Hughes Missile System Group, and Raytheon performed Research and Development (R&D) related to highly classified projects for defense and military purposes. As part of the R&D, processes and materials were used that caused contamination of soil and the ground water. These activities will be explained in a more detailed fashion in the DISCUSSION section of this submittal.

3. HISTORY OF THE SITE: GOVERNMENT AGENCIES INVOLVEMENTS

See Exhibit B for the involvement of several government agencies in charge of controlling the contamination and ensuring that the public HEALTH is protected. Most involved agencies were the California Regional Water Quality Control Board (CRWQCB) and the Department of Toxic Substances Control (DTSC). The Exhibit shows many correspondences between the owners of the site and these agencies and confusions that were created. The progression of several determinations is summarized below:

Based on the latest agreement between DTSC and Raytheon, the entire site of Corporate Point must be tested for contamination and restored to below regulatory concerns. A final Environmental Report showing the site is free of contaminants is expected to be issued.

The long history and sometime confusing determinations have caused the residents to demand a comprehensive Environmental Impact Report (EIR) in which the entire Corporate Point is reviewed, cleaned up and determined to be free of dangerous substances harmful to the environment and the public HEALTH.

4. DISCUSSION

This section will be divided into several parts and each part will address specific concerns.

4.1 Review of Section IX of the MND. (Exhibit C)

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

RESPONSE a:

The warehouses will be sold or leased to unknown tenants. The city is making a gross assumption that all the regulatory requirements will be adhered to by the occupiers of these warehouses.

Question 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?"

RESPONSE b:

See attached or available documents:

- **DTSC & Raytheon Agreement sections 2.1 List of Areas of Concerns (AOCs) and Solid Waste Management Units (SWMUs), showing SWMU-9 Sewer Line. And AOC-12 Storm water system.**
- **DTSC & Raytheon Agreement section 2.6 identifying the C.P. boundaries that includes the "project" site.**
- **Letter from California Regional Water Quality Control Board (CRWQCB) dated May 13, 2011, Paragraph 1, stating that Freon has migrated off site in the southern part of the property, the location of the "project".**

. Canoga Park Environmental Hazards Report- Superfunds. C.P. is listed as a Superfund Site that needs clean up and must not be treated as an ordinary site for construction.

. ADDENDUM TO RESIDENTIAL PURCHASE AGREEMENT THIS IS INTENDED TO BE A LEGALLY BINDING DOCUMENT – READ IT CAREFULLY FOR USE WITH PROPERTIES LOCATED IN THE SAN FERNANDO VALLEY. This is a legal document that the homeowners must sign and relieve the seller of liability for contamination of their homes. It shows that the underground hazards could move across the boundaries of the site.

The history of the Corporate Point (C.P.) Property is full of controversies. The proposed project is part of C.P. There are Areas of Concerns (AOCs) that were identified by a previously performed Environmental Impact Study (which is not available to the public to review).

Page 67, section b. The statement about the old building on the north side of the proposed project is not an indication of anything that will be applicable to the proposed project site. The subject site is entirely different and could contain hazardous / unspecified materials used by the Companies performing Defense / military related work (R&D). The materials that were used for R&D by these companies may not be available to the public, and as such the City or the Developer should seek and provide a complete list of materials that were used during the years of experiments at the

project site. A comprehensive list of all materials should be provided to the public and be included in the MND and made part of the list for any soil samples that laboratories will conduct testing for. The hazardous or even radioactive material may have crept underground and contaminated the site or even the adjacent neighborhoods.

Without a comprehensive EIR, the HEALTH of the public may be at stake, and this project should not be approved while there are questions to be answered.

Construction phase of the warehouses may create a significant hazard to the public and the environment.

1- **Excavation and grading: The proposed project site is about 10-12 feet above the street level and currently paved with asphalt and used as parking lot. The proposed "Project" will demolish the pavement and removes approx. 10,000 Cubic Yard of dirt for preparation of the construction. The "project" proposes to take soil samples at two locations next to the sewer line and a drain line.**

The problem with this approach and justifications are numerous. There are no Scientific / Engineering analyses performed to show how far the old underground piping (containing Arsenic, Freon, and other hazardous material) has leaked into the surrounding areas. Because of lack of a valid analysis, it is not clear how many test locations should be drilled, and at what intervals or depths these samples should be taken and analyzed.

2- **There is not a real contingency plan to deal with contaminated soil for protection of workers, general public, especially the immediate neighbors, and protection against hazardous materials becoming airborne and contaminating large areas of the community. The "project" states that if contamination is found, a permit will be requested and they will deal with the issue. That approach is unacceptable. It assumes that the contaminants will not become airborne (West Hills can have strong winds, and Santa Ana Winds are common in the area), and will not be mixed with rain or use of water by construction. The concern is that excavation will have a high probability to impact the HEALTH and safety of the public and if airborne or washed into the storm drains will impact the environment with unknown consequences. The city is taking a risk not to require a comprehensive contingency plan that would protect the public health against possible release of hazardous chemical and radioactive material.**

3- **There is no comprehensive transportation and disposal of the contaminated dirt through the neighborhood. The city is taking a risk to assume there is no contaminated soil to be moved through the city streets, and where it will be disposed of. Again, a scientific / engineering analysis is lacking for the proper transport of contaminated soil, based on test results that should be obtained from the entire site and at several depths.**

4- Contamination spread through the site and adjacent neighborhood. See attached documents showing contamination has spread from parts of the C.P. By removing the top 12 feet of soil in preparation of construction, the construction activities will disturb the existing balance and may cause additional spread of contamination. As an example, working on the SWMU-9 (Sewer line) and AOC-12 (Drain Line) can disturb and increase the probability of the spread of contaminants. The project states that there will be a request for a permit submitted in the middle of the construction for dealing with the contaminated dirt. This project poses a significant hazard to the public HEALTH and environment and should be treated as such.

Section b repeatedly refers to the Phase I EIS. The current development is labeled Phase II and as such it needs a separate EIR. This section of the IX states the following:

"According to the Phase I ESA, the Project Site is located within the boundaries of the former Hughes Missile Systems facility, which is the subject of an open Corrective Action Case associated with releases of contaminants from the former Hughes facility."

It is not clear how there could be a justification to build on a property that is under investigation without performing a FULL Environmental Impact Study. In addition, the MND part b. totally ignores that latest agreement between DTSC and Raytheon. There was an agreement reached between DTSC and Raytheon that requires the entire C.P. be investigated and remediated. The "project" is within the boundaries of C.P. (Ref CORRECTIVE ACTION CONSENT AGREEMENT, Docket No. HWCA-FY22/23-003).

There are two areas of concerns as indicated in this section

"SWMU-9 is defined as the Site wide sewer line. Releases to soil near soil boring BSL-4. Constituents include arsenic. The report notes that the Site wide assessment in 1991 did not show any metal contamination at detection limits. One sample had a trace (0.009 milligram per kilogram (mg/kg)) of toluene. Sample B-SL had 0.3 mg/kg of toluene. No other VOCs were detected. DTSC concluded that there was a need to determine if any issues remain. • AOC-12 is defined as the Site wide storm water system."

The Phase 1 Environmental Study states the following unreasonable determinations that are unacceptable to us because we have no access to the study. Also, this EIS was completed for Phase 1 which was before the DTSC monitoring of the two Areas of Concerns (AOC). How can a study predict the future of the moving contaminants in the future? There are no calculations or quotative analysis to support these statements, and if there are, we have no access to them.

• "Further evaluation of subsurface environmental conditions is not warranted at this time.
• Manage any disturbance of onsite soils with existing Soil Management Plan as needed.
• Further assessment of onsite soils in the vicinity of the sewer lines may be required in the future by DTSC as part of ongoing open, Corrective Action Case for the former Hughes Missiles Co./Raytheon Systems Co."

. The soil sampling criteria in the MND (page 69) does not include tests for possible Radioactive Isotopes.

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

RESPONSE c: This question is not clear whether it refers to the operation or construction phase of the project.

There will be hazardous emission of trucks and construction equipment that will cause health impact to the school children and immediate neighbors. In addition

to the preschool mentioned, there are several home-operated day cares in the immediate area of the project.

Question d: "Be located on a site that 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?"

RESPONSE d:

The site is included in the California Government Code 65962.5 and is part of the Cortese list. According to the MND section d, "although the Site is included on the Cortese List, it would not result in conditions that could create a significant hazard to the public, or the environment and impacts would be less than significant."

This statement will not assure the public that the project is safe. And as such, a full Environmental Impact Study for Phase II is needed.

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

RESPOND e: No Response needed.

Question f: "Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?"

RESPONSE f: The justification for this section is inadequate. The section states, "While partial lane closures may cause temporary inconvenience, they would only occur during the construction phase, and for a temporary time period. No complete street closures would occur, and the Project would not substantially interfere with emergency response or evacuation plans."

There is a Fire Station almost across the street from the Roscoe entrance to the C.P. property. There are nearly 100 new homes built at the north end of the Fallbrook Ave. Fallbrook is dead end, and adjacent to an open area called the Chatsworth Nature Preserve. The area is wildfire prone

and there is only Fallbrook Ave. for the residents to escape. The construction phase of the project is almost one year, and such a period should not be called "temporary" or "inconvenient". In a fire event, and partial closure of the streets, lives can be put in danger and this section should not be labeled as – "No mitigating measures are required."

Question g: "Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires".

RESPONSE g: A wildfire event on the north side of the Fallbrook Ave., which is a dead-end street, and during construction of this project may create obstacles in evacuation of newly built homes' residents at the north end of the Fallbrook Ave.

4.2 <u>Review of Experts' comments (Exhibit D)</u>

Excerpts of comments and concerns after review of the MND were simply dismissed as "speculation". The applicable pages of the 518-page document by ENVICOM is EXHIBIT D.

4.3 <u>State of California EPA / DTSC Agreement with Raytheon (Exhibit E)</u>

State of California EPA / DTSC reached an agreement with Raytheon for cleanup of the Corporate Point property. The scope of the cleanup was stated in Section 2.6 of the document.

The proposed project (Fallbrook Point Project located at 22815 – 22825 West Roscoe Boulevard, Los Angeles, CA 91304 **is part of the Corporate Point property, and**

as such it is required to be tested and remediated as required, and then a complete report to be generated to ensure no environmental impact or public health issues exist.

4.4 Review of the City of LA Conditional approval of the Project (Exhibit F)

The City of LA issued a Conditional Approval of the FPP on September 14, 2022, with two weeks allowed for Appeals. I have submitted an appeal objecting to building the Project based on unsubstantiated and insufficient analysis of section IX of the MND. This section lacks a complete Environmental Impact Report and completely relies on previous Environmental reports. The following are shortcomings of the MND, Section IX:

. The City did not require a full Environmental Impact Report and accepted an insufficient MND.

. The City did not consider, in the letter from ENVICOM (the preparer of the MND), the comprehensive concerns and comments for the MND that were submitted by the RFNC Work Group. The city explained that the concerns were covered by other commentors and the "Letter was already written".

. The City did not allow the Experts review of the MND to have a chance to rebut ENVICOM's dismissal of their comments and concerns. See Exhibit D for applicable pages of the ENVICOM report with Experts'

comments. The CEQA states the following: Under CEQA, if there is a disagreement among experts over the significance of an effect, the agency is to treat the effect as significant and prepare an EIR. *Sierra Club v. County of Sonoma* (1992) 6 Cal.App.4th 1307, 1318.

. The City did not consider the latest Agreement between DTSC and Raytheon in which the entire site of the Corporate Point property was required to be cleaned up, remediated and a final report produced.

. The City did not seek the advice of independent and qualified scientists and engineers to review the site historical data and recommend additional testing of soil prior to the start of construction.

. The City did not consider any provisions of the project site to be possibly identified as "Brownfields" site.

5. <u>CONCLUSION:</u>

Based on evidence presented in this document and foregoing discussion, building three warehouses with total square footage of almost 100,000 sq. ft. and ten (10) truck docks may cause irreparable harm to the community of West Hills. Specifically, the concerns are that the developer and the City of LA do not seriously consider the HEALTH impact on the residents as the result of Construction and excavation of 12 feet of dirt. The proposed soil testing is limited to the area of Concern (AOCs) and adjacent to sewer & and a drain line. There is not consideration of the old sewer line leakage into the surrounding areas. There has been no scientific recommendation for a comprehensive testing of soil to be conducted and verified by an independent scientific and reputable laboratory. There are no specific depth intervals of testing identified. There are no provisions for

obtaining a complete list of toxic and possible radioactive material that were used by the companies and are unavailable to the general public. And many other shortcomings of the MND as described above.

Approval of this project without a more thorough investigation may impact the public HEALTH with unknown consequences.

I respectfully ask the Commission to reject this project in its current form and ask for a complete Environment Impact Report and allow the DTSC and Raytheon Agreement to be carried out as stated for the entire Corporate Point Property.

Respectfully Submitted:

Jahanshah (John) Kaboli-Nejad
8315 Ponce Ave.
West Hills, CA 91304
Mobile phone: 402-201-4047
****

EXHIBIT A

EXHIBIT A

The (Raytheon) Canoga Park Facility as related to the Fallbrook Point Project (ENV-2021-10328)
EPA ID - CAD041162124 January 30, 2008
Historical Recap

by
Renee' Jacobs
10/2/22

1. Site description

The Canoga Park facility is located at 8433 Fallbrook Ave. The side is approximately 86 acres. Elevation from approximately 900 feet above Main Sea Level (MSL) In the north central portion to approximately 840 feet above MSL at its southern boundary. This site is founded to the east by Fallbrook Ave., to the south by Roscoe Blvd., to the north by open space land adjacent to the Chatsworth reservoir, and to the west by single-family residential housing. Residential neighborhoods are located across Fallbrook Avenue and Roscoe Boulevard. (1)

2. Ownership history

1903-1952
The site was agriculturally developed or vacant land. (3)

1959–1966
In 1959, the 8433 Fallbrook Ave. property was developed as an industrial park by Bunker-Ramo, an electrical component design and testing company. (1)

1961–1963
Atomic International (Part of Rocketdyne) became co-occupants. (2)

1965
Thomas-Ramo-Woolridge Facility leased offices for nuclear research. (1)

1966–1976
Hughes Missile Systems Company was co-occupants with Rocketdyne, a division of Rockwell International and Bunker - Ramo.(1)

1970-1990's
Hughes (now known as Raytheon)purchased the entire site in mid 1970 and became the sole occupant, operating as an aerospace research and development facility.(1)

1978-1994
Hughes Building #275 was located on the north side of the subject property. (3)

1/17/1994
The Northridge earthquake (Mw 6.7) damaged several buildings and Hughes moved people and activities to Tucson Arizona.(1)

May 1995
Coast Federal Bank (CFB) bought the facility from Hughes the facility change from research and development and prototyping to commercial office space.(1)

1997
Raytheon assumed management of the environmental investigations and remediation activities at the facility.(1)(3)

1997
Northern portions of the site were sold to Regent Properties Inc. Regent did a major redevelopment - remodeling and regrading to raise the elevations of the portion of the site parcels within the **Southern** portion which were sold to De Vry Inc., the LA Metropolitan Police Department, and Trammel Crow.(1)

2001
In September Regent sold its **Northern** portion of the facility to Shamrock Holding Inc.(1)

2002
In June MEPT West Hills Limited Liability Corporation (LLC) bought the **Northern** property from Shamrock.(1)

2002
Trammel Crow Company acts as property manager for the facility as stipulated in sales agreement with CFB in 1995 Hughes (now Raytheon) continued to handle environmental impacts resultant from its former operations.(1)

02/24/2021
Current Owner SCIND Fallbrook Point, LLC
Parking Lot 306,108 Sq. Ft.
Proposed 22815-22825 West Roscoe Blvd. (4)

(1) Facility Facility Assessment ARFA Doc P-3 &4 DTSC Martin Herrmann 1/30/2008
(2) Aerospace Cancer Museum of Education (ACME) 11/2/2009 Report Page 4
(3) Partner Engineering and Science, Inc. Phase 1 Environmental Site Assessment Project No. 20-288877.1 February 1, 2021
(4) ParcelQuest Appraise 6/30/22

EXHIBIT B

EXHIBIT B

ACME

California Regional Water Quality Control Board
Los Angeles Region

Linda S. Adams
Acting Secretary for
Environmental Protection

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Edmund G. Brown Jr.
Governor

important statement 2nd - state see Phil Chan 1992

May 13, 2011

Mr. Daniel S. Samorano
Raytheon Company
1151 East Hermans Road
TU, Bldg 845
Tucson, AZ 85706

SUBJECT: RESPONSE TO REQUEST FOR GROUNDWATER CLOSURE FOR TWO SOUTHERN PARCELS

SITE/CASE: RAYTHEON COMPANY (FORMER HUGHES MISSILE SYSTEMS COMPANY), 8433 FALLBROOK AVENUE, CANOGA PARK, CALIFORNIA (SCP NO. 0693, SITE ID NO. 2043T00)

Dear Mr. Samorano:

Los Angeles Regional Water Quality Control Board (Regional Board) staff reviewed the July 8, 2010, *Request for No Further Action Status for Southern Parcels* (Report), prepared by Oneida Total Integrated Enterprises, LLC (OTIE) for the reference site. Regional Board staff also reviewed the project files and recent submittals related to the source and extent of groundwater contamination beneath and in the vicinity of the two southern parcels. On May 3, 2011, Regional Board staff held a meeting with you and Mr. Jacques Marcillac of OTIE to discuss issues related to groundwater closure for two southern parcels of the site and data gaps that need to be addressed.

Based on the review of the Report and file documents and as discussed during the May 3, 2011 meeting, Regional Board staff have determined that groundwater closure for the southern parcels can not be granted at this time based on the following:

1. The lateral extent of the trichlorofluoromethane (Freon-11) plume in groundwater originating from the site and migrating through the southern parcels has not been adequately defined. During the groundwater sampling in June 1990, Freon-11 was detected at concentrations up to 360 micrograms per liter (µg/L) in monitoring well CM-10, which is located near the site boundary. This indicates that the Freon-11 groundwater plume originating from the site has migrated off site. To date, there have been no monitoring wells installed at appropriate locations cross- and down-gradient from monitoring well CM-10.

2. The vertical extent of the Freon-11 plume in groundwater has not been adequately defined. A review of the well construction details indicates that two monitoring wells, CM-10 and MW-31 that are located within the Freon-11 plume, have approximately the same screened interval lengths. These well screened lengths bottom are at approximately 10 to 25 feet below groundwater surface. To determine if multiple-depth groundwater monitoring wells are needed and to verify the vertical change trend of the Freon-11 plume in groundwater beneath the southern parcels and the vicinity of the site, discrete multiple-depth groundwater samples shall be

monitoring wells MW-31 (located near the identified source area) and CM-10 during the next scheduled site-wide groundwater monitoring event for the site.

3. The residual soil source of Freon-11 contamination has not been adequately addressed. It is our understanding that an active source of Freon-11 was removed from the site several decades ago. However, the magnitude and the lateral and vertical extent of Freon-11 soil contamination at the identified source area near the southern parcels has not been adequately characterized. The results of a 1995 shallow [(up to 5 feet below ground surface (bgs)] soil gas survey indicate that Freon-11 was detected at concentrations up to 1,300 µg/L in vapor samples collected from the identified source area. To assess the potential for vapor intrusion and continuing source of groundwater contamination from residual Freon-11 soil contamination, multiple-depth soil and soil vapor samples shall be collected from approximately 5 feet bgs to the water table at the identified source area. If the detected concentrations of residual Freon-11 in soil and soil vapor are greater than its site-specific soil and soil vapor screening levels that are protective of both human health and groundwater resource at the southern parcels and vicinity, active soil remediation or other mitigation measures may be required.

4. To confirm if the lateral and vertical extent of Freon-11 soil and groundwater contamination from releases at the site near the two southern parcels are adequately defined, please submit a work plan for soil/soil vapor and groundwater investigations at the identified source area near the southern parcels, and cross- and down-gradient from existing well CM-10 to the Regional Board by **October 15, 2011**, for review and approval.

Thank you for your continued efforts in working with the Regional Board staff and moving this project forward. If you have any questions, please contact Dr. Ann Chang at (213) 620-6070 (achang@waterboards.ca.gov).

Sincerely,

for Paula Rasmussen
Samuel Unger, PE
Executive Officer

cc: Ms. Sutida Bergquist, California Department of Public Health
Mr. Chris Nagler, Watermaster, California Department of Water Resources
Mr. Bernard Franklin, Los Angeles County, Department of Public Health
Mr. Hoover Ng, Water Replenishment District- Southern California
Ms. Stephanie Lewis, Department of Toxic Substances Control
Mr. Jacques Marcillac, Oneida Total Integrated Enterprises
Mr. Kenneth Katich, Trammell Crow Company
Mr. William Preston Bowling, Aerospace Cancer Museum and Education
Ms. Christina Walsh, Cleanuprocketdyne.org
Ms. Bonnie Klea
Ms. Chris Rowe
Mr. Daniel Wiseman

STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

In the Matter of: Former Hughes Missile Systems Facility 8433 Fallbrook Avenue Canoga Park, California EPA I.D. CAD041162124 Raytheon Company 1151 East Hermans Road, Building 807 Tucson, Arizona 85706	Docket No. HWCA -FY22/23-003 CORRECTIVE ACTION CONSENT AGREEMENT Health and Safety Code Section 25187

INTRODUCTION

1. The Department of Toxic Substances Control (DTSC) and Raytheon Company (Respondent) enter into this Corrective Action Consent Agreement (Consent Agreement) and agree as follows:

1.1. Jurisdiction exists pursuant to Health and Safety Code section 25187, which authorizes DTSC to issue an order to require corrective action when DTSC determines that there is or may be a release of hazardous waste or hazardous waste constituents into the environment from a hazardous waste facility. DTSC is the overall lead agency in overseeing corrective action, closure and post-closure caret at the facility.

1.2. The parties enter into this Consent Agreement to avoid the expense of litigation and to carry out promptly the corrective action described below.

1.3. Respondent is the former owner of a hazardous waste facility located at 8433 Fallbrook Avenue, Canoga Park California (Facility).

Parcel	Acreage		
2005-002-013	8.66+/-	2005-22-003	1.78+/-
2005-002-014	42.34+/-	2005-22-004	3.29+/-
2005-002-901	5+/-	2005-22-005	1.90+/-
2005-22-001	5.90+/-	2005-22-006	4.99+/-
2005-22-002	5.20+/-	2005-22-007	3.74+/-
Parcel	Acreage		

1.4. The Facility received authorization to operate as a hazardous waste storage facility from the Department of Health Services, which was DTSC's predecessor agency, pursuant to a Hazardous Waste Management Permit issued to Hughes Missile Systems Company (Hughes) that became effective on June 28, 1985. The permit expired on June 28, 1990 and the 1996 approved Closure Plan was implemented. In 1997 the Respondent acquired the Facility from the Hughes.

1.5. The terms used in this Consent Agreement are as defined in California Code of Regulations, title 22, section 66260.10, except as otherwise provided.

1.6. Respondent agrees to implement all DTSC-approved workplans and to undertake all actions required by the terms and conditions of this Consent Agreement, including any portions of this Consent Agreement incorporated by reference.

1.7. Respondent waives any right to request a hearing on this Consent Agreement pursuant to Health and Safety Code section 25187.

FINDINGS OF FACT

2.1. On January 30, 2008, DTSC completed a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA). The RFA identifies nine (9) solid waste management units (SWMUs) and thirteen (13) areas of concern (AOCs) that either have released or may release hazardous waste or hazardous waste constituents into the environment. The SWMUs and AOCs are as follow:

SWMU-1 Former Hazardous Waste Storage Area (HWSA)

SWMU-2 Former Underground Storage Tank (UST) for Waste (T3)

SWMU-3 Former Building 272

SWMU-4 Former Building 282 Former Drum Storage Room

SWMU-5 Pits #1 and #2 near Former Building 269

SWMU-6 Parking area between Buildings Former 274 & Former 276

SWMU-7 Cooling Unit outside of Building Former 274

SWMU-8 Former USTs T-1/T2 pump island near Former Buildings 272 & 282

SWMU-9 Site wide sewer line

AOC-1 Building 262 drains and feeder sewer lines

AOC-2 Building 263 drains, sumps and feeder sewer lines

AOC-3 Building 265 drains and feeder sewerlines

AOC-4 Former Building 269 interior: plating pit,drains, sumps, degreaser exterior clarifier pit and feeder sewer lines

AOC-5 Former Building 271 industrial waste clarifier,drains and feeder sewer lines

AOC-6 Former Building 274 drains and feeder sewerlines

AOC-7 Former Building 276 drains and feeder sewerlines

AOC-8 Building 281 drains and feeder sewerlines

AOC-9 Former USTs T-5 & T-6

AOC-10 Former USTs T-7, T-8 and T-9

AOC-11 Above ground tank, T-14

AOC-12 Site wide storm water system

AOC-13 Northeast plume (Well CM-8D Area)

2.2. On August 6, 1996, DTSC approved a Closure Plan (CH2M Hill) (CP) for the T3 (SWMU-2) and HWSA (SWMU-1) pursuant to the "remove or decontaminate" standards (or "clean closure") specified in sections 66264.197 and 66264.178, title 22, California Code of Regulations (CCR), respectively. Since clean closure was not achieved as evidence by the results of subsurface investigations conducted, the Facility is required to submit a revised CP with the goal to meet risk-based clean closure or if clean closure is not achieved, a revised CP and post-closure care will be prepared and submitted to DTSC for approval to close the units as landfills in accordance with section 66264.310, title 22, CCR.

2.3. Based on the RFA and a Facility inspection in June 2013, DTSC concluded that Facility should continue with groundwater remediation, develop a site conceptual model, prepare a current conditions report to identify gaps, conduct additional investigation to address data gaps, complete a soil vapor survey to evaluate vapor intrusion risk, prepare a Facility-wide human health risk assessment, and evaluate remediation goals.

2.4. The hazardous waste and hazardous waste constituents of concern at the Facility are volatile organic compounds, total petroleum hydrocarbons and metals.

2.5. Hazardous wastes or hazardous waste constituents have migrated or may migrate from the Facility into the environment through the following pathways: air, soil, groundwater and surface water.

2.6. The Facility is located 8433 Fallbrook Avenue in Canoga Park, California. The Facility is bounded to the east by Fallbrook Avenue, to the south by Roscoe Boulevard, to the north by open space land adjacent to the Chatsworth reservoir, and to the west by single family residential housing. Residential neighborhoods are located across Fallbrook Avenue and Roscoe Boulevard.

2.7. The Facility has been conducting groundwater remediation and monitoring under the Los Angeles Regional Water Quality Control Board's (RWQCB) oversight since 1995 in accordance with the RWQCB-approved Corrective Action Plan (CAP) (Groundwater Technology, Inc., 1992) and its Addendums.

- The Facility conducted soil remediation at SWMU-1 and SWMU-2 and has been conducting groundwater monitoring and/or remediation under the RWQCB oversight since 1995.
- Remediation of hexavalent chromium in groundwater at SWMU-1 was conducted in 2010. In December 2013, groundwater remediation was completed and the RWQCB granted a No Further Active remediation letter (December 30, 2013) for hexavalent chromium at the former HWSU.
- Remediation of VOC in groundwater at SWMU-2 was conducted via air sparging and pump and treat from 1995 to 2005. From 2005 to the present, groundwater remediation has been conducted via Enhanced In-Situ Bioremediation (a total of 9 injection events). Current VOC concentrations in groundwater are below RWQCB-approved CAP levels in most wells.
- Groundwater under SWMU-6 in the southern portion of the Facility was monitored for Freon-11 from 1993 to 2012. In 2018, the RWQCB granted No Further Action for groundwater in the southern parcels, including SWMUs 6, -7, and -9 and AOCs -3, -6, and -7 (add).
- Groundwater under AOC-13 in the northeastern portion of the Facility has been monitored for VOCs since 1995 with an Enhanced In-Situ Bioremediation remedy from 2006 to 2016. Ongoing groundwater monitoring data demonstrates that VOCs are below RWQCB-approved CAP levels.
- Raytheon continues to monitor the results of ongoing groundwater remedial measures. Site-wide current VOC concentrations in groundwater are below RWQCB-approved CAP levels in most wells.

PROJECT COORDINATOR

3. Within 14 days of the effective date of this Consent Agreement, DTSC and Respondent shall each designate a Project Coordinator and shall notify each other in writing of the Project Coordinator selected. Each Project Coordinator shall be responsible for overseeing the implementation of this Consent Agreement and for designating a person to act in his/her absence. All communications between Respondent and DTSC, and all documents, report approvals, and other correspondence concerning the activities performed pursuant to this Consent Agreement shall be directed through the Project Coordinators. Each party may change its Project Coordinator with at least seven days prior written notice.

WORK TO BE PERFORMED

4. Respondent agrees to perform the work required by this Consent Agreement in accordance with the applicable state and federal laws, their implementing

regulations, and the applicable DTSC and the United States Environmental Protection Agency guidance documents.

INTERIM MEASURES (IM)

5.1. Respondent shall evaluate available data and assess the need for interim measures in addition to those specifically required by this Consent Agreement. Interim measures shall be used whenever possible to control or abate immediate threats to human health and/or the environment, and to prevent and/or minimize the spread of contaminants while long-term corrective action alternatives are being evaluated.

5.2. Within 30 days of the effective date of this Consent Agreement, Respondent shall submit a Current Conditions Report to DTSC. The Current Conditions Report is subject to approval by DTSC and shall be developed in a manner consistent with the Scope of Work for a RCRA Facility Investigation contained in Attachment 4. The Current Conditions Report shall contain an assessment of interim measures. The assessment must include both previously implemented interim measures and other interim measures that could be implemented at the Facility. The assessment must also identify any additional data needed for making decisions on interim measures. This new data or information shall be collected during the early stages of the RCRA Facility Investigation. DTSC will review the Respondent's assessment and determine which interim measures, if any, Respondent will implement at the Facility. If deemed appropriate by DTSC, such determination may be deferred until additional data are collected. The Current Conditions report shall include but not be limited to all previous investigations and remediations conducted at the facility including closure of the HWMUs and information pertaining to all AOCs and SWMUs.

5.3. If at any time Respondent identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous waste constituents, or discovers new solid waste management units not previously identified, Respondent shall notify DTSC Project Coordinator orally within 48 hours of discovery and notify DTSC in writing within 10 days of discovery summarizing the findings, including the immediacy and magnitude of the potential threat to human health and/or the environment. Within 30 days of receiving DTSC's written request, Respondent shall submit to DTSC an IM Workplan for approval. The IM Workplan shall include a schedule for submitting to DTSC an IM Operation and Maintenance Plan and IM Plans and Specifications. The IM Workplan, IM Operation and Maintenance Plan, and IM Plans and Specifications shall be developed in a manner consistent with the Scope of Work for Interim Measures Implementation contained in as Attachment 1. If DTSC determines that immediate action is required, DTSC Project Coordinator may orally authorize the Respondent to act prior to DTSC's receipt of the IM Workplan.

5.4. If DTSC identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous

waste constituents, or discovers new solid waste management units not previously identified, DTSC will notify Respondent in writing. Within 30 days of receiving DTSC's written notification, Respondent shall submit to DTSC for approval an IM Workplan that identifies Interim Measures that will mitigate the threat. The IM Workplan shall include a schedule for submitting to DTSC an IM Operation and Maintenance Plan and IM Plans and Specifications. The IM Workplan, IM Operation and Maintenance Plan, and IM Plans and Specifications shall be developed in a manner consistent with the Scope of Work for Interim Measures Implementation contained in as Attachment 1. If DTSC determines that immediate action is required, DTSC Project Coordinator may orally authorize Respondent to act prior to receipt of the IM Workplan.

5.5. All IM Workplans shall ensure that the Interim Measures are designed to mitigate current or potential threats to human health and/or the environment, and should, to the extent practicable, be consistent with the objectives of, and contribute to the performance of, any remedy which may be required at the Facility.

5.6. Concurrent with the submission of an IM Workplan, Respondent shall submit to DTSC a Health and Safety Plan in accordance with the Scope of Work for a Health and Safety Plan contained in Attachment 2.

5.7. Concurrent with the submission of an IM Workplan, Respondent shall submit to DTSC for approval a Community Profile in accordance with Attachment 3. Based on the information provided in the Community Profile, if DTSC determines that there is a high level of community concern about the Facility, DTSC may require Respondent to prepare a Public Participation Plan.

RCRA FACILITY INVESTIGATION (RFI)

6.1. Within 60 days of the effective date of this Consent Agreement, Respondent shall submit to DTSC a Workplan for a RCRA Facility Investigation ("RFI Workplan"). The RFI Workplan is subject to approval by DTSC and shall be developed in a manner consistent with the Scope of Work for a RCRA Facility Investigation contained in Attachment 4. DTSC will review the RFI Workplan and notify Respondent in writing of DTSC's approval or disapproval.

6.2. The RFI Workplan shall detail the methodology to: (1) gather data needed to make decisions on interim measures/ stabilization during the early phases of the RCRA Facility Investigation; (2) identify and characterize all sources of contamination; (3) define the nature, degree and extent of contamination; (4) define the rate of movement and direction of contamination flow; (5) characterize the potential pathways of contaminant migration; (6) identify actual or potential human and/or ecological receptors; and (7) support development of alternatives from which a corrective measure will be selected by DTSC. A specific schedule for implementation of all activities shall be included in the RFI Workplan.

6.3. Respondent shall submit a RFI Report to DTSC for approval in accordance with DTSC-approved RFI Workplan schedule. The RFI Report shall be

developed in a manner consistent with the Scope of Work for a RCRA Facility Investigation contained in Attachment 4. If there is a phased investigation, separate RFI Reports and a report that summarizes the findings from all phases of the RFI must be submitted to DTSC. DTSC will review the RFI Report(s) and notify Respondent in writing of DTSC's approval or disapproval.

6.4. Concurrent with the submission of a RFI Workplan, Respondent shall submit to DTSC a Health and Safety Plan in accordance with Attachment 2. If Workplans for both an IM and RFI are required by this Consent Agreement, Respondent may submit a single Health and Safety Plan that addresses the combined IM and RFI activities.

6.5. Respondent shall submit a RFI Summary Fact Sheet to DTSC that summarizes the findings from all phases of the RFI. The RFI Summary Fact Sheet shall be submitted to DTSC in accordance with the schedule contained in the approved RFI Workplan. DTSC will review the RFI Summary Fact Sheet and notify Respondent in writing of DTSC's approval or disapproval, including any comments and/or modifications. When DTSC approves the RFI Summary Fact Sheet, Respondent shall mail the approved RFI Summary Fact Sheet to all individuals on the Facility mailing list established pursuant to California Code Regulations, title 22, section 66271.9(c)(1)(D), within15 calendar days of receipt of written approval.

6.6. Concurrent with the submission of a RFI Workplan, Respondent shall submit to DTSC for approval a Community Profile in accordance with Attachment 3. Based on the information provided in the Community Profile and any Supplement to the Community Profile, if DTSC determines that there is a high level of community concern about the Facility, Respondent shall prepare a Public Participation Plan.

RISK ASSESSMENT

7. Based on the information available to DTSC, Respondent may be required to conduct a Risk Assessment to evaluate potential human health risk and ecological risk and to establish site-specific action levels and cleanup standards. If DTSC determines that a Risk Assessment is required, Respondent shall submit to DTSC for approval a Risk Assessment Workplan within 30 days of receipt of DTSC's determination. Respondent shall submit to DTSC for approval a Risk Assessment Report in accordance with DTSC-approved Risk Assessment Workplan schedule.

CORRECTIVE MEASURES STUDY (CMS)

8.1. Respondent shall prepare a Corrective Measures Study, if contaminant concentrations exceed human health-based or ecologically-based action levels established by the DTSC-approved Risk Assessment Report if one is required under this Consent Agreement, or if DTSC otherwise determines that the contaminant releases pose a potential threat to human health or the environment.

8.2. Within 45 days of DTSC's approval of the Risk Assessment Report, Respondent shall submit a CMS Workplan to DTSC. The CMS Workplan is subject to approval by DTSC and shall be developed in a manner consistent with the Scope of Work for a Corrective Measures Study contained in Attachment 5.

8.3. The CMS Workplan shall detail the methodology for developing and evaluating potential corrective measures to remedy any contamination at the Facility. The CMS Workplan shall identify the potential corrective measures, including any innovative technologies, that may be used for the containment, treatment, remediation, and/or disposal of contamination.

8.4. Respondent shall prepare treatability studies for all potential corrective measures that involve treatment except where Respondent can demonstrate to DTSC's satisfaction that they are not needed. The CMS Workplan shall include, at a minimum, a summary of the proposed treatability study including a conceptual design, a schedule for submitting a treatability study workplan, or Respondent's justification for not proposing a treatability study.

8.5. Respondent shall submit a CMS Report to DTSC for approval in accordance with DTSC-approved CMS Workplan schedule. The CMS Report shall be developed in a manner consistent with the Scope of Work for a Corrective Measures Study contained in Attachment 5. DTSC will review the CMS Report and notify Respondent in writing of DTSC's approval or disapproval.

8.6. Respondent shall include a corrective action cost estimate in the CMS Report submitted to DTSC; demonstrate financial assurance within 90 days of DTSC's approval of the cost estimate; and maintain the DTSC-approved financial assurance mechanism until DTSC determines that the required corrective action is complete.

REMEDY SELECTION

9.1. DTSC will provide the public with an opportunity to review and comment on the final draft of the CMS Report, DTSC's proposed corrective measures for the Facility, and DTSC's justification for selection of such corrective measures. Depending on the level of community concern, DTSC may conduct a public hearing to obtain comments.

9.2. Following the public comment period, DTSC may select final corrective measures or require Respondent to revise the CMS Report and/or perform additional corrective measures studies.

9.3. DTSC will notify Respondent of the final corrective measures selected by DTSC in the Final Decision and Response to Comments. The notification will include DTSC's reasons for selecting the corrective measures.

CORRECTIVE MEASURES IMPLEMENTATION (CMI)

10.1. Within 60 days of Respondent's receipt of notification of DTSC's selection of the corrective measures, Respondent shall submit to DTSC a Corrective Measures Implementation (CMI) Workplan. The CMI Workplan is subject to approval by DTSC and shall be developed in a manner consistent with the Scope of Work for Corrective Measures Implementation contained in Attachment 6.

10.2. Concurrent with the submission of a CMI Workplan, Respondent shall submit to DTSC a Health and Safety Plan in accordance with Attachment 2.

10.3. Concurrent with the submission of a CMI Workplan, Respondent shall submit to DTSC for approval a Community Profile in accordance with Attachment 3. Based on the information provided in the Community Profile and any Supplement to the Community Profile, if DTSC determines that there is a high level of community concern about the Facility, DTSC may require Respondent to prepare a Public Participation Plan.

10.4. The CMI program shall be designed to facilitate the design, construction, operation, maintenance, and monitoring of corrective measures at the Facility. In accordance with the schedule contained in the approved CMI Workplan, Respondent shall submit to DTSC the documents listed below, to the extent applicable. These documents shall be developed in a manner consistent with the Scope of Work for Corrective Measures Implementation contained in Attachment 6.

- o Operation and Maintenance Plan
- o Corrective Measures Completion Report

10.5. DTSC will review all required CMI documents and notify Respondent in writing of DTSC's approval or disapproval.

10.6. Respondent shall provide a financial assurance mechanism for corrective action to DTSC within 90 days of DTSC's approval of a corrective measures implementation workplan or a DTSC-approved equivalent. The financial assurance mechanism must consist of one of the options specified in California Code of Regulation section 66264.143. Respondent shall establish the financial assurance mechanism to allow DTSC access to the funds to undertake corrective measures implementation tasks if Respondent is unable or unwilling to undertake the required tasks. If Respondent proposes to use the financial test or corporate guarantee as the financial assurance mechanism for corrective action, Respondent shall also establish a process that allows DTSC access to the funds to undertake corrective measures implementation tasks if DTSC determines that Respondent is unable or unwilling to undertake the required tasks. Any financial assurance mechanism or process proposed by Respondent shall be subject to DTSC's approval.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

11. DTSC must comply with the California Environmental Quality Act (CEQA) insofar as activities required by this Consent Agreement are projects subject to CEQA. Respondent shall provide all information necessary to facilitate any CEQA analysis. DTSC will make an initial determination regarding the applicability of CEQA. If the activities are not exempt from CEQA, DTSC will conduct an Initial Study. Based on the results of the Initial Study, DTSC will determine if a Negative Declaration or an Environmental Impact Report (EIR) should be prepared. DTSC will prepare and process any such Negative Declaration. However, should DTSC determine that an EIR is necessary, such an EIR would be prepared under a separate agreement between DTSC and Respondent.

DTSC APPROVAL

12.1. Respondent shall revise any workplan, report, specification, or schedule in accordance with DTSC's written comments. Respondent shall submit to DTSC any revised documents by the due date specified by DTSC. Revised submittals are subject to DTSC's approval or disapproval.

12.2. Upon receipt of DTSC's written approval, Respondent shall commence work and implement any approved workplan in accordance with the schedule and provisions contained therein.

12.3. Any DTSC-approved workplan, report, specification, or schedule required under this Consent Agreement shall be deemed incorporated into this Consent Agreement.

12.4. Verbal advice, suggestions, or comments given by DTSC representatives will not constitute an official approval or decision.

SUBMITTALS

13.1. Beginning with the first full month following the effective date of this Consent Agreement, Respondent shall provide DTSC with quarterly progress reports of corrective action activities conducted pursuant to this Consent Agreement. Progress reports are due on the 15th day of the first month following the close of each reporting period. The progress reports shall conform to the Scope of Work for Progress Reports contained in Attachment 7. DTSC may adjust the frequency of progress reporting to be consistent with site-specific activities.

13.2. Any report or other document submitted by Respondent pursuant to this Consent Agreement shall be signed and certified by the project coordinator, a responsible corporate officer, or a duly authorized representative.

13.3. The certification required by paragraph 13.2 above, shall be in the following form:

I certify that the information contained in or accompanying this submittal is true, accurate, and complete. As to those portions of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared at my direction in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted.

Signature: _____

Name: _____

Title: _____

Date: _____

13.4. Respondent shall provide two copies of all documents, including but not limited to, workplans, reports, and correspondence. Submittals specifically exempted from this copy requirement are all progress reports and correspondence of less than 15 pages, of which one copy is required.

13.5. Unless otherwise specified, all reports, correspondence, approvals, disapprovals, notices, or other submissions relating to this Consent Agreement shall be in writing and shall be sent to the current Project Coordinators.

PROPOSED CONTRACTOR/CONSULTANT

14. All work performed pursuant to this Consent Agreement shall be under the direction and supervision of a professional engineer or registered geologist, registered in California, with expertise in hazardous waste site cleanup. Respondent's contractor or consultant shall have the technical expertise sufficient to fulfill his or her responsibilities. Within 14 days of the effective date of this Consent Agreement, Respondent shall notify DTSC Project Coordinator in writing of the name, title, and qualifications of the professional engineer or registered geologist and of any contractors or consultants and their personnel to be used in carrying out the terms of this Consent Agreement.

ADDITIONAL WORK

15. DTSC may determine or Respondent may propose that certain tasks, including additional work regarding closure plan and post closure-care for SWMU1 and SWMU2, investigatory work, engineering evaluation, or procedure/methodology modifications are necessary in addition to, or in lieu of, the tasks and deliverables included in any part of DTSC-approved workplans. DTSC shall request in writing that

Respondent perform the additional work and shall specify the basis and reasons for DTSC's determination that the additional work is necessary. Within 14 days after the receipt of such determination, Respondent may confer with DTSC to discuss the additional work DTSC has requested. If required by DTSC, Respondent shall submit to DTSC a workplan for the additional work. Such workplan shall be submitted to DTSC within 30 days of receipt of DTSC's determination or according to an alternate schedule established by DTSC. Upon approval of a workplan, Respondent shall implement it in accordance with the provisions and schedule contained therein. The need for, and disputes concerning, additional work are subject to the dispute resolution procedures specified in this Consent Agreement.

QUALITY ASSURANCE

16.1. All sampling and analyses performed by Respondent under this Consent Agreement shall follow applicable DTSC and U.S. EPA guidance for sampling and analysis. Workplans shall contain quality assurance/quality control and chain of custody procedures for all sampling, monitoring, and analytical activities. Any deviations from the approved workplans must be approved by DTSC prior to implementation, must be documented, including reasons for the deviations, and must be reported in the applicable report.

16.2. The names, addresses, and telephone numbers of the California State certified analytical laboratories Respondent proposes to use must be specified in the applicable workplans.

SAMPLING AND DATA/DOCUMENT AVAILABILITY

17.1. Respondent shall submit to DTSC upon request the results of all sampling and/or tests or other data generated by its employees, agents, consultants, or contractors pursuant to this Consent Agreement.

17.2. Respondent shall notify DTSC in writing at least seven days prior to beginning each separate phase of field work approved under any workplan required by this Consent Agreement. If Respondent believes it must commence emergency field activities without delay, Respondent may seek emergency telephone authorization from DTSC Project Coordinator or, if the Project Coordinator is unavailable, his/her Branch Chief, to commence such activities immediately.

17.3. At the request of DTSC, Respondent shall provide or allow DTSC or its authorized representative to take split or duplicate samples of all samples collected by Respondent pursuant to this Consent Agreement. Similarly, at the request of Respondent, DTSC shall allow Respondent or its authorized representative to take split or duplicate samples of all samples collected by DTSC under this Consent Agreement.

ACCESS

18. Subject to the Facility's security and safety procedures, Respondent agrees to provide DTSC and its representatives access at all reasonable times to the Facility and any off-site property to which access is required for implementation of this Consent Agreement and shall permit such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Consent Agreement and that are within the possession or under the control of Respondent or its contractors or consultants.

RECORD PRESERVATION

19.1. Respondent shall retain, during the pendency of this Consent Agreement and for a minimum of six years after its termination, all data, records, and documents that relate in any way to the performance of this Consent Agreement or to hazardous waste management and/or disposal at the Facility. Respondent shall notify DTSC in writing 90 days prior to the destruction of any such records, and shall provide DTSC with the opportunity to take possession of any such records. Such written notification shall reference the effective date, caption, and docket number of this Consent Agreement and shall be addressed to:

Javier Hinojosa

Branch Chief

Site Mitigation and Restoration Program

Department of Toxic Substances Control

9211 Oakdale Avenue

Chatsworth, California 91311

19.2. If Respondent retains or employs any agent, consultant, or contractor for the purpose of carrying out the terms of this Consent Agreement, Respondent will require any such agents, consultants, or contractors to provide Respondent a copy of all documents produced pursuant to this Consent Agreement.

19.3. All documents pertaining to this Consent Agreement shall be stored in a central location at the Facility, or at a location otherwise agreed to by the parties, to afford easy access by DTSC and its representatives.

DISPUTE RESOLUTION

20.1. The parties agree to use their best efforts to resolve all disputes informally. The parties agree that the procedures contained in this section are the sole administrative procedures for resolving disputes arising under this Consent Agreement.

If Respondent fails to follow the procedures contained in this section, it shall have waived its right to further consideration of the disputed issue.

20.2. If Respondent disagrees with any written decision by DTSC pursuant to this Consent Agreement, Respondent's Project Coordinator shall orally notify DTSC's Project Coordinator of the dispute. The Project Coordinators shall attempt to resolve the dispute informally.

20.3. If the Project Coordinators cannot resolve the dispute informally, Respondent may pursue the matter formally by placing its objection in writing. Respondent's written objection must be forwarded to Javier Hinojosa, Branch Chief, Site Mitigation & Restoration Program, Department of Toxic Substances Control, with a copy to DTSC's Project Coordinator. The written objection must be mailed to the Branch Chief within 14 days of Respondent's receipt of DTSC's written decision. Respondent's written objection must set forth the specific points of the dispute and the basis for Respondent's position.

20.4. DTSC and Respondent shall have 14 days from DTSC's receipt of Respondent's written objection to resolve the dispute through formal discussions. This period may be extended by DTSC for good cause. During such period, Respondent may meet or confer with DTSC to discuss the dispute.

20.5. After the formal discussion period, DTSC will provide Respondent with its written decision on the dispute. DTSC's written decision will reflect any agreements reached during the formal discussion period and be signed by the Branch Chief or his/her designee.

20.6. During the pendency of all dispute resolution procedures set forth above, the time periods for completion of work required under this Consent Agreement that are affected by such dispute shall be extended for a period of time not to exceed the actual time taken to resolve the dispute. The existence of a dispute shall not excuse, toll, or suspend any other compliance obligation or deadline required pursuant to this Consent Agreement.

RESERVATION OF RIGHTS

21.1. DTSC reserves all of its statutory and regulatory powers, authorities, rights, and remedies, which may pertain to Respondent's failure to comply with any of the requirements of this Consent Agreement. Respondent reserves all of its statutory and regulatory rights, defenses and remedies, as they may arise under this Consent Agreement. This Consent Agreement shall not be construed as a covenant not to sue, release, waiver, or limitation on any powers, authorities, rights, or remedies, civil or criminal, that DTSC or Respondent may have under any laws, regulations or common law.

21.2. DTSC reserves the right to disapprove of work performed by Respondent pursuant to this Consent Agreement and to request that Respondent perform additional tasks.

21.3. DTSC reserves the right to perform any portion of the work consented to herein or any additional site characterization, feasibility study, and/or remedial actions it deems necessary to protect human health and/or the environment. DTSC may exercise its authority under any applicable state or federal law or regulation to undertake response actions at any time. DTSC reserves its right to seek reimbursement from Respondent for costs incurred by the State of California with respect to such actions. DTSC will notify Respondent in writing as soon as practicable regarding the decision to perform any work described in this section.

21.4. If DTSC determines that activities in compliance or noncompliance with this Consent Agreement have caused or may cause a release of hazardous waste and/or hazardous waste constituents, or a threat to human health and/or the environment, or that Respondent is not capable of undertaking any of the work required, DTSC may order Respondent to stop further implementation of this Consent Agreement for such period of time as DTSC determines may be needed to abate any such release or threat and/or to undertake any action which DTSC determines is necessary to abate such release or threat. The deadlines for any actions required of Respondent under this Consent Agreement affected by the order to stop work shall be extended to take into account DTSC's actions.

21.5. This Consent Agreement is not intended to be nor shall it be construed to be a permit. This Consent Agreement is not a substitute for, and does not preclude DTSC from requiring, any hazardous waste facility permit, post closure permit, closure plan or post closure plan. The parties acknowledge and agree that DTSC's approval of any workplan, plan, and/or specification does not constitute a warranty or representation that the workplans, plans, and/or specifications will achieve the required cleanup or performance standards. Compliance by Respondent with the terms of this Consent Agreement shall not relieve Respondent of its obligations to comply with the Health and Safety Code or any other applicable local, state, or federal law or regulation.

OTHER CLAIMS

22. Except as provided in this Consent Agreement, nothing in this Consent Agreement shall constitute or be construed as a release by DTSC or Respondent from any claim, cause of action, or demand in law or equity against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken or migrating from the Facility.

COMPLIANCE WITH WASTE DISCHARGE REQUIREMENTS

23. Respondent shall comply with all applicable waste discharge requirements issued by the State Water Resources Control Board or a California regional water quality control board.

OTHER APPLICABLE LAWS

24. All actions required by this Consent Agreement shall be conducted in accordance with the requirements of all local, state, and federal laws and regulations. Respondent shall obtain or cause its representatives to obtain all permits and approvals necessary under such laws and regulations.

REIMBURSEMENT OF DTSC'S COSTS

25.1. Respondent shall pay DTSC's costs incurred in the implementation of this Consent Agreement. Such costs must include DTSC's costs incurred in the preparation and implementation of this Consent Agreement prior to the effective date of this Consent Agreement.

25.2. An estimate of DTSC's costs is attached as Exhibit A showing the amount of $93,104.00. It is understood by the parties that this amount is only a cost estimate for the activities shown on Exhibit A and it may differ from the actual costs incurred by DTSC in overseeing these activities or in implementing this Consent Agreement. DTSC will provide additional cost estimates to Respondent as the work progresses under the Consent Agreement.

25.3. Respondent shall make an advance payment to DTSC in the amount of $46,552.00 within 30 days of the effective date of this Consent Agreement. If the advance payment exceeds DTSC's costs, DTSC will refund the balance within 120 days after the execution of the Acknowledgment of Satisfaction pursuant to Section 27 of this Consent Agreement.

25.4. DTSC will provide Respondent with a billing statement at least quarterly, which will include the name(s) of the employee(s), identification of the activities, the amount of time spent on each activity, and the hourly rate charged. If Respondent does not pay an invoice within 60 days of the date of the billing statement, the amount is subject to interest as provided by Health and Safety Code section 25360.1.

25.5. DTSC will retain all costs records associated with the work performed under this Consent Agreement as required by state law. DTSC will make all documents that support the DTSC's cost determination available for inspection upon request, as provided by the Public Records Act.

25.6. Any dispute concerning DTSC's costs incurred pursuant to this Consent Agreement is subject to the Dispute Resolution provision of this Consent Agreement and the dispute resolution procedures as established pursuant to Health and Safety Code section 25269.2. DTSC reserves its right to recover unpaid costs under applicable state and federal laws.

25.7. All payments shall be made within 30 days of the date of the billing statement by check payable to the Department of Toxic Substances Control and shall be sent to:

Accounting Unit

Department of Toxic Substances Control

P. O. Box 806

Sacramento, California 95812-0806

All checks shall reference the name of the Facility, the Respondent's name and address, and the docket number of this Consent Agreement. Copies of all checks and letters transmitting such checks shall be sent simultaneously to DTSC's Project Coordinator.

MODIFICATION

26.1. This Consent Agreement may be modified by mutual agreement of the parties. Any agreed modification shall be in writing, shall be signed by both parties, shall have as its effective date the date on which it is signed by all the parties, and shall be deemed incorporated into this Consent Agreement.

26.2. Any requests for revision of an approved workplan requirement must be in writing. Such requests must be timely and provide justification for any proposed workplan revision. DTSC has no obligation to approve such requests, but if it does so, such approval will be in writing and signed by the Branch Chief of the Site Mitigation & Restoration Program, Department of Toxic Substances Control, or his or her designee. Any approved workplan revision shall be incorporated by reference into this Consent Agreement.

TERMINATION AND SATISFACTION

27. The provisions of this Consent Agreement shall be deemed satisfied upon the execution by both parties of an Acknowledgment of Satisfaction (Acknowledgment). DTSC will prepare the Acknowledgment for Respondent's signature. The Acknowledgment will specify that Respondent has demonstrated to the satisfaction of DTSC that the terms of this Consent Agreement including payment of DTSC's costs have been satisfactorily completed. The Acknowledgment will affirm Respondent's continuing obligation to preserve all records after the rest of the Consent Agreement is satisfactorily completed.

EFFECTIVE DATE

28. The effective date of this Consent Agreement shall be the date on which this Consent Agreement is signed by all the parties. Except as otherwise specified, "days" means calendar days.

SIGNATORIES

29. Each undersigned representative certifies that he or she is fully authorized to enter into this Consent Agreement.

DATE: 8/30/22 BY: _____
Representing Respondent

J Hyte Johnson / Director, EHS Raytheon (AKA. RTX)
Name and title of Respondent's Representative

DATE: 9-14-22 BY: _____
Javier Hinojosa
Branch Chief
Site Mitigation & Restoration Program
Department of Toxic Substances Control

ATTACHMENT 1

SCOPE OF WORK FOR INTERIM MEASURES IMPLEMENTATION

PURPOSE

Interim measures are actions to control and/or eliminate releases of hazardous waste and/or hazardous constituents from a facility prior to the implementation of a final corrective measure. Interim measures must be used whenever possible to achieve the goal of stabilization which is to control or abate threats to human health and/or the environment, and to prevent or minimize the spread of contaminants while long-term corrective action alternatives are being evaluated.

SCOPE

The documents required for Interim Measures (IM) are, unless the Department of Toxic Substances Control (Department) specifies otherwise, an IM Workplan, an Operation and Maintenance Plan and IM Plans and Specifications. The scope of work (SOW) for each document is specified below. The SOWs are intended to be flexible documents capable of addressing both simple and complex site situations. If the Owner/Operator or Respondent can justify, to the satisfaction of the Department, that a plan or portions thereof are not needed in the given site specific situation, then the Department may waive that requirement.

The Department may require the Owner/Operator or Respondent to conduct additional studies beyond what is discussed in the SOWs in order to support the IM program. The Owner/Operator or Respondent will furnish all personnel, materials and services necessary to conduct the additional tasks.

A. Interim Measures Workplan

The Owner/Operator or Respondent shall prepare an IM Workplan that evaluates interim measure options and clearly describes the proposed interim measure, the key components or elements that are needed, describes the designer's vision of the interim measure in the form of conceptual drawings and schematics, and includes procedures and schedules for implementing the interim measure(s). The IM Workplan must be approved by the Department prior to implementation. The IM Workplan must, at a minimum, include the following elements:

1. Introduction/Purpose

Describe the purpose of the document and provide a summary of the project.

2. Conceptual Model of Contaminant Migration

It is important to know where the contaminants are and to understand how they are moving before an adequate interim measure can be developed. To address this critical question, the Owner/Operator or Respondent must present a conceptual model of the site and contaminant migration. The conceptual model consists of a working hypothesis of how the contaminants may move from the release source to the receptor population. The conceptual model is developed by looking at the applicable physical parameters (e.g., water solubility, density, Henry's Law Constant, etc.) for each contaminant and assessing how the contaminant may migrate given the existing site conditions (geologic features, depth to groundwater, etc.). Describe the phase (water, soil, gas, non-aqueous) and location where contaminants are likely to be found. This analysis may have already been done as part of earlier work (e.g., Current Conditions Report). If this is the case, then provide a summary of the conceptual model with a reference to the earlier document.

3. Evaluation of Interim Measure Alternatives

List, describe and evaluate interim measure alternatives that have the potential to stabilize the facility. Propose interim measures for implementation and provide rationale for the selection. Document the reasons for excluding any interim measure alternatives.

4. Description of Interim Measures

Qualitatively describe what the proposed interim measure is supposed to do and how it will function at the facility.

5. Data Sufficiency

Review existing data needed to support the design effort and establish whether or not there are sufficient accurate data available for this purpose. The Owner/Operator or Respondent must summarize the assessment findings and specify any additional data needed to complete the interim measure design. The Department may require or the Owner/Operator or Respondent may propose that sampling and analysis plans and/or treatability study workplans be developed to obtain the additional data. Submittal times for any new sampling and analysis plans and/or treatability study workplans must be included in the project schedule.

6. Project Management

Describe the levels of authority and responsibility (include organization chart), lines of communication and a description of the qualifications of key personnel who will direct the interim measure design and implementation effort (including contractor personnel).

7. Project Schedule

The project schedule must specify all significant steps in the process, when any key documents (e.g., plans and specifications, operation and maintenance plan) are to be submitted to the Department and when the interim measure is to be implemented.

8. Design Basis

Discuss the process and methods used to design all major components of the interim measure. Discuss the significant assumptions made and possible sources of error. Provide justification for the assumptions.

9. Conceptual Process/Schematic Diagrams.

10. Site plan showing preliminary plant layout and/or treatment area.

11. Tables listing number and type of major components with approximate dimensions.

12. Tables giving preliminary mass balances.

13. Site safety and security provisions (e.g., fences, fire control, etc.).

14. Waste Management Practices

Describe the wastes generated by the construction of the interim measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed.

15. Required Permits

List and describe the permits needed to construct the interim measure. Indicate on the project schedule when the permit applications will be submitted to the applicable agencies and an estimate of the permit issuance date.

16. Sampling and Monitoring

Sampling and monitoring activities may be needed for design and during construction of the interim measure. If sampling activities are necessary, the IM Workplan must include a complete sampling and analysis section which specifies the following information:

a. Description and purpose of monitoring tasks;
b. Data quality objectives;
c. Analytical test methods and detection limits;
d. Name of analytical laboratory;
e. Laboratory quality control (include laboratory QA/QC procedures in appendices)

f. Sample collection procedures and equipment;
g. Field quality control procedures:

- duplicates (10% of all field samples)
- blanks (field, equipment, etc.)
- equipment calibration and maintenance
- equipment decontamination
- sample containers
- sample preservation
- sample holding times (must be specified)
- sample packaging and shipment
- sample documentation (field notebooks, sample labeling, etc);

h. Criteria for data acceptance and rejection; and
i. Schedule of monitoring frequency.

17. The Owner/Operator or Respondent shall follow all Department and USEPA guidance for sampling and analysis. The Department may request that the sampling and analysis section be a separate document.

18. Appendices including:

- Design Data - Tabulations of significant data used in the design effort;
- Equations - List and describe the source of major equations used in the design process;
- Sample Calculations - Present and explain one example calculation for significant calculations; and
- Laboratory or Field Test Results.

B. Interim Measures Operation and Maintenance Plan

The Owner/Operator or Respondent shall prepare an Interim Measures Operation and Maintenance (O&M) Plan that includes a strategy and procedures for performing operations, maintenance, and monitoring of the interim measure(s). An Interim Measures Operation and Maintenance Plan shall be submitted to the Department simultaneously with the Plans and Specifications. The O&M plan shall, at a minimum, include the following elements:

1. Purpose/Approach

Describe the purpose of the document and provide a summary of the project.

2. Project Management

Describe the levels of authority and responsibility (include organization chart), lines of communication and a description of the qualifications of key personnel who will operate and maintain the interim measure(s) (including contractor personnel).

3. System Description

Describe the interim measure and identify significant equipment.

4. Personnel Training

Describe the training process for O&M personnel. The Owner/Operator or Respondent shall prepare, and include in the technical specifications governing treatment systems, contractor requirements for providing: appropriate service visits by experienced personnel to supervise the installation, adjustment, start up and operation of the treatment systems, and training covering appropriate operational procedures once the start-up has been successfully accomplished.

5. Start-Up Procedures

Describe system start-up procedures including any operational testing.

6. Operation and Maintenance Procedures

Describe normal operation and maintenance procedures including:

a. Description of tasks for operation;
b. Description of tasks for maintenance;
c. Description of prescribed treatment or operation condition, and
d. Schedule showing frequency of each O&M task.

7. Replacement schedule for equipment and installed components.

8. Waste Management Practices

Describe the wastes generated by operation of the interim measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed.

9. Sampling and Monitoring

Sampling and monitoring activities may be needed for effective operation and maintenance of the interim measure. If sampling activities are necessary, the O&M plan must include a complete sampling and analysis section which specifies the following information:

a. Description and purpose of monitoring tasks;
b. Data quality objectives;
c. Analytical test methods, method detection limits and practical quantitation limits;
d. Name of analytical laboratory;
e. Laboratory quality control (include laboratory QA/QC procedures in appendices)
f. Sample collection procedures and equipment;
g. Field quality control procedures:

- duplicates (10% of all field samples)
- blanks (field, equipment, etc.)
- equipment calibration and maintenance
- equipment decontamination
- sample containers
- sample preservation
- sample holding times (must be specified)
- sample packaging and shipment
- sample documentation (field notebooks, sample labeling, etc.)

h. Criteria for data acceptance and rejection; and
i. Schedule of monitoring frequency.

The Owner/Operator or Respondent shall follow all Department and USEPA guidance for sampling and analysis. The Department may request that the sampling and analysis section be a separate document.

10. O&M Contingency Procedures:

a. Procedures to address system breakdowns and operational problems including a list of redundant and emergency back-up equipment and procedures;

b. Should the interim measure suffer complete failure, specify alternate procedures to prevent release or threatened releases of hazardous substances, pollutants or contaminants which may endanger public health and/or the environment or exceed cleanup standards; and

c. The O&M Plan must specify that, in the event of a major breakdown and/or complete failure of the interim measure (includes emergency situations), the Owner/Operator or Respondent will orally notify the Department within 24 hours of the event and will notify the Department in writing within 72 hours of the event. The written notification must, at a minimum, specify what happened, what response action is being taken and/or is planned, and any potential impacts on human health and the environment.

11. Data Management and Documentation Requirements

Describe how analytical data and results will be evaluated, documented and managed, including development of an analytical database. State the criteria that will be used by the project team to review and determine the quality of data.

The O&M Plan shall specify that the Owner/Operator or Respondent collect and maintain the following information:

a. Progress Report Information

- Work Accomplishments (e.g., performance levels achieved, hours of treatment operation, treated and/or excavated volumes, concentration of contaminants in treated and/or excavated volumes, nature and volume of wastes generated, etc.).
- Record of significant activities (e.g., sampling events, inspections, problems encountered, action taken to rectify problems, etc.).

b. Monitoring and laboratory data;

c. Records of operating costs; and

d. Personnel, maintenance and inspection records.

The Department may require that the Owner/Operator or Respondent submit additional reports that evaluate the effectiveness of the interim measure in meeting the stabilization goal.

C. Interim Measures Plans and Specifications

The Owner/Operator or Respondent shall prepare Plans and Specifications for the interim measure that are based on the conceptual design but include additional detail. The Department may require the submittal of other draft plans and specifications at different points in the design process. The Plans and Specifications shall be submitted to the Department simultaneously with the Operation and Maintenance Plan. The design package must include drawings and specifications needed to construct the interim measure. Depending on the nature of the interim measure, many different types of drawings and specifications may be needed. Some of the elements that may be required are:

- General Site Plans
- Process Flow Diagrams
- Mechanical Drawings

- Electrical Drawings
- Structural Drawings
- Piping and Instrumentation Diagrams
- Excavation and Earthwork Drawings
- Equipment Lists
- Site Preparation and Field Work Standards
- Preliminary Specifications for Equipment and Material

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the project specifications to the Department, the Owner/Operator or Respondent shall:

a. Proofread the specifications for accuracy and consistency with the conceptual design; and

b. Coordinate and cross-check the specifications and drawings.

ATTACHMENT 2

SCOPE OF WORK FOR A HEALTH AND SAFETY PLAN

1. Objectives

Describe the goals and objectives of the Health and Safety Plan (must apply to on-site personnel and visitors). The Health and Safety Plan must be consistent with the facility Contingency Plan, OSHA Regulations, NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985), all state and local regulations and other Implementing Agency guidance as provided.

2. Hazard Assessment

List and describe the potentially hazardous substances that could be encountered by field personnel during different phases of the activities.

Discuss the following:

- Inhalation Hazards
- Dermal Exposure
- Ingestion Hazards
- Physical Hazards
- Overall Hazard Rating

Include a table that, at a minimum, lists: Known Contaminants, Highest Observed Concentration, Media, Symptoms/Effects of Acute Exposure.

1. Personal Protection/monitoring Equipment

For each task, describe personal protection levels and identify all monitoring equipment.

Describe any action levels and corresponding response actions (i.e., when will levels of safety be upgraded).

Describe decontamination procedures and areas.

2. Site organization and Emergency Contacts

List and identify all contacts (include phone numbers). Identify the nearest hospital and provide a regional map showing the shortest route from the facility to the hospital.

Describe site emergency procedures and any site safety organizations. Include evacuation procedures for neighbors (where applicable).

Include a facility Map showing emergency station locations (e.g., first aid, eye wash areas, etc.).

The Health and Safety Plan shall be signed by a Certified Industrial Hygienist.

ATTACHMENT 3

SCOPE OF WORK FOR A COMMUNITY PROFILE

The following items should be included in the Community Profile:

SITE DESCRIPTION

- Description of proposed project.
- Map.
- Description of the site/facility location.
- Description of the surrounding land uses and environmental resources (including proximity to residential housing, schools, churches, etc.).
- Visibility of the site to neighbors.
- Demographics of community in which the site is located (e.g., socioeconomic level, ethnic composition, specific language considerations, etc.). This information may be found in local libraries (e.g., census records).

LOCAL INTEREST

- Contacts with community members - any inquiries from community members, groups, organizations, etc. (include names, phone numbers, and addresses on the key contact list).
- Community interactions - any current meetings, events, presentations, etc.
- Media coverage - any newspaper, magazine, television, etc., coverage.
- Government contacts - city and county staff, state and local elected officials.

KEY CONTACT LIST

- Names, addresses, and phone numbers of city manager, city/county planning department staff, local elected officials, and other community members with whom previous contact has been made.

PAST PUBLIC INVOLVEMENT ACTIVITIES

- Any ad hoc committees, community meetings, workshops, letters, newsletters, etc., about the site or similar activity.

KEY ISSUES AND CONCERNS

- Any specific concerns/issues raised by the community regarding the site/facility or any activities performed on the site/facility.
- Any anticipated concerns/issues regarding the site/facility.
- Any general environmental concerns/issues in the community.

ATTACHMENT 4

SCOPE OF WORK FOR A RCRA FACILITY INVESTIGATION

PURPOSE

The purpose of this RCRA Facility Investigation (RFI) is to determine the nature and extent of releases of hazardous waste or constituents from regulated units, solid waste management units, and other source areas at the Facility and to gather all necessary data to support the Corrective Measures Study. The RFI must include characterization of the facility (processes, waste management, etc), environmental setting, source areas, nature and extent of contamination, migration pathways (transport mechanisms) and all potential receptors.

SCOPE

The documents required for a RFI are, unless the Department of Toxic Substances Control (Department) specifies otherwise, a RCRA Facility Investigation Workplan and a RCRA Facility Investigation Report. The scope of work (SOW) for each document is specified below. The SOWs are intended to be flexible documents capable of addressing both simple and complex site situations. If the Owner/Operator or Respondent can justify, to the satisfaction of the Department, that a plan and/or report or portions thereof are not needed in the given site specific situation, then the Department may waive that requirement.

The scope and substance of the RFI should be focused to fit the complexity of the site-specific situation. It is anticipated that Owner/Operator's or Respondent's of sites with complex environmental problems may need more extensive RFI's than other facilities with less complex problems.

The Department may require the Owner/Operator or Respondent to conduct additional studies beyond what is discussed in the SOWs in order to meet the objectives of the RFI. The Owner/Operator or Respondent will furnish all personnel, materials and services necessary to conduct the additional tasks.

A. RCRA Facility Investigation Workplan

The RFI Workplan shall define the procedures necessary to:

- Gather all necessary data to determine where interim measures are needed and

to support the use of interim measures to address immediate threats to human health and/or the environment, to prevent or minimize the spread of contaminants, to control sources of contamination and to accelerate the corrective action process (required for all releases);

- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any ground water contamination in and around the facility (only required for releases to ground water);

- Characterize the geology and hydrogeology in and around the facility (only required for releases to ground water and possibly for releases to soil);

- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any soil contamination in and around the facility (only required for releases to soil);

- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any soil gas contamination in and around the facility (may be required for releases to ground water and/or soil depending on the circumstances);

- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any surface water contamination (includes surface water sediments) at the facility (only required for releases to surface water);

- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any air releases at the facility (only required for air releases);

- Characterize any potential sources of contamination (required for all releases);

- Characterize the potential pathways of contaminant migration (required for all releases);

- Identify any actual or potential receptors (required for all releases);

- Gather all data to support a risk and/or ecological assessment (if required);

- Gather all necessary data to support the Corrective Measures Study (required for all releases). This could include conducting treatability, pilot, laboratory and/or bench scale studies to assess the effectiveness of a treatment method.

The RFI Workplan shall describe all aspects of the investigation, including project management, sampling and analysis, well drilling and installation and quality assurance and quality control. If the scope of the investigation is such that more than one phase is necessary, the "Phase 1" RFI Workplan must include a summary description of each phase. For example, the first phase of a RFI could be used to gather information necessary to focus the second phase into key areas of the facility that need further investigation.

The required format for a RFI Workplan is described below:

1. Introduction

Briefly introduce the RFI Workplan. Discuss the Order or Permit requiring the RFI and how the RFI Workplan is organized.

2. Investigation Objectives

2.1 Project Objectives

Describe the overall objectives and critical elements of the RFI. State the general information needed from the site (e.g., soil chemistry, hydraulic conductivity of aquifer, stratigraphy, ground water flow direction, identification of potential receptors, etc.). The general information should be consistent with the objectives of the RFI and the data needs identified in the Current Conditions Report.

2.2 Data Quality Objectives

Provide data quality objectives that identify what data are needed and the intended use of the data.

3. Project Management

Describe how the investigation will be managed, including the following information:

- Organization chart showing key personnel, levels of authority and lines of communication;
- Project Schedule; and
- Estimated Project Budget.

Identify the individuals or positions who are responsible for: project management, field activities, laboratory analysis, database management, overall quality assurance, data

validation, etc. Include a description of qualifications for personnel performing or directing the RFI, including contractor personnel.

4. Facility Background

Summarize existing contamination (e.g., contaminants, concentrations, etc.), local hydrogeologic setting and any other areas of concern at the facility. Include a map showing the general geographic location of the facility and a more detailed facility map showing the areas of contamination. Provide a reference to the Current Conditions Report and/or other applicable documents as a source of additional information.

5. Field Investigation

5.1 Task Description

Provide a qualitative description of each investigation task. Example tasks may include, but are not limited to the following:

Task 1: Surface Soil Sampling
Task 2: Surface Geophysics, Subsurface Soil Boring, and Borehole Geophysics
Task 3: Data Gathering to Support Interim Corrective Measures
Task 4: Monitoring Well Installation
Task 5: Aquifer Testing
Task 6: Ground Water Sampling
Task 7: Potential Receptor Identification
Task 8: Treatability Studies

5.2 Rationale for Sampling

Describe where all samples will be collected (location and depth), types of media that will be sampled and the analytical parameters. Explain the rationale for each sampling point, the total number of sampling points, and any statistical approach used to select these points. The conceptual model of contaminant migration developed in the Current Conditions Report should be considered when selecting sampling locations and depths. If some possible sampling points are excluded, explain why. Describe any field screening techniques that will be used to identify samples for laboratory analysis. Include the rationale for use of field screening techniques and criteria for sample selection.

5.2.1 Background Samples

Background samples should be analyzed for the complete set of parameters for each medium; treat sediments, surface soils and subsurface soils as separate media. Background samples are collected, numbered, packaged, and sealed in the same

manner as other samples. For long term and/or especially large projects, it is recommended that 10% of samples collected be from background locations.

5.3 Sample Analysis

List and discuss all analyses proposed for the project. Include a table that summarizes the following information for each analysis to be performed:

- Analytical Parameters
- Analytical Method Reference Number (from USEPA SW 846)
- Sample Preparation and/or Extraction Method Reference Number (from USEPA SW 846)
- Detection and Practical Quantitation Limits (Data above the detection limit but below the practical quantitation limit must be reported with the estimated concentration.)

Discuss the rationale for selection of the analytical parameters. The rationale must relate to site history and the RFI objectives. The achievable detection limits or quantitation limits stated in the selected methods must be adequate for valid comparisons of analytical results against any action levels or standards. For example, the objective may be to collect ground water data for comparison with Maximum Contaminant Levels (MCL's). If this were the case, it would be important to ensure that any ground water test methods had detection limits below the MCL's. Give an explanation if all samples from the same medium will not be analyzed for the same parameters.

Provide the name(s) of the laboratory(s) that will be doing the analytical work. Indicate any special certifications or ratings of the laboratory. Describe the steps that will be taken to select and pre-qualify analytical laboratories to be used including any previous audits and/or other criteria. If a definite laboratory has not yet been selected, list at least 3 laboratories that are being considered for the analytical work.

5.4 Sample Collection Procedures

Describe how sampling points will be selected in the field, and how these locations will be documented and marked for future reference. If a sampling grid will be used, describe the dimensions and lay out planned for the grid.

Outline sequentially or step-by-step the procedure for collecting a sample for each medium and each different sampling technique. Include a description of sampling equipment (including materials of construction), field measurements, sample preservation, housekeeping/ cleanliness techniques and well purging procedures. The procedure described must ensure that a representative sample is collected, and that sample handling does not result in cross contamination or unnecessary loss of

contaminants. Special care in sample handling for volatile organic samples must be addressed.

Describe how and when duplicates, blanks, laboratory quality control samples and background samples will be collected. If samples will be filtered, describe filtration equipment and procedures.

The Owner/Operator or Respondent must include sufficient maps and tables to fully describe the sampling effort. This shall include, at a minimum, a map showing all proposed sampling locations and tables that contain the following information:

Sample Collection Table:

- Sampling Location/Interval
- Analytical Parameters (e.g., volatile organic compounds)
- Analytical Method Number
- Medium
- Preservation Method
- Holding Times (as specified in USEPA SW 846)
- Containers (quantity, size, type plus footnotes that discuss source and grade of containers)

Sample Summary Table:

- Sample Description/Area (include QC samples)
- Analytical Parameters
- Analytical Method Number
- Preparation or Extraction Method Number
- Medium
- Number of Sample Sites
- Number of Analyses

5.4.1 Equipment Decontamination

Describe the decontamination procedure for all drilling, sampling equipment (including metal sleeves), and field-parameter testing equipment.

The following is a recommended generic procedure for decontamination of sampling equipment:

- Wash with non-phosphate detergent
- Tap water rinse
- 0.1Mole nitric acid rinse (when cross contamination from metals is a concern)

- Deionized/distilled water rinse
- Pesticide grade solvent rinse (when semi volatiles and non-volatile organic contamination may be present)
- Deionized/distilled water rinse (twice)
- Organic free water rinse [High Performance Liquid Chromatography (HPLC) grade]

The above procedure is not appropriate for every field condition. Clearly document the decontamination procedures.

5.4.2 Equipment Calibration and Maintenance

Logbooks or pre-formatted calibration worksheets should be maintained for major field instruments, to document servicing, maintenance and instrument modification. The calibration, maintenance and operating procedures for all instruments, equipment and sampling tools must be based upon manufacturer's instructions. List all field equipment to be used, specify the maintenance/calibration frequency for each instrument and the calibration procedures (referenced in text and included in appendices).

5.4.3 Sample Packaging and Shipment

Describe how samples will be packaged and shipped. All applicable Department of Transportation regulations must be followed.

5.4.4 Sample Documentation

Discuss the use of all paperwork including field notebooks, record logs, photographs, sample paperwork, and Chain of Custody forms (include a blank copy in FI Workplan Appendices) and seals.

Describe how sample containers will be labeled and provide an example label if available. At a minimum, each sample container label should include: project ID, sample location, analytical parameters, date sampled and any preservative added to the sample.

A bound field log book must be maintained by the sampling team to provide a daily record of events. Field log books shall provide the means of recording all data regarding sample collection. All documentation in field books must be made in permanent ink. If an error is made, corrections must be made by crossing a line through the error and entering the correct information. Changes must be initialed, no entries shall be obliterated or rendered unreadable. Entries in the log book must include, at a minimum, the following for each day's sampling:

- Date
- Starting Time
- Meteorological Conditions
- Field Personnel Present
- Level of Personal Protection
- Site Identification
- Field Observations/Parameters
- Sample Identification Numbers
- Location and Description of Sampling Points
- Number of Samples Collected
- Time of Sample Collection
- Signature of Person Making the Entry
- Observation of Sample Characteristics
- Photo Log
- Deviations

5.4.5 Disposal of Contaminated Materials

Describe the storage and disposal methods for all contaminated cuttings, well development and purge water, disposable equipment, decontamination water, and any other contaminated materials. The waste material must be disposed of in a manner consistent with local, state and federal regulations.

5.4.6 Standard Operating Procedures

If Standard Operating Procedures (SOPs) are referenced, the relevant procedure must be summarized in the FI Workplan. The SOP must be specific to the type of tasks proposed and be clearly referenced in the FI Workplan. The SOP must also be directly applicable, as written, to the FI Workplan; otherwise, modifications to the SOP must be discussed. Include the full SOP description in the FI Workplan appendix.

5.5 Well Construction and Aquifer Testing

When new monitoring wells (or piezometers) are proposed, describe the drilling method, well design and construction details (e.g., depth of well, screen length, slot size, filter pack material, etc.) and well development procedures. Describe the rationale for proposed well locations and selection of all well design and construction criteria (i.e., provide rationale for selection of slot size and screen length).

When aquifer testing is proposed, describe the testing procedures, flow rates, which wells are involved, test periods, how water levels will be measured, and any other pertinent information.

6. Quality Assurance and Quality Control

Quality control checks of field and laboratory sampling and analysis serve two purposes: to document the data quality, and to identify areas of weakness within the measurement process which need correction.

Include a summary table of data quality assurance objectives that, at a minimum, lists:

- Analysis Group (e.g., volatile organic compounds)
- Medium
- Practical Quantitation Limits (PQL) and Method Detection Limits (MDL)
- Spike Recovery Control Limits (%R)
- Duplicate Control Limits +/- Relative Percent Difference (RPD)
- QA Sample Frequency
- Data Validation

A reference may note the specific pages from USEPA's SW 846 Guidance Document that list the test method objectives for precision and accuracy. If the field and laboratory numerical data quality objectives for precision are the same and presented on a single table, then a statement should be made to this effect and added as a footnote to the table (e.g., "These limits apply to both field and laboratory duplicates"). Include a copy of the analytical laboratory quality assurance/quality control plan in the appendices of the RFI Workplan and provide the equations for calculating precision and accuracy.

6.1 Field Quality Control Samples

6.1.1 Field Duplicates

Duplicates are additional samples that must be collected to check for sampling and analytical precision. Duplicate samples for all parameters and media must be collected at a frequency of at least one sample per week or 10 percent of all field samples, whichever is greater.

Duplicates should be collected from points which are known or suspected to be contaminated. For large projects, duplicates should be spread out over the entire site and collected at regular intervals.

Duplicates must be collected, numbered, packaged, and sealed in the same manner as other samples; duplicate samples are assigned separate sample numbers and submitted blind to the laboratory.

6.1.2 Blank Samples

Blanks are samples that must be collected to check for possible cross-contamination during sample collection and shipment and in the laboratory. Blank samples should be analyzed for all parameters being evaluated. At least one blank sample per day must be done for all water and air sampling. Additionally, field blanks are required for soil sampling if non-dedicated field equipment is being used for sample collection.

Blank samples must be prepared using analytically- certified, organic-free (HPLC-grade) water for organic parameters and metal-free (deionized-distilled) water for inorganic parameters. Blanks must be collected, numbered, packaged, and sealed in the same manner as other samples; blank samples are assigned separate sample numbers and submitted blind to the laboratory. The following types of blank samples may be required:

Equipment Blank: An equipment blank must be collected when sampling equipment (e.g., bladder pump) or a sample collection vessel (e.g., a bailer or beaker) is decontaminated and reused in the field. Use the appropriate "blank" water to rinse the sampling equipment after the equipment has been decontaminated and then collect this water in the proper sample containers.

Field Bottle Blank: This type of blank must be collected when sampling equipment decontamination is not necessary. The field bottle blank is obtained by pouring the appropriate "blank" water into a container at a sampling point.

6.2 Laboratory Quality Control Samples

Laboratories routinely perform medium spike and laboratory duplicate analysis on field samples as a quality control check. A minimum of one field sample per week or 1 per 20 samples (including field blanks and duplicates), whichever is greater, must be designated as the "Lab QC Sample" for the medium and laboratory duplicate analysis.

Laboratory quality control samples should be selected from sampling points which are suspected to be moderately contaminated. Label the bottles and all copies of the paperwork as "Lab QC Sample"; the laboratory must know that this sample is for their QC analyses. The first laboratory QC sample of the sampling effort should be part of the first or second day's shipment. Subsequent laboratory QC samples should be spread out over the entire sampling effort.

For water media, 2-3 times the normal sample volume must be collected for the laboratory QC sample. Additional volume is usually not necessary for soil samples.

6.3 Performance System Audits by Respondent

This section should describe any internal performance and/or system audit which Respondent will conduct to monitor the capability and performance of the project. The extent of the audit program should reflect the data quality needs and intended data

uses. Audits are used to quickly identify and correct problems thus preventing and/or reducing costly errors. For example, a performance audit could include monitoring field activities to ensure consistency with the workplan. If the audit strategy has already been addressed in a QA program plan or standard operating procedure, cite the appropriate section which contains the information.

7. Data Management

Describe how investigation data and results will be evaluated, documented and managed, including development of an analytical database. State the criteria that will be used by the project team to review and determine the quality of data. To document any quality assurance anomalies, the FI QC Summary Forms must be completed by the analytical laboratory and submitted as part of the FI Report. In addition, provide examples of any other forms or checklists to be used.

Identify and discuss personnel and data management responsibilities, all field, laboratory and other data to be recorded and maintained, and any statistical methods that may be used to manipulate the data.

8. References

Provide a list of references cited in the FI Workplan.

B. RCRA Facility Investigation Report

A RFI Report must be prepared that describes the entire site investigation and presents the basic results. The RFI Report must clearly present an evaluation of investigation results (e.g., all potential contaminant source areas must be identified, potential migration pathways must be described, and affected media shown, etc.).

The RFI Report must also include an evaluation of the completeness of the investigation and indicate if additional work is needed. This work could include additional investigation activities and/or interim corrective measures to stabilize contaminant release areas and limit contaminant migration. If additional work is needed, the Owner/Operator or Respondent must submit a Phase 2 RFI Workplan and/or Interim Corrective Measures Workplan must be submitted to the Department along with the RFI Report.

At a minimum, the RFI Report must include:

- A summary of investigation results (include tables that summarize analytical results).
- A complete description of the investigation, including all data necessary to

understand the project in its entirety including all investigative methods and procedures.

- A discussion of key decision points encountered and resolved during the course of the investigation.

- Graphical displays such as isopleths, potentiometric surface maps, cross-sections, plume contour maps (showing concentration levels, isoconcentration contours), facility maps (showing sample locations, etc.) and regional maps (showing receptor areas, water supply wells, etc.) that describe report results. Highlight important facts such as geologic features that may affect contaminant transport.

- Tables that list all chemistry data for each medium investigated.

- An analysis of current and existing ground water data to illustrate temporal changes for both water chemistry and piezometric data (use graphics whenever possible).

- A description of potential or known impacts on human and environmental receptors from releases at the facility. Depending on the site specific circumstances, this analysis could be based on the results from contaminant dispersion models if field validation is performed.

- A discussion of any upset conditions that occurred during any sampling events or laboratory analysis that may influence the results. The discussion must include any problems with the chain of custody procedures, sample holding times, sample preservation, handling and transport procedures, field equipment calibration and handling, field blank results that show potential sample contamination and any field duplicate results that indicate a potential problem. Summary tables must be provided that show the upset condition and the samples that could be impacted. The RFI QC Summary Forms (see Appendix A of this attachment) must be completed by the analytical laboratory and submitted as part of the RFI Report.

- Assessment of the entire QA/QC program effectiveness.

- Data validation results should be documented in the RFI Report.

In addition to the RFI Report, the Department may require the Owner/Operator or Respondent to submit the analytical results (database) on a floppy disk (Department will specify the format). All raw laboratory and field data (e.g., analytical reports) must be kept at the facility and be made available or sent to the Department upon request.

ATTACHMENT 5

SCOPE OF WORK FOR A CORRECTIVE MEASURES STUDY

PURPOSE

The purpose of the Corrective Measures Study (CMS) is to:

1. Develop and evaluate corrective measure alternatives (or a single corrective measure) that may be taken at the Facility to address releases of hazardous wastes (including hazardous constituents); and

2. Recommend the corrective measures to be taken at the Facility that are protective of human health and the environment.

SCOPE

A Corrective Measures Study Workplan and Corrective Measures Study Report are, unless otherwise specified by the Department of Toxic Substances Control (Department), required elements of the CMS. The Scope of Work (SOW) for the Corrective Measures Study Workplan and Report describe what should be included in each document. The SOW's are intended to be flexible documents capable of addressing both simple and complex site situations. If the Owner/Operator or Respondent can justify, to the satisfaction of the Department, that sections of a plan and/or report are not needed in the given site specific situation, then the Department may waive that requirement.

The Department may require the Owner/Operator or Respondent to conduct additional studies beyond what is discussed in the SOW's in order to support the CMS. The Owner/Operator or Respondent will furnish all personnel, materials and services necessary to conduct the additional tasks. The SOW for the Corrective Measures Study Workplan and Report are specified below:

A. Corrective Measures Study Workplan

The Corrective Measures Study (CMS) Workplan shall, at a minimum, include the following elements:

1. A description of the overall purpose of the Corrective Measure Study;

2. Corrective measure objectives including proposed media cleanup standards

(promulgated federal and state standards, risk derived standards) and points of compliance;

3. A description of the specific corrective measure technologies and/or corrective measure alternatives which will be studied;

4. A description of the general approach to investigating and evaluating potential corrective measures;

5. A summary description of any proposed pilot, laboratory and/or bench scale studies. Proposed studies must be further detailed in either the CMS Workplan or in separate workplans. Submittal times for separate workplans must be included in the CMS Workplan project schedule;

6. A proposed outline for the CMS Report including a description of how information will be presented;

7. A description of overall project management including overall approach, levels of authority (include organization chart), lines of communication, budget and personnel. Include a description of qualifications for personnel directing or performing the work; and

8. A project schedule that specifies all significant steps in the process and when key documents (e.g., CMS Report) are to be submitted to the Department.

9. Cost estimate for implementation of corrective action.

B. Corrective Measures Study Report

The Corrective Measures Study (CMS) Report shall, at a minimum, include the following elements:

1. Introduction/Purpose

Describe the purpose and intent of the document.

2. Description of Current Conditions

The Owner/Operator or Respondent shall include a brief discussion of any new information that has been developed since the RCRA Facility Investigation Report was finalized. This discussion should concentrate on those issues which could significantly affect the evaluation and selection of the corrective measure alternative(s).

3. Corrective Action Objectives

The Owner/Operator or Respondent shall propose corrective action objectives including applicable media cleanup standards. The corrective action objectives must be based on available promulgated federal and state cleanup standards, risk derived standards, data and information gathered during the corrective action process (e.g., from interim measures, RCRA Facility Investigation, etc.), and/or other applicable guidance documents. If no specific standards exist for a given contaminant and media, the Owner/Operator or Respondent shall propose and justify a media cleanup standard. The Department may require that the Owner/Operator or Respondent conduct a risk assessment to develop appropriate cleanup standards.

4. Identification and Screening of Corrective Measure Technologies

a. Identification

List and briefly describe potentially applicable technologies for each affected media that may be used to achieve the corrective action objectives. The Owner/Operator or Respondent should consider including a table that summarizes the available technologies.

The Owner/Operator or Respondent should consider innovative treatment technologies, especially in situations where there are a limited number of applicable corrective measure technologies. Innovative technologies are defined as those technologies for source control other than incineration, solidification/stabilization and pumping with conventional treatment for contaminated groundwater. Innovative treatment technologies may require extra initial effort to gather information, analyze options and to adapt the technology to site specific situations. However, in the long run, innovative treatment technologies could be more cost effective. Pilot, laboratory and/or bench scale studies are useful for evaluating innovative treatment technologies. Depending on the site-specific situation, the Department may require the Owner/Operator or Respondent to consider additional technologies.

b. Screening

Technologies must be screened to eliminate those that may prove unfeasible to implement given the existing set of waste and site-specific conditions. The screening is accomplished by evaluating technology limitations (e.g., for volume, area, contaminant concentrations, interferences, etc.) and using contaminant and site characterization information from the RCRA Facility Investigation to screen out technologies that cannot be fully implemented at the facility. The screening process must focus on eliminating those technologies which have severe limitations for a given set of waste and site-specific conditions (e.g., depth to groundwater and aquitards). As with all decisions

during the CMS, the screening of technologies must be fully documented. This is especially true if the screening step indicates that only one corrective action technology should proceed to the next step and be evaluated in detail. List the corrective action technologies selected for further evaluation. Also document the reasons for excluding any corrective action technologies. The Owner/Operator or Respondent should consider including a table that summarizes the findings.

5. Corrective Measure Alternative Development

Assemble the technologies that pass the screening step into specific alternatives that have potential to meet the corrective action objectives. Options for addressing less complex sites could be relatively straightforward and may only require evaluation of a single or limited number of alternatives.

Each alternative may consist of an individual technology or a combination of technologies used in sequence (e.g., treatment train). Depending on the site specific situation, different alternatives may be considered for separate areas of the facility. List and briefly describe each corrective measure alternative.

6. Evaluation of Corrective Measure Alternatives

Each corrective measure alternative must be evaluated (including its components) based on Short- and Long-Term Effectiveness, Reduction of Toxicity, Mobility and/or Volume, Long Term Reliability, Implementability, and Preliminary Cost.

a. Short-and Long-Term Effectiveness

Each corrective measure alternative must be evaluated for effectiveness in protecting human health and the environment and meeting the corrective action objectives. Both short- and long-term components of effectiveness must be evaluated; short-term referring to the construction and implementation period, and long-term referring to the period after the remedial action is complete. Estimate approximately how much time it will take to implement each corrective measure alternative, how much time to see initial beneficial results, and how much time to achieve the corrective action objectives.

The evaluation of short-term effectiveness must include possible threats to the safety of nearby communities, workers, and environmentally sensitive areas (e.g., oceans, wetlands) during construction of the corrective measure alternative. Factors to consider are fire, explosion, exposure to hazardous substances and potential threats associated with treatment, excavation, transportation and re-disposal or containment of waste material. Laboratory and/or field studies are extremely useful in estimating the effectiveness of corrective measures and should be used whenever possible.

The evaluation of long-term effectiveness must include possible threats to the safety of nearby communities, workers, and environmentally sensitive areas (e.g., oceans, wetlands) during operation of the corrective measure alternative.

b. Reduction of Toxicity, Mobility and/or Volume

Each corrective measure alternative must be evaluated for its ability to reduce the toxicity, mobility, and/or volume of the contaminated media. Reduction in toxicity, mobility, and/or volume refers to changes in one or more characteristics of the contaminated media by the use of corrective measures that decrease the inherent threats associated with the media.

Estimate how much the corrective measure alternative will reduce the waste toxicity, volume and/or mobility (compare initial site conditions to post-corrective measure conditions). In general, corrective measures that have a high degree of permanence and reduce the contaminant toxicity, mobility and volume through treatment.

c. Long-Term Reliability

Each corrective measure alternative must be evaluated as to its long-term reliability. This evaluation includes consideration of operation and maintenance requirements.

Demonstrated and expected reliability is a way of assessing the risk and effect of failure. Discuss whether the technology or combination of technologies have been used effectively together under analogous site conditions, whether failure of any one technology in the alternative has an impact on receptors or contaminant migration, and whether the alternative would have the flexibility to deal with uncontrollable changes at the site (e.g., heavy rain storms, earthquakes, etc).

Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements must also be considered.

Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure alternative shall be evaluated in terms of the projected useful life of the overall alternative and of its component technologies. Useful life is defined as the length of time the necessary or required level of effectiveness can be maintained.

d. Implementability of Corrective Measure Alternatives

The implementability criterion addresses the technical and administrative feasibility of implementing a corrective measure alternative and the availability of various services and materials needed during implementation. Each corrective measure alternative must be evaluated using the following criteria:

Construction and Operation: Corrective measure alternatives must be feasible to implement given the existing set of waste and site-specific conditions. This evaluation was initially done for specific technologies during the screening process and is addressed again in this detailed analysis of the alternative as a whole. It is not intended that the screening process be repeated here, but instead to highlight key differences and/or changes from the screening analysis that may result from combining technologies.

Administrative Feasibility: Discuss the administrative activities needed to implement the corrective measure alternative (e.g., permits, public acceptance, rights of way, off-site approvals, etc.).

Availability of Services and Materials: Discuss the availability of adequate off-site treatment, storage capacity, disposal services, needed technical services and materials, and the availability of prospective technologies for each corrective measure alternative.

e. Preliminary Cost Estimates

Develop a preliminary cost estimate for each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include both capital and operation and maintenance costs. Include a description of how the costs were estimated and what assumptions were used.

- The preliminary capital cost estimate must consider all key costs including, at a minimum, costs for engineering, mobilization, demobilization, site preparation, construction, materials, labor, equipment purchase and rental, sampling, analysis, waste disposal, permitting and health and safety measures.

- The preliminary operation and maintenance cost estimate must consider all key costs including, at a minimum, costs for labor, training, sampling, analysis, maintenance materials, utilities, waste disposal, waste treatment, permitting and health and safety measures.

- Calculate the net present value of preliminary capital and operation and maintenance costs for each corrective measure alternative.

7. Recommendation and Justification of the Corrective Measure Alternative

The Owner/Operator or Respondent shall recommend and justify a corrective measure alternative using the five criteria specified in Section 6. This recommendation shall include summary tables which allow the alternative or alternatives to be easily understood. Tradeoffs among implementability, effectiveness, reliability, and other pertinent factors shall be highlighted.

In addition, the recommended corrective measure alternative(s) must meet the following corrective action standards:

a. Protect human health and the environment;

b. Attain corrective action objectives including media cleanup standards;

c. Control the source(s) of releases so as to reduce or eliminate, to the extent practicable, further releases of hazardous wastes (including hazardous constituents) that may pose a threat to human health and the environment; and

d. Comply with any applicable federal, state, and local standards for management of wastes.

The Owner/Operator or Respondent must document how the recommended alternative meets the corrective action standards (a-d above).

8. Summary of Recommended Corrective Measure Alternative

Provide a description of the recommended corrective measure alternative and qualitatively describe what the alternative is supposed to do and how it will function at the facility.

ATTACHMENT 6

SCOPE OF WORK FOR CORRECTIVE MEASURES IMPLEMENTATION

PURPOSE

The purpose of the Corrective Measures Implementation (CMI) program is to design, construct, operate, maintain and monitor the performance of the corrective measure or measures selected by the Department. Corrective measures are intended to protect human health and/or the environment from hazardous waste releases from the Facility. The Owner/Operator or Respondent will furnish all personnel, materials and services necessary to implement the corrective measures program.

SCOPE

The documents required for Corrective Measures Implementation are, unless the Department of Toxic Substances Control (Department) specifies otherwise, a Conceptual Design, Operation and Maintenance Plan, Draft Plans and Specifications, Final Plans and Specifications, Construction Workplan, Construction Completion Report, Corrective Measure Completion Report, Health and Safety Plan and Progress Reports. The scope of work (SOW) for each document is specified below. The SOW's are intended to be flexible documents capable of addressing both simple and complex site situations. If the Owner/Operator or Respondent can justify, to the satisfaction of the Department, that a plan and/or report or portions thereof are not needed in the given site specific situation, then the Department may waive that requirement.

The Department may require the Owner/Operator or Respondent to conduct additional studies beyond what is discussed in the SOW's in order to support the CMI program. The Owner/Operator or Respondent will furnish all personnel, materials and services necessary to conduct the additional tasks.

A. Conceptual Design

The Owner/Operator or Respondent shall prepare a Conceptual Design (CD) that clearly describes the size, shape, form, and content of the proposed corrective measure, the key components or elements that are needed, describes the designers vision of the corrective measure in the form of conceptual drawings and schematics, and includes procedures and schedules for implementing the corrective measure(s).

It should be noted that more that one conceptual design may be needed in situations where there is a complex site with multiple technologies being employed at different

locations. The CD must be approved by the Department prior to implementation. The CD must, at a minimum, include the following elements:

1. Introduction/Purpose

Describe the purpose of the document and provide a summary description of the project.

2. Corrective Measure Objectives

Discuss the corrective measure objectives including applicable media cleanup standards.

3. Conceptual Model of Contaminant Migration

It is important to know where the contaminants are and to understand how they are moving before an adequate corrective measure can be developed. To address this critical question, the Owner/Operator or Respondent must present a conceptual model of the site and contaminant migration. The conceptual model consists of a working hypothesis of how the contaminants may move from the release source to the receptor population. The conceptual model is developed by looking at the applicable physical parameters (e.g., water solubility, density, Henry's Law Constant, etc.) for each contaminant and assessing how the contaminant may migrate given the existing site conditions (geologic features, depth to groundwater, etc.). Describe the phase (water, soil, gas, non-aqueous) and location where contaminants are likely to be found. This analysis may have already been done as part of earlier work (e.g., Current Conditions Report). If this is the case, then provide a summary of the conceptual model with a reference to the earlier document;

4. Description of Corrective Measures

Considering the conceptual model of contaminant migration, qualitatively describe what the corrective measure is supposed to do and how it will function at the Facility. Discuss the constructability of the corrective measure and its ability to meet the corrective measure objectives.

5. Data Sufficiency

Review existing data needed to support the design effort and establish whether or not there are sufficient accurate data available for this purpose. The Owner/Operator or Respondent must summarize the assessment findings and specify any additional data needed to complete the corrective measure design. The Department may require or the Owner/Operator or Respondent may propose that sampling and analysis plans and/or

treatability study workplans be developed to obtain the additional data. Submittal times for any new sampling and analysis plans and/or treatability study workplans must be included in the project schedule.

6. Project Management

Describe the management approach including levels of authority and responsibility (include organization chart), lines of communication and the qualifications of key personnel who will direct the corrective measure design and implementation effort (including contractor personnel).

7. Project Schedule

The project schedule must specify all significant steps in the process and when all CMI deliverables (e.g., Operation and Maintenance Plan, Corrective Measure Construction Workplan, etc.) are to be submitted to the Department.

8. Design Criteria

Specify performance requirements for the overall corrective measure and for each major component. The Owner/Operator or Respondent must select equipment that meets the performance requirements.

9. Design Basis

Discuss the process and methods for designing all major components of the corrective measure. Discuss the significant assumptions made and possible sources of error. Provide justification for the assumptions;

10. Conceptual Process/Schematic Diagrams.

11. Site plan showing preliminary plant layout and/or treatment area.

12. Tables listing number and type of major components with approximate dimensions.

13. Tables giving preliminary mass balances.

14. Site safety and security provisions (e.g., fences, fire control, etc.).

15. Waste Management Practices

Describe the wastes generated by the construction of the corrective measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed;

16. Required Permits

List and describe the permits needed to construct and operate the corrective measure. Indicate on the project schedule when the permit applications will be submitted to the applicable agencies and an estimate of the permit issuance date.

17. Long-Lead Procurement Considerations

The Owner/Operator or Respondent shall prepare a list of any elements or components of the corrective measure that will require custom fabrication or for some other reason must be considered as long-lead procurement items. The list must include the reason why the items are considered long-lead items, the length of time necessary for procurement, and recognized sources of such procurement;

18. Appendices including:

- Design Data - Tabulations of significant data used in the design effort;
- Equations - List and describe the source of major equations used in the design process; Sample Calculations - Present and explain one example calculation for significant or unique design calculations; and
- Laboratory or Field Test Results.

B. Operation and Maintenance Plan

The Owner/Operator or Respondent shall prepare an Operation and Maintenance (O&M) Plan that includes a strategy and procedures for performing operations, long term maintenance, and monitoring of the corrective measure. A draft Operation and Maintenance Plan shall be submitted to the Department simultaneously with the draft Plans and Specifications. A final Operation and Maintenance Plan shall be submitted to the Department simultaneously with the final Plans and Specifications. The O&M plan shall, at a minimum, include the following elements:

1.Introduction/Purpose

Describe the purpose of the document and provide a summary description of the project.

2. Project Management

Describe the management approach including levels of authority and responsibility (include organization chart), lines of communication and the qualifications of key personnel who will operate and maintain the corrective measures (including contractor personnel);

3. System Description

Describe the corrective measure and identify significant equipment.

4. Personnel Training

Describe the training process for O&M personnel. The Owner/Operator or Respondent shall prepare, and include in the technical specifications governing treatment systems, contractor requirements for providing: appropriate service visits by experienced personnel to supervise the installation, adjustment, start up and operation of the treatment systems, and training covering appropriate operational procedures once the start-up has been successfully accomplished.

5. Start-Up Procedures

Describe system start-up procedures including any operational testing.

6. Operation and Maintenance Procedures

Describe normal operation and maintenance procedures including:

a. Description of tasks for operation;
b. Description of tasks for maintenance;
c. Description of prescribed treatment or operation conditions; and
d. Schedule showing frequency of each O&M task.

7. Replacement schedule for equipment and installed components.

8. Waste Management Practices

Describe the wastes generated by operation of the corrective measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed.

9. Sampling and Monitoring

Sampling and monitoring activities may be needed for effective operation and maintenance of the corrective measure. If sampling activities are necessary, the O&M plan must include a complete sampling and analysis section which specifies the following information:

a. Description and purpose of monitoring tasks;
b. Data quality objectives;
c. Analytical test methods and detection limits;
d. Name of analytical laboratory;
e. Laboratory quality control (include laboratory QA/QC procedures in appendices)
f. Sample collection procedures and equipment;
g. Field quality control procedures:
   - duplicates (10% of all field samples)
   - blanks (field, equipment, etc.)
   - equipment calibration and maintenance
   - equipment decontamination
   - sample containers
   - sample preservation
   - sample holding times (must be specified)
   - sample packaging and shipment
   - sample documentation (field notebooks, sample labeling, etc);
h. Criteria for data acceptance and rejection; and
i. Schedule of monitoring frequency.

The Owner/Operator or Respondent shall follow all EPA guidance for sampling and analysis. The Department may request that the sampling and analysis section be a separate document.

10. Corrective Measure Completion Criteria

Describe the process and criteria (e.g., groundwater cleanup goal met at all compliance points for 1 year) for determining when corrective measures may cease. Also describe the process and criteria for determining when maintenance and monitoring may cease. Criteria for corrective measures such as a landfill cap must be carefully crafted to account for the fact that a landfill cap will never actually "cease" but will need to be maintained and monitored for a long period of time. Satisfaction of the completion criteria will trigger preparation and submittal of the Corrective Measures Completion Report.

11. O&M Contingency Procedures:

a. Procedures to address system breakdowns and operational problems including a list of redundant and emergency back-up equipment and procedures;

b. Should the corrective measure suffer complete failure, specify alternate procedures to prevent release or threatened releases of hazardous substances, pollutants or contaminants which may endanger public health and/or the environment or exceed cleanup standards;

c. The O&M Plan must specify that, in the event of a major breakdown and/or complete failure of the corrective measure (includes emergency situations), the Owner/Operator or Respondent will orally notify the Department within 24 hours of the event and will notify the Department in writing within 72 hours of the event. The written notification must, at a minimum, specify what happened, what response action is being taken and/or is planned, and any potential impacts on human health and/or the environment; and

d. Procedures to be implemented in the event that the corrective measure is experiencing major operational problems, is not performing to design specifications and/or will not achieve the cleanup goals in the expected timeframe. For example, in certain circumstances both a primary and secondary corrective measure may be selected for the Facility. If the primary corrective measure were to fail, then the secondary would be implemented. This section would thus specify that if the primary corrective measure failed, then design plans would be developed for the secondary measure.

12. Data Management and Documentation Requirements

Describe how analytical data and results will be evaluated, documented and managed, including development of an analytical database. State the criteria that will be used by the project team to review and determine the quality of data.

The O&M Plan shall specify that the Owner/Operator or Respondent collect and maintain the following information:

a. Progress Report Information

- Work Accomplishments (e.g., performance levels achieved, hours of treatment operation, treated and/or excavated volumes, concentration of contaminants in treated and/or excavated volumes, nature and volume of wastes generated, etc.).

- Record of significant activities (e.g., sampling events, inspections, problems encountered, action taken to rectify problems, etc.).

b. Monitoring and laboratory data;
c. Records of operating costs; and
d. Personnel, maintenance and inspection records.

These data and information should be used to prepare Progress Reports and the Corrective Measure Completion Report.

C. Draft Plans and Specifications

The Owner/Operator or Respondent shall prepare draft Plans and Specifications that are based on the Conceptual Design but include additional design detail. A draft Operation and Maintenance Plan and Construction Workplan shall be submitted to the Department simultaneously with the draft Plans and Specifications. The draft design package must include drawings and specifications needed to construct the corrective measure. Depending on the nature of the corrective measure, many different types of drawings and specifications may be needed. Some of the elements that may be required are:

- General Site Plans
- Process Flow Diagrams
- Mechanical Drawings
- Electrical Drawings
- Structural Drawings
- Piping and Instrumentation Diagrams
- Excavation and Earthwork Drawings
- Equipment Lists
- Site Preparation and Field Work Standards
- Preliminary Specifications for Equipment and Material

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the project specifications to the Department, the Owner/Operator or Respondent shall:

a. Proofread the specifications for accuracy and consistency with the conceptual design; and

b. Coordinate and cross-check the specifications and drawings.

D. Final Plans and Specifications (100% Design Point)

The Owner/Operator or Respondent shall prepare final Plans and Specifications that are sufficient to be included in a contract document and be advertised for bid. A final Operation and Maintenance Plan and Construction Workplan shall be submitted to the Department simultaneously with the final Plans and Specifications. The final design package must consist of the detailed drawings and specifications needed to construct the corrective measure. Depending on the nature of the corrective measure, many different types of drawings and specifications may be needed. Some of the elements that may be required are:

- General Site Plans
- Process Flow Diagrams
- Mechanical Drawings
- Electrical Drawings
- Piping and Instrumentation Diagrams
- Structural Drawings
- Excavation and Earthwork Drawings
- Site Preparation and Field Work Standards
- Construction Drawings
- Installation Drawings
- Equipment Lists
- Detailed Specifications for Equipment and Material

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the final project specifications to the Department, the Owner/Operator or Respondent shall:

a. Proofread the specifications for accuracy and consistency with the preliminary design; and

b. Coordinate and cross-check the specifications and drawings.

E. Construction Workplan

The Owner/Operator or Respondent shall prepare a Construction Workplan which documents the overall management strategy, construction quality assurance procedures and schedule for constructing the corrective measure. A draft Construction Workplan shall be submitted to the Department simultaneously with the draft Plans and Specifications and draft Operation and Maintenance Plan. A final Construction Workplan shall be submitted to the Department simultaneously with the final Plans and Specifications and final Operation and Maintenance Plan. Upon receipt of written

approval from the Department, the Owner/Operator or Respondent shall commence the construction process and implement the Construction Workplan in accordance with the schedule and provisions contained therein. The Construction Workplan must be approved by the Department prior to the start of corrective measure construction. The Construction Workplan must, at a minimum, include the following elements:

1. Introduction/Purpose

Describe the purpose of the document and provide a summary description of the project.

2. Project Management

Describe the construction management approach including levels of authority and responsibility (include organization chart), lines of communication and the qualifications of key personnel who will direct the corrective measure construction effort and provide construction quality assurance/quality control (including contractor personnel);

3. Project Schedule

The project schedule must include timing for key elements of the bidding process, timing for initiation and completion of all major corrective measure construction tasks as specified in the Final Plans and Specifications, and specify when the Construction Completion Report is to be submitted to the Department;

4. Construction Quality Assurance/Quality Control Program

The purpose of construction quality assurance is to ensure, with a reasonable degree of certainty, that a completed corrective measure will meet or exceed all design criteria, plans and specifications. The Construction Workplan must include a complete construction quality assurance program to be implemented by the Owner/Operator or Respondent.

5. Waste Management Procedures

Describe the wastes generated by construction of the corrective measure and how they will be managed.

6. Sampling and Analysis

Sampling and monitoring activities may be needed for construction quality assurance/quality control and/or other construction related purposes. If sampling

activities are necessary, the Construction Workplan must include a complete sampling and analysis section which specifies the following information:

a. Description and purpose of monitoring tasks;
b. Data quality objectives;
c. Analytical test methods and detection limits;
d. Name of analytical laboratory;
e. Laboratory quality control (include laboratory QA/QC procedures in appendices)
f. Sample collection procedures and equipment;
g. Field quality control procedures:
   - duplicates (10% of all field samples)
   - blanks (field, equipment, etc.)
   - equipment calibration and maintenance
   - equipment decontamination
   - sample containers
   - sample preservation
   - sample holding times (must be specified)
   - sample packaging and shipment
   - sample documentation (field notebooks, sample labeling, etc);
h. Criteria for data acceptance and rejection; and
i. Schedule of monitoring frequency.

The Owner/Operator or Respondent shall follow all Department and USEPA guidance for sampling and analysis. The Department may request that the sampling and analysis section be a separate document.

7. Construction Contingency Procedures

a. Changes to the design and/or specifications may be needed during construction to address unforeseen problems encountered in the field. Procedures to address such circumstances, including notification of the Department, must be included in the Construction Workplan;

b. The Construction Workplan must specify that, in the event of a construction emergency (e.g., fire, earthwork failure, etc.), the Owner/Operator or Respondent will orally notify the Department within 24 hours of the event and will notify the Department in writing within 72 hours of the event. The written notification must, at a minimum, specify what happened, what response action is being taken and/or is planned, and any potential impacts on public health and/or the environment; and

c. Procedures must be implemented if unforeseen events prevent corrective measure construction. For example, in certain circumstances both a primary

and secondary corrective measure may be selected for the Facility. If the primary corrective measure could not be constructed, then the secondary would be implemented. This section would thus specify that if the primary corrective measure could not be constructed, then design plans would be developed for the secondary measure.

8. Construction safety procedures should be specified in a separate Health and Safety Plan.

9. Data Management and Documentation Requirements

Describe how analytical data and results will be evaluated, documented and managed, including development of an analytical database. State the criteria that will be used by the project team to review and determine the quality of data.

The Construction Workplan shall specify that the Owner/Operator or Respondent collect and maintain the following information:

a. Progress Report Information

- Work Accomplishments (e.g., hours of operation, excavated volumes, nature and volume of wastes generated, area of cap completed, length of trench completed, etc.).

- Record of significant activities (e.g., sampling events, inspections, problems encountered, action taken to rectify problems, etc.).

b. Monitoring and laboratory data;
c. Records of construction costs; and
d. Personnel, maintenance and inspection records. This data and information should be used to prepare progress reports and the Construction Completion Report.

10. Cost Estimate/Financial Assurance

If financial assurance for corrective measure construction and operation is required by an enforcement order, facility permit, or through use of Department discretion, the Construction Workplan must include a cost estimate, specify which financial mechanism will be used and when the mechanism will be established. The cost estimate shall include both construction and operation and maintenance costs. An initial cost estimate shall be included in the draft Construction Workplan and a final cost estimate shall be included in the final Construction Workplan. The financial assurance mechanism may include a performance or surety bond, a trust fund, a letter of credit, financial test and corporate guarantee equivalent to that in 40 CFR 265.143 or any other mechanism acceptable to the Department.

Financial assurance mechanisms are used to assure the Department that the Owner/Operator or Respondent has adequate financial resources to construct and operate the corrective measure.

F. Construction Completion Report

The Owner/Operator or Respondent shall prepare a Construction Completion (CC) Report which documents how the completed project is consistent with the Final Plans and Specifications. A CC Report shall be submitted to the Department when the construction and any operational tests have been completed. The CC Report shall, at a minimum, include the following elements:

1. Purpose;

2. Synopsis of the corrective measure, design criteria, and certification that the corrective measure was constructed in accordance with the Final Plans and Specifications;

3. Explanation and description of any modifications to the Final Plans and Specifications and why these were necessary for the project;

4. Results of any operational testing and/or monitoring, indicating how initial operation of the corrective measure compares to the design criteria;

5. Summary of significant activities that occurred during construction. Include a discussion of problems encountered and how they were addressed;

6. Summary of any inspection findings (include copies of key inspection documents in appendices);

7. As built drawings; and

8. A schedule indicating when any treatment systems will begin full scale operations.

G. Corrective Measure Completion Report

The Owner/Operator or Respondent shall prepare a Corrective Measure Completion (CMC) Report when the Owner/Operator or Respondent believes that the corrective measure completion criteria have been satisfied. The purpose of the CMC Report is to fully document how the corrective measure completion criteria have been satisfied and to justify why the corrective measure and/or monitoring may cease. The CMC Report shall, at a minimum, include the following elements:

1. Purpose;

2. Synopsis of the corrective measure;

3. Corrective Measure Completion Criteria

   Describe the process and criteria for determining when corrective measures, maintenance and monitoring may cease. Corrective measure completion criteria were given in the final Operation and Maintenance (O&M) Plan;

4. Demonstration that the completion criteria have been met. Include results of testing and/or monitoring, indicating how operation of the corrective measure compares to the completion criteria;

5. Summary of work accomplishments (e.g., performance levels achieved, total hours of treatment operation, total treated and/or excavated volumes, nature and volume of wastes generated, etc.);

6. Summary of significant activities that occurred during operations. Include a discussion of problems encountered and how they were addressed;

7. Summary of inspection findings (include copies of key inspection documents in appendices); and

8. Summary of total operation and maintenance costs.

H. Health and Safety Plan

The Owner/Operator or Respondent must prepare a Health and Safety Plan for construction, operation and maintenance of the corrective measure. The Health and Safety Plan will not be approved by the Department. The Health and Safety Plan must, at a minimum, include the following elements:

1. Objectives

Describe the goals and objectives of the Health and Safety Plan (must apply to on-site personnel and visitors). The Health and Safety Plan must be consistent with the Facility Contingency Plan, Occupational Safety and Health Administration (OSHA) Regulations, NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site

Activities (1985), all state and local regulations and other Department guidance as provided.

2. Hazard Assessment

List and describe the potentially hazardous substances that could be encountered by field personnel during construction and/or operation and maintenance activities. Discuss the following:

- Inhalation Hazards
- Dermal Exposure
- Ingestion Hazards
- Physical Hazards
- Overall Hazard Rating

Include a table that, at a minimum, lists: known contaminants, highest observed concentration, media, symptoms/effects of acute exposure.

3. Personal Protection/Monitoring Equipment

For each operational task, describe personal protection levels and identify all monitoring equipment. Describe any action levels and corresponding response actions (i.e., when will levels of safety be upgraded). Describe decontamination procedures and areas.

4. Site Organization and Emergency Contacts

List and identify all contacts (include phone numbers). Identify the nearest hospital and provide a regional map showing the shortest route from the facility to the hospital. Describe site emergency procedures and any site safety organizations. Include evacuation procedures for neighbors (where applicable). Include a Facility Map showing emergency station locations (first aid, eye wash areas, etc.).

I. Progress Reports

The Owner/Operator or Respondent shall provide the Department with signed bi-monthly progress reports during corrective measure design, construction, operation and maintenance. The Department may adjust the frequency of progress reporting to address site specific needs. For example, more frequent progress reports may be needed to track critical activities such as corrective measure construction and start-up. Progress reports must, at a minimum, include the following elements:

1. A description of significant activities and work completed during the reporting period;

2. Summary of system effectiveness. Provide a comparison of system operation to predicted performance levels (applicable only during operation of the corrective measure);

3. Summaries of all findings (including any inspection results);

4. Summaries of all contacts with representatives of the local community, public interest groups or State government during the reporting period;

5. Summaries of all problems or potential problems encountered during the reporting period;

6. Actions being taken and/or planned to rectify problems;

7. Changes in personnel during the reporting period;

8. Projected work for the next reporting period; and

9. If requested by the Department, the results of any sampling tests and/or other data generated during the reporting period.

J. Submittal Summary

The following list provides a summary of when and how key documents should be submitted to the Department.

1. The submittal schedule for the documents listed below should be included in an enforcement order, permit or otherwise specified by the Department.

   - Conceptual Design

2. The submittal schedule for the documents listed below must be specified in the Conceptual Design. The groupings reflect which documents should be submitted together.

   - Draft Plans and Specifications
   - Draft Operation and Maintenance Plan
   - Draft Construction Workplan
   - Final Plans and Specifications
   - Final Operation and Maintenance Plan
   - Final Construction Workplan

- Health and Safety Plan

3. The submittal schedule for the document listed below must be specified in the Final Construction Workplan.

   - Construction Completion Report

4. The submittal schedule for the document listed below is based on when the Owner/Operator or Respondent believes the completion criteria have been satisfied.

   - Corrective Measure Completion Report

5. The submittal schedule for Progress Reports shall be bimonthly unless otherwise specified by the Department.

ATTACHMENT 7

SCOPE OF WORK FOR PROGRESS REPORTS

The Owner/Operator or Respondent shall provide the Department with signed quarterly progress reports. The Department may adjust the frequency of progress reporting to address site specific needs. For example, more frequent progress reports may be needed to track critical activities such as corrective measure construction and start-up. Progress reports must, at a minimum, include the following elements:

1. All Actions taken during the reporting period to achieve compliance with the Consent Order;
2. A summary of any findings made during the reporting period;
3. All problems or potential problems encountered during the well reporting period (also discuss problem solutions);
4. List all documents and dates submitted to DTSC during the reporting period and dates documents are anticipated to be submitted to DTSC during the next reporting period;
5. All projected work for the next reporting period;
6. A discussion of any changes in personnel and/or contractors that have occurred during the reporting period;
7. Summaries of all contacts with representatives of the press, local community or public interest groups;
8. Submit copies of published press or news articles associated with onsite and offsite facility or historical facility operations;
9. Provided an updated MS Project Schedule;
10. If requested by the Department, the results of any sampling, tests or other data generated during the RCRA Facility Investigations or Corrective Measure Study;
11. Provide a current list of documents available in the information repository. Provide verification that these documents are present and are easily assessable.

EXHIBIT A
COST ESTIMATE WORKSHEET
Corrective Action Consent Agreement
Date: April 21, 2022
Raytheon Systems Co.
Site Code 300336

DTSC Project Team		Site Mitigation		Toxicology	Geology	Industrial Hygienist	Engineering	Public Participation	CEQA	Legal	Project Assistants	
		Project Manager	Supervisor									
Classification (personnel)		ES	Sr. HSE (Sup)	Staff Toxicologist	Engineering Geologist	Assoc IH	HSE	PPS	Enviromental Planner	Attorney	OT	APA
TASK												
Agreement preparation, negotiation and issuance		6								2		
Scoping Meeting/Site Visit		8	8	8	8							
Revised Closure Plan		8	4	5	5		5					
Review and comment Current Conditions Report		15	5	10	10		8					
Interim Measures												
- Workplan		15		10	10	4	8					
- Implementation		8			8							
- Report		15		10	10		8					
- Public Participation (Community Profile, public notice and community update)		10						15				
- CEQA		16							16			
Facility Investigation												
- Workplan		15		8	8							
- Implementation		10		8	8	2						
- Health and Safety Plan						4						
- Report		15		10	10							
8 Project Management		15	8	8	8		8			2		
Total No. Hours/Class		156	25	77	85	10	37	15	16	4	0	0
Hourly Rate/Class		$189	$339	$256	$263	$305	$261	$161	$219	$305	$102	
Cost/Class		$29,484	$8,475	$19,712	$22,355	$3,050	$9,657	$2,415	$3,504	$1,220	$0	$0
Total	$99,872											
Advance Payment	**$49,936**											

EXHIBIT C

EXHIBIT C

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☒	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d. Be located on a site that 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?	☐	☐	☒	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

The following analysis is based on the Phase I Environmental Site Assessment Report (Phase I ESA) dated February 1, 2021, prepared by Partner Engineering and Science Inc., and provided as **Appendix F**.

Impact Analysis

a. Less Than Significant Impact. A significant impact could occur if a project would create a significant hazard to the public or environment though the routine transport, use, or disposal of hazardous materials. The Project Site is zoned [T][Q]M1-1, which is a Limited Industrial (M1-1) zone with certain qualifying [Q] and temporary [T] conditions. The [Q] conditions applied to the property limit the allowed uses on the Site and are more restrictive than what is normally allowed in the M1-1 zone. Consequently, there are no allowed uses which would involve the routine transport, use, or disposal of hazardous materials in significant quantities.

Hazardous materials are defined by California Health and Safety Code section 25501, and reportable quantities in section 25507. Any substance or product for which the manufacturer is required to prepare a material safety data sheet is considered a hazardous material. There are many common household products that qualify as hazardous materials, and businesses in the proposed buildings will no doubt use cleansers or petroleum products, for example, that would qualify as hazardous materials. However, in order to represent a potentially significant impact a business would need to be engaged in an activity that routinely uses, stores, or creates reportable quantities of hazardous substances.

As specified by Ordinance No. 180,844,[38] the Project Site's [Q] Conditions of Approval, Development Conditions (#3) allow certain uses such as assembly and manufacture of electrical devices, and research and development laboratories, which could potentially utilize hazardous materials. However, these types of light industrial uses do not require the routine use, storage, or manufacture of reportable quantities of hazardous materials. Additionally, the Project Site's [Q] Conditions of Approval, Development Conditions (#2) limits uses to those that do not have a negative effect upon surrounding properties. Specifically, Development Condition #2 of the Site's [Q] Conditions of Approval states the following:

> *Use Limitations. All industrial and manufacturing uses shall be consistent with accepted principals of "light industrial" uses in which the processes carried on, the machinery used, and the goods and commodities carried to and from the premises will not cause any injury to, or will not adversely affect the amenity of the surrounding residential area by reason of the emission of light, noise, vibration, smell, fumes, smoke, vapor, steam, soot, ash, dust, wastewater or other waste products.*

Given that any use proposed for the Site must be provided clearance from the Planning department, the intent, purpose, and letter of the [Q] conditions would be enforced. Although unlikely, if an allowed use did require the occasional utilization of hazardous materials in reportable quantities, it would be required to obtain a permit from the Los Angeles Fire Department (LAFD) ensuring proper storage, handling, and disposal, and all activities employing the materials would be required to take place indoors per requirements of the zoning. It would also be required to submit a Hazardous Materials Business Plan which would assist emergency responders in planning for emergencies at the Site. Because of these safeguards, and because it is anticipated that no allowed use would involve the routine utilization of reportable quantities of hazardous materials, the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during operations, and potential impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

b. Potentially Significant Unless Mitigation Incorporated. A significant impact could occur if a project would 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. As stated in Section IX(a,) uses allowed on the Site are limited and none of the permitted uses would be expected to routinely use, store, or manufacture reportable quantities of hazardous materials. It is unlikely that any of the allowed uses would conduct activities that could potentially release hazardous materials into the environment if there was an accident condition during operations.

During construction activities, the Project could potentially result in the release of hazardous materials during grading if hazardous materials or conditions exist on the Site. Previous development within the Site consisted primarily of open space with a single-story building that occupied the northern corner of the property until the current parking lot was developed over the Site in approximately 1998-1999, which included removal of the previous structure. According to the Phase I ESA, the Project Site is located within

[38] City of Los Angeles Ordinance No. 180,844, Effective September 28, 2009, Council File No. 09-1510

the boundaries of the former Hughes Missile Systems facility, which is the subject of an open Corrective Action Case associated with releases of contaminants from the former Hughes facility.

Recognized Environmental Conditions

A recognized environmental condition (REC) refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The Phase I ESA did not identify any REC for the Subject Property.

Controlled Recognized Environmental Condition

A controlled recognized environmental condition (CREC) refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The Phase I ESA did not identify any CREC for the Subject Property.

Historic Recognized Environmental Condition

The Phase I ESA documented a Historic Recognized Environmental Condition (HREC) of the Site regarding groundwater impacted by historical releases of contaminants to the northwest of the Project Site associated with the former Hughes's operations, which was the subject of a remediation and monitoring program. According to the Phase I ESA groundwater remediation with injection wells has been underway since 1995 to achieve cleanup criteria at the contaminated site. Under the oversight of the RWQCB, the primary objective of the remediation program is to accelerate the degradation of VOCs to concentrations below the cleanup goals established in the 1992 Corrective Action Plan, which was most recently amended in 2016 (Addendum No. 5). Remediation techniques used at the Site have included remedial excavation, a groundwater recovery and treatment system, a soil vapor extraction system, and an air sparge system. Enhanced in-situ bioremediation was implemented in 2005 to 2020. The majority of the treatment areas are located to the northwest (0.17-mile from the Subject Property) of the Subject Property and along the northwestern boundary (0.34-mile from the Subject Property) of the Former Hughes facility. Two monitoring wells were located on the Project Site (and several others outside of the Project Site) and on March 22, 2018, the Regional Water Quality Control Board (RWQCB) concluded that the southern portion of the former Hughes facility, including the Project Site, had met the Regional Board requirements for groundwater closure and issued a No Further Action letter on March 22, 2018. The monitoring wells on the Project Site, CM-10 and CM-17, were removed on September 6th and 10th, 2018. Based on the analytical results and regulatory case closure, the impacts to groundwater beneath the Subject Property are considered to be HRECs. An HREC is defined in the ASTM International (formerly known as the American Society for Testing and Materials) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E1527-13) as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls." There are no use restrictions associated with an HREC that would indicate a potential for construction activities to potentially release hazardous materials into the environment.

Environmental Issue

The Phase I ESA reports that an "environmental issue" refers to environmental concerns identified within the Phase I ESA that does not qualify as a REC; however, warrants further discussion. The Phase I ESA identified an "environmental issue" related to the open Corrective

Action Case regarding the Hughes facility Area of Concern (AOC) noted by the Department of Toxic Substance Control (DTSC), which was described as follows:

> *The Subject Property is located within the boundary of the open Corrective Action Case for the former Hughes Missile Systems facility. Additional investigations and/or submittals may be requested by the DTSC for the Subject Property since two AOCs including Solid Waste Management Unit (SWMU)-9 (Sanitary Sewer) and AOC-12 (Storm Sewers), were identified at the Subject Property in the 2008 RCRA Facility Assessment Report and remain uninvestigated. Closure certification and completion corrective action are outstanding. Partner notes that the DTSC has not investigated or required investigation of the sanitary and storm sewers.*

The DTSC has not required investigations but considers both the site-wide sewer line and storm drain system as requiring further investigation. As reported in the Phase I ESA, a Resource Conservation and Recovery Act (RCRA) Facility Assessment Report (2008)[39] indicated that AOCs including Solid Waste Management Unit (SWMU)-9 (Sanitary Sewer) and AOC-12 (Storm Sewers) were identified at the Subject Property, with the following descriptions:

- SWMU-9 is defined as the Site wide sewer line. Releases to soil near soil boring BSL-4. Constituents include arsenic. The report notes that the Site wide assessment in 1991 did not show any metal contamination at detection limits. One sample had a trace (0.009 milligram per kilogram (mg/kg)) of toluene. Sample B-SL had 0.3 mg/kg of toluene. No other VOCs were detected. DTSC concluded that there was a need to determine if any issues remain.
- AOC-12 is defined as the Site wide storm water system. Releases are suspected.

According to guidance provided in a letter from the DTSC to the City of Los Angeles dated August 5, 2008, a soil sampling work plan would be required to be submitted to the DTSC for any construction proposed in an AOC or SWMU identified in the RCRA Facility Assessment Report (2008). If DTSC determines that contaminants are above acceptable levels for the intended use on a particular area of the Property, DTSC would require submission and approval of a remediation plan to address the contamination prior to issuance of a building permit. As reported in the Phase I ESA, the referenced RCRA Facility Assessment document identifies an AOC regarding onsite storm sewers, and an SWMU regarding an existing sewer line that crosses the Site, which the Project would relocate/realign within the property.

According to the Phase I ESA, soil at the Subject Property and larger Corporate Pointe at West Hills (formerly the Hughes Missile Systems facility)[40] is being managed under a Soil Management Plan prepared by Environ International Corporation dated May 12, 2008. The Phase I ESA makes the following Conclusions, Opinions and Recommendations:

- Further evaluation of subsurface environmental conditions is not warranted at this time.
- Manage any disturbance of onsite soils with existing Soil Management Plan as needed.
- Further assessment of onsite soils in the vicinity of the sewer lines may be required in the future by DTSC as part of ongoing open, Corrective Action Case for the former Hughes Missiles Co./Raytheon Systems Co. Facility. Note that the DTSC has not yet required investigation of these areas.

[39] Department of Toxic Substances Control, RCRA Facility Assessment. Hughes Missile Systems Company Canoga Park Facility (Raytheon) EPA ID – CAD041162124, January 30, 2008.
[40] Also referred to as the Former Canoga Park Facility and Raytheon Canoga Park Site in the Phase I ESA.

All grading activities require grading permits from the LADBS, which include requirements and standards designed to limit potential impacts to acceptable levels. The first 10-12 feet of soil on the Site is fill material and grading and construction is unlikely to require excavation below that level. However, the Project will require a realignment of the onsite sewer line that connects to the sewer system, which will require excavating existing pipe associated with SWMU-9 and trenching to install a replacement segment through the property that would not pass below the proposed structures.

The Project would be required to implement the [Q] Qualified Conditions of Approval Environmental Condition #35, which requires the applicant comply with recommendations of the State of California Department of Toxic Substances Control, outlined in the letter dated August 5, 2008. The recommendations of the DTSC letter referenced in the [Q] Qualified Conditions of Approval Environmental Condition #35 are included here as **Mitigation Measure MM-HAZ-1 (Soil Sampling and Remediation)** augmented with specific performance criteria to address the potential release of hazardous materials during construction.

Mitigation Measure MM-HAZ-1 (Soil Sampling and Remediation)

- There shall be no restrictions on development in those areas on the Property not identified as an Area of Concern (AOC) or Solid Waste Management Unit (SWMU) in the documents entitled, "RCRA Facility Assessment, Hughes Missile Systems Company, Canoga Park Facility (Raytheon), EPA ID – CAD041162124", dated January 30, 2008.
- A soil sampling work plan shall be submitted to the Department of Toxic Substances Control (DTSC) for approval, before the issuance of a building permit for any construction in an identified AOC or SWMU within the Property.
- The applicant shall enter into a contract with a qualified, independent third-party firm to conduct the soil sampling and laboratory testing to implement the soil sampling work plan as approved by DTSC.
- The soil sampling plan shall at a minimum include soil testing within areas of the property that the project would disturb within the AOC or SWMU identified in the RCRA Facility Assessment, Hughes Missile Systems Company, Canoga Park Facility (Raytheon), EPA ID – CAD041162124", dated January 30, 2008, which consists of the storm sewers (AOC-12) and the sanitary sewer (SWMU-9).
- The soil sampling plan shall include testing for the presence of volatile organic compounds and determine if they are detected in concentrations exceeding any applicable Screening Level for Commercial/Industrial Soil (mg/kg), Cancer Endpoint levels established by the DTSC, which are listed in the *Human Health Risk Assessment (HHRA) Note Number 3, DTSC-modified Screening Levels* (June 2020) within Table 1: HHRA Note 3, June 2020, DTSC-recommended Screening Levels for Soil Analytes of that document.
- The applicant shall submit the results of the soil sampling plan to the DTSC for review and comment before the issuance of a building permit for any construction in an identified AOC or SWMU within the Property.
- Development and use of the Property may continue without further DTSC requirements, if DTSC determines that contaminants are at or below acceptable levels for the intended use of the particular areas of the Property.
- If DTSC determines that contaminants are above acceptable levels for the intended use on a particular area of the Property, DTSC shall require submission and approval of a remediation plan to address the contamination and concentrations are reduced to acceptable levels for the intended use of the particular areas of the Property prior to issuance of a building permit.

Additionally, **Regulatory Compliance Measure RC-HAZ-1 (Hazardous Materials Site)** would require confirmation from the Fire Department that any unknown contamination associated with the Site including the sewer line has been adequately remediated or that the proposed development will not impede on-going remediation activities. Therefore, potential impacts related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be less than significant.

Regulatory Compliance Measure RC-HAZ-1 (Hazardous Materials Site)

- Prior to the issuance of any use of land, grading, or building permit, the applicant shall obtain a sign-off from the Fire Department indicating that all on-site hazardous materials, including contamination of the soil and groundwater, have been suitably remediated, or that the proposed Project will not impede proposed or on-going remediation measures.

Mitigation Measures: No mitigation measures are required.

c. Less Than Significant Impact. A significant impact may occur if a project would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The Casa Dei Maria Montessori pre-education school is within 1/4 mile, located at 8230 Fallbrook Avenue. As stated in Section IX(a) uses allowed on the Site are limited and none of the permitted uses would be expected to routinely use, store, or manufacture reportable quantities of hazardous materials. Also, none of the allowed Light Industrial uses would be expected to handle reportable quantities of acutely hazardous materials or engage in activities where hazardous emissions would be generated. A research laboratory may utilize hazardous substances in a controlled environment, for instance, but such a use is not engaged in production and therefore would be unlikely to use or create large quantities of hazardous materials or produce hazardous emissions. Many regulatory measures are in place for workplace chemicals and other hazardous materials. Usage of hazardous materials and machinery are subject to safe handling and usage requirements as labeled. All facilities would be constructed to current Building Codes requirements and would require Proposition 65 labeling pursuant to State of California requirements.

Additionally, as discussed in Section IX(a), the Project Site's [Q] Conditions of Approval, Development Conditions (#2) limits uses to those that do not have a negative effect upon surrounding properties. Specifically, Development Condition #2 of the Site's [Q] Conditions of Approval states the following:

> *Use Limitations. All industrial and manufacturing uses shall be consistent with accepted principals of "light industrial" uses in which the processes carried on, the machinery used, and the goods and commodities carried to and from the premises will not cause any injury to, or will not adversely affect the amenity of the surrounding residential area by reason of the emission of light, noise, vibration, smell, fumes, smoke, vapor, steam, soot, ash, dust, wastewater or other waste products.*

With the specified limitations on allowed onsite land uses, it is not anticipated that the Project would use, store, or dispose of hazardous materials in quantities that could result in a release of toxic emissions that would pose a health hazard beyond regulatory thresholds, and potential impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

d. Less Than Significant Impact. A significant impact could occur if a project would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment. California Government Code Section 65962.5 requires various state agencies to compile lists of hazardous waste

disposal facilities, unauthorized release from underground storage tanks, contaminated drinking water wells, and solid waste facilities from which there is known migration of hazardous waste and submit such information to the Secretary for Environmental Protection on at least an annual basis. As mentioned above the Site has a HREC and the business park the Project Site is within has an REC. These conditions are listed in the State Water Resources Control Board's (SWRCB's) GeoTracker database which makes up part of the Cortese List, the list compiled pursuant to Government Code Section 65962.5.

As explained above in IX(b) the Phase I ESA determined that an existing sewer line and storm drain system that cross the Site are considered Areas of Concern associated with an open corrective Action Case according to the DTSC. RCM-HAZ-1 will ensure compliance with DTSC recommendations, and RCM-HAZ-2 will ensure that if any hazardous materials are detected, handling of the material and proper clean-up activities will be determined by the Fire Department acting as the Certified Unified Program Agency tasked with ensuring such activities adhere to State standards. Therefore, although the Site is included on the Cortese List, it would not result in conditions that could create a significant hazard to the public, or the environment and impacts would be less than significant.

Mitigation Measures: No mitigation measures are required.

e. No Impact. A significant impact could occur if a project would be 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, and would result in a safety hazard or excessive noise for people residing or working in the area. The Project Site is not located within an airport land use plan or within 2 miles of an airport. No impact would occur.

Mitigation Measures: No mitigation measures are required.

f. Less Than Significant Impact. A significant impact could occur if a project would interfere with an emergency response plan or emergency evacuation plan. The Project Site is not located along a Selected Disaster Route within the Safety Element of the City General Plan.[41] Woodlake Avenue is a designated route and less than a half mile to the west of the Project Site. The Project would not physically alter area roadways and therefore would not interfere with use of Woodlake Avenue for emergency response or emergency evacuation.

Development of the Project Site may require temporary partial lane closures of the business park campus internal circulation driveway for grading and/or paving of driveway aprons along the Project boundary, or adjacent roadways to connect utilities to existing offsite infrastructure. While partial lane closures may cause temporary inconvenience, they would only occur during the construction phase, and for a temporary time period. No complete street closures would occur, and the Project would not substantially interfere with emergency response or evacuation plans.

The Project would be required to implement the [Q] Qualified Conditions of Approval Environmental Condition #38 assuring adequate emergency access will be maintained during construction, which is included here as **Regulatory Compliance Measure RC-HAZ-2 (Emergency Access)**.

Regulatory Compliance Measure RC-HAZ-2 (Emergency Access)

- During the Project's construction phase, the applicant shall ensure adequate through-access and emergency access to adjacent uses.

[41] City of Los Angeles, Department of City Planning, General Plan, Safety Element, Exhibit H, Critical Facilities and Lifeline Systems in the City of Los Angeles, Adopted by City Council November 26, 1996.

As the Project would not cause permanent alterations to vehicular circulation routes or impede public access or travel upon public rights-of-way, and would be required to maintain adequate emergency access during construction, the potential to interfere with any adopted emergency response plan or emergency evacuation plan would be less than significant.

Mitigation Measures: No mitigation measures are required.

g. Less Than Significant Impact. A significant impact could occur if a project would expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. The Project Site is located within the Corporate Pointe West Hills Business Park campus, which is situated within a Very High Fire Hazard Severity Zone (VHFHSZ).[42] In the City of Los Angeles, the VHFHSZ comprises most of the hilly and mountainous regions of the City, such as sparsely developed areas around the City boundaries, including undeveloped open space along the City's western boundary in the Project Site vicinity. The VHFHSZ is extended from undeveloped open space areas just north of the Corporate Pointe West Hills Business Park to include the developed business park and the existing parking lot on the Project Site. The business park campus itself does not pose a substantial wildfire hazard as the buildings are surrounded by asphalt parking lots and irrigated landscaping. The Project proposes to redevelop the Site by replacing the existing parking lot with three concrete buildings that would be surrounded by a continuous paved parking area and an irrigated landscape buffer. Therefore the Project would not pose a substantial wildfire hazard that could affect persons or structures in the area in the event of a fire.

Mitigation Measures: No mitigation measures are required.

[42] City of Los Angeles Fire Department, Fire Zone Map, Accessed on June 2, 2021, at: https://www.lafd.org/fire-prevention/brush/fire-zone/fire-zone-map.

EXHIBIT D

EXHIBIT D

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

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May 12, 2022

Mitigated Negative Declaration (MND) for the Proposed Fallbrook Point Project (ENV-2021-10328) (Proposed Project)

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. The City of Los Angeles is the California Environmental Quality Act (CEQA) Lead Agency for the Proposed Project. The following comments include recommended revisions to the CEQA regional air quality impacts analysis for cleanup activities during construction, mobile source health risk assessment, and information about South Coast AQMD rules and permits that the Lead Agency should incorporate in the Final MND.

South Coast AQMD Staff's Summary of Project Information in the MND

Based on the MND, the Lead Agency proposes redeveloping an existing paved parking lot and constructing three buildings totaling 98,614 square feet for warehouse and manufacturing activities on 6.99 acres. The Proposed Project is located at the northwest corner of Fallbrook Avenue and Roscoe Boulevard, situated within a larger Corporate Pointe West Hills Business Park. The 56,114-square-foot warehouse portion with 10 loading docks will involve 45 one-way truck trips per day. Based on a review of aerial photographs, South Coast AQMD staff found that the nearest sensitive receptor (e.g., residence) is within 100 feet of the Proposed Project. Construction of the Proposed Project is anticipated to begin in the final quarter of 2022. Operation is expected to start in 2023.

South Coast AQMD Staff's Comments

CEQA Regional Air Quality Impacts Analysis for Cleanup Activities during Construction

Based on the Hazards and Hazardous Materials Section in the MND and Phase I Environmental Site Assessment (ESA) report, there is a potential for contamination with volatile organic compounds (VOCs) in two areas (SWMU-9 and AOC-12) within the Proposed Project site. It is reasonably foreseeable that cleanup activities for remediating and controlling contaminated soil may occur prior to or concurrently with constructing three buildings. The Lead Agency included Mitigation Measures (MM) HAZ-1 in the MND and recommended further investigation, soil sampling, testing, and preparing a remediation plan to address the contamination and to reduce

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concentrations to acceptable levels for the intended use of the areas of the Proposed Project[1]. However, the Lead Agency did not analyze air quality impacts from cleanup activities in the MND.

Cleanup activities will likely involve the use of heavy-duty, diesel-fueled trucks for soil export and result in emissions from truck hauling activities and vehicle trips by workers that will be required to conduct cleanup activities. Additionally, cleanup activities will likely require the use of additional equipment that may be different from typical equipment for grading and site preparation for construction. If cleanup activities are reasonably foreseeable at the time the MND was prepared, the Lead Agency should use good faith and best efforts to provide information on the scope, types, and duration of cleanup activities, quantify emissions from cleanup activities, and include those emissions in the Proposed Project's construction emissions profile to be compared to South Coast AQMD's air quality CEQA significance thresholds for construction to determine the level of significance in the Final MND. Alternatively, if emissions from cleanup activities are not included in the Final MND, the Lead Agency should include a new air quality mitigation measure in the Air Quality Section of the Final MND to commit to evaluating the potential environmental impacts from cleanup activities through CEQA prior to commencing any cleanup activities. If a new air quality mitigation measure is not included in the Final MND, the Lead Agency should provide reasons supported by substantial evidence in the record to explain why a new air quality mitigation measure is not included. A-1

Based on the emission calculations from the CalEEMod output files, the Lead Agency used the default one-way truck trip length of 20 miles to quantify the Proposed Project's construction emissions from hauling construction materials and importing or exporting soil. The MND identified Sunshine Canyon Landfill as the nearest municipal waste landfill within Los Angeles County that could serve the Proposed Project[2]. If cleanup activities would include removing and disposal of contaminated soil, depending on the type of contamination, contaminated soil may not be accepted at Sunshine Canyon Landfill. It may need to be disposed of at a permitted hazardous disposal facility outside Los Angeles County with a one-way truck trip length that is likely longer than 20 miles. Therefore, South Coast AQMD staff recommends that the Lead Agency identify the permitted hazardous disposal facility that the Proposed Project could use to dispose contaminated soil if the cleanup activities involve transport and off-site disposal of contaminated soil and disclose the information in the Final MND. When quantifying emissions from transport and off-site disposal, the Proposed Project's construction emissions from haul truck trips for the transport and disposal of contaminated soil based on the appropriate one-way truck trip length should be recalculated. If the default one-way truck trip length of 20 miles is not re-calculated for quantifying emissions from haul truck trips for transporting contaminated soil, the Lead Agency should provide reasons for not re-calculating it supported by substantial evidence in the record.

Mobile Source Health Risk Assessment during Operation

Based on the MND and technical appendices review, South Coast AQMD staff found that the MND did not perform a mobile source health risk assessment (HRA). Because the operation of the warehousing portion of the Proposed Project will attract heavy-duty, diesel-fueled vehicular trips (e.g., 45 one-way truck trips per day) that emit diesel particulate matter, which is an air toxic and A-2

[1] MND. Hazards and Hazardous Materials. Page 69.
[2] *Ibid.* Utilities and Service Systems. Page 116.

carcinogen, it is recommended that the Lead Agency perform a mobile source HRA and compare the Proposed Project's cancer risk to South Coast AQMD CEQA significance threshold of 10 in one million for cancer risk to determine the level of significance for the Proposed Project's health risk impact in the Final MND[3]. If a mobile source HRA is not included in the Final MND, the Lead Agency should provide reasons for not having it supported by substantial evidence in the record.

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Responsible Agency and South Coast AQMD Permits

In the event that cleanup activities at the Proposed Project or implementation of the Proposed Project require the use of stationary equipment, permits from South Coast AQMD are required unless a written permit is not required[4]. The Lead Agency should use good faith effort to include a discussion of equipment that will require South Coast AQMD permits and identify South Coast AQMD as a Responsible Agency for the Proposed Project in the Final MND.

Due to the presence of VOCs in soil, requirements of South Coast AQMD Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil[5] will apply and should be discussed in the Final MND. If any activities involve using equipment that either emits or controls air pollution, the Lead Agency should consult with South Coast AQMD staff to determine whether or not permits or plans are required and approved by South Coast AQMD prior to the operation and to identify if any other South Coast AQMD Rules, such as Rule 431.2 – Sulfur Content of Liquid Fuels[6] and Rule 1110.2 – Emissions from Gaseous and Liquid-Fueled Engines[7], will be applicable and discussed in the Final MND. Please contact South Coast AQMD's Engineering and Permitting staff at (909) 396-3385 or visit South Coast AQMD's web page for more general information on permits: http://www.aqmd.gov/home/permits.

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Conclusion

According to CEQA Guidelines Section 15074, prior to approving the Proposed Project, the Lead Agency shall consider the MND for adoption together with any comments received during the public review process. Please provide South Coast AQMD with written responses to all comments contained herein prior to the adoption of the Final MND. When the Lead Agency's position is at variance with recommendations raised in the comments, the issues raised in the comments should be addressed in detail, giving reasons why specific comments and suggestions are not accepted. There should be good faith and reasoned analysis in response. Conclusory statements unsupported by factual information do not facilitate the purpose and goal of CEQA on public disclosure and are not meaningful, informative, or useful to decision-makers and the public who are interested in the Proposed Project.

[3] South Coast AQMD's guidance for performing a mobile source health risk assessment can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis.
[4] South Coast AQMD. Rule 219. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-ii/Rule-219.pdf.
[5] South Coast AQMD. Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil. Accessed at: http://www.aqmd.gov/docs/default-source/rule book/reg-xi/rule-1166.pdf.
[6] South Coast AQMD. Rule 431.2 – Sulfur Content of Liquid Fuels. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-431-2.pdf.
[7] South Coast AQMD. Rule 1110.2 – Emissions from Gaseous- and Liquid-Fueled Engines. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1110-2.pdf.

South Coast AQMD staff is available to work with the Lead Agency to address any air quality questions that may arise from this comment letter. Please contact Dung Nguyen, Air Quality Specialist, at dnguyen1@aqmd.gov should you have any questions.

Sincerely,

Lijin Sun

Lijin Sun
Program Supervisor, CEQA IGR
Planning, Rule Development, and Area Sources

MM:LS:DN
LAC220428-03
Control Number

COMMENT LETTER A – South Coast Air Quality Management District (May 12, 2022)

Response to Comment A-1:

The commenter asserts that, based on the Hazards and Hazardous Materials Section in the MND and Phase I Environmental Assessment (ESA) report, there is a potential for contamination with volatile organic compounds (VOCs) in two (2) areas (SWMU-9 and AOC-12) within the proposed project site. The commenter refers to the MND Mitigation Measure MM HAZ-1 which requires (i) soil sampling before the issuance of a building permit for any construction in those two (2) areas within the Property, and (ii) if VOCs are detected in concentrations exceeding applicable screening levels, implementation of a remediation plan.

The commenter further asserts that any cleanup activities will likely involve use of heavy-duty, diesel-fueled trucks for soil export, and vehicle trips by workers to conduct cleanup activities, as well as additional equipment. The commenter further expresses a concern that a permitted hazardous disposal facility would be farther than 20 miles from the site. This comment includes recommendations that the Lead Agency provide a description of cleanup activities, quantify emissions from cleanup activities, and include those emissions with construction emissions. Alternatively, if cleanup activity emissions are not included in the Final MND, the commenter recommends that a mitigation measure be added to the Air Quality Section of the Final MND to commit to evaluating potential environmental impacts from cleanup activities through CEQA prior to commencing any cleanup activities. Or provide reasons why such a mitigation measure is not included in the Final MND. The commenter also recommends that if a one-way truck trip length of 20 miles is not re-calculated for quantifying emissions from haul truck trips for transporting contaminated soil, the Lead Agency should provide reasons for not re-calculating [the distance].

The MND addresses potential future impacts to the extent practical and within the limits of CEQA, which does not allow for speculative analysis and requires the degree of specificity of the analysis to be commensurate with the underlying activity (CEQA Guidelines Section 15145). In this instance, providing any further description or evaluation of air emissions due to soil cleanup activities would be completely speculative as it is unknown if any soil cleanup would be required, or the quantity, and other factors that could not be known at this time.

The MND describes that the Phase 1 ESA did not identify any recognized environmental conditions (REC) or controlled recognized environmental conditions (CREC) that pose a material threat of a future release to the environment or otherwise require cleanup activities.[1] However, the subject property is located within the boundary of an open Corrective Action Case for the former Hughes Missile Systems facility, which is considered an environmental issue warranting further discussion. Specifically, as described in the MND, a 2008 Resource Conservation and Recovery Act (RCRA)

[1] As described in the MND, a recognized environmental condition (REC) refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The Phase I ESA did not identify any REC for the Subject Property. A controlled recognized environmental condition (CREC) refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The Phase I ESA did not identify any CREC for the Subject Property.

Facility Assessment Report indicated that there are two (2) areas of concern on the subject property:

- SWMU-9 is defined as the Site wide sewer line. Releases to soil near soil boring BSL-4. Constituents include arsenic. The report notes that the Site wide assessment in 1991 did not show any metal contamination at detection limits. One (1) sample had a trace (0.009 milligram per kilogram (mg/kg)) of toluene. Sample B-SL had 0.3 mg/kg of toluene. No other VOCs were detected. Department of Toxic Substances Control (DTSC) concluded that there was a need to determine if any issues remain.
- AOC-12 is defined as the Site wide storm water system. Releases are suspected.

According to guidance provided in a letter from the DTSC to the City of Los Angeles dated August 5, 2008, there are no restrictions on development of the Property with the exception that a soil sampling plan would be required to be submitted to DTSC prior to any construction impacting the sanitary sewer or the storm water (storm drain) system. The Project will not disturb the existing storm drain line which would remain in place (See **Attachment 1**). Thus, no sampling or cleanup activities are anticipated to be required in this area. The Project will, however, relocate/realign a portion of the existing sanitary sewer line on site (See Attachment 1), which will trigger the sampling requirement in that portion of the property where the existing sanitary sewer line crosses the site. As such, sampling to comply with mitigation measure HAZ-1, and potential soil removal (if any) that may be required would be limited to the area of the existing sanitary sewer line (SWMU-9) alignment.

Although the commenter expresses a concern that additional soil hauling may be necessary to comply with mitigation measure HAZ-1, note that the assessment of the air quality emissions associated with soil hauling as evaluated in the MND is conservatively overestimated. As shown on page 14 of the MND "Although the Project would only import approximately 6,000 cubic yards (cy) of soil, the following analyses of construction-related emissions and fuel use are conservatively evaluated assuming import of approximately 10,500 cy of soil materials would be needed based on a previous grading study." This is an overestimation of 4,500 cy for soil hauling. Thus, the quantified emissions of criteria pollutants associated with soil hauling reported in the MND are conservatively overestimated and already account for an additional 4,500 cy of additional soil hauling, should cleanup activities in the area of the relocated sanitary sewer line be required. Additionally, if any soil removal would be warranted for compliance with mitigation measure HAZ-1, such activities would likely occur either prior to or after the planned site grading import hauling, and not within the same day as the planned site grading and import hauling. Thus emissions resulting from soil export hauling, worker trips, or onsite equipment use for soil remediation, if any, would thus not increase the project's maximum daily emissions during construction shown in the MND Table III-2, or the Table III-4 LST - Maximum On-site Construction Emissions, as such activities would most likely occur on different days than the activities generating the maximum daily emissions.

Regarding the commenter's concern that a permitted hazardous disposal facility would be farther than 20 miles from the site, it is noted that the potential soil testing to be conducted pursuant to mitigation measure HAZ-1 is for the presence of VOC. While the MND evaluation assumed a hauling distance of 20 miles (the default rate provided in CalEEMod), the distance to the Simi

Valley Landfill (Waste Management) located at 2801 Madera Road in Simi Valley is only approximately 18 miles one-way from the project site. The Simi Valley Landfill is permitted to accept VOC soil[2] exceeding 50 parts per million (ppm) as well as soil containing less than 50 ppm VOC. As such, the one-way distance to haul soil from the site if necessary pursuant to mitigation measure HAZ-1 is less than the distance used to evaluate the overestimation of soil hauling for the project evaluated in the MND.

Finally, the Project is subject to CEQA Guidelines Section 15162 which governs the circumstances under which subsequent CEQA review may be required. As this is state law, the Project is already required to comply with it and no additional mitigation measures are required to ensure its implementation.

Response to Comment A-2:

The comment suggests a health risk assessment (HRA) be provided to evaluate the operational emissions associated with diesel trucks accessing or leaving the proposed warehouse uses.

The project site is relatively small for conducting an HRA for diesel trucking and as discussed in the MND on page 30, it would not be subject to the SCAQMD Rule 2305 (adopted 2021) otherwise known as the Warehouse Indirect Source Rule. The rule requires warehouses greater than 100,000 square feet to directly reduce NOx and diesel particulate matter (DPM) emissions, or to otherwise facilitate emission and exposure reductions of these pollutants in nearby communities.

However, to address the commenter's concern, an HRA has been conducted by iLanco Environmental (June 27, 2022) for the proposed project to determine potential impacts associated with diesel emissions during operations (see **Attachment 2**). The HRA analysis quantified the potential cancer risk to receptors that may be affected by exposure to toxic air contaminants (TAC) from the Project's operational trucking activities for the nearest residents and offsite workers. SCAQMD has established a health-protective threshold of 10 in a million (1.0E-05) for cancer risk. The HRA determined that the Project's operational diesel trucking activities potential cancer risks for residents would be 0.504 in a million (5.04E-07) and for offsite workers would be 0.0497 in a million (4.97E-08), which would be well below the SCAQMD threshold.

Response to Comment A-3:

This comment refers to use of stationary equipment for removal of VOCs that may require SCAQMD permits and be subject to SCAQMD rules if such equipment or cleanup activities were to be implemented. The commenter also suggests that a discussion of equipment that would require SCAQMD permits be provided and identify SCAQMD as a Responsible Agency for the project in the MND.

The SCAQMD permits and rules discussed in the comment are provided in the context of "In the event that cleanup activities at the Proposed Project or implementation of the Proposed Project require the use of stationary equipment". It would be speculative for the MND to attempt to describe

[2] South Coast Air Quality Management Control District – Rule 1166 – VOC Soil Mitigation.

such equipment as it is not known if implementation of mitigation measure HAZ-1 would result in the need for any removal of VOC from soil, much less the type of equipment that any VOC removal would employ if any.

It is acknowledged that if VOC is determined to be present in onsite soils in concentrations requiring remediation, SCAQMD Rule 1166 – Volatile Organic Compound (VOC) Emissions from Decontamination of Soil may apply. It is also acknowledged that if remediation of VOC in soils would be necessary that would involve using equipment that either emits or controls air pollution, the project would be required to determine if any applicable SCAQMD permits would be needed prior to use of such equipment. Further, the project would be subject to comply with SCAQMD Rules for operation of certain stationary equipment if such equipment were to be used, including the SCAQMD rules mentioned in the comment (i.e., Rule 431.2 – Sulfur Content of Liquid Fuels, and Rule 1110.2 – Emissions from Gaseous and Liquid-Fueled Engines).

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Via Email

April 28, 2022

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Re: CEQA and Land Use Notice Request for Fallbrook Point Project (ENV-2021-10328-MND; DIR-2021-10327-SPR)

Dear Ms. Ahn, Mr. Bertoni, and Ms. Wolcott:

I am writing on behalf of Supporters Alliance for Environmental Responsibility ("SAFER") regarding the Fallbrook Point Project (ENV-2021-10328-MND; DIR-2021-10327-SPR), including all actions related or referring to the proposed development of three warehouse/manufacturing buildings with floor areas of approximately 49,892 square feet, 31,169 square feet, and 17,553 square feet, for a total of approximately 98,614 square feet, located at 22815 – 22825 West Roscoe Boulevard in the City of Los Angeles ("Project").

We hereby request that the City of Los Angeles ("City") send by electronic mail, if possible or U.S. mail to our firm at the address below notice of any and all actions or hearings related to activities undertaken, authorized, approved, permitted, licensed, or certified by the City and any of its subdivisions, and/or supported, in whole or in part, through contracts, grants, subsidies, loans or other forms of assistance from the City, including, but not limited to the following:

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- Notice of any public hearing in connection with the Project as required by California Planning and Zoning Law pursuant to Government Code Section 65091.
- Any and all notices prepared for the Project pursuant to the California Environmental Quality Act ("CEQA"), including, but not limited to:
  - Notices of any public hearing held pursuant to CEQA.
  - Notices of determination that an Environmental Impact Report ("EIR") is required for the Project, prepared pursuant to Public Resources Code Section 21080.4.
  - Notices of any scoping meeting held pursuant to Public Resources Code Section 21083.9.

- Notices of preparation of an EIR or a negative declaration for the Project, prepared pursuant to Public Resources Code Section 21092.
- Notices of availability of an EIR or a negative declaration for the Project, prepared pursuant to Public Resources Code Section 21152 and Section 15087 of Title 14 of the California Code of Regulations.
- Notices of approval and/or determination to carry out the Project, prepared pursuant to Public Resources Code Section 21152 or any other provision of law.
- Notices of any addenda prepared to a previously certified or approved EIR.
- Notices of approval or certification of any EIR or negative declaration, prepared pursuant to Public Resources Code Section 21152 or any other provision of law.
- Notices of determination that the Project is exempt from CEQA, prepared pursuant to Public Resources Code section 21152 or any other provision of law.
- Notice of any Final EIR prepared pursuant to CEQA.
- Notice of determination, prepared pursuant to Public Resources Code Section 21108 or Section 21152.

K-1

Please note that we are requesting notices of CEQA actions and notices of any public hearings to be held under any provision of Title 7 of the California Government Code governing California Planning and Zoning Law. **This request is filed pursuant to Public Resources Code Sections 21092.2 and 21167(f), and Government Code Section 65092**, which require local counties to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body.

Please send notice by electronic mail or U.S. Mail to:

Rebecca Davis
Molly Greene
Colby Gonzales
Lozeau Drury LLP
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colby@lozeaudrury.com

Please call if you have any questions. Thank you for your attention to this matter.

Sincerely,

Molly Greene

Molly Greene
Lozeau | Drury LLP

COMMENT LETTER K– Lozeau Drury (April 28, 2022)

Response to Comments K-1

This commenter is speaking on behalf of the Supporters Alliance for Environmental Responsibility (SAFER), and requested the City send notice of any actions or hearing related to the project such as the notice of public hearing and CEQA notices. This comment is acknowledged, and will be passed along to the City decisionmakers. As there is no comment related to the environmental analysis within the MND, no further response is necessary.

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May 26, 2022

Via Email

Samantha Millman, President
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Helen Campbell, Commissioner
Jenna Hornstock, Commissioner
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Re: Comment on Mitigated Negative Declaration, Fallbrook Point Project (ENV-2021-10328-MND; DIR-2021-10327-SPR; SCH 2022040565)

Dear Honorable President Millman, Vice-President Choe, Commissioners Campbell, Hornstock, Leung, Lopez-Ledesma, Perlman, and Wilson, and Ms. Ahn:

I am writing on behalf of Supporters Alliance for Environmental Responsibility ("SAFER") regarding the Initial Study and Mitigated Negative Declaration ("IS/MND") prepared for the Fallbrook Point Project (ENV-2021-10328-MND; DIR-2021-10327-SPR; SCH 2022040565), including all actions related or referring to the proposed construction of three warehouse/manufacturing buildings with floor areas of approximately 49,892 square feet, 31,169 square feet, and 17,553 square feet, located at 22815 and 22825 West Roscoe boulevard, in the City of Los Angeles ("Project").

L-1

After reviewing the IS/MND, we conclude the IS/MND fails as an informational document, and that there is a fair argument that the Project may have adverse environmental impacts. Therefore, we request that the City of Los Angeles ("City") prepare an environmental impact report ("EIR") for the Project pursuant to the California Environmental Quality Act ("CEQA"), Public Resources Code section 21000, et seq.

This comment has been prepared with the assistance of environmental consulting firm

Soil/Water/Air Protection Enterprise ("SWAPE") and noise expert Deborah Jue. SWAPE's comment and curriculum vitae are attached as Exhibit A hereto and is incorporated herein by reference in its entirety. Ms. Jue's comment and curriculum vitae are attached as Exhibit B hereto and is incorporated herein by reference in its entirety. L-1

I. PROJECT DESCRIPTION

The Fallbrook Point Project proposes to develop the site with three warehouse/manufacturing buildings with two-story heights not exceeding 37 feet. The three buildings would have floor areas of approximately 49,892 square feet, 31,169 square feet, and 17,553 square feet, for a Project total of approximately 98,614 square feet. The Project's total floor area would include approximately 23,500 square feet for potential office use, 19,000 square feet for manufacturing, and 56,114 square feet for warehouse use. The Project would provide 262 paved parking spaces within the site for employee vehicle use, and a total of 10 truck dock doors would be provided (two at the smallest building and four at each of the other two buildings).The Project proposes to redevelop an existing surface parking lot located at 22815 and 22825 West Roscoe boulevard. The Project Site consists of an approximately 6.99-acre site, which is currently zoned for limited industrial uses and has a land use designation of Limited Industrial. L-2

II. LEGAL STANDARD

As the California Supreme Court has held, "[i]f no EIR has been prepared for a nonexempt project, but substantial evidence in the record supports a fair argument that the project may result in significant adverse impacts, the proper remedy is to order preparation of an EIR." (*Communities for a Better Env't v. South Coast Air Quality Mgmt. Dist.* (2010) 48 Cal.4th 310, 319-320 (*CBE v. SCAQMD*) (citing *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75, 88; *Brentwood Assn. for No Drilling, Inc. v. City of Los Angeles* (1982) 134 Cal.App.3d 491, 504–505).) "Significant environmental effect" is defined very broadly as "a substantial or potentially substantial adverse change in the environment." (Pub. Res. Code ("PRC") § 21068; *see also* 14 CCR § 15382.) An effect on the environment need not be "momentous" to meet the CEQA test for significance; it is enough that the impacts are "not trivial." (*No Oil, Inc.*, 13 Cal.3d at 83.) "The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." (*Communities for a Better Env't v. Cal. Res. Agency* (2002) 103 Cal.App.4th 98, 109 (*CBE v. CRA*).) L-3

The EIR is the very heart of CEQA. (*Bakersfield Citizens for Local Control v. City of Bakersfield (*2004) 124 Cal.App.4th 1184, 1214 (*Bakersfield Citizens*); *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 927.) The EIR is an "environmental 'alarm bell' whose purpose is to alert the public and its responsible officials to environmental changes before they have reached the ecological points of no return." (*Bakersfield Citizens*, 124 Cal.App.4th at 1220.) The EIR also functions as a "document of accountability," intended to "demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action." (*Laurel Heights Improvements Assn. v. Regents of Univ. of Cal.*

(1988) 47 Cal.3d 376, 392.) The EIR process "protects not only the environment but also informed self-government." (*Pocket Protectors*, 124 Cal.App.4th at 927.)

An EIR is required if "there is substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment." (PRC § 21080(d); *see also Pocket Protectors*, 124 Cal.App.4th at 927.) In very limited circumstances, an agency may avoid preparing an EIR by issuing a negative declaration, a written statement briefly indicating that a project will have no significant impact thus requiring no EIR (14 CCR § 15371), only if there is not even a "fair argument" that the project will have a significant environmental effect. (PRC §§ 21100, 21064.) Since "[t]he adoption of a negative declaration . . . has a terminal effect on the environmental review process," by allowing the agency "to dispense with the duty [to prepare an EIR]," negative declarations are allowed only in cases where "the proposed project will not affect the environment at all." (*Citizens of Lake Murray v. San Diego* (1989) 129 Cal.App.3d 436, 440.) L-3

Mitigation measures may not be construed as project design elements or features in an environmental document under CEQA. The MND must "separately identify and analyze the significance of the impacts … before proposing mitigation measures …." (*Lotus vs. Department of Transportation* (2014) 223 Cal.App.4th 645, 658.) A "mitigation measure" is a measure designed to minimize a project's significant environmental impacts, (PRC § 21002.1(a)), while a "project" is defined as including "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." (CEQA Guidelines § 15378(a).) Unlike mitigation measures, project elements are considered prior to making a significance determination. Measures are not technically "mitigation" under CEQA unless they are incorporated to avoid or minimize "significant" impacts. (PRC § 21100(b)(3).) L-4

To ensure that the project's potential environmental impacts are fully analyzed and disclosed, and that the adequacy of proposed mitigation measures is considered in depth, mitigation measures that are not included in the project's design should not be treated as part of the project description. (*Lotus*, 223 Cal.App.4th at 654-55, 656 fn.8.) Mischaracterization of a mitigation measure as a project design element or feature is "significant," and therefore amounts to a material error, "when it precludes or obfuscates required disclosure of the project's environmental impacts and analysis of potential mitigation measures." (*Mission Bay Alliance v. Office of Community Investment & Infrastructure* (2016) 6 Cal.App.5th 160, 185.)

Where an initial study shows that the project may have a significant effect on the environment, a mitigated negative declaration may be appropriate. However, a mitigated negative declaration is proper *only* if the project revisions would avoid or mitigate the potentially significant effects identified in the initial study "to a point where clearly no significant effect on the environment would occur, and…there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment." (PRC §§ 21064.5, 21080(c)(2); *Mejia v. City of Los Angeles* (2005) 130 Cal.App.4th 322, 331.) In that context, "may" means a reasonable possibility of a significant effect on the environment. (PRC §§ 21082.2(a), 21100, 21151(a); *Pocket Protectors*, 124 L-5

Cal.App.4th at 927; *League for Protection of Oakland's etc. Historic Res. v. City of Oakland* (1997) 52 Cal.App.4th 896, 904–05.)

Under the "fair argument" standard, an EIR is required if any substantial evidence in the record indicates that a project may have an adverse environmental effect—even if contrary evidence exists to support the agency's decision. (14 CCR § 15064(f)(1); *Pocket Protectors,* 124 Cal.App.4th at 931; *Stanislaus Audubon Society v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-51; *Quail Botanical Gardens Found., Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1602.) The "fair argument" standard creates a "low threshold" favoring environmental review through an EIR rather than through issuance of negative declarations or notices of exemption from CEQA. (*Pocket Protectors*, 124 Cal.App.4th at 928.)

The "fair argument" standard is virtually the opposite of the typical deferential standard accorded to agencies. As a leading CEQA treatise explains: L-5

> This 'fair argument' standard is very different from the standard normally followed by public agencies in their decision making. Ordinarily, public agencies weigh the evidence in the record and reach a decision based on a preponderance of the evidence. [Citation]. The fair argument standard, by contrast, prevents the lead agency from weighing competing evidence to determine who has a better argument concerning the likelihood or extent of a potential environmental impact.

(Kostka & Zischke, *Practice Under the California Environmental Quality Act*, §6.37 (2d ed. Cal. CEB 2021).) The Courts have explained that "it is a question of law, not fact, whether a fair argument exists, and the courts owe no deference to the lead agency's determination. Review is de novo, with *a preference for resolving doubts in favor of environmental review*." (*Pocket Protectors*, 124 Cal.App.4th at 928 (emphasis in original).)

For over forty years the courts have consistently held that an accurate and stable project description is a bedrock requirement of CEQA—the *sine qua non* (that without which there is nothing) of an adequate CEQA document:

> Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal (i.e., the "no project" alternative) and weigh other alternatives in the balance. An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR. L-6

(*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185 at 192–93.) CEQA therefore requires that an environmental review document provide an adequate description of the project to allow for the public and government agencies to participate in the review process through submitting public comments and making informed decisions.

Lastly, CEQA requires that an environmental document include a description of the L-7

project's environmental setting or "baseline." (CEQA Guidelines § 15063(d)(2).) The CEQA "baseline" is the set of environmental conditions against which to compare a project's anticipated impacts. (*CBE v. SCAQMD*, 48 Cal.4th at 321.) CEQA Guidelines section 15125(a) states, in pertinent part, that a lead agency's environmental review under CEQA:

> …must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time [environmental analysis] is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant.

(*See Save Our Peninsula Committee v. County of Monterey* (2001) 87 Cal.App.4th 99, 124-25 ("*Save Our Peninsula*").) As the court of appeal has explained, "the impacts of the project must be measured against the 'real conditions on the ground,'" and not against hypothetical permitted levels. (*Id.* at 121-23.)

L-7

III. ANALYSIS

A. The IS/MND Relied on Unsubstantiated Input Parameters to Estimate Project Emissions and Thus the Project May Result in Significant Air Quality Impacts Requiring an EIR.

SWAPE reviewed the Project's CalEEMod output files, provided in the CalEEMod Output Sheets ("CalEEMod Sheets") as Appendix A to the IS/MND, and found that several model inputs used to generate a project's construction and operation emissions were not consistent with information disclosed in the IS/MND. (*See* Ex. A. pp. 1-7.) As a result, SWAPE concludes that the Project's construction and operational emissions are underestimated. An EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

L-8

Specifically, SWAPE found that several values used in the IS/MND and CalEEMod Sheets' air quality analysis were either inconsistent with information provided in the IS/MND or otherwise unjustified (Ex. A, pp. 2-7), including:

1. Failure to Substantiate Amount of Required Demolition. (Ex. A, pp. 2-3.) L-9
2. Unsubstantiated Reductions to Construction Off-Road Equipment Unit Amounts. (Ex. A, pp. 3-5.) L-10
3. Underestimated Number of Saturday and Sunday Vehicle Trips. (Ex. A, pp. 5-7.) L-11

As a result of these errors in the IS/MND, the Project's construction and operational emissions were underestimated and cannot be relied upon to determine the significance of the Project's air quality impacts. Thus, an EIR is needed to adequately address the air quality impacts of the proposed Project, and to mitigate those impacts accordingly.

L-12

B. There is Substantial Evidence of a Fair Argument that the Project May Have Significant Health Impacts as a Result of Diesel Particulate Emissions.

A subsequent EIR is required to evaluate the significant health impacts to individuals and workers from the Project's operational and construction-related diesel particulate matter ("DPM") emissions as a result of the proposed Project. SWAPE's analysis of health risks related to the Project concludes that the IS/MND failed to adequately analyze the health impacts related to the Project's operational and construction DPM emissions, and provides substantial evidence of a fair argument that the Project will have significant health impacts as a result of such emissions. (*See* Ex. A, pp. 7-14).

1. The IS/MND fails to adequately evaluate health risks from DPM emissions.

According to SWAPE, the IS/MND incorrectly concludes that the proposed Project would have a less-than-significant health risk impact, without conducting an adequate quantified construction or operational health risk analysis ("HRA"). (Ex. A, pp. 7-9.) Specifically, the IS/MND concludes that the Project would result in a less-than-significant construction and operational health risk impact because the Project would not be subject to SCAQMD's Rule 2035, otherwise known as the Warehouse Indirect Source Rule, and thus would not be required to directly reduce emissions. (Ex. A, pp. 7-8 (citing IS/MND, p. 30).) However, as SWAPE points out, the IS/MND's evaluation of the Project's potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for several reasons. (Ex. A, pp. 8-9.)

L-13

First, by failing to prepare a quantified construction and operational HRA, the IS/MND fails to quantitatively evaluate toxic air contaminants ("TACs") related to Project construction or operation, or make a reasonable effort to connect emissions to health impacts posed to nearby existing sensitive receptors from the Project. (Ex. A, p. 8.) SWAPE identifies potential emissions from both the exhaust stacks of construction equipment. (*Id.* (citing IS/MND, pp. 15; 108).) As such, the IS/MND fails to meet the CEQA requirement that projects correlate increases in project-generated emissions to adverse impacts on human health caused by those emissions.

Second, the IS/MND's conclusion is also inconsistent with the most recent guidance published by the Office of Health Hazard Assessment ("OEHHA"), the organization responsible for providing guidance on conducting HRAs in California, as well as local air district guidelines.[1] (Ex. A, pp. 8-9.) OEHHA recommends that projects lasting at least 2 months be evaluated for cancer risks to nearby sensitive receptors, a time period which this Project easily exceeds. (*Id.*) The OEHHA document also recommends that if a project is expected to last over 6 months, the exposure should be evaluated throughout the project using a 30-year exposure duration to estimate individual cancer risks. (*Id.*) Based on its extensive experience, SWAPE

[1] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

reasonably assumes that the Project will last at least 30 years, and therefore recommends that health risk impacts from the project be evaluated. (*Id.*, p. 9.) An EIR is therefore required to analyze these impacts. (*Id.*)

Third, by claiming a less-than-significant impact without evaluating the combined lifetime cancer risk to nearby, existing receptors as a result of Project construction and operation together, SWAPE found that the IS/MND fails to compare the excess health risk impact to the SCAQMD's specific numeric threshold of 10 in one million. (Ex. A, p. 9.) Thus, in accordance with the most relevant guidance, an updated assessment of the health risk posed to nearby existing receptors from Project construction and operation should be conducted. L-13

2. There is substantial evidence that the Project may have a significant health risk impact.

Correcting the above errors, SWAPE prepared a screening-level HRA to evaluate potential impacts from the construction and operation of the Project. (Ex. A, pp. 9-14.) SWAPE prepared a screening-level HRA to evaluate potential health risk impacts posed to residential sensitive receptors as a result of the Project's construction and operational TAC emissions. SWAPE used AERSCREEN, the leading screening-level air quality dispersion model. SWAPE applied a sensitive receptor distance of 125 meters and analyzed impacts to individuals at different stages of life based on OEHHA and SCAQMD guidance utilizing age sensitivity factors.

SWAPE found that the excess cancer risks at a sensitive receptor located approximately 125 meters away over the course of Project construction and operation, while utilizing the recommended age sensitivity factors, is approximately 40.3 in one million for infants. (Ex. A, p. 13.) SWAPE also concluded that the total excess lifetime cancer risk over the course of Project construction and operation is approximately 52.2 in one million. (*Id.*) Therefore, the cancer risk for infants and lifetime residents exceeds the SCAQMD's threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the IS/MND. Hence, an EIR is required for the Project. L-14

CEQA requires an agency to include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. SWAPE's screening-level HRA demonstrates that the Project's construction and operation may have a significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Because SWAPE's screening-level HRA indicates a potentially significant impact, the City must prepare an EIR. This EIR should also include an HRA which makes a reasonable effort to connect the Project's air quality emissions and the potential health risks posed to nearby receptors. Thus, as SWAPE recommends, "an EIR should be prepared to include a refined health risk analysis which adequately and accurately evaluates health risk impacts associated with both Project construction and operation." (Ex. A, p. 14.)

C. The IS/MND Failed to Adequately Analyze Greenhouse Gas Impacts and Thus the Project May Result in Significant Greenhouse Gas Emissions Requiring an EIR.

SWAPE's review of the IS/MND and CalEEMod Sheets found that the IS/MND fails to adequately evaluate the greenhouse gas ("GHG") impacts of the proposed Project. (Ex. A, pp. 14-18 (citing IS/MND, p. 52 & Table VIII-1; pp. 53-60).) However, SWAPE concludes that the IS/MND's GHG analysis and subsequent less-than-significant impact conclusion, is incorrect for several reasons. (*See* Ex. A, pp. 14-18.) L-15

First, the IS/MND's quantitative analysis relies upon an incorrect and unsubstantiated air model. (Ex. A, pp. 14-15.) As a result, GHG emissions are underestimated and the IS/MND's quantitative GHG analysis should not be relied upon to determine Project significance. *Id.* Thus, an EIR should be prepared to adequately assess the Project's potential GHG impacts on the surrounding environment from construction and operation.

Second, the IS/MND utilizes an outdated GHG threshold, and as a result, the IS/MND fails to identify a potentially significant GHG impact. (Ex. A, p. 15.) SWAPE notes that when compared to the correct quantitative threshold, the Project's GHG impacts are demonstrably significant. (*Id.*) Accordingly, the IS/MND's conclusion of a less-than-significant GHG impact should not be relied upon, and instead, an EIR should be prepared that includes an updated GHG analysis. (*Id.*) SWAPE also recommends that "the Project apply the SCAQMD 2035 efficiency target of 3.0 metric tons of carbon dioxide equivalents per service population per year ("MT CO_2e/SP/year")." (*Id.*) L-16

Third, SWAPE's updated analysis indicates a potential significant impact in GHG emissions that the IS/MND fails to identify. (Ex. A, pp. 15-16.) In an effort to quantitatively evaluate the Project's GHG emissions, SWAPE "compared the Project's GHG emissions, as estimated by the IS/MND, to the SCAQMD 2035 service population efficiency target of 3.0 MT CO_2e/SP/year, which was calculated by applying a 40% reduction to the 2020 targets." (*Id.*, p. 15 (citing "Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15." SCAQMD, September 2010, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf, p. 2.) According to SWAPE, "[w]hen applying this threshold, the Project's incorrect and unsubstantiated air model indicates a potentially significant GHG impact." (Ex. A, p. 15.) SWAPE's conclusion is based on the following analysis: L-17

> …the IS/MND estimates that the Project would generate net annual GHG emissions of 1,285.1 MT CO2e/year (p. 52, Table VIII). According to *CAPCOA's CEQA & Climate Change* report, a service population ("SP") is defined as "the

> sum of the number of residents and the number of jobs supported by the project."[2] As the Project does not include any residential land uses, the SP would include the number of jobs supported by the Project. According to the IS/MND, the Project will employ 211 people during operation (p. 98). As such, we estimate a SP of 211 people. When dividing the Project's net annual GHG emissions, as estimated by the IS/MND, by a SP of 211 people, we find that the Project would emit approximately 6.1 MT CO2e/SP/year….[3]

L-17

(Ex. A, pp. 15-16.) As such, "the Project's service population efficiency value, as estimated by the IS/MND's provided net annual GHG emission estimates and SP, exceeds the SCAQMD 2035 efficiency target of 3.0 MT CO_2e/SP/year, indicating a potentially significant impact not previously identified or addressed by the IS/MND." (*Id.*, p. 16.) Consequently, the IS/MND's less-than-significant GHG impact conclusion is incorrect and should not be relied upon. Thus, an EIR must be prepared and should include an updated GHG analysis and incorporate mitigation measures intended to reduce GHG emissions to less-than-significant levels

Fourth, the IS/MND fails to consider the performance-based standards underlying CARB's Scoping Plan. (*See* Ex. A, pp. 16-17.) Specifically, SWAPE notes that "the IS/MND fails to evaluate the Project's consistency with the CARB 2017 *Scoping Plan* performance-based daily VMT per capita projections." (*Id.*, p. 17.) An EIR should be prepared for the Project that provides additional information and analysis to conclude less-than-significant GHG impacts.

L-18

Fifth, the IS/MND fails to consider the performance-based standards under SCAG's *RTP/SCS*. (*See* Ex. A, pp. 17-18.) The IS/MND concludes that the Project would be consistent with SCAG's *RTP/SCS*. (IS/MND, pp. 53-60.) However, as SWAPE notes, "the IS/MND fails to consider whether or not the Project meets any of the specific performance-based goals underlying SCAG's *RTP/SCS* and SB 375, such as: i) per capita GHG emission targets, or ii) daily [VMT] per capita benchmarks." (Ex. A, pp. 17.) Because the IS/MND fails to evaluate the Project's consistency with the SCAG's per capita emissions and performance-based daily VMT per capita projects, "the IS/MND's claim that the proposed Project would not conflict with SCAG's *RTP/SCS* is unsupported." (*Id.*, p. 18.) An EIR should be prepared for the Project that provides additional information and analysis to conclude less-than-significant GHG impacts.

L-19

SWAPE's analysis demonstrates a potentially significant health risk and GHG impact from the Project that necessitates further mitigation in order to adequately reduce the Project's construction and operational emissions to less-than-significant. Therefore, SWAPE provides a number of cost-effective, feasible mitigation measures that the City should consider implementing prior to approving the Project. (*See* Ex. A, pp. 18-21.) In addition to implementing

L-20

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[2] "CEQA & Climate Change." California Air Pollution Control Officers Association (CAPCOA), January 2008, *available at:* http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf , pp. 71-72.)

[3] SWAPE calculated: (1,285.1 MT CO2e/year) / (211 service population) = (6.09 MT CO_2e/SP/year).

these measures, an EIR should be prepared with an updated air quality, health risk, and GHG analysis. L-20

D. There Is Substantial Evidence of a Fair Argument that the Project Could Have Significant Noise Impact.

The comment of noise expert Deborah Jue is attached as Exhibit B. Ms. Jue has identified several issues with the IS/MND. Ms. Jue's concerns are summarized below. L-21

After reviewing the proposed Project and IS/MND and related appendices, Ms. Jue concluded that the Project's construction noise impacts are potentially significant. (*See* Exhibit B, pp. 1-5.) As a result, the IS/MND is improper and an EIR should be prepared.

According to Ms. Jue, the IS/MND failed to adequately analyze the Project's noise impact from construction and operation for several reasons. First, the IS/MND fails to properly establish several baseline noise levels for the proposed Project. (Ex. B, pp. 1-2.) L-22

Second, the IS/MND's construction noise analysis draws upon thresholds of significance that are not properly developed. (Ex. B, pp. 2-3.)

Third, Ms. Jue found that the IS/MND's construction noise impact analysis for the Project is incomplete for several reasons:

1. The IS/MND fails to provide evidence that the specific site conditions (e.g., sightlines, barrier geometry), and available equipment (e.g., mufflers) would be sufficient to mitigate the noise impacts shown in Table XIII-2, (IS/MND, p. 88), which shows that noise levels from individual pieces of equipment would exceed 75 dBA (LAMC noise limit) at most residential areas without mitigation. (Ex. B, p. 4.)

2. The IS/MND's noise analysis fails to include any aggregate determination of construction activities, even though the IS/MND's Table XIII-2 shows that there would be several sources of construction equipment noise, when combined with others, that would potentially exceed the LACEQA construction noise thresholds, constituting more significant impacts. (Ex. B, p. 4.)

3. The IS/MND relies on the Regulatory Compliance Measure RC-NOI-1, but provides no evidence that these measures would be sufficient to mitigate the significant noise impacts at noise sensitive receptors. (Ex. B, p. 5.)

L-23

Thus, the IS/MND's less-than-significant construction noise impact conclusion is incorrect and should not be relied upon.

Fourth, Ms. Jue found that the IS/MND's off-site operational noise impact analysis is incomplete because the IS/MND "lacks any discussion of whether the TNM model incorporated L-24

flow control at intersections; trucks at stop signs/stop lights would generate a different noise increase from a model that only uses free flow conditions." (Ex. B, p. 5.) As a result, the IS/MND's less-than-significant operational noise impact conclusion is incorrect and should not be relied upon. L-24

Fifth, Ms. Jue found that the IS/MND's on-site operational noise impact analysis is incomplete. (*See* Ex. B, p. 5.) As Ms. Jue notes, "[i]f the rooftop equipment and other operational noise sources would operate during nighttime hours, these activities must be compared to nighttime baseline conditions and the CNEL increase, if any, must also be evaluated." (*Id.*) Because the IS/MND fails to evaluate these on-site operational noise sources, the IS/MND's less-than-significant operational noise impact conclusion is incorrect and should not be relied upon. L-25

Lastly, the IS/MND lacks adequate noise mitigations to lessen several potentially significant noise impacts from construction-related activities of the proposed Project. (Ex. B, p. 5.)

Ms. Jue's expert comments constitute substantial evidence of potentially significant construction and operational noise impact as a result of the Project that was not adequately disclosed, analyzed, or mitigated in the IS/MND. Thus, an EIR is required for this Project. L-26

IV. CONCLUSION

For the foregoing reasons, the IS/MND for the Project is in violation of CEQA. Thus, an EIR must be prepared for the proposed Project and should be circulated for public review and comment in accordance with CEQA. SAFER reserves the right to supplement these comments in advance of and during public hearings concerning the Project. (*Galante Vineyards v. Monterey Peninsula Water Management Dist.*, 60 Cal. App. 4th 1109, 1121 (1997).) Thank you for considering these comments. L-27

Sincerely,

Victoria Yundt

Victoria Yundt
LOZEAU | DRURY LLP

EXHIBIT A

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May 24, 2022

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Subject: Comments on the Fallbrook Point Project (SCH No. 2022040565)

Dear Ms. Yundt,

We have reviewed the April 2022 Initial Study / Mitigated Negative Declaration ("IS/MND") for the Fallbrook Point Project ("Project") located in the City of Los Angeles ("City"). The Project proposes to construct 56,114-square-feet ("SF") of warehouse space, 19,00-SF of manufacturing space, 23,500-SF of office space, and 262 parking spaces, on the 6.99-acre site.

Our review concludes that the IS/MND fails to adequately evaluate the Project's air quality, health risk, and greenhouse gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An Environmental Impact Report ("EIR") should be prepared to adequately assess and mitigate the potential air quality, health risk, and greenhouse gas impacts that the project may have on the environment.

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The IS/MND's air quality analysis relies on emissions calculated with the California Emissions Estimator Model ("CalEEMod") Version 2016.3.2 (p. 23). [1] CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental

[1] "CalEEMod Version 2016.3.2." California Air Pollution Control Officers Association (CAPCOA), November 2017, *available at:* http://www.aqmd.gov/caleemod/archive/download-version-2016-3-2.

Quality Act ("CEQA") requires that such changes be justified by substantial evidence. Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters are utilized in calculating the Project's air pollutant emissions and make known which default values are changed as well as provide justification for the values selected.

When reviewing the Project's CalEEMod output files, provided in the CalEEMod Output Sheets ("CalEEMod Sheets") as Appendix A to the IS/MND, we found that several model inputs were not consistent with information disclosed in the IS/MND. As a result, the Project's construction and operational emissions may be underestimated. An EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

Failure to Substantiate Amount of Required Demolition

Review of the CalEEMod output files demonstrates that the "Fallbrook Point Light Industrial Use" model includes 593 demolition hauling trips (see excerpt below) (Appendix A, pp. 7, 35, 64).

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number
Architectural Coating	1	17.00	0.00	0.00
Building Construction	9	83.00	33.00	0.00
Demolition	5	13.00	0.00	593.00
Grading	6	15.00	0.00	1,312.00
Paving	6	15.00	0.00	0.00
Site Preparation	3	8.00	0.00	0.00

According to the CalEEMod User's Guide:

> "Haul trips are based on the amount of material that is demolished, imported or exported assuming a truck can handle 16 cubic yards of material."[2]

Therefore, CalEEMod calculates a default number of hauling trips based upon the amount of demolition material inputted into the model. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified. [3] According to the "User Entered Comments & Non-Default Data" table, the justification provided for the amount of demolition debris included in the model is:

> "6,000 tons asphalt removal" (Appendix A, pp. 2, 30, 58).

[2] "Appendix A - Calculation Details for CalEEMod." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 14

[3] "CalEEMod User's Guide Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 1, 14.

However, this justification is unsubstantiated, as the IS/MND fails to disclose the specific square footage of buildings to be demolished or the tons of demolition debris required for Project construction. Therefore, we cannot verify that 6,000 tons of demolition debris, or consequently 593 demolition hauling trips, is accurate. As such, demolition may be underestimated in the model.

This potential underestimation presents an issue, as the total amount of demolition material is used by CalEEMod to determine emissions associated with the demolition phase of construction. The three primary operations that generate dust emission during the demolition phase are mechanical or explosive dismemberment, site removal of debris, and on-site truck traffic on paved and unpaved road. [4] By failing to substantiate the amount of required demolition, the model may underestimate emissions associated with fugitive dust, debris removal, as well as exhaust from hauling trucks traveling to and from the site, and should not be relied upon to determine the significance of the Project's air quality impacts.

Unsubstantiated Reductions to Construction Off-Road Equipment Unit Amounts

Review of the CalEEMod output files demonstrates that the "Fallbrook Point Light Industrial Use" model includes several changes to the default off-road construction equipment unit amounts (see excerpt below) (Appendix A, pp. 2, 30, 58).

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00

As a result of these changes, the model includes the following off-road equipment (see excerpt below) (Appendix A, pp. 6, 34, 63).

[4] "CalEEMod User's Guide Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 11.

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Rubber Tired Loaders	1	6.00	203	0.36
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[5] According to the "User Entered Comments & Non-Default Data" table, the justification provided for these changes is:

> "1 excavator, 1 loader. 1 dozer, 2 backhoes" (Appendix A, pp. 2, 30, 58).

Furthermore, the IS/MND provides the following construction equipment list (see excerpt below) (p. 15):

[5] "CalEEMod User's Guide Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 2, 9.

Table 3-1
Construction Activities and Equipment

Construction Phase	Duration [a]	Equipment Type and Quantity
Demolition	20	1 Excavator
		1 Loader
		1 Concrete Saw
		2 Dozers
Site Preparation	10	1 Dozer
		2 Tractor/Loader/Backhoe
Grading and Soil Import	20	1 Grader
		1 Dozer
		1 Excavator
		1 Loader
		3 Tractor/Loader/Backhoe
Building Construction	230	1 Crane
		3 Forklift
		1 Generator Set
		1 Welder
		3 Tractor/Loader/Backhoe
Paving	20	2 Paver
		2 Paving Equipment
		2 Roller
Architectural Coating/Painting	20	1 Air Compressor

Source: CalEEMod output sheets provided in Appendix A.
[a] Durations and equipment pieces are conceptually based on the size of the Site and proposed structures.

However, this is incorrect, as the source provided for the construction equipment unit amounts is the CalEEMod output files themselves. This is incorrect, as the Project documents should substantiate the changes included in the CalEEMod model, not vice versa. According CalEEMod User's Guide:

> "CalEEMod was also designed to allow the user to change the defaults to reflect site- or project-specific information, when available, provided that the information is supported by substantial evidence as required by CEQA." [6]

Here, as the IS/MND and associated documents fail to provide substantial evidence to support the revised construction off-road equipment unit amounts, we cannot verify the changes.

These unsubstantiated reductions present an issue, as CalEEMod calculates construction-related emissions based on the off-road equipment list for the expected construction activities.[7] By including incorrect off-road construction equipment unit amounts, the model may underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.

Underestimated Number of Saturday and Sunday Vehicle Trips

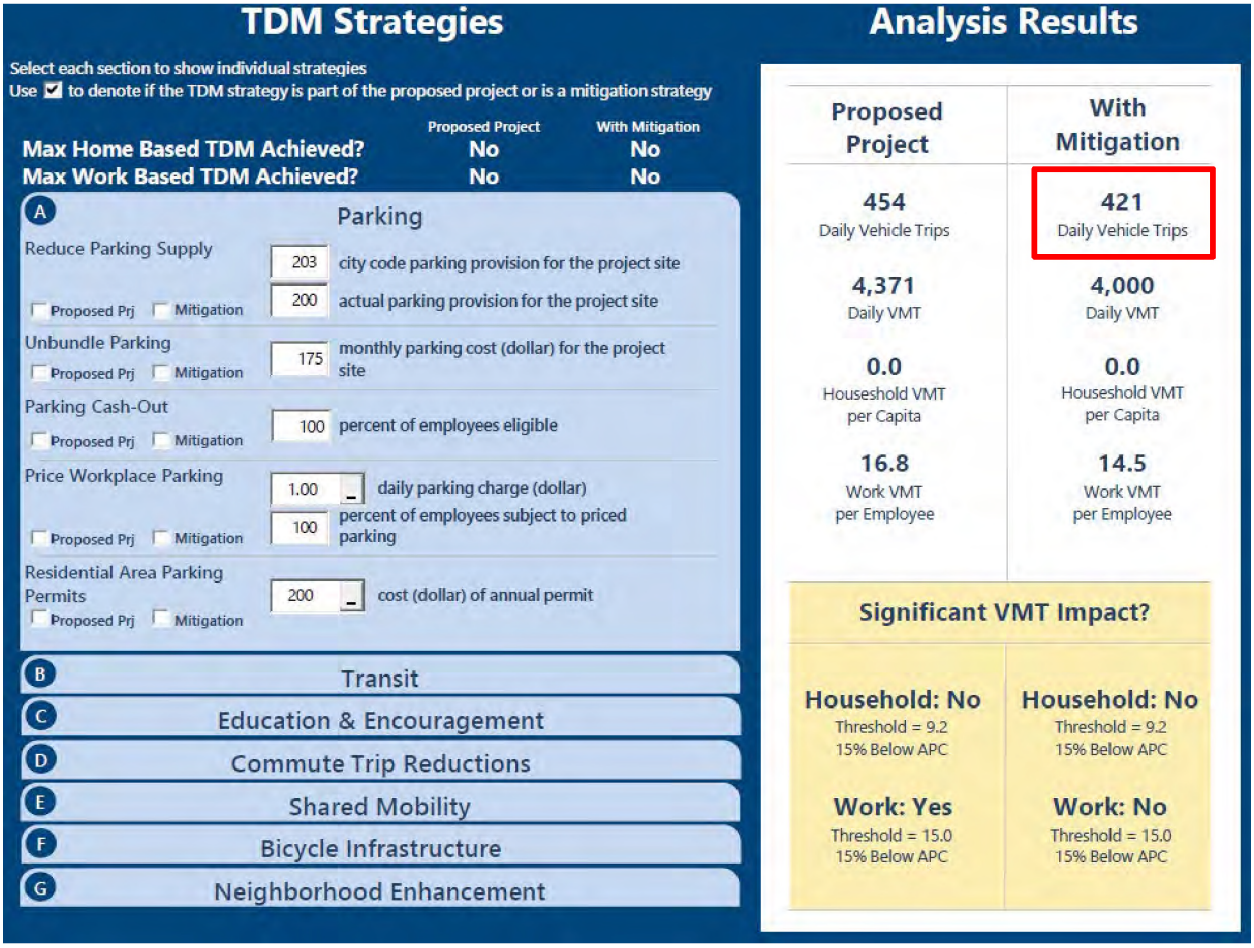
According to the IS/MND:

[6] "CalEEMod User's Guide Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 12.
[7] "CalEEMod User's Guide Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 33-34.

"[T]he Project would generate a total of 421 daily vehicle trips and have a Daily Work VMT per Employee of 14.5, which is less than the applicable North Valley APC significance threshold of 15.0 with incorporation of the following TDM measures:

- Promotions and marketing tools to educate and inform employees about alternative transportation options and the effects of their travel choices.
- Implement a ride-share program" (p. 108).

As demonstrated above, the IS/MND indicates that the Project implements multiple Transportation Demand Management ("TDM") strategies to calculate the expected trip generation of 421 daily vehicle trips (see excerpt below) (Appendix G, pp. 105).



As demonstrated above, the LADOT VMT Calculator shows a daily vehicle trip rate of 421, without specifying any changes between weekday and weekend trips. However, review of the CalEEMod output files demonstrates that the "Fallbrook Point Light Industrial Use" model includes only 183.34 Saturday, and 129.55 Sunday vehicle trips (see excerpt below) (Appendix A, pp. 22, 50, 79).

Land Use	Average Daily Trip Rate		
	Weekday	Saturday	Sunday
General Office Building	476.85	62.73	26.78
Manufacturing	0.00	30.55	12.71
Parking Lot	0.00	0.00	0.00
Unrefrigerated Warehouse-No Rail	0.00	90.06	90.06
Total	476.85	183.34	129.55

However, this is incorrect, as the model should have included 421 daily vehicle trips for Saturday and Sunday. Thus, the Saturday and Sunday daily vehicle trips are underestimated by 237.66- and 291.45-trips, respectively. [8, 9]

These underestimations present an issue, as CalEEMod uses operational vehicle trip rates to calculate the emissions associated with the operational on-road vehicles.[10] Thus, by including an underestimated number of Saturday, and Sunday operational vehicle trips, the model underestimates the Project's mobile-source emissions and should not be relied upon to determine Project significance.

Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The IS/MND concludes that the Project would have a less-than-significant health risk impact without conducting a quantified construction or operational health risk analysis ("HRA"). Regarding the health risk impacts associated with Project construction and operation, the IS/MND references the SCAQMD Warehouse Indirect Source Rule:

> "Based on information from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition Supplement and the square footage of proposed warehouse, manufacturing, and office uses, the Project would generate approximately 45 one-way truck trips per day, which is approximately nine percent of the Project's total of 477 daily trips. Assuming an equal number of arrivals and departures (rounded to an even number), these one-way truck trips would be associated with approximately 23 individual trucks accessing and then leaving the Site per day, or an average of three individual trucks per hour in an eight hour workday. Pursuant to the California Code of Regulations Title 13 Section 2485, these trucks that may access the Project would be prohibited from idling for more than 5 minutes on the Site.
>
> On May 7, 2021, the South Coast Air Quality Management District (South Coast AQMD) Governing Board adopted Rule 2305 otherwise known as the Warehouse Indirect Source Rule. The rule requires warehouses greater than 100,000 square feet to directly reduce NOx and diesel particulate matter (PM) emissions, or to otherwise facilitate emission and exposure reductions of these pollutants in nearby communities. As the proposed warehouse use would be

[8] Calculated: (421 proposed daily vehicle trips) - (183.34 modeled vehicle trips) = 237.66 underestimated Saturday vehicle trips.
[9] Calculated: (421 proposed daily vehicle trips) - (129.55 modeled vehicle trips) = 291.45 underestimated Sunday vehicle trips.
[10] "CalEEMod User's Guide Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 35.

approximately 53,614 square feet, this Project would not be subject to Rule 2305 requirements" (p. 30).

As demonstrated above, the IS/MND concludes that the Project would not be subject to Rule 2035, and thus would not be required to directly reduce emissions. However, the IS/MND fails to mention the Project's construction-related or operational toxic air contaminant ("TAC") emissions or conduct a quantified construction or operational health risk analysis ("HRA") whatsoever. This is incorrect for three reasons.

First, by failing to prepare a quantified construction and operational HRA, the Project is inconsistent with CEQA's requirement to make "a reasonable effort to substantively connect a project's air quality impacts to likely health consequences."[11] This poses a problem, as construction of the Project would produce DPM emissions through the exhaust stacks of construction equipment over a duration of approximately 14 months (p. 15). Furthermore, operation of the Project is expected to generate 421 daily vehicle trips, which would produce additional exhaust emissions and continue to expose nearby, existing sensitive receptors to DPM emissions (p. 108). However, the IS/MND fails to evaluate the TAC emissions associated with Project construction and operation or indicate the concentrations at which such pollutants would trigger adverse health effects. Thus, without making a reasonable effort to connect the Project's TAC emissions to the potential health risks posed to nearby receptors, the IS/MND is inconsistent with CEQA's requirement to correlate Project-generated emissions with potential adverse impacts on human health.

Second, the State of California Department of Justice recommends that warehouse projects prepare a quantitative HRA pursuant to the Office of Environmental Health Hazard Assessment ("OEHHA"), the organization responsible for providing guidance on conducting HRAs in California, as well as local air district guidelines.[12] OEHHA released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments* in February 2015, as referenced by the IS/MND (p. 32). This guidance document describes the types of projects that warrant the preparation of an HRA. Specifically, OEHHA recommends that all short-term projects lasting at least 2 months assess cancer risks.[13] Furthermore, according to OEHHA:

> "Exposure from projects lasting more than 6 months should be evaluated for the duration of the project. In all cases, for assessing risk to residential receptors, the exposure should be assumed to start in the third trimester to allow for the use of the ASFs (OEHHA, 2009)."[14]

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[11] "Sierra Club v. County of Fresno." Supreme Court of California, December 2018, a*vailable at:* https://ceqaportal.org/decisions/1907/Sierra%20Club%20v.%20County%20of%20Fresno.pdf.
[12] "Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act." State of California Department of Justice, *available at*: https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/warehouse-best-practices.pdf, p. 6.
[13] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-18.
[14] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-18.

Thus, as the Project's anticipated construction duration exceeds the 2-month and 6-month requirements set forth by OEHHA, construction of the Project meets the threshold warranting a quantified HRA under OEHHA guidance and should be evaluated for the entire 14-month construction period. Furthermore, OEHHA recommends that an exposure duration of 30 years should be used to estimate the individual cancer risk at the maximally exposed individual resident ("MEIR").[15] While the IS/MND fails to provide the expected lifetime of the proposed Project, we can reasonably assume that the Project would operate for at least 30 years, if not more. Therefore, operation of the Project also exceeds the 2-month and 6-month requirements set forth by OEHHA and should be evaluated for the entire 30-year residential exposure duration, as indicated by OEHHA guidance. These recommendations reflect the most recent state health risk policies, and as such, an EIR should be prepared to include an analysis of health risk impacts posed to nearby sensitive receptors from Project-generated DPM emissions.

Third, by claiming a less-than-significant impact without conducting a quantified construction or operational HRA for nearby, existing sensitive receptors, the IS/MND fails to compare the Project's excess cancer risk to the SCAQMD's specific numeric threshold of 10 in one million.[16] Thus, in accordance with the most relevant guidance, an assessment of the health risk posed to nearby, existing receptors as a result of Project construction and operation should be conducted.

Screening-Level Analysis Demonstrates Significant Impacts

In order to conduct our screening-level risk assessment we relied upon AERSCREEN, which is a screening level air quality dispersion model.[17] The model replaced SCREEN3, and AERSCREEN is included in the OEHHA and the California Air Pollution Control Officers Associated ("CAPCOA") guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs").[18, 19] A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

We prepared a preliminary HRA of the Project's construction and operational health risk impact to residential sensitive receptors using the annual PM_{10} exhaust estimates from the IS/MND's CalEEMod output files. Consistent with recommendations set forth by OEHHA, we assumed residential exposure

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[15] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 2-4.
[16] "South Coast AQMD Air Quality Significance Thresholds." SCAQMD, April 2019, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.
[17] "AERSCREEN Released as the EPA Recommended Screening Model," U.S. EPA, April 2011, *available at:* http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf
[18] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.
[19] "Health Risk Assessments for Proposed Land Use Projects." CAPCOA, July 2009, *available at:* http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf.

begins during the third trimester stage of life.[20] The IS/MND's CalEEMod model indicates that construction activities will generate approximately 175 pounds of DPM over the 445-day construction period.[21] The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{174.9\ lbs}{445\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.00206\ g/s}$$

Using this equation, we estimated a construction emission rate of 0.00206 grams per second ("g/s"). Subtracting the 445-day construction period from the total residential duration of 30 years, we assumed that after Project construction, the sensitive receptor would be exposed to the Project's operational DPM for an additional 28.78 years. The IS/MND's operational CalEEMod emissions indicate that operational activities will generate approximately 14 net pounds of DPM per year throughout operation. Applying the same equation used to estimate the construction DPM rate, we estimated the following emission rate for Project operation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{13.7\ lbs}{365\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.000198\ g/s}$$

Using this equation, we estimated an operational emission rate of 0.000198 g/s. Construction and operation were simulated as a 6.99-acre rectangular area source in AERSCREEN, with approximate dimensions of 238- by 119-meters. A release height of three meters was selected to represent the height of stacks of operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution. The population of Los Angeles was obtained from U.S. 2020 Census data.[22]

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project Site. The United States Environmental Protection Agency ("U.S. EPA") suggests that the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10% in screening procedures.[23] According to the IS/MND the nearest sensitive receptor to the Project is located 100 feet, or 30 meters from the Project site (p. 28). However, review of the AERSCREEN output files demonstrates that the MEIR is located approximately 125 meters from the Project site. Thus, the single-hour concentration estimated by AERSCREEN for Project construction is approximately 2.295 µg/m^3 DPM at approximately 125 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.2295 µg/m^3 for Project

[20] "Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-18.
[21] See Attachment A for health risk calculations.
[22] "Los Angeles." U.S. Census Bureau, 2020, *available at:* https://datacommons.org/place/geoId/0644000.
[23] "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised." U.S. EPA, October 1992, *available at:* http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf.

construction at the MEIR. For Project operation, the single-hour concentration estimated by AERSCREEN is 0.2198 µg/m^3 DPM at approximately 125 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.02198 µg/m^3 for Project operation at the MEIR.

We calculated the excess cancer risk to the MEIR using applicable HRA methodologies prescribed by OEHHA, as recommended by SCAQMD.[24] Specifically, guidance from OEHHA and the California Air Resources Board ("CARB") recommends the use of a standard point estimate approach, including high-point estimate (i.e. 95th percentile) breathing rates and age sensitivity factors ("ASF") in order to account for the increased sensitivity to carcinogens during early-in-life exposure and accurately assess risk for susceptible subpopulations such as children. The residential exposure parameters, such as the daily breathing rates ("BR/BW"), exposure duration ("ED"), age sensitivity factors ("ASF"), fraction of time at home ("FAH"), and exposure frequency ("EF") utilized for the various age groups in our screening-level HRA are as follows:

Exposure Assumptions for Residential Individual Cancer Risk

Age Group	Breathing Rate (L/kg-day)[25]	Age Sensitivity Factor[26]	Exposure Duration (years)	Fraction of Time at Home[27]	Exposure Frequency (days/year)[28]	Exposure Time (hours/day)
3rd Trimester	361	10	0.25	1	350	24
Infant (0 - 2)	1090	10	2	1	350	24
Child (2 - 16)	572	3	14	1	350	24
Adult (16 - 30)	261	1	14	0.73	350	24

For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose for each age group. Once determined, contaminant dose is multiplied by the

[24] "AB 2588 and Rule 1402 Supplemental Guidelines." SCAQMD, October 2020, *available at:* http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines.pdf?sfvrsn=19, p. 2.

[25] "Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics 'Hot Spots' Information and Assessment Act." SCAQMD, October 2020, available at: http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines.pdf?sfvrsn=19, p. 19; see also "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

[26] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-5 Table 8.3.

[27] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 5-24.

[28] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 5-24.

cancer potency factor ("CPF") in units of inverse dose expressed in milligrams per kilogram per day (mg/kg/day^{-1}) to derive the cancer risk estimate. Therefore, to assess exposures, we utilized the following dose algorithm:

$$Dose_{AIR,per\ age\ group} = C_{air} \times EF \times \left[\frac{BR}{BW}\right] \times A \times CF$$

where:

$Dose_{AIR}$ = dose by inhalation (mg/kg/day), per age group
C_{air} = concentration of contaminant in air (µg/m3)
EF = exposure frequency (number of days/365 days)
BR/BW = daily breathing rate normalized to body weight (L/kg/day)
A = inhalation absorption factor (default = 1)
CF = conversion factor (1x10-6, µg to mg, L to m3)

To calculate the overall cancer risk, we used the following equation for each appropriate age group:

$$Cancer\ Risk_{AIR} = Dose_{AIR} \times CPF \times ASF \times FAH \times \frac{ED}{AT}$$

where:

$Dose_{AIR}$ = dose by inhalation (mg/kg/day), per age group
CPF = cancer potency factor, chemical-specific (mg/kg/day)$^{-1}$
ASF = age sensitivity factor, per age group
FAH = fraction of time at home, per age group (for residential receptors only)
ED = exposure duration (years)
AT = averaging time period over which exposure duration is averaged (always 70 years)

Consistent with the 445-day construction schedule, the annualized average concentration for construction was used for the entire third trimester of pregnancy (0.25 years), and the first 0.97 years of the infantile stage of life (0 – 2 years). The annualized average concentration for operation was used for the remainder of the 30-year exposure period, which makes up the latter 1.03 years of infantile stage of life, the entire child stage of life (2 – 16 years), and the entire adult stage of life (16 – 30 years). The results of our calculations are shown in the table below.

The Maximally Exposed Individual at an Existing Residential Receptor				
Age Group	**Emissions Source**	**Duration** (years)	**Concentration** (ug/m3)	**Cancer Risk**
3rd Trimester	Construction	0.25	0.2295	3.12E-06
	Construction	*0.97*	*0.2295*	*3.65E-05*
	Operation	*1.03*	*0.0220*	*3.72E-06*
Infant (0 - 2)	Total	2		4.03E-05
Child (2 - 16)	Operation	14	0.0220	7.96E-06
Adult (16 - 30)	Operation	14	0.0220	8.83E-07
Lifetime		**30**		**5.22E-05**

As demonstrated in the table above, the excess cancer risks for the 3rd trimester of pregnancy, infants, children, and adults at the MEIR located approximately 125 meters away, over the course of Project construction and operation, are approximately 3.12, 40.3, 7.96, and 0.883 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years) is approximately 52.2 in one million. The infant and lifetime cancer risks exceed the SCAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the IS/MND.

Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection. The purpose of the screening-level HRA is to demonstrate the potential link between Project-generated emissions and adverse health risk impacts. According to the U.S. EPA:

> "EPA's Exposure Assessment Guidelines recommend completing exposure assessments iteratively using a tiered approach to 'strike a balance between the costs of adding detail and refinement to an assessment and the benefits associated with that additional refinement' (U.S. EPA, 1992).
>
> In other words, an assessment using basic tools (e.g., simple exposure calculations, default values, rules of thumb, conservative assumptions) can be conducted as the first phase (or tier) of the overall assessment (i.e., a screening-level assessment).
>
> The exposure assessor or risk manager can then determine whether the results of the screening-level assessment warrant further evaluation through refinements of the input data and exposure assumptions or by using more advanced models."

As demonstrated above, screening-level analyses warrant further evaluation in a refined modeling approach. Thus, as our screening-level HRA demonstrates that construction and operation of the Project

could result in a potentially significant health risk impact, an EIR should be prepared to include a refined health risk analysis which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

The IS/MND estimates that the Project would generate net annual greenhouse gas ("GHG") emissions of 1,285.1 metric tons of carbon dioxide equivalents per year ("MT CO_2e/year") (see excerpt below) (p. 52, Table VIII-1).

Table VIII-1
Annual Greenhouse Gas Emissions

Consumption Source	MTCO_2e/year
Area Sources	< 0.1
Energy Utilization	485.4
Mobile Source	525.2
Solid Waste Generation	50.0
Water Consumption	204.2
Annualized Construction	20.3
Total	**1,285.1**

Source: CalEEMod.2016.3.1 output provided in Appendix A. Proposed building square footages are slightly reduced from the total used to generate the CalEEMod outputs.

As such, the IS/MND states:

> "As shown in Table VIII-1, with the addition of the amortized construction GHG emissions discussed above, the emissions model estimates that the Project would result in annual emissions of approximately 1,285.1 MTCO2e. This would be far below the SCAQMD staff proposed numerical threshold of 3,000 MT of CO_2e per year for evaluating GHG impacts of non-industrial projects" (p. 52).

Furthermore, the IS/MND's analysis relies upon the Project's consistency with the CARB Scoping Plan and SCAG 2020-2045 RTP/SCS to conclude that the Project would result in a less-than-significant GHG impact (p. 53-60). However, the IS/MND's analysis, as well as the subsequent less-than-significant impact conclusion, is incorrect for five reasons.

(1) The IS/MND's quantitative GHG analysis relies upon an incorrect and unsubstantiated air model;
(2) The IS/MND's quantitative GHG analysis relies upon an outdated threshold;
(3) The IS/MND fails to identify a potentially significant GHG impact;
(4) The IS/MND fails to consider the performance-based standards under CARB's *Scoping Plan*; and
(5) The IS/MND fails to consider the performance-based standards under SCAG's *RTP/SCS.*

1) Incorrect and Unsubstantiated Quantitative Analysis of Emissions

As previously stated, the IS/MND estimates that the Project would generate net annual GHG emissions of 1,285.1 MT CO_2e/year (p. 52, Table VIII). However, the IS/MND's quantitative GHG analysis is

unsubstantiated. As previously discussed, when we reviewed the Project's CalEEMod output files, provided in the CalEEMod Output Sheets as Appendix A to the IS/MND, we found that several of the values inputted into the model are not consistent with information disclosed in the IS/MND. As a result, the model underestimates the Project's emissions, and the IS/MND's quantitative GHG analysis should not be relied upon to determine Project significance. An EIR should be prepared that adequately assesses the potential GHG impacts that construction and operation of the proposed Project may have on the environment.

2) Incorrect Reliance on an Outdated Quantitative GHG Threshold

As previously stated, the IS/MND estimates that the Project would generate net annual GHG emissions of 1,285.1 MT CO_2e/year, which would not exceed the SCAQMD bright-line threshold of 3,000 MT CO_2e/year (p. 52, Table VIII). However, the guidance that provided the 3,000 MT CO_2e/year threshold, the SCAQMD's 2008 *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans* report, was developed when the Global Warming Solutions Act of 2006, commonly known as "AB 32", was the governing statute for GHG reductions in California. AB 32 requires California to reduce GHG emissions to 1990 levels by 2020. [29] Furthermore, AEP guidance states:

> "[F]or evaluating projects with a post 2020 horizon, the threshold will need to be revised based on a new gap analysis that would examine 17 development and reduction potentials out to the next GHG reduction milestone." [30]

As it is currently May 2022, thresholds for 2020 are not applicable to the proposed Project and should be revised to reflect the current GHG reduction target. As such, the SCAQMD bright-line threshold of 3,000 MT CO_2e/year is outdated and inapplicable to the proposed Project, and the IS/MND's less-than-significant GHG impact conclusion should not be relied upon. Instead, we recommend that the Project apply the SCAQMD 2035 efficiency target of 3.0 metric tons of carbon dioxide equivalents per service population per year ("MT CO_2e/SP/year").

3) Failure to Identify a Potentially Significant GHG Impact

In an effort to quantitatively evaluate the Project's GHG emissions, we compared the Project's GHG emissions, as estimated by the IS/MND, to the SCAQMD 2035 service population efficiency target of 3.0 MT CO_2e/SP/year, which was calculated by applying a 40% reduction to the 2020 targets. [31] When applying this threshold, the Project's incorrect and unsubstantiated air model indicates a potentially significant GHG impact. As previously stated, the IS/MND estimates that the Project would generate net annual GHG emissions of 1,285.1 MT CO_2e/year (p. 52, Table VIII). According to CAPCOA's *CEQA & Climate Change* report, a service population ("SP") is defined as "the sum of the number of residents

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[29] "Health & Safety Code 38550." California State Legislature, January 2007, *available at:* https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=38550.

[30] "Beyond Newhall and 2020: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California." Association of Environmental Professionals (AEP), October 2016, *available at:* https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf, p. 39.

[31] "Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15." SCAQMD, September 2010, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf, p. 2.

and the number of jobs supported by the project."[32] As the Project does not include any residential land uses, the SP would include the number of jobs supported by the Project. According to the IS/MND, the Project will employ 211 people during operation (p. 98). As such, we estimate a SP of 211 people. When dividing the Project's net annual GHG emissions, as estimated by the IS/MND, by a SP of 211 people, we find that the Project would emit approximately 6.1 MT CO_2e/SP/year (see table below).[33]

IS/MND Greenhouse Gas Emissions	
Annual Emissions (MT CO2e/year)	1,285.1
Service Population	211
Service Population Efficiency (MT CO2e/SP/year)	6.1
SCAQMD 2035 Target	**3.0**
Exceeds?	***Yes***

As demonstrated above, the Project's service population efficiency value, as estimated by the IS/MND's provided net annual GHG emission estimates and SP, exceeds the SCAQMD 2035 efficiency target of 3.0 MT CO_2e/SP/year, indicating a potentially significant impact not previously identified or addressed by the IS/MND. As a result, the IS/MND's less-than-significant GHG impact conclusion should not be relied upon. An EIR should be prepared, including an updated GHG analysis and incorporating additional mitigation measures to reduce the Project's GHG emissions to less-than-significant levels.

4) Failure to Consider Performance-based Standards Under CARB's 2017 Scoping Plan

As previously discussed, the IS/MND concludes that the Project would be consistent with CARB's 2017 Climate Change Scoping Plan (p. 53-60). However, this is incorrect, as the IS/MND fails to consider performance-based measures proposed by CARB.

i. Passenger & Light Duty VMT Per Capita Benchmarks per SB 375

In reaching the State's long-term GHG emission reduction goals, CARB's 2017 *Scoping Plan* explicitly cites to SB 375 and the VMT reductions anticipated under the implementation of Sustainable Community Strategies.[34] CARB has identified the population and daily VMT from passenger autos and light-duty vehicles at the state and county level for each year between 2010 to 2050 under a "baseline scenario" that includes "current projections of VMT included in the existing Regional Transportation Plans/Sustainable Communities Strategies (RTP/SCSs) adopted by the State's 18 Metropolitan Planning Organizations (MPOs) pursuant to SB 375 as of 2015."[35] By dividing the projected daily VMT by the

[32] "CEQA & Climate Change." California Air Pollution Control Officers Association (CAPCOA), January 2008, *available at:* http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf, p. 71-72.
[33] Calculated: (1,285.1 MT CO_2e/year) / (211 service population) = (6.09 MT CO_2e/SP/year).
[34] "California's 2017 Climate Change Scoping Plan." CARB, November 2017, *available at*: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, p. 25, 98, 101-103.
[35] Supporting Calculations for 2017 Scoping Plan-Identified VMT Reductions," California Air Resources Board (CARB), January 2019, *available at*: https://ww2.arb.ca.gov/sites/default/files/2019-01/sp_mss_vmt_calculations_jan19_0.xlsx; *see also:* https://ww2.arb.ca.gov/resources/documents/carb-2017-scoping-plan-identified-vmt-reductions-and-relationship-state-climate.

population, we calculated the daily VMT per capita for each year at the state and county level for 2010 (baseline year), 2023 (Project operational year), and 2030 (target years under SB 32) (see table below).

2017 Scoping Plan Daily VMT Per Capita						
	Los Angeles County			State		
Year	Population	LDV VMT Baseline	VMT Per Capita	Population	LDV VMT Baseline	VMT Per Capita
2010	9,838,771	216,979,221.64	22.05	37,335,085	836,463,980.46	22.40
2023	10,581,976	221,156,313.83	20.90	41,659,526	924,184,228.61	22.18
2030	10,868,614	215,539,586.12	19.83	43,939,250	957,178,153.19	21.78

As the IS/MND fails to evaluate the Project's consistency with the CARB 2017 *Scoping Plan* performance-based daily VMT per capita projections, the IS/MND's claim that the proposed Project would not conflict with the CARB 2017 *Scoping Plan* is unsupported. An EIR should be prepared for the proposed Project to provide additional information and analysis to conclude less-than-significant GHG impacts.

5) Failure to Consider Performance-based Standards under SCAG's RTP/SCS

As previously discussed, the IS/MND concludes that the Project would be consistent with SCAG's *RTP/SCS* (p. 53-60). However, the IS/MND fails to consider whether or not the Project meets any of the specific performance-based goals underlying SCAG's *RTP/SCS* and SB 375, such as: i) per capita GHG emission targets, or ii) daily vehicles miles traveled ("VMT") per capita benchmarks.

i. SB 375 Per Capita GHG Emission Goals

SB 375 was signed into law in September 2008 to enhance the state's ability to reach AB 32 goals by directing CARB to develop regional 2020 and 2035 GHG emission reduction targets for passenger vehicles (autos and light-duty trucks). In March 2018, CARB adopted updated regional targets requiring a 19 percent decrease in VMT for the SCAG region by 2035. This goal is reflected in SCAG's 2020 RTP/SCS Program Environmental Impact Report ("PEIR"), in which the 2020 RTP/SCS PEIR updates the per capita emissions to 18.8 lbs/day in 2035 (see excerpt below). [36]

[36] "Connect SoCal Certified Final Program Environmental Impact Report." SCAG, May 2020, *available at*: https://scag.ca.gov/sites/main/files/file-attachments/fpeir_connectsocal_complete.pdf?1607981618, p. 3.8-74.

Table 3.8-10
SB 375 Analysis

	2005 (Baseline)	2020 (Plan)	2035 (Plan)
Resident population (per 1,000)	17,161	19,194	21,110
CO2 emissions (per 1,000 tons)	204.0/a/	204.5/b/	198.6/b/
Per capita emissions (pounds/day)	23.8	21.3	18.8
% difference from Plan (2020) to Baseline (2005)			–8%
% difference from Plan (2035) to Baseline (2005)			–19%/c/

Note:
/a/ Based on EMFAC2007
/b/Based on EMFAC2014 and SCAG modeling, 2019.
/c/ Includes off-model adjustments for 2035 and 2045
Source: SCAG modeling, 2019.
http://www.scag.ca.gov/committees/CommitteeDocLibrary/jointRCPC110515fullagn.pdf

As the IS/MND fails to evaluate the Project's consistency with the SCAG's per capita emissions, the IS/MND's claim that the proposed Project would not conflict with SCAG's *RTP/SCS* is unsupported. An EIR should be prepared for the proposed Project to provide additional information and analysis to conclude less-than-significant GHG impacts.

ii. SB 375 RTP/SCS Daily VMT Per Capita Target

Under the SCAG's 2020 *RTP/SCS*, daily VMT per capita in the SCAG region should decrease from 23.2 VMT in 2016 to 20.7 VMT by 2045.[37] Daily VMT per capita in Los Angeles County should decrease from 22.2 to 19.2 VMT during that same period.[38] Here, however, the IS/MND fails to consider any of the above-mentioned performance-based VMT targets. As the IS/MND fails to evaluate the Project's consistency with the SCAG's performance-based daily VMT per capita projections, the IS/MND's claim that the proposed Project would not conflict with SCAG's *RTP/SCS* is unsupported. An EIR should be prepared for the proposed Project to provide additional information and analysis to conclude less-than-significant GHG impacts.

Feasible Mitigation Measures Available to Reduce Emissions

The IS/MND's analysis demonstrates that the Project would result in a potentially significant health risk and GHG impact that should be mitigated further. In an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project. Feasible mitigation measures can be found in the Department of Justice Warehouse Project Best Practices document.[39] Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

[37] "Connect SoCal." SCAG, September 2020, *available at*: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176, pp. 138.
[38] "Connect SoCal." SCAG, September 2020, *available at*: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal-plan_0.pdf?1606001176, pp. 138.
[39] "Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act." State of California Department of Justice, *available at:* https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/warehouse-best-practices.pdf.

- Requiring off-road construction equipment to be zero-emission, where available, and all diesel-fueled off-road construction equipment, to be equipped with CARB Tier IV-compliant engines or better, and including this requirement in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.
- Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.
- Requiring on-road heavy-duty haul trucks to be model year 2010 or newer if diesel-fueled.
- Providing electrical hook ups to the power grid, rather than use of diesel-fueled generators, for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.
- Limiting the amount of daily grading disturbance area.
- Prohibiting grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the project area.
- Forbidding idling of heavy equipment for more than two minutes.
- Keeping onsite and furnishing to the lead agency or other regulators upon request, all equipment maintenance records and data sheets, including design specifications and emission control tier classifications.
- Conducting an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts.
- Using paints, architectural coatings, and industrial maintenance coatings that have volatile organic compound levels of less than 10 g/L.
- Providing information on transit and ridesharing programs and services to construction employees.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations for construction employees.
- Requiring that all facility-owned and operated fleet equipment with a gross vehicle weight rating greater than 14,000 pounds accessing the site meet or exceed 2010 model-year emissions equivalent engine standards as currently defined in California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025. Facility operators shall maintain records on-site demonstrating compliance with this requirement and shall make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring all heavy-duty vehicles entering or operated on the project site to be zero-emission beginning in 2030.
- Requiring on-site equipment, such as forklifts and yard trucks, to be electric with the necessary electrical charging stations provided.
- Requiring tenants to use zero-emission light- and medium-duty vehicles as part of business operations.
- Forbidding trucks from idling for more than two minutes and requiring operators to turn off engines when not in use.

- Posting both interior- and exterior-facing signs, including signs directed at all dock and delivery areas, identifying idling restrictions and contact information to report violations to CARB, the air district, and the building manager.
- Installing and maintaining, at the manufacturer's recommended maintenance intervals, air filtration systems at sensitive receptors within a certain radius of facility for the life of the project.
- Installing and maintaining, at the manufacturer's recommended maintenance intervals, an air monitoring station proximate to sensitive receptors and the facility for the life of the project, and making the resulting data publicly available in real time. While air monitoring does not mitigate the air quality or greenhouse gas impacts of a facility, it nonetheless benefits the affected community by providing information that can be used to improve air quality or avoid exposure to unhealthy air.
- Constructing electric truck charging stations proportional to the number of dock doors at the project.
- Constructing electric plugs for electric transport refrigeration units at every dock door, if the warehouse use could include refrigeration.
- Constructing electric light-duty vehicle charging stations proportional to the number of parking spaces at the project.
- Installing solar photovoltaic systems on the project site of a specified electrical generation capacity, such as equal to the building's projected energy needs.
- Requiring all stand-by emergency generators to be powered by a non-diesel fuel.
- Requiring facility operators to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.
- Requiring operators to establish and promote a rideshare program that discourages single-occupancy vehicle trips and provides financial incentives for alternate modes of transportation, including carpooling, public transit, and biking.
- Meeting CalGreen Tier 2 green building standards, including all provisions related to designated parking for clean air vehicles, electric vehicle charging, and bicycle parking.
- Achieving certification of compliance with LEED green building standards.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations.
- Posting signs at every truck exit driveway providing directional information to the truck route.
- Improving and maintaining vegetation and tree canopy for residents in and around the project area.
- Requiring that every tenant train its staff in charge of keeping vehicle records in diesel technologies and compliance with CARB regulations, by attending CARB approved courses. Also require facility operators to maintain records on-site demonstrating compliance and make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring tenants to enroll in the United States Environmental Protection Agency's SmartWay program, and requiring tenants to use carriers that are SmartWay carriers.
- Providing tenants with information on incentive programs, such as the Carl Moyer Program and Voucher Incentive Program, to upgrade their fleets.

These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduce emissions released during Project construction and operation.

Furthermore, as it is policy of the State that eligible renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers by December 31, 2045, we emphasize the applicability of incorporating solar power system into the Project design. Until the feasibility of incorporating on-site renewable energy production is considered, the Project should not be approved.

An EIR should be prepared to include all feasible mitigation measures, as well as include an updated health risk analysis to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The EIR should also demonstrate a commitment to the implementation of these measures prior to Project approval, to ensure that the Project's significant emissions are reduced to the maximum extent possible.

Disclaimer

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,



Matt Hagemann, P.G., C.Hg.



Paul E. Rosenfeld, Ph.D.

Attachment A: Health Risk Calculations
Attachment B: AERSCREEN Output Files
Attachment C: Matt Hagemann CV
Attachment D: Paul E. Rosenfeld CV

Construction			Total		Operation	
2022					**Emission Rate**	
Annual Emissions (tons/year)	0.0308		Total DPM (lbs)	174.890411	Annual Emissions (tons/year)	0.00687
Daily Emissions (lbs/day)	0.168767123		Total DPM (g)	79330.29041	Daily Emissions (lbs/day)	0.037643836
Construction Duration (days)	90		Emission Rate (g/s)	0.002063314	Total DPM (lbs)	13.74
Total DPM (lbs)	15.1890411		Release Height (meters)	3	Emission Rate (g/s)	0.00019763
Total DPM (g)	6889.749041		Total Acreage	6.99	Release Height (meters)	3
Start Date	10/3/2022		Max Horizontal (meters)	237.86	Total Acreage	6.99
End Date	1/1/2023		Min Horizontal (meters)	118.93	Max Horizontal (meters)	237.86
Construction Days	90		Initial Vertical Dimension (meters)	1.5	Min Horizontal (meters)	118.93
2023			Setting	Urban	Initial Vertical Dimension (meters)	1.5
Annual Emissions (tons/year)	0.0821		Population	3,973,278	Setting	Urban
Daily Emissions (lbs/day)	0.449863014		Start Date	10/3/2022	Population	3,973,278
Construction Duration (days)	355		End Date	12/22/2023		
Total DPM (lbs)	159.7013699		Total Construction Days	445		
Total DPM (g)	72440.54137		Total Years of Construction	1.22		
Start Date	1/1/2023		Total Years of Operation	28.78		
End Date	12/22/2023					
Construction Days	355					

Start date and time 05/23/22 14:27:09

AERSCREEN 21112

Fallbrook Point Warehouse, Construction

Fallbrook Point Warehouse, Construction

---------- DATA ENTRY VALIDATION ----------

** AREADATA **	METRIC	ENGLISH
Emission Rate:	0.206E-02 g/s	0.164E-01 lb/hr
Area Height:	3.00 meters	9.84 feet
Area Source Length:	237.86 meters	780.38 feet
Area Source Width:	118.93 meters	390.19 feet
Vertical Dimension:	1.50 meters	4.92 feet
Model Mode:	URBAN	
Population:	3973278	
Dist to Ambient Air:	1.0 meters	3. feet

** BUILDING DATA **

No Building Downwash Parameters

** TERRAIN DATA **

No Terrain Elevations

Source Base Elevation: 0.0 meters 0.0 feet

Probe distance: 5000. meters 16404. feet

No flagpole receptors

No discrete receptors used

** FUMIGATION DATA **

No fumigation requested

** METEOROLOGY DATA **

Min/Max Temperature: 250.0 / 310.0 K -9.7 / 98.3 Deg F

Minimum Wind Speed: 0.5 m/s

```
 Anemometer Height:   10.000 meters

 Dominant Surface Profile: Urban
 Dominant Climate Type:    Average Moisture

 Surface friction velocity (u*): not adjusted

DEBUG OPTION ON




 AERSCREEN output file:
 2022.05.23_AERSCREEN_FallbrookPointWarehouse_Construction.out



 *** AERSCREEN Run is Ready to Begin




 No terrain used, AERMAP will not be run
**************************************************

SURFACE CHARACTERISTICS & MAKEMET
Obtaining surface characteristics...
```

Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season	Albedo	Bo	zo
Winter	0.35	1.50	1.000
Spring	0.14	1.00	1.000
Summer	0.16	2.00	1.000
Autumn	0.18	2.00	1.000

Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl

Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl

Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl

Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl

Buildings and/or terrain present or rectangular area source, skipping probe

FLOWSECTOR started 05/23/22 14:39:04

****

Running AERMOD

Processing Winter

Processing surface roughness sector 1

```
**************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************

Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
```

```
**************************************************

Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  25

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************
```

```
Processing wind flow sector   7

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  30

    ********   WARNING MESSAGES    ********

               ***  NONE  ***

 *****************************************

  Running AERMOD

 Processing Spring

Processing surface roughness sector  1

**************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0

    ********   WARNING MESSAGES    ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20
```

```
    ********   WARNING MESSAGES    ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  25


    ********   WARNING MESSAGES    ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  30


    ********   WARNING MESSAGES    ********

               ***  NONE  ***

 ****************************************


  Running AERMOD

 Processing Summer


Processing surface roughness sector  1
```

```
**************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************
```

```
Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  25

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   7
```

```
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 ******************************************


  Running AERMOD

 Processing Autumn


Processing surface roughness sector  1


*****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20


    ********   WARNING MESSAGES   ********
```

```
               ***  NONE  ***

**************************************************

Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  25

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************

Processing wind flow sector   7

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  30

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

FLOWSECTOR   ended 05/23/22 14:39:16

REFINE       started 05/23/22 14:39:16

 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0

    ********   WARNING MESSAGES   ********
```

*** NONE ***

REFINE ended 05/23/22 14:39:18

****

AERSCREEN Finished Successfully

With no errors or warnings

Check log file for details

****

Ending date and time 05/23/22 14:39:20

```
 Concentration     Distance Elevation  Diag  Season/Month   Zo sector       Date
  H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.18391E+01         1.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19678E+01        25.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20763E+01        50.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21985E+01        75.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22833E+01       100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
*  0.22949E+01       125.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15801E+01       150.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11662E+01       175.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.96008E+00       200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.81199E+00       225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.69948E+00       250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61187E+00       275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54185E+00       300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.48450E+00       325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.43741E+00       350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.39732E+00       375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
```

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 310.0    2.0
   0.36361E+00       400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33433E+00       425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30910E+00       450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28715E+00       475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26754E+00       500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25013E+00       525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23466E+00       550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22085E+00       575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20844E+00       600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19712E+00       625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18682E+00       650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17743E+00       675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16880E+00       700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16089E+00       725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15361E+00       750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14690E+00       775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14070E+00       800.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13490E+00       825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12948E+00       850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12444E+00       875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11974E+00       900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11534E+00       925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11121E+00       950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10734E+00       975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10371E+00      1000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10028E+00      1025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.97048E-01      1050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.93979E-01      1075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.91077E-01      1100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.88329E-01      1125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.85724E-01      1150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.83250E-01      1175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.80890E-01      1200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```

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   0.78637E-01      1225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.76491E-01      1250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.74446E-01      1275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.72495E-01      1300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.70632E-01      1325.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.68855E-01      1350.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.67150E-01      1375.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.65519E-01      1400.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.63955E-01      1425.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.62456E-01      1450.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61016E-01      1475.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.59634E-01      1500.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.58306E-01      1525.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.57029E-01      1550.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.55799E-01      1575.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54616E-01      1600.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.53475E-01      1625.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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 310.0    2.0
   0.52374E-01      1650.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.51312E-01      1675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.50288E-01      1700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.49300E-01      1725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.48346E-01      1750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.47423E-01      1775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46531E-01      1800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.45667E-01      1825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.44831E-01      1850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.44022E-01      1875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.43238E-01      1900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.42478E-01      1925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.41737E-01      1950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.41019E-01      1975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.40321E-01      2000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.39644E-01      2025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.38987E-01      2050.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.38346E-01      2075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.37722E-01      2100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.37115E-01      2125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.36525E-01      2150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.35951E-01      2175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.35393E-01      2200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.34999E-01      2225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.34468E-01      2250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33951E-01      2275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33446E-01      2300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32955E-01      2325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32476E-01      2350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32010E-01      2375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.31554E-01      2400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.31110E-01      2425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30677E-01      2450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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   0.30253E-01      2475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29840E-01      2500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29436E-01      2525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29041E-01      2550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28656E-01      2575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28279E-01      2600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27911E-01      2625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27551E-01      2650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27199E-01      2675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26855E-01      2700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26518E-01      2725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26188E-01      2750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25866E-01      2775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25550E-01      2800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25241E-01      2825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24938E-01      2850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24642E-01      2875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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 310.0    2.0
   0.24352E-01      2900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24067E-01      2925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23788E-01      2950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23515E-01      2975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23247E-01      3000.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22985E-01      3025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22727E-01      3050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22475E-01      3075.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22227E-01      3100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21984E-01      3125.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21745E-01      3150.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21511E-01      3175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21281E-01      3200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21056E-01      3225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20835E-01      3250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20617E-01      3275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20404E-01      3300.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20194E-01      3325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19988E-01      3350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19786E-01      3375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19587E-01      3400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19391E-01      3425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19199E-01      3450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19010E-01      3475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18825E-01      3500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18642E-01      3525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18463E-01      3550.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18287E-01      3575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18113E-01      3600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17942E-01      3625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17774E-01      3650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17609E-01      3675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17446E-01      3700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```

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   0.17286E-01      3725.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17129E-01      3750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16974E-01      3775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16821E-01      3800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16671E-01      3825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16523E-01      3850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16377E-01      3875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16234E-01      3900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16092E-01      3925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15953E-01      3950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15816E-01      3975.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15681E-01      4000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15548E-01      4025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15417E-01      4050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15287E-01      4075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15160E-01      4100.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15034E-01      4125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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 310.0    2.0
   0.14910E-01      4150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14789E-01      4175.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14668E-01      4200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14550E-01      4225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14433E-01      4250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14317E-01      4275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14203E-01      4300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14091E-01      4325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13981E-01      4350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13871E-01      4375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13764E-01      4400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13657E-01      4425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13552E-01      4450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13449E-01      4475.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13347E-01      4500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13246E-01      4525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13147E-01      4550.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13048E-01      4575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12951E-01      4600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12856E-01      4625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12761E-01      4650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12668E-01      4675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12576E-01      4700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12485E-01      4725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12395E-01      4750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12307E-01      4775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12219E-01      4800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12132E-01      4825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12047E-01      4850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11962E-01      4875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11879E-01      4900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11797E-01      4925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11715E-01      4950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```

```
   0.11635E-01      4975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11555E-01      5000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```

Start date and time 05/23/22 14:39:34

AERSCREEN 21112

Fallbrook Point Warehouse, Operation

Fallbrook Point Warehouse, Operation

---------- DATA ENTRY VALIDATION ----------

	METRIC	ENGLISH
** AREADATA **	---	---
Emission Rate:	0.198E-03 g/s	0.157E-02 lb/hr
Area Height:	3.00 meters	9.84 feet
Area Source Length:	237.86 meters	780.38 feet
Area Source Width:	118.93 meters	390.19 feet
Vertical Dimension:	1.50 meters	4.92 feet
Model Mode:	URBAN	
Population:	3973278	
Dist to Ambient Air:	1.0 meters	3. feet

** BUILDING DATA **

No Building Downwash Parameters

** TERRAIN DATA **

No Terrain Elevations

Source Base Elevation: 0.0 meters 0.0 feet

Probe distance: 5000. meters 16404. feet

No flagpole receptors

No discrete receptors used

** FUMIGATION DATA **

No fumigation requested

** METEOROLOGY DATA **

Min/Max Temperature: 250.0 / 310.0 K -9.7 / 98.3 Deg F

Minimum Wind Speed: 0.5 m/s

```
 Anemometer Height:   10.000 meters

 Dominant Surface Profile: Urban

 Dominant Climate Type:    Average Moisture

 Surface friction velocity (u*): not adjusted

DEBUG OPTION ON



 AERSCREEN output file:

 2022.05.23_AERSCREEN_FallbrookPointWarehouse_Operation.out



 *** AERSCREEN Run is Ready to Begin



 No terrain used, AERMAP will not be run
**************************************************

SURFACE CHARACTERISTICS & MAKEMET

Obtaining surface characteristics...
```

Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season	Albedo	Bo	zo
Winter	0.35	1.50	1.000
Spring	0.14	1.00	1.000
Summer	0.16	2.00	1.000
Autumn	0.18	2.00	1.000

Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl

Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl

Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl

Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl

Buildings and/or terrain present or rectangular area source, skipping probe

FLOWSECTOR started 05/23/22 14:44:29

****

Running AERMOD

Processing Winter

Processing surface roughness sector 1

```
**************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10

    ********   WARNING MESSAGES   ********

               ***  NONE  ***
```

```
**************************************************

Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  25

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************
```

```
Processing wind flow sector   7

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  30

    ********   WARNING MESSAGES    ********

               ***  NONE  ***

 *****************************************

  Running AERMOD

 Processing Spring

Processing surface roughness sector  1

**************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0

    ********   WARNING MESSAGES    ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20
```

```
    ********   WARNING MESSAGES    ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  25


    ********   WARNING MESSAGES    ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  30


    ********   WARNING MESSAGES    ********

               ***  NONE  ***

 ****************************************


  Running AERMOD

 Processing Summer


Processing surface roughness sector  1
```

```
**************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************

Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

**************************************************
```

```
Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  25

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************
Processing wind flow sector   7
```

```
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 ******************************************


  Running AERMOD

 Processing Autumn


Processing surface roughness sector  1


*****************************************************

Processing wind flow sector   1


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   2


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


**************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20


    ********   WARNING MESSAGES   ********
```

```
               ***  NONE  ***

**************************************************

Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  25

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

**************************************************

Processing wind flow sector   7

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  30

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

FLOWSECTOR   ended 05/23/22 14:44:40

REFINE       started 05/23/22 14:44:40

 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0

    ********   WARNING MESSAGES   ********
```

*** NONE ***

REFINE ended 05/23/22 14:44:41

****

AERSCREEN Finished Successfully

With no errors or warnings

Check log file for details

****

Ending date and time 05/23/22 14:44:43

```
 Concentration     Distance Elevation  Diag  Season/Month   Zo sector       Date
  H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.17615E+00         1.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18847E+00        25.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19887E+00        50.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21057E+00        75.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21869E+00       100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
*  0.21980E+00       125.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15134E+00       150.00      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11170E+00       175.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.91954E-01       200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.77770E-01       225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.66994E-01       250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.58604E-01       275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.51897E-01       300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46405E-01       325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.41894E-01       350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.38054E-01       375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
```

```
 310.0    2.0
   0.34825E-01       400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32021E-01       425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29605E-01       450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27502E-01       475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25625E-01       500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23957E-01       525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22475E-01       550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21152E-01       575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19964E-01       600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18880E-01       625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17893E-01       650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16994E-01       675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16167E-01       700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15410E-01       725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14713E-01       750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14070E-01       775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13476E-01       800.00      0.00   0.0        Winter       0-360   10011001
```

```
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12920E-01       825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12402E-01       850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11919E-01       875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11468E-01       900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11046E-01       925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10652E-01       950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10281E-01       975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.99327E-02      1000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.96046E-02      1025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.92950E-02      1050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.90011E-02      1075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.87232E-02      1100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.84599E-02      1125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.82104E-02      1150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.79735E-02      1175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.77474E-02      1200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```

```
   0.75316E-02      1225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.73261E-02      1250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.71303E-02      1275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.69434E-02      1300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.67650E-02      1325.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.65947E-02      1350.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.64315E-02      1375.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.62752E-02      1400.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61254E-02      1425.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.59818E-02      1450.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.58440E-02      1475.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.57116E-02      1500.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.55844E-02      1525.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54621E-02      1550.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.53443E-02      1575.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.52310E-02      1600.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.51217E-02      1625.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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 310.0    2.0
   0.50162E-02      1650.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.49145E-02      1675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.48165E-02      1700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.47219E-02      1725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46304E-02      1750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.45420E-02      1775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.44566E-02      1800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.43739E-02      1825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.42938E-02      1850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.42163E-02      1875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.41412E-02      1900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.40684E-02      1925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.39975E-02      1950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.39287E-02      1975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.38619E-02      2000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.37970E-02      2025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.37341E-02      2050.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.36727E-02      2075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.36129E-02      2100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.35548E-02      2125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.34983E-02      2150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.34433E-02      2175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33899E-02      2200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33521E-02      2225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33013E-02      2250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32517E-02      2275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32034E-02      2300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.31564E-02      2325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.31105E-02      2350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30658E-02      2375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30222E-02      2400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29797E-02      2425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29381E-02      2450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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   0.28976E-02      2475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28580E-02      2500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28193E-02      2525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27815E-02      2550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27446E-02      2575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27085E-02      2600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26732E-02      2625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26388E-02      2650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26051E-02      2675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25721E-02      2700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25398E-02      2725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25083E-02      2750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24774E-02      2775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24471E-02      2800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24175E-02      2825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23885E-02      2850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23601E-02      2875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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 310.0    2.0
   0.23323E-02      2900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23051E-02      2925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22784E-02      2950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22522E-02      2975.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22266E-02      3000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22014E-02      3025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21767E-02      3050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21526E-02      3075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21288E-02      3100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21055E-02      3125.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20827E-02      3150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20603E-02      3175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20383E-02      3200.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20167E-02      3225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19955E-02      3250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19747E-02      3275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19542E-02      3300.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19341E-02      3325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19144E-02      3350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18950E-02      3375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18760E-02      3400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18572E-02      3425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18389E-02      3450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18208E-02      3475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18030E-02      3500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17855E-02      3525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17683E-02      3550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17514E-02      3575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17348E-02      3600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17184E-02      3625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17024E-02      3650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16865E-02      3675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16710E-02      3700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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   0.16556E-02      3725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16405E-02      3750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16257E-02      3775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16111E-02      3800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15967E-02      3825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15825E-02      3850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15686E-02      3875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15548E-02      3900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15413E-02      3925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15279E-02      3950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15148E-02      3975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15019E-02      4000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14891E-02      4025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14766E-02      4050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14642E-02      4075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14520E-02      4100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14399E-02      4125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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 310.0    2.0
   0.14281E-02      4150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14164E-02      4175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14049E-02      4200.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13935E-02      4225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13823E-02      4250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13713E-02      4275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13604E-02      4300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13496E-02      4325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13390E-02      4350.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13286E-02      4375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13182E-02      4400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13081E-02      4425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12980E-02      4450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12881E-02      4475.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12783E-02      4500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12687E-02      4525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12591E-02      4550.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12497E-02      4575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12404E-02      4600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12313E-02      4625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12222E-02      4650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12133E-02      4675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12045E-02      4700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11958E-02      4725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11872E-02      4750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11787E-02      4775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11703E-02      4800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11620E-02      4825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11538E-02      4850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11457E-02      4875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11377E-02      4900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11299E-02      4925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11220E-02      4950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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   0.11143E-02      4975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11067E-02      5000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

Geologic and Hydrogeologic Characterization
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
Industrial Stormwater Compliance
CEQA Review

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with SWAPE, Matt has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2104, 2017;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of over 300 environmental impact reports and negative declarations since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at more than 100 industrial facilities.
- Expert witness on numerous cases including, for example, perfluorooctanoic acid (PFOA) contamination of groundwater, MTBE litigation, air toxins at hazards at a school, CERCLA compliance in assessment and remediation, and industrial stormwater contamination.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted

public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9.

Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific

principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt is currently a part time geology instructor at Golden West College in Huntington Beach, California where he taught from 2010 to 2014 and in 2017.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F.** 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examinations, 2009-2011.

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, industrial, military and agricultural sources, unconventional oil drilling operations, and locomotive and construction engines. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities. Dr. Rosenfeld has also successfully modeled exposure to contaminants distributed by water systems and via vapor intrusion.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, creosote, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at sites and has testified as an expert witness on numerous cases involving exposure to soil, water and air contaminants from industrial, railroad, agricultural, and military sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H_2O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

Remy, L.L., Clay T., Byers, V., **Rosenfeld P. E.** (2019) Hospital, Health, and Community Burden After Oil Refinery Fires, Richmond, California 2007 and 2012. *Environmental Health.* 18:48

Simons, R.A., Seo, Y. **Rosenfeld, P**., (2015) Modeling the Effect of Refinery Emission On Residential Property Value. Journal of Real Estate Research. 27(3):321-342

Chen, J. A, Zapata A. R., Sutherland A. J., Molmen, D.R., Chow, B. S., Wu, L. E., **Rosenfeld, P. E.,** Hesse, R. C., (2012) Sulfur Dioxide and Volatile Organic Compound Exposure To A Community In Texas City Texas Evaluated Using Aermod and Empirical Data. *American Journal of Environmental Science*, 8(6), 622-632.

Rosenfeld, P.E. & Feng, L. (2011). *The Risks of Hazardous Waste.* Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2011). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Agrochemical Industry*, Amsterdam: Elsevier Publishing.

Gonzalez, J., Feng, L., Sutherland, A., Waller, C., Sok, H., Hesse, R., **Rosenfeld, P.** (2010). PCBs and Dioxins/Furans in Attic Dust Collected Near Former PCB Production and Secondary Copper Facilities in Sauget, IL. *Procedia Environmental Sciences*. 113–125.

Feng, L., Wu, C., Tam, L., Sutherland, A.J., Clark, J.J., **Rosenfeld, P.E.** (2010). Dioxin and Furan Blood Lipid and Attic Dust Concentrations in Populations Living Near Four Wood Treatment Facilities in the United States. *Journal of Environmental Health.* 73(6), 34-46.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2010). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Wood and Paper Industries.* Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2009). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Petroleum Industry*. Amsterdam: Elsevier Publishing.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P**. (2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. *WIT Transactions on Ecology and the Environment, Air Pollution,* 123 (17), 319-327.

Tam L. K.., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. *Organohalogen Compounds*, 70, 002252-002255.

Tam L. K.., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. *Organohalogen Compounds*, 70, 000527-000530.

Hensley, A.R. A. Scott, J. J. J. Clark, **Rosenfeld, P.E.** (2007). Attic Dust and Human Blood Samples Collected near a Former Wood Treatment Facility. *Environmental Research.* 105, 194-197.

Rosenfeld, P.E., J. J. J. Clark, A. R. Hensley, M. Suffet. (2007). The Use of an Odor Wheel Classification for Evaluation of Human Health Risk Criteria for Compost Facilities. *Water Science & Technology* 55(5), 345-357.

Rosenfeld, P. E., M. Suffet. (2007). The Anatomy Of Odour Wheels For Odours Of Drinking Water, Wastewater, Compost And The Urban Environment. *Water Science & Technology* 55(5), 335-344.

Sullivan, P. J. Clark, J.J.J., Agardy, F. J., **Rosenfeld, P.E.** (2007). *Toxic Legacy, Synthetic Toxins in the Food, Water, and Air in American Cities.* Boston Massachusetts: Elsevier Publishing

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash. *Water Science and Technology*. 49(9),171-178.

Rosenfeld P. E., J.J. Clark, I.H. (Mel) Suffet (2004). The Value of An Odor-Quality-Wheel Classification Scheme For The Urban Environment. *Water Environment Federation's Technical Exhibition and Conference (WEFTEC) 2004.* New Orleans, October 2-6, 2004.

Rosenfeld, P.E., and Suffet, I.H. (2004). Understanding Odorants Associated With Compost, Biomass Facilities, and the Land Application of Biosolids. *Water Science and Technology*. 49(9), 193-199.

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash, *Water Science and Technology*, 49(9), 171-178.

Rosenfeld, P. E., Grey, M. A., Sellew, P. (2004). Measurement of Biosolids Odor and Odorant Emissions from Windrows, Static Pile and Biofilter. *Water Environment Research.* 76(4), 310-315.

Rosenfeld, P.E., Grey, M and Suffet, M. (2002). Compost Demonstration Project, Sacramento California Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Integrated Waste Management Board Public Affairs Office*, Publications Clearinghouse (MS–6), Sacramento, CA Publication #442-02-008.

Rosenfeld, P.E., and C.L. Henry. (2001). Characterization of odor emissions from three different biosolids. *Water Soil and Air Pollution.* 127(1-4), 173-191.

Rosenfeld, P.E., and Henry C. L., (2000). Wood ash control of odor emissions from biosolids application. *Journal of Environmental Quality.* 29, 1662-1668.

Rosenfeld, P.E., C.L. Henry and D. Bennett. (2001). Wastewater dewatering polymer affect on biosolids odor emissions and microbial activity. *Water Environment Research.* 73(4), 363-367.

Rosenfeld, P.E., and C.L. Henry. (2001). Activated Carbon and Wood Ash Sorption of Wastewater, Compost, and Biosolids Odorants. *Water Environment Research*, 73, 388-393.

Rosenfeld, P.E., and Henry C. L., (2001). High carbon wood ash effect on biosolids microbial activity and odor. *Water Environment Research.* 131(1-4), 247-262.

Chollack, T. and **P. Rosenfeld. (**1998). Compost Amendment Handbook For Landscaping. Prepared for and distributed by the City of Redmond, Washington State.

Rosenfeld, P. E. (1992). The Mount Liamuiga Crater Trail. *Heritage Magazine of St. Kitts*, 3(2).

Rosenfeld, P. E. (1993). High School Biogas Project to Prevent Deforestation On St. Kitts. *Biomass Users Network*, 7(1).

Rosenfeld, P. E. (1998). Characterization, Quantification, and Control of Odor Emissions From Biosolids Application To Forest Soil. Doctoral Thesis. University of Washington College of Forest Resources.

Rosenfeld, P. E. (1994). Potential Utilization of Small Diameter Trees on Sierra County Public Land. Masters thesis reprinted by the Sierra County Economic Council. Sierra County, California.

Rosenfeld, P. E. (1991). How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

Presentations:

Rosenfeld, P.E., "The science for Perfluorinated Chemicals (PFAS): What makes remediation so hard?" Law Seminars International, (May 9-10, 2018) 800 Fifth Avenue, Suite 101 Seattle, WA.

Rosenfeld, P.E., Sutherland, A; Hesse, R.; Zapata, A. (October 3-6, 2013). Air dispersion modeling of volatile organic emissions from multiple natural gas wells in Decatur, TX. *44th Western Regional Meeting, American Chemical Society.* Lecture conducted from Santa Clara, CA.

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Atrazine: A Persistent Pesticide in Urban Drinking Water. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Feng, L.; Gonzalez, J.; Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T.; Sahai, R.K.; La, M.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Bringing Environmental Justice to East St. Louis, Illinois. *Urban Environmental Pollution.* Lecture conducted from Boston, MA.

Rosenfeld, P.E. (April 19-23, 2009). Perfluoroctanoic Acid (PFOA) and Perfluoroactane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*, Lecture conducted from Tuscon, AZ.

Rosenfeld, P.E. (April 19-23, 2009). Cost to Filter Atrazine Contamination from Drinking Water in the United States" Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*. Lecture conducted from Tuscon, AZ.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P**. (20-22 July, 2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. Brebbia, C.A. and Popov, V., eds., *Air Pollution XVII: Proceedings of the Seventeenth International Conference on Modeling, Monitoring and Management of Air Pollution*. Lecture conducted from Tallinn, Estonia.

Rosenfeld, P. E. (October 15-18, 2007). Moss Point Community Exposure To Contaminants From A Releasing Facility. *The 23rd Annual International Conferences on Soils Sediment and Water.* Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23rd Annual International*

Conferences on Soils Sediment and Water. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions. The *23rd Annual International Conferences on Soils Sediment and Water*. Lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld P. E. (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

Rosenfeld P. E. (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting*. Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition.* Lecture conducted from Boston Massachusetts.

Paul Rosenfeld Ph.D. (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference*. Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

Paul Rosenfeld Ph.D. (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel in Irvine, California.

Paul Rosenfeld Ph.D. (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference*. Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference.* Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D. (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

Paul Rosenfeld, Ph.D. (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

Rosenfeld, P. E., Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants*.. Lecture conducted from Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

Paul Rosenfeld, Ph.D. (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association*. Lecture conducted from Vancouver Washington..

Rosenfeld, P.E. and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conferenc*e. Lecture conducted from Indianapolis, Maryland.

Rosenfeld. P.E. (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation.* Lecture conducted from Anaheim California.

Rosenfeld. P.E. (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest.* Lecture conducted from Ocean Shores, California.

Rosenfeld, P.E. (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association*. Lecture conducted from Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings*. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America*. Lecture conducted from Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell.* Lecture conducted from Seattle Washington.

Rosenfeld, P.E., C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest.* Lecture conducted from Lake Chelan, Washington.

Rosenfeld, P.E, C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America.* Lecture conducted from Anaheim California.

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded:

California Integrated Waste Management Board. $41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: $10,000 grant awarded to San Diego State University.
Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. $100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. $20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: $10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: $15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. $500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

Deposition and/or Trial Testimony:

In the Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition, 5-14-2021
Trial, October 8-4-2021

In the Circuit Court of Cook County Illinois
Joseph Rafferty, Plaintiff vs. Consolidated Rail Corporation and National Railroad Passenger Corporation d/b/a AMTRAK,
Case No.: No. 18-L-6845
Rosenfeld Deposition, 6-28-2021

In the United States District Court For the Northern District of Illinois
Theresa Romcoe, Plaintiff vs. Northeast Illinois Regional Commuter Railroad Corporation d/b/a METRA Rail, Defendants
Case No.: No. 17-cv-8517
Rosenfeld Deposition, 5-25-2021

In the Superior Court of the State of Arizona In and For the Cunty of Maricopa
Mary Tryon et al., Plaintiff vs. The City of Pheonix v. Cox Cactus Farm, L.L.C., Utah Shelter Systems, Inc.
Case Number CV20127-094749
Rosenfeld Deposition: 5-7-2021

In the United States District Court for the Eastern District of Texas Beaumont Division
Robinson, Jeremy et al *Plaintiffs*, vs. CNA Insurance Company et al.
Case Number 1:17-cv-000508
Rosenfeld Deposition: 3-25-2021

In the Superior Court of the State of California, County of San Bernardino
Gary Garner, Personal Representative for the Estate of Melvin Garner vs. BNSF Railway Company.
Case No. 1720288
Rosenfeld Deposition 2-23-2021

In the Superior Court of the State of California, County of Los Angeles, Spring Street Courthouse
Benny M Rodriguez vs. Union Pacific Railroad, A Corporation, et al.
Case No. 18STCV01162
Rosenfeld Deposition 12-23-2020

In the Circuit Court of Jackson County, Missouri
Karen Cornwell, *Plaintiff,* vs. Marathon Petroleum, LP, *Defendant.*
Case No.: 1716-CV10006
Rosenfeld Deposition. 8-30-2019

In the United States District Court For The District of New Jersey
Duarte et al, *Plaintiffs,* vs. United States Metals Refining Company et. al. *Defendant.*
Case No.: 2:17-cv-01624-ES-SCM
Rosenfeld Deposition. 6-7-2019

In the United States District Court of Southern District of Texas Galveston Division
M/T Carla Maersk, *Plaintiffs,* vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS "Conti Perdido" *Defendant.*
Case No.: 3:15-CV-00106 consolidated with 3:15-CV-00237
Rosenfeld Deposition. 5-9-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants
Case No.: No. BC615636
Rosenfeld Deposition, 1-26-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants
Case No.: No. BC646857
Rosenfeld Deposition, 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado
Bells et al. Plaintiff vs. The 3M Company et al., Defendants
Case No.: 1:16-cv-02531-RBJ
Rosenfeld Deposition, 3-15-2018 and 4-3-2018

In The District Court Of Regan County, Texas, 112th Judicial District
Phillip Bales et al., Plaintiff vs. Dow Agrosciences, LLC, et al., Defendants
Cause No.: 1923
Rosenfeld Deposition, 11-17-2017

In The Superior Court of the State of California In And For The County Of Contra Costa
Simons et al., Plaintiffs vs. Chevron Corporation, et al., Defendants
Cause No C12-01481
Rosenfeld Deposition, 11-20-2017

In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition, 8-23-2017

In United States District Court For The Southern District of Mississippi
Guy Manuel vs. The BP Exploration et al., Defendants
Case: No 1:19-cv-00315-RHW
Rosenfeld Deposition, 4-22-2020

In The Superior Court of the State of California, For The County of Los Angeles
Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC
Case No.: LC102019 (c/w BC582154)
Rosenfeld Deposition, 8-16-2017, Trail 8-28-2018

In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., *Plaintiffs,* vs. Meritor Inc., et al., *Defendants*
Case Number: 4:16-cv-52-DMB-JVM
Rosenfeld Deposition: July 2017

In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No.: No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial, March 2017

In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No.: RG14711115
Rosenfeld Deposition, September 2015

In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No.: LALA002187
Rosenfeld Deposition, August 2015

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action N0. 14-C-30000
Rosenfeld Deposition, June 2015

In The Iowa District Court For Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No 4980
Rosenfeld Deposition: May 2015

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case Number CACE07030358 (26)
Rosenfeld Deposition: December 2014

In the County Court of Dallas County Texas
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant.*
Case Number cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial: April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs,* vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition: October 2012

In the United States District Court for the Middle District of Alabama, Northern Division
James K. Benefield, et al., *Plaintiffs*, vs. International Paper Company, *Defendant.*
Civil Action Number 2:09-cv-232-WHA-TFM
Rosenfeld Deposition: July 2010, June 2011

In the Circuit Court of Jefferson County Alabama
Jaeanette Moss Anthony, et al., *Plaintiffs*, vs. Drummond Company Inc., et al., *Defendants*
Civil Action No. CV 2008-2076
Rosenfeld Deposition: September 2010

In the United States District Court, Western District Lafayette Division
Ackle et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants*.
Case Number 2:07CV1052
Rosenfeld Deposition: July 2009

EXHIBIT B

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

CALIFORNIA
WASHINGTON
NEW YORK

WI #22-004.14

May 26, 2022

Ms. Victoria Yundt
Lozeau | Drury LLP
1939 Harrison Street, Suite 150
Oakland, California 94612

SUBJECT: Fallbrook Point Initial Study/Mitigated Negative Declaration, Comments on the Noise Analysis

Dear Ms. Yundt,

Per your request, I have reviewed the subject matter document for the Fallbrook Point Project Initial Study / Mitigated Negative Declaration (ISMND) in Los Angeles, California. The proposed Project would add three new two-story warehouse/manufacturing buildings. The current surface parking lot would be demolished, and the new building and new parking facilities would be constructed.

Baseline Noise Levels are not Properly Established

On page 85, the ISMND cites the City Noise Element and indicates exterior noise targets in the form of the Community Noise Equivalent Level (CNEL) which is a 24-hour noise metric which makes corrections for noise generated between 7 PM and 10 PM (evening) and 10 PM and 7 AM (nighttime) when residents are more sensitive to noise. Table XIII-1 of the ISMND summarizes short-term measurements that were each conducted for 15-minutes at three locations along the project perimeter. There is no evidence that documents the baseline CNEL. When documenting the baseline condition is customary to use at least one 24-hour measurement to document the typical variations over the course of the day, and this can be compared to the Noise Element targets. Time intervals of only 15 minutes represents 1% of the daytime period of interest, and thus it is unknown whether the ambient result at any of the noise monitoring locations was typical, higher, or lower than normal conditions. There is no evidence or discussion presented that explains how this data is representative of the time-varying conditions that occur each day and that vary from day to day. From our own experience with measuring noise from urban environments, the flow of traffic can vary substantially between different 15-minute increments in any hour. The ISMND should also include any professional judgement regarding the effects of any unusual traffic or noise patterns that may have been encountered during the COVID-19 pandemic.

On page 13 of the ISMND the site access restriction indicates that truck deliveries would be limited to mostly daytime hours, to occur up to 7 PM. There is no indication regarding on-site hours of

operation for other on-site activities and equipment. The Los Angeles Municipal Code (LAMC)[1] prohibits overnight operations between 10 PM and 7 AM within 200 ft, and given the project configuration, it appears that the loading docks could be open and warehouse operations could be continuous (e.g., 24/7). If this is the case, then it is essential to document the baseline environment during nighttime hours.

Finally, the noise measurements were located on the project property, as shown in Figure XIII-1 and not at the receiving land use. The ISMND lacks any discussion of how these noise measurement locations are applicable to noise sensitive land use on the other side of the road.

Thresholds of Significance are Not Properly Developed

As the existing noise environment has a direct relationship to the significance thresholds, the lack of properly documented Leq (1.hr) undermines any understanding of how the Project could increase noise at neighboring noise sensitive areas.

Per CEQA, the ISMND must clearly show that the mitigation would eliminate **potentially** significant effects:

(b) The initial study identifies potentially significant effects, but:

(1) Revisions in the project plans or proposals made by or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

(2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

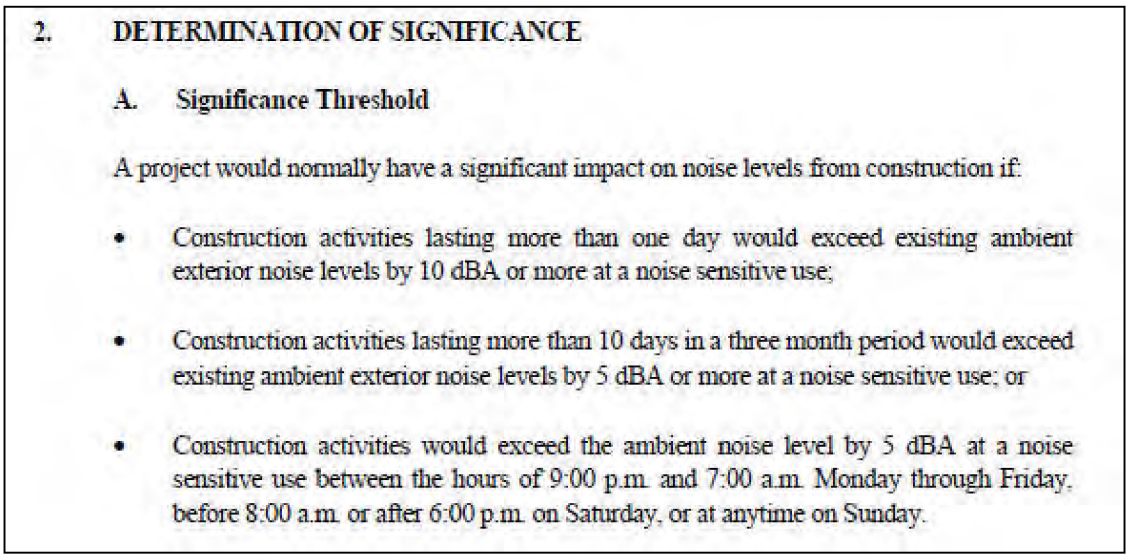
Figure 1 CEQA Section 15070(b) [2]

The ISMND lacks clear delineation of the thresholds of significance. As noted above, on page 85 the City's Noise Element is cited, but there is no definitive statement that exceeding the target CNEL levels would be ***potentially significant.*** Also, on page 85 the ISMND cites the City's Municipal Code and Noise Ordinance (LAMC), which are applicable to "stationary" (individual) noise sources, and on page 87 the equipment noise limits during construction, but the ISMND does not clearly state that exceedance of the LAMC constitutes a ***significant*** impact. Given the requirements for ISMNDs noted in Figure 1 above, the construction operations which exceed the LAMC should be considered potentially significant.

Furthermore, the ISMND lacks any threshold to evaluate the combined construction noise and does not establish the potential significance of any temporary noise increases from construction. If one assumes that the existing noise levels in Table XIII-1 are "typical", then the ISMND must provide a determination of whether any noise increase from the existing baseline is potentially significant. For the entire day, the relative increase in noise levels brought about by construction activities must be assessed.

The ISMND references the *L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles* (City of Los Angeles, 2006) in other sections of the document (page 117). This document (LACEQA) establishes clear thresholds of significance for construction noise:

[1] Per 12772 San Fernando Road Project ISMND, December 2021.
[2] https://govt.westlaw.com/calregs/Document/IA1DEFD80D48811DEBC02831C6D6C108E?



2. **DETERMINATION OF SIGNIFICANCE**

A. Significance Threshold

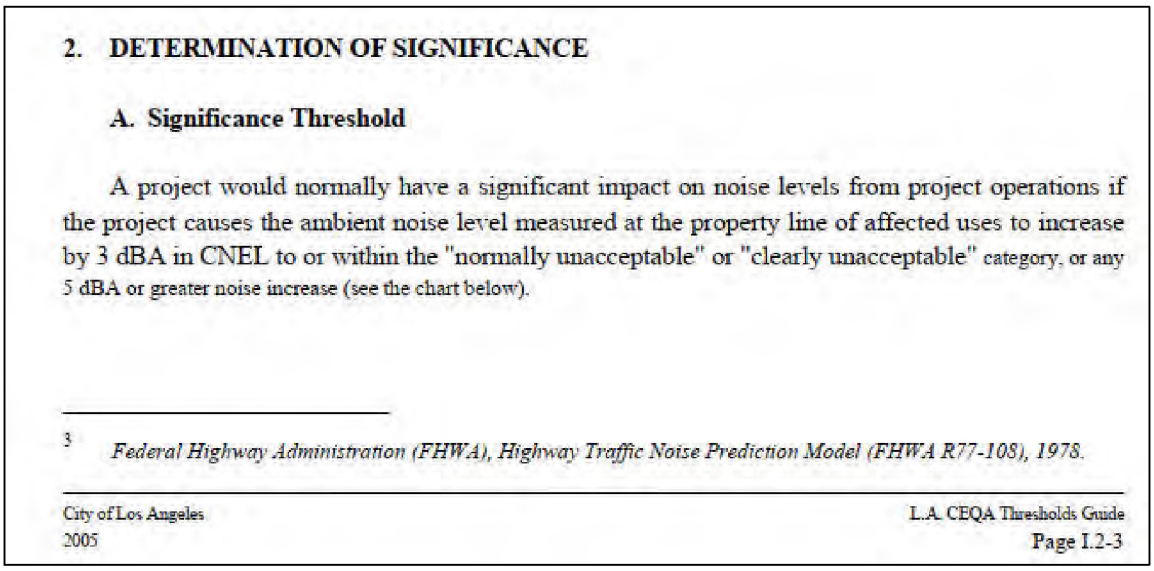
A project would normally have a significant impact on noise levels from construction if:

- Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise sensitive use;
- Construction activities lasting more than 10 days in a three month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use; or
- Construction activities would exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at anytime on Sunday.

Figure 2 ***Excerpt from L.A. CEQA Thresholds Guide, p. I.1-3***

Because the project will have a duration of several months (final quarter of 2022 and completion in 2023, page 14), the second bullet point provides the applicable standard: construction noise that exceeds the existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive land use constitutes a significant noise impact. Assuming that the measurements taken on the project property (M1, M2, and M3) are representative of the RECEIVING land use on the other side of the road (Figure XIII-1), then the significance thresholds would be 65 dBA, 63 dBA, and 71 dBA (Leq.1hr), respectively.

Similarly, LACEQA identifies significance thresholds for operational noise as shown in Figure 3. The LACEQA criteria reference the land use compatibility chart from the California Department of Health services in terms of CNEL. The ISMND lacks evidence that documents the baseline CNEL, as discussed above. Thus, the significance threshold for operational noise cannot be determined based on the information provided in the ISMND. The ISMND uses 5 dBA noise threshold for daytime operations to determine compliance with the LAMC, but this may not be adequate, pending confirmation of the existing nighttime ambient, CNEL and land use compatibility, per Figure 3.



2. **DETERMINATION OF SIGNIFICANCE**

A. Significance Threshold

A project would normally have a significant impact on noise levels from project operations if the project causes the ambient noise level measured at the property line of affected uses to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category, or any 5 dBA or greater noise increase (see the chart below).

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3 *Federal Highway Administration (FHWA), Highway Traffic Noise Prediction Model (FHWA R77-108), 1978.*

City of Los Angeles
2005

L.A. CEQA Thresholds Guide
Page I.2-3

Figure 3 Excerpt from L.A. CEQA Thresholds Guide, p. I.2-3

Impact Analyses are Incomplete

Construction Noise

As noted above, lack of compliance with the LAMC should be considered (potentially) significant. Table XIII-2 shows noise levels from individual pieces of equipment that would exceed 75 dBA (LAMC noise limit) at most residential areas without mitigation. The ISMND notes that not all construction noise reduction features are feasible (page 87). The ISMND provides no evidence that the noise reduction features and sound barriers that are presented in the analysis are feasible for ***this project.*** Thus, if the project is approved and the contractor demonstrates to the City that they cannot implement most (any) noise reduction measures, the construction noise would exceed the City's noise limit, and this would be a significant impact. Therefore, the ISMND must show evidence that the specific site conditions (e.g., sightlines, barrier geometry), and available equipment (e.g., mufflers) would be sufficient to mitigate the noise impacts shown in Table XIII-2.

Furthermore, since construction activities generally involve more than one unit of equipment at a time, determining potential significance must include some aggregate determination of construction activities. Based on the values shown in Table XIII-2, there would be several sources of noise that, when combined with others, would potentially exceed the LACEQA construction noise thresholds, constituting more significant impacts. The noise reduction features and barrier attenuation performance must be shown as mitigation, and evidence is required to show that these are realistic reductions for this project. If the use of "optimal" muffler systems and other techniques discussed by the FHWA is required to achieve these levels, it must be listed as mitigation. If no feasible mitigation measures are identified, construction noise would constitute a significant and unavoidable impact. The reference noise data used by the FHWA Roadway Construction Noise Model is largely based on measurements for the Central Artery/Tunnel project in Boston (commonly known at the "Big Dig") which had a strict noise monitoring and control program. As such, one may be assured that all equipment was fitted with properly performing mufflers and that no additional noise reduction is to be had by the City of Los Angeles' requirement for such.

The ISMND relies on the Regulatory Compliance Measure RC-NOI-1, but as discussed above, the ISMND provides no evidence that these measures would be sufficient to mitigate the significant noise impacts at noise sensitive receptors. In fact, RC-NOI-1 states that the temporary sound barrier only needs to achieve a goal of 10 dBA (page 89). The ISMND lacks evidence that a) such a barrier is possible for this project and b) that any feasible barrier would be sufficient to mitigate significant noise impacts.

Off-Site Operational Noise

The ISMND uses TNM and discuss operational truck noise on a CNEL basis, over a 24-hour period of time. However, The ISMND lacks any discussion of whether the TNM model incorporated flow control at intersections; trucks at stop signs/stop lights would generate a different noise increase from a model that only uses free flow conditions.

On-Site operational Noise

If the rooftop equipment and other operational noise sources would operate during nighttime hours, these activities must be compared to nighttime baseline conditions and the CNEL increase, if any, must also be evaluated.

Noise Mitigations are Lacking

The ISMND indicates that no mitigation measures are required and relies on the Conditions of Approval and RC-NOI-1. As discussed above, it appears that the construction noise would be (potentially) significant and would require mitigation measures above and beyond RC-NOI-1.

Conclusions

The ISMND lacks sufficient documentation of the baseline noise environment, and it lacks clear significance thresholds. The noise analysis thus must be updated to clearly assign significance to noise impacts.

Please feel free to contact me with any questions on this information.

Very truly yours,

WILSON IHRIG

Deborah A. Jue

Deborah A. Jue, INCE-USA
Principal

fallbrook point ismnd_noise review_wilson ihrig_draft.docx

COMMENT LETTER L– Lozeau Drury (May 26, 2022)

Comment L-1:

The commenter requests the City prepare an Environmental Impact Report (EIR) for the Project.

Response to Comment L-1:

The comment is noted. Responses to the particular detailed CEQA comments are provided below.

Please note that the author of these comments has provided a letter to the City dated August 15, 2022, confirming that SAFER has reached an agreement with the Developer to resolve the issues raised in their comments on the Project, and notifying the City that SAFER withdraws its comments filed with City on May 26, 2022.

Comment L-2:

The comment provides a summary of the proposed Project.

Response to Comment L-2:

The comment is noted for the record. As a summary of the Project, no response is necessary.

Comment L-3:

This comment provides a discussion of legal standards under CEQA.

Response to Comment L-3:

The comment is noted for the record. As the comment does not address the evaluation provided in the MND, no response is necessary.

Comment L-4:

This comment provides a discussion of mitigation measures, and states that "Unlike mitigation measures, project elements are considered prior to making a significance determination. Measures are not technically "mitigation" under CEQA unless they are incorporated to avoid or minimize "significant" impacts. (PRC § 21100(b)(3).)"

Response to Comment L-4:

The comment is noted for the record. As the comment does not address the evaluation provided in the MND, no response is necessary.

Comment L-5:

The comment notes that an MND is appropriate for a project that as revised would avoid or mitigate potentially significant effects identified in the IS and that, "there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment." The comment further provides a discussion of the "fair argument" standard of review.

Response to Comment L-5:

The comment summarizes concepts in CEQA and the CEQA Guidelines, with no comment on the IS/MND. No further response is required.

Comment L-6:

The comment generally states that CEQA requires that an environmental review document provide an adequate description of the project.

Response to Comment L-6:

The IS/MND provides a project description in Section 3.0 Project Description. The comment summarizes concepts in CEQA and the CEQA Guidelines, with no comment on the IS/MND. No further response is required

Comment L-7:

The comment generally states that CEQA requires that an environmental document include a description of the project's environmental setting or "baseline."

Response to Comment L-7:

The IS/MND Section 3.0 Project Description provides a discussion of the existing conditions of the project site and uses, as well as a general description of existing uses in the vicinity. Figure 3-3A and Figure 3-3B in the IS/MND provide photographs of the project site under existing conditions. Additionally, the IS/MND provides discussions of existing conditions (baseline) within each issue area evaluated in Section 4.0 as such conditions relate to the issue being evaluated. The comment summarizes concepts in CEQA and the CEQA Guidelines, with no comment on the IS/MND. No further response is required.

Comment L-8:

The commenter states that their consultant concluded that the Project's construction and operational emissions are underestimated because values used in the IS/MND and CalEEMod Sheets' air quality analysis were either inconsistent with information provided in the IS/MND or otherwise unjustified.

Response to Comment L-8:

The commenter's conclusory statement that their consultant found that emissions are underestimated is not consistent with the document provided by their consultant which was provided as Exhibit A of their comment letter. Actually, the commenter's consultant stated that they "found that several model inputs were not consistent with information disclosed in the IS/MND. As a result, the Project's construction and operational emissions ***may*** be underestimated."[3] [***emphasis added***] Responses to the specific air model inputs questioned by the commenter's consultant are provided in Responses to Comments L-9 through L-11 below.

[3] SWAPE, Comments on the Fallbrook Point Project (SCH No. 2022040565), page 2, May 24, 2022.

Comment L-9:

The commenter expresses a concern that the amount of required demolition is not substantiated in the IS/MND and CalEEMod air model output sheets.

Response to Comment L-9:

The commenter's consultant correctly acknowledges that "According to the CalEEMod User's Guide: "Haul trips are based on the amount of material that is demolished, imported or exported assuming a truck can handle 16 cy of material." Therefore, CalEEMod calculates a default number of hauling trips based upon the amount of demolition material inputted into the model." The commenter's consultant also correctly notes that the IS/MND CalEEMod Sheets report that emissions during demolition were calculated based on 6,000 tons of asphalt removal.

However, the commenter's consultant goes on to say that "the IS/MND fails to disclose the specific square footage of buildings to be demolished or the tons of demolition debris required for Project construction. Therefore, we cannot verify that 6,000 tons of demolition debris, or consequently 593 demolition hauling trips, is accurate."

The comment is incorrect. The IS/MND Introduction (page 1) and Project Description (page 4) clearly describe that the site is currently developed as a paved parking area with associated landscaping, and Figure 3-2 shows that there are no buildings within the subject property. As such, it should be clear that there are no buildings to be demolished and thus the specific square footage of buildings to be demolished would be zero.

The amount of demolition debris evaluated in the IS/MND air model is calculated from the existing parking lot to be removed. For this project, the existing parking lot is approximately 190,000 square foot (as measured using Google Earth). Using a standard density for asphalt[4] of approximately 145 pounds per cubic foot the total amount of pavement to be removed from the site during demolition would be approximately 5,647.8 tons. (190,000 sq ft parking lot x 0.41 feet thickness x 145 lbs/ ft^3 / 2000 lbs/ton = 5,647.8 tons). As such, the emissions are conservatively modeled based on 6,000 tons of debris rather that the calculated 5,647.8 tons. The commenter provides no evidence that the calculated amount of demolition is underestimated and therefore there is no evidence that the IS/MND construction emissions are underestimated. No revised analysis is required to address this comment as CalEEMod was used in accordance with the applicable User's Guide guidance.

Comment L-10:

The commenter expresses a concern that reductions to construction off-road equipment unit amounts are not substantiated in the IS/MND and CalEEMod air model output sheets.

Response to Comment L-10:

The CalEEMod User's Guide, available at http://www.aqmd.gov/caleemod/user's-guide, expressly instructs that the user should override default values with project-specific information, if the user has more detailed site-specific equipment and phase information. Specifically:

[4] GigaCalculator, Accessed at https://www.gigacalculator.com/calculators/asphalt-calculator.php.

Section 4.3 (page 31)

- "if the user has more detailed site-specific equipment and phase information, the user should override the default values."

Section 4.3.1 (page 32)

- "the user can enter the type of each construction phase and the date range for each phase."
- "Depending on the project being modeled, not all phases may be necessary, so the user may need to delete phases that are not applicable to the project."

Section 4.3.1 (page 33)

- "The user can enter with the aid of a calendar, the Start Date and End Date for each construction phase."
- "The user may change the defaults to alter the total days estimated for each phase."

Section 4.3.2 (page 33)

- "The Off-Road Equipment tab is for the user to select the type and quantity of off-road equipment needed for each construction phase and to define the daily usage schedule."
- "If equipment-specific information is available, the user can override these default values."

Consistent with this guidance from the CalEEMod User's Guide, changes in default values of the model were made based on project specific data communicated by the project applicant to Envicom.

The default values that were changed in the model were limited to the Demolition and Site Preparation phases of construction. The activities related to these construction phases as defined by the CalEEMod User's Guide Section 4.3.1 are as follows:

- Demolition involves removing buildings or structures.
- Site Preparation involves clearing vegetation (grubbing and tree/stump removal) and removing stones and other unwanted material or debris prior to grading.

The CalEEMod default values for equipment during the Demolition phase were adjusted to calculate emissions by the reduction of the number of excavators by two, and the addition of a front end loader, for a net reduction of one off-road equipment piece during the demolition phase. This change is appropriate as the CalEEMod default rates for demolition are based on "removing buildings or structures", and there are no buildings or structures at the site to be removed. Thus fewer equipment pieces would be necessary for demolition at this site. A loader was added to the model to account for loading of parking lot pavement/debris for removal from the site.[5]

The CalEEMod default values for equipment during the Site Preparation phase were adjusted to calculate emissions by the reduction of the number of dozers and backhoes to reflect the fact that the property is currently developed with an existing parking lot that occupies the majority of the site. As such, the site has previously undergone site preparation activities for development of the

[5] The addition of a loader to the default values for offroad equipment is not shown in the CalEEMod output sheets Section 1.3 User Entered Comments & Non-Default Data. However, the CalEEMod output sheets Section 3.0 Construction Detail table shows the inclusion of a front-end loader (rubber-tired loader) in the demolition phase.

existing parking lot, and the number of tree stumps and/or unwanted rock materials to be removed during Site Preparation for the proposed project would be limited compared to an undeveloped site, and the reduction of the equipment default values for the site preparation phase are justified and appropriate for this application.

While the commenter claims that such changes are "unsubstantiated", these changes were made because "more detailed site-specific equipment and phase information" was made available to the user and thus according to guidance of the CalEEMod User's Guide Section 4.3, "the user should override the default values."

The specific data was provided by the project's development team based on the Project development team's knowledge of the grading and construction needs for this specific site and development, and that firm's experience in developing industrial properties. No revised analysis is required to address this comment as CalEEMod was used in accordance with the applicable User's Guide guidance.

Comment L-11:

The commenter expresses a concern that the number of Saturday and Sunday vehicle trips are underestimated in the IS/MND and CalEEMod air model output sheets.

Response to Comment L-11:

The comment is incorrect. The IS/MND did not underestimate vehicle trip rates for Saturday and Sunday and did not underestimate emissions associated with operational on-road vehicles.

First, the commenter's consultant asserts that the CalEEMod model should have assumed 421 daily vehicle trips for Saturday and Sunday trip rates to match the number of daily trips shown in the LADOT VMT Calculator. This is not supported.

The Daily Vehicle Trip Rates provided in the LADOT VMT Calculator Documentation Table 1 are weekday average daily trip generation rates (not weekend); thus, the Daily VMT reported in the LADOT VMT Calculator is Daily Weekday VMT.[6] Accordingly, the number of trips reported by the VMT Calculator are not relevant to weekend trips.[7] For weekend trips, the air model justifiably relied on the CalEEMod default rates for Saturday and Sunday trips, which are from the

[6] According to the City of Los Angeles VMT Calculator Documentation Version 1.3 (May 2020), developed by the LADOT and the Los Angeles Department of City Planning (DCP), the calculator was developed using trip generation rates from the 9th Edition of the ITE Trip Generation Manual publication.

[7] Commenter's consultant correctly observes that the LADOT VMT Calculator shows a daily vehicle trip rate of 421. It should be noted, however, that the weekday operational trips were conservatively adjusted (increased) in the air model to 476 to match the number of weekday trips shown in the LADOT VMT Calculator Project Screening Criteria output as reported in the project's Transportation Assessment (Appendix G of the IS/MND). This is conservatively higher than the 421 trips shown in the LADOT VMT Calculator Analysis Results that the commenter's consultant refers to in their comments. As such, the air model actually provides a conservative analysis by using the larger number of weekday trips (476) per the LADOT VMT Calculator Project Screening Criteria output as opposed to the lower number of weekday trips (421) shown in the LADOT VMT Calculator Analysis Results that the commenter's consultant refers to.

ITE Trip Generation Manual, 10th Edition.[8] Accordingly, the weekend trip rate assumed was appropriate and the resulting emissions calculated for operational on-road vehicles were not underestimated.

Regardless, the AQMD significance thresholds for criteria pollutant emissions during operations are maximum daily emissions, as shown in the MND Table III-1. Thus, increasing the Saturday and Sunday trips to match the weekday (Monday through Friday) numbers in the air model would not alter the maximum daily emissions that are shown in the MND Table III-3 for mobile sources as they would be the same, and thus the significance conclusion would be the same. Therefore, this comment is a non-issue for the evaluation of air quality impacts.

Comment L-12:

The commenter restates their opinion that emissions were underestimated due to the alleged "errors" they assert were made in the air model in the IS/MND.

Response to Comment L-12:

As discussed in the Responses to Comments L-9 through L-11 above, there were no material "errors" made in the air model that would lead to an underestimation of emissions in the IS/MND. As such, there is no evidence that emissions were underestimated, and no revised analysis is required to address this comment.

Comment L-13:

The commenter asserts that a HRA should be conducted to evaluate health risks from diesel particulate matter (DPM) for construction and operations.

Response to Comment L-13:

See also Response to Comment A-2. At the request of the SCAQMD, an HRA has been conducted by iLanco Environmental (June 27, 2022) for the proposed project to determine potential impacts associated with diesel emissions during operations. The HRA analysis quantified the potential cancer risk to receptors that may be affected by exposure to TAC from the Project's trucking activities for the nearest residents and offsite workers. SCAQMD has established a health-protective threshold of 10 in a million (1.0E-05) for cancer risk. The HRA determined that the Project's operational diesel trucking activities potential cancer risks for residents would be 0.504 in a million (5.04E-07) and for offsite workers would be 0.0497 in a million (4.97E-08), which would be well below the SCAQMD threshold. As such, there is no evidence that the project may have significant health impacts as a result of DPM, and no revised analysis is required to address this comment.

Additionally, iLanco prepared a technical memorandum dated August 30, 2022 that supplements the June 2022 HRA to include both construction and operational activities for the proposed project. As shown in the August 2022 memorandum (**Attachment 3**), the analysis quantified the potential

[8] California Air Pollution Control Officers Association (CAPCOA), California Emissions Estimator Model User's Guide Version 2020.4.0, May 2021.

cancer risk and noncancer chronic impacts (HIc) to receptors that may be affected by exposure to toxic air contaminants (TAC) from the Project's construction and operational activities. The HRA was conducted in accordance with the SCAQMD dispersion modeling guidance[9,10] and the Office of Environmental Health Hazard Assessment Guidance (OEHHA).[11]

Potential cancer risk and noncancer chronic impacts to both sensitive receptors and offsite worker receptors were evaluated. Sensitive receptors include residences, schools, childcare, and convalescent facilities. The closest and most impacted sensitive receptors would be residences to the east, across Fallbrook Avenue, and to the south, across Roscoe Boulevard. Receptors further than those evaluated would experience lower impacts. Offsite worker receptors include receptors at the neighboring Corporate Pointe at West Hills office park to the north and west.

SCAQMD has established health-protective thresholds[12] of 10 in a million (10E-06) for cancer risk and 1.0 for HIc. The HRA determined that the cancer risk from the Project's construction and operational activities for an exposure scenario starting at the 3rd trimester of pregnancy for a duration of 30 years would conservatively be 9 in a million (9.06E-06) for the nearest residential receptor, and the noncancer chronic impact (Hlc) would be 0.00933 (9.33E-03), which would be below the SCAQMD thresholds. For offsite workers, the potential cancer risks from construction and operations would be 0.5 in a million (5.54E-07) and the noncancer chronic impact (Hlc) would be 0.0394 (3.94E-02), which would be well below the SCAQMD threshold. As such, there is no evidence that the project may have significant health impacts as a result of DPM, and no revised analysis is required to address this comment.

Comment L-14:

The comment asserts that the project may have a significant impact on human health based on the results of a screening-level HRA conducted by their consultant SWAPE.

Response to Comment L-14:

The comment acknowledges that SWAPE conducted only a preliminary screening level HRA that "utilizes a limited amount of site-specific information," and that, "[i]f an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project." It also is noted that the commenter's consultant provides a disclaimer to all of their comments that states "SWAPE has received limited discovery regarding

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[9] SCAQMD 2017. South Coast Air Quality Management District. Risk Assessment Procedures for Rules 1401, 1401.1 and 212, Version 8.1. September. Available online: http://www.aqmd.gov/home/permits/risk-assessment. Accessed: June 2022.

[10] SCAQMD 2022. South Coast Air Quality Management District. Modeling Guidance for AERMOD. Available online: https://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance. Accessed: June 2022.

[11] OEHHA 2015. Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments, Appendix D: Risk Assessment Procedures to Evaluate Particulate Emissions from Diesel-Fueled Engines. February. Available at: https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spotsprogram-guidance-manual-preparation-health-risk-0. Accessed: June 2022.

[12] SCAQMD 2019. South Coast Air Quality Management District. Air Quality Management Thresholds. April 2019. Available online: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-airquality-significance-thresholds.pdf. Accessed: June 2022.

this project", and that "their efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties."

See also Response to Comment L-13. iLanco Environmental conducted a refined, site-specific HRA (August 30, 2022) for the proposed project to determine potential cancer and noncancer chronic impacts for construction and operations. The HRA analysis quantified the potential cancer risk and noncancer chronic impacts to receptors that may be affected by exposure from the Project's construction and operations activities for the nearest residents and offsite workers. As discussed in Response to Comment L-13, the project-specific HRA determined that the project's potential cancer risk and noncancer chronic impact would be below SCAQMD thresholds and no revised analysis is required to address this comment.

Comment L-15:

The commenter asserts that the IS/MND's quantitative analysis relies upon an incorrect and unsubstantiated air model and thus GHG emissions are underestimated.

Response to Comment L-15:

See response to Comments L-8 through L-12, which address the commenter's concerns regarding the air model.

Comment L-16:

The commenter erroneously states that the IS/MND utilizes an outdated GHG threshold. The commenter further states that their consultant recommends that "the Project apply the SCAQMD 2035 efficiency target of 3.0 metric tons of carbon dioxide equivalents per service population per year ("MT CO2e/SP/year")" as a quantitative threshold.

Response to Comment L-16:

The commenter does not provide any basis for the claim that the GHG threshold in the IS/MND is outdated. As discussed on page 52 of the IS/MND, the City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions and has not formally adopted a local plan for reducing GHG emissions. Nor have the SCAQMD, OPR, CARB, CAPCOA or any other state or regional agency adopted a numerical significance threshold for assessing GHG emissions that the City has adopted that would be applicable to the Project. As such, the commenter's unsubstantiated opinion that the Project should apply the SCAQMD 2035 efficiency target which was proposed by SCAQMD staff over a decade ago and never adopted as a quantitative threshold is noted but is irrelevant to the determination of significance.

Consistent with the CEQA Guidelines, the IS/MND undertook a qualitative and quantitative analysis of the potential GHG emissions associated with the Project. As an initial step in this analysis, the IS/MND made a "good-faith effort" to quantify the potential direct and indirect GHG emissions related to construction, transportation, building operations, water use, solid waste treatment, and equipment from landscape maintenance activities. (See CEQA Guidelines, §

15064.4 ("Determining the Significance of Impacts from Greenhouse Gas Emissions].) Based on this accounting, the IS/MND determined that the emissions model estimates that the Project would result in annual emissions of approximately 1,285.1 MTCO2e, and that this would be far below the SCAQMD staff proposed numerical threshold of 3,000 MT of CO2e per year for evaluating GHG impacts of non-industrial projects.

However, as discussed on page 52 of the IS/MND, no applicable quantitative threshold has been adopted for evaluating the significance of the Project's impacts. Accordingly, in the absence of an adopted numerical threshold by the City, state, or SCAQMD, and consistent with CEQA Guidelines section 15064.4, the IS/MND provides a qualitative assessment of consistency with plans adopted for the purpose of reducing and/or mitigating GHG emissions as the determining factor of the potential significance of the Project's contribution to global GHG emissions and resulting environmental effects. The IS/MND demonstrates that the Project complies with applicable plans, policies, and regulations adopted for the purpose of reducing emissions of GHGs, including the CARB AB 32 Scoping Plan and 2017 Scoping Plan Update, the 2020-2045 RTP/SCS (Connect SoCal), LAGBC, Mobility Plan 2035, Green LA/ClimateLA, and L.A.'s Green New Deal / Sustainable City pLAn. Therefore, the IS/MND demonstrates that Project's potential impacts regarding GHG emissions would be less than significant.

Comment L-17:

The comment refers to the commenter's consultant's "effort to quantitatively evaluate the Project's GHG emissions", (citing "Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15." SCAQMD, September 2010, available at: http://www.aqmd.gov/docs/defaultsource/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf, p. 2.).

Response to Comment L-17:

See Response to Comment L-16. There are no quantitative significance thresholds adopted by the SCAQMD that would be relevant to the project.

As discussed on page 52 of the IS/MND, "no applicable quantitative threshold has been adopted for evaluating the significance of the Project's impacts, and this analysis will use a qualitative discussion of plan consistency to determine the potential significance of the Project's contribution to global GHG emissions and resulting environmental effects pursuant to CEQA Guidelines Section 15064.4(a)."

Therefore, the results of the commenter's consultant "effort to quantitatively evaluate the Project's GHG emissions" is irrelevant to this project or the analysis of the IS/MND.

Comment L-18:

The commenter asserts that the IS/MND fails to consider the performance-based standards underlying CARB's Scoping Plan.

Response to Comment L-18:

As described in the IS/MND, the Scoping Plan is applicable to state agencies but is not directly applicable to cities and/or individual development projects. The 2017 Scoping Plan outlines the regulations, programs, and other mechanisms needed to reduce GHG emissions in California, and notes that "CARB and other State agencies will work closely with State and local agencies, stakeholders, Tribes, and the public to develop regulatory measures and other programs to implement the Scoping Plan." Regulatory actions taken at the state, regional, or local levels would result in direct and/or indirect compliance by the project where applicable.

As shown by the policy consistency analysis provided in the IS/MND Table VIII-3, the Project would be consistent with the 2017 Scoping Plan policies. For example, as described in the IS/MND, new buildings are required to comply with the Title 24 Building Energy Efficiency Standards and the California Green Building Standards Code adopted and approved by the California Energy Commission and California Building Standards Commission, respectively. In addition, as described in the MND (page 80), the Project will implement a Transit Demand Management (TDM) program in compliance with LAMC Section 12.26 J to reduce and manage employee commute-related trips in private vehicles.[13] Further, as discussed in the MND (page 108), the Project would have a Daily Work VMT per Employee of 14.5, which is less than the applicable North Valley APC significance threshold of 15.0 with incorporation of the identified TDM measures. As stated in the LADOT's Transportation Assessment Guidelines (TAG), projects that fall under the City's efficiency-based impact thresholds align with the long-term VMT and GHG reduction goals of SCAG's RTP/SCS that demonstrates regional compliance with air quality conformity requirements and GHG reduction targets. The Project's Daily Work VMT per Employee would not exceed the City's efficiency-based impact threshold as proposed, and therefore would be consistent with the RTP/SCS. Pursuant to the TAG, project's that are deemed to be consistent with the SCAG RTP/SCS would have a less than significant cumulative impact on VMT.

As such, the Project would be required to comply with current regulatory measures adopted to implement the 2017 Scoping Plan as may be applicable to the proposed Project, including provision of EV infrastructure and building efficiency standards required by Title 24. Therefore, the Project complies with the 2017 Scoping Plan, and there is no evidence that the Project would otherwise conflict with or interfere with its implementation.

Comment L-19:

This comment expresses a concern that the MND fails to discuss whether the Project is consistent with the SB 375 performance benchmarks assumed in the 2020 RTP/SCS such as: i) per capita GHG emission targets, or ii) daily vehicles miles traveled ("VMT") per capita benchmarks.

Response to Comment L-19:

Regarding SCAG's RTP/SCS, as described in the IS/MND, the RTP/SCS does not require that local general plans, specific plans, or zoning be consistent with it. Instead, the RTP/SCS provides

[13] See also Mitigation Measure MM-TRAFF-1: Transportation Demand Management (TDM)

incentives to governments and developers to be consistent with it. Also, in general, the RTP/SCS incorporates local land use projections from city and county general plans as part of its development. As the proposed project would result in a use that is consistent with the underlying industrial zoning and General Plan land use designations for the project site, it is also consistent with the underlying land use projections contained in the RTP/RCS.

As shown in Table VIII-4, the Project would be consistent with GHG reduction strategies in the RTP/SCS that aim to reduce VMT by changing the region's land use and travel patterns, such as providing compact growth in infill areas accessible to transit and providing jobs closer to transit facilities. Table VIII-4, Project Consistency with Connect SoCal (RTP/SCS), lists the relevant strategies identified in Connect SoCal that could be implemented to help achieve the state mandated GHG emissions reduction targets and provides an analysis of Project consistency with each strategy. Although consistency with SB 375 benchmarks may entitle projects to certain CEQA exemptions or streamlining, SB 375 targets are not stand-alone CEQA thresholds for GHG or transportation impact analysis. The Project is not seeking a CEQA exemption or streamlining procedure pursuant to statute based on consistency with SB 375 performance benchmarks.

Comment L-20:

The commenter asserts that their consultant's analysis demonstrates a potentially significant health risk and GHG impact from the Project that necessitates further mitigation.

Response to Comment L-20:

As evaluated in the MND, the City has found the Project's potential to result in a substantial cumulative contribution to climate change environmental impacts to be less than significant, and no GHG mitigation measures would be required under CEQA. As such, implementation of additional mitigation measures identified by the commenter's consultant for consideration would not be warranted to comply with CEQA.

Comment L-21:

The commenter states that their noise consultant Ms. Jue concluded that the Project's construction noise impacts are potentially significant.

Response to Comment L-21:

Responses to individual claims made by the commenter's consultant regarding the noise impact analysis are provided below in Comments L-22 through L-26.

Comment L-22:

According to the commenter's consultant, the IS/MND fails to properly establish several baseline noise levels for the proposed Project.

Response to Comment L-22:

Section XIII of the IS/MND consists of a noise analysis, which includes ambient noise measurements and was prepared pursuant to City standards. According to the LAMC Section 111.01, "Ambient noise shall be averaged over a period of at least 15 minutes".

The MND included three ambient noise measurements of sufficient length to establish baseline ambient noise levels under the LAMC. Therefore, the IS/MND properly establishes baseline noise levels. The measurements were taken during off-peak traffic hours (between 9:16 A.M. and 11:22 A.M.) on June 10, 2021, which coincides with a period when traffic volumes in the City may have been lower due to COVID-19 measures. This, however, represents a conservative baseline because any project noise increase over ambient noise conditions would be greater and more noticeable in a low ambient noise environment than in a high ambient noise environment. Thus, the measurements and subsequent analysis are considered to be conservative and more sensitive to the residential receptors.

Nighttime and 24-hour noise levels are not relevant to the evaluation of the project's on-site truck delivery noise or truck traffic, because the project is required to comply with Case No. CPC 2007-237-ZC-GPA-CU-SPR, Condition of Approval No. B.3 for the Commercial Corner Exceptions, which limits truck deliveries and distribution to the daytime hours of 6 AM to 7 PM on Monday through Friday, 7 AM to 5 PM on Saturday, and 10 AM to 4 PM on Sunday, as discussed in the IS/MND. Accordingly, existing daytime ambient noise levels are the relevant baseline for the evaluation of operation noise levels from on-site sources.

Roadways are the dominant noise sources in the vicinity. The IS/MND substantiates that noise measurements conducted on the project site are at a similar distance from the roadways as are the nearest sensitive land uses; accordingly, the noise levels at these locations are equivalent to and representative of the nearby sensitive receptors. For the evaluation of project-related traffic noise and cumulative traffic noise, CNEL noise levels from local roadways were modelled based on traffic data from the project Transportation Assessment. As such, the IS/MND correctly and conservatively establishes "the physical environmental conditions in the vicinity of the project" that serves as the baseline against which the project's predicted effects were described and quantified.

Regarding nighttime noise concerns, the project would not entail trucking operations at night as stated above per Case No. CPC 2007-237-ZC-GPA-CU-SPR, Condition of Approval No. B.3. Any nighttime warehouse or manufacturing operations would be internal to the proposed structures. Rooftop HVAC equipment would be a considerable distance from existing sensitive receptors and would be shielded by rooftop parapets. Finally, current building standards would require use of efficient equipment with lower noise generation levels.

Comment L-23:

The comment asserts that the IS/MND's construction noise analysis draws upon thresholds of significance that are not properly developed. The comment further states that the IS/MND's construction noise impact analysis for the Project is incomplete because:

1. The IS/MND fails to provide evidence that the specific site conditions (e.g., sightlines, barrier geometry), and available equipment (e.g., mufflers) would be sufficient to mitigate the noise impacts shown in Table XIII-2, which shows that noise levels from individual pieces of equipment would exceed 75 dBA (LAMC noise limit) at most residential areas without mitigation.

2. The IS/MND's noise analysis fails to include any aggregate determination of construction activities, even though the IS/MND's Table XIII-2 shows that there would be several sources of construction equipment noise, when combined with others, that would potentially exceed the LACEQA construction noise thresholds, constituting more significant impacts.

3. The IS/MND relies on the Regulatory Compliance Measure RC-NOI-1, but provides no evidence that these measures would be sufficient to mitigate the significant noise impacts at noise sensitive receptors.

Response to Comment L-23:

Regarding thresholds of significance for construction noise, construction noise was analyzed based on the applicable standards in the LAMC noise ordinance, as discussed in the IS/MND. Mitigation is not required, because the project would comply with LAMC Sections 112.05 using standard regulatory compliance practices incorporated into the project as Regulatory Compliance Measure (RC)-NOI-1. Regarding "aggregate" construction activities with "several sources" of construction equipment, the project noise analysis is consistent with LAMC Section 112.05 which establishes a construction noise performance standard of 75 dBA at 50 feet from an individual piece of equipment, unless technically infeasible "despite the use of mufflers, shields, sound barriers and/or other noise reduction device or techniques". Accordingly, the analysis conservatively considered noise at 50 feet from each piece of equipment. As construction equipment would operate at some distance from each other, the nearest source would typically be the most impactful, given distance attenuation and the logarithmic nature in which multiple noise sources combine. In addition, construction equipment would move throughout the project site, and it is unlikely that more than one piece of equipment would operate at the nearest point of the property to a given residence for a substantial amount of time. Therefore, operation of multiple pieces of equipment would not increase typical construction noise levels above those evaluated in the IS/MND. To this end, RC-NOI-1 requires the Project to schedule construction and demolition activities so as to avoid the simultaneous operation of multiple pieces of equipment, which is a standard condition frequently used by the City in CEQA documents.

Regarding "the LACEQA construction noise thresholds", the 2006 Los Angeles CEQA Threshold Guide states that it is "the City's initial effort to develop citywide guidance for CEQA impact analyses," and that, "The Thresholds Guide is intended to be available as a voluntary tool" and has not typically been used by the City for similar projects in recent years. In addition, the 2006 document uses a version of the CEQA checklist for noise that has subsequently been revised. As such, the evaluation provided in the IS/MND effectively addresses the less than significant temporary construction noise impacts based on the applicable threshold and performance standard pursuant to LAMC Sections 41.40 and 112.05. Nonetheless, even when the loudest piece of

construction equipment operates at the edge of construction near the closest sensitive receptors, noise level increases would be less than 5 dB as shown in **Table RTC-1, Construction Noise Level Increases**.

Table RTC-1
Construction Noise Level Increases.

Phase	Equipment	Noise Level at 50 ft (dB Leq) [1]	Distance (ft) [2]	Attenuated Noise (dB Leq)	RCNM NOI-1 Reduction (dB)	Reduced Construction Noise (dB Leq)	Existing Ambient Noise (dB Leq) [3]	Ambient Noise Level with Construction (db Leq)	Increase Over Ambient (dB)
Demolition	Concrete Saw	83	130	74.7	15.0	59.7	58.3	62.1 [a]	3.8 [b]

Source: Envicom Corporation August 16, 2022.
[1] Average equivalent noise level (Leq) based on Federal Highway Administration Roadway Construction Noise Model (FHWA RCNM). While the IS/MND conservatively uses maximum (Lmax) noise levels for evaluating compliance with LAMC Section 112.05, in this case Leq is the appropriate metric for comparison with the measured existing ambient average noise levels in Leq.
[2] Distance from edge of existing asphalt parking lot (i.e., edge of demolition activity) to nearest residential structure.
[3] Measured noise level at M2. See IS/MND Table XIII-1, Ambient Noise Measurements.
[a] 62.1 dB = 10 • log (10^[59.7 dB/10]+10^[58.3 dB/10]); i.e., combination of reduced construction noise level with existing ambient noise level
[b] 3.8 dB = 62.1 dB – 58.3 dB

Regarding operational noise, the 2006 Los Angeles CEQA Threshold Guide criteria for permanent operation noise increases is any 5 dB increase or a 3 dB increase to or above 70 dB+ CNEL (the "normally unacceptable" level for residential land uses). As shown in Table XIII-3 of the IS/MND, future cumulative with project noise levels would be less then 70 dB CNEL. As shown in Table XIII-6 and XIII-7, project-related operational noise level increases would be less than 3 dB and cumulative operational noise level increases would be less than 5 dB. Therefore, project operation would not exceed the voluntary 2006 Los Angeles CEQA Threshold Guide criteria for a significant operational noise impact. No further evaluation is warranted.

Regarding sufficiency of RC-NOI-1 to "mitigate" noise impacts, it is not a mitigation measure, because it consists of standard regulatory compliance measures for City ordinances applicable to any construction within 500 feet of a residential zone. As discussed in the IS/MND, construction noise impacts would be less than significant, and no mitigation is required pursuant to CEQA. The IS/MND provides citations within Section XIII of the IS/MND on page 87 that demonstrate the effectiveness of mufflers and barrier as noise reduction features, contrary to the commenter's claim of "no evidence". Construction noise impacts are less than significant and no mitigation measures are required.

Comment L-24:

The commenter states that their consultant asserts that the IS/MND's off-site operational noise impact analysis is incomplete because the IS/MND "lacks any discussion of whether the TNM

model incorporated flow control at intersections; trucks at stop signs/stop lights would generate a different noise increase from a model that only uses free flow conditions."

Response to Comment L-24:

The use of flow control in Federal Highway Administration Traffic Noise Model 3.0 (FHWA TNM 3.0) would result in reduced vehicle speeds for portions of the roadways, resulting in lower noise levels from the trucks. Regardless, because the project would not add stop signs or traffic lights, flow control on local roadways would be the same without and with the project, meaning the project-related traffic noise increase would not be affected by using flow control in the model. In addition, the commenter provided no supporting evidence that project-related traffic noise would be significant if the modelling parameters were to be changed.

Comment L-25:

The commenter states that their consultant asserts that "[i]f the rooftop equipment and other operational noise sources would operate during nighttime hours, these activities must be compared to nighttime baseline conditions and the CNEL increase, if any, must also be evaluated."

Response to Comment L-25:

Rooftop equipment would typically be primarily active during the daytime due to outdoor temperature and the fact that the facility would have limited nighttime operations due to Condition of Approval No. B.3, which would restrict truck deliveries and distribution to daytime hours. In addition, as stated in the IS/MND, the roofline and parapet along the exterior walls of the buildings would provide additional noise reduction beyond the levels shown in the IS/MND. As discussed previously, baseline conditions are established in the IS/MND. As discussed in the IS/MND, composite operational noise levels would be less than significant. During nighttime, composite operational noise levels would be substantially less based on the prohibition of truck deliveries and limited other operational activities during nighttime. Operational noise would be less than significant, and no mitigation would be required.

Comment L-26:

The comment states that the IS/MND lacks adequate noise mitigations to lessen several potentially significant noise impacts from construction-related activities of the proposed Project.

Response to Comment L-26:

As discussed in response to Comment D-2, construction noise impacts are less than significant, and no mitigation measures are required. Contrary to the commenter's assertions, the noise analysis in the IS/MND is consistent with City requirements and industry standards.

Comment L-27:

The comment is a conclusion that asserts the City must prepare an EIR.

Response to Comment L-27:

The City reserves the right as Lead Agency under CEQA to determine the correct environmental review for individual projects under CEQA. As demonstrated in the IS/MND analysis, all impacts are either less than significant or reduced to less than significant with implementation of Project mitigation measures. Therefore, no further analysis is required.

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VIA E-MAIL

May 26, 2022

Ester Ahn, City Planner
City of Los Angeles
200 North Spring Street, Room 763
Los Angeles, CA 90012
Em: esther.ahn@lacity.org

RE: City of Los Angeles' Fallbrook Point Project (SCH#:2022040565).

Dear Ester Ahn,

On behalf of the Southwest Regional Council of Carpenters ("**Southwest Carpenter**" or "**SWRCC**"), my Office is submitting these comments for the City of Los Angeles' ("**City**") Initial Study / Mitigated Negative Declaration ("**IS / MND**") for the Fallbrook Point Project (SCH#:2022040565) ("**Project**").

The Southwest Carpenters is a labor union representing 50,000 union carpenters in six states, including California, and has a strong interest in well ordered land use planning and addressing the environmental impacts of development projects.

Individual members of the Southwest Carpenters live, work and recreate in the City and surrounding communities and would be directly affected by the Project's environmental impacts.

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SWRCC expressly reserves the right to supplement these comments at or prior to hearings on the Project, and at any later hearings and proceedings related to this Project. Cal. Gov. Code § 65009(b); Cal. Pub. Res. Code § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

SWRCC incorporates by reference all comments raising issues regarding the EIR submitted prior to certification of the EIR for the Project. *Citizens for Clean Energy v City of Woodland* (2014) 225 Cal. App. 4th 173, 191 (finding that any party who has objected to the Project's environmental documentation may assert any issue timely raised by other parties).

Moreover, SWRCC requests that the City provide notice for any and all notices referring or related to the Project issued under the California Environmental Quality Act ("**CEQA**"), Cal Public Resources Code ("**PRC**") § 21000 *et seq*, and the California Planning and Zoning Law ("**Planning and Zoning Law**"), Cal. Gov't Code §§ 65000–65010. California Public Resources Code Sections 21092.2, and 21167(f) and Government Code Section 65092 require agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body.

The City should require the use of a local skilled and trained workforce to benefit the community's economic development and environment. The City should require the use of workers who have graduated from a Joint Labor Management apprenticeship training program approved by the State of California, or have at least as many hours of on-the-job experience in the applicable craft which would be required to graduate from such a state approved apprenticeship training program or who are registered apprentices in an apprenticeship training program approved by the State of California.

Community benefits such as local hire and skilled and trained workforce requirements can also be helpful to reduce environmental impacts and improve the positive economic impact of the Project. Local hire provisions requiring that a certain percentage of workers reside within 10 miles or less of the Project Site can reduce the length of vendor trips, reduce greenhouse gas emissions and providing localized economic benefits. Local hire provisions requiring that a certain percentage of workers reside within 10 miles or less of the Project Site can reduce the length of vendor trips, reduce greenhouse gas emissions and providing localized economic benefits. As environmental consultants Matt Hagemann and Paul E. Rosenfeld note:

> [A]ny local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling.

Skilled and trained workforce requirements promote the development of skilled trades that yield sustainable economic development. As the California Workforce

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Development Board and the UC Berkeley Center for Labor Research and Education concluded:

> . . . labor should be considered an investment rather than a cost – and investments in growing, diversifying, and upskilling California's workforce can positively affect returns on climate mitigation efforts. In other words, well trained workers are key to delivering emissions reductions and moving California closer to its climate targets.[1]

Local skilled and trained workforce requirements and policies have significant environmental benefits since they improve an area's jobs-housing balance, decreasing the amount of and length of job commutes and their associated greenhouse gas emissions. Recently, on May 7, 2021, the South Coast Air Quality Management District found that that the "[u]se of a local state-certified apprenticeship program or a skilled and trained workforce with a local hire component" can result in air pollutant reductions.[2]

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Cities are increasingly adopting local skilled and trained workforce policies and requirements into general plans and municipal codes. For example, the City of Hayward 2040 General Plan requires the City to "promote local hiring . . . to help achieve a more positive jobs-housing balance, and reduce regional commuting, gas consumption, and greenhouse gas emissions."[3]

In fact, the City of Hayward has gone as far as to adopt a Skilled Labor Force policy into its Downtown Specific Plan and municipal code, requiring developments in its Downtown area to requiring that the City "[c]ontribute to the stabilization of regional construction markets by spurring applicants of housing and nonresidential developments to require contractors to utilize apprentices from state-approved, joint

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[1] California Workforce Development Board (2020) Putting California on the High Road: A Jobs and Climate Action Plan for 2030 at p. ii, *available at* https://laborcenter.berkeley.edu/wp-content/uploads/2020/09/Putting-California-on-the-High-Road.pdf.

[2] South Coast Air Quality Management District (May 7, 2021) Certify Final Environmental Assessment and Adopt Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions Program, and Proposed Rule 316 – Fees for Rule 2305, Submit Rule 2305 for Inclusion Into the SIP, and Approve Supporting Budget Actions, *available at* http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf?sfvrsn=10

[3] City of Hayward (2014) Hayward 2040 General Plan Policy Document at p. 3-99, *available at* https://www.hayward-ca.gov/sites/default/files/documents/General_Plan_FINAL.pdf.

labor-management training programs, . . .”[4] In addition, the City of Hayward requires all projects 30,000 square feet or larger to “utilize apprentices from state-approved, joint labor-management training programs.”[5]

Locating jobs closer to residential areas can have significant environmental benefits. As the California Planning Roundtable noted in 2008:

> People who live and work in the same jurisdiction would be more likely to take transit, walk, or bicycle to work than residents of less balanced communities and their vehicle trips would be shorter. Benefits would include potential reductions in both vehicle miles traveled and vehicle hours traveled.[6]

In addition, local hire mandates as well as skill training are critical facets of a strategy to reduce vehicle miles traveled. As planning experts Robert Cervero and Michael Duncan noted, simply placing jobs near housing stock is insufficient to achieve VMT reductions since the skill requirements of available local jobs must be matched to those held by local residents.[7] Some municipalities have tied local hire and skilled and trained workforce policies to local development permits to address transportation issues. As Cervero and Duncan note:

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> In nearly built-out Berkeley, CA, the approach to balancing jobs and housing is to create local jobs rather than to develop new housing.” The city’s First Source program encourages businesses to hire local residents, especially for entry- and intermediate-level jobs, and sponsors vocational training to ensure residents are employment-ready. While the program is voluntary, some 300 businesses have used it to date, placing more than 3,000 city residents in local jobs since it was launched in 1986. When needed, these carrots are matched by sticks, since the city is not shy about

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[4] City of Hayward (2019) Hayward Downtown Specific Plan at p. 5-24, *available at* https://www.hayward-ca.gov/sites/default/files/Hayward%20Downtown%20Specific%20Plan.pdf.

[5] City of Hayward Municipal Code, Chapter 10, § 28.5.3.020(C).

[6] California Planning Roundtable (2008) Deconstructing Jobs-Housing Balance at p. 6, *available at* https://cproundtable.org/static/media/uploads/publications/cpr-jobs-housing.pdf

[7] Cervero, Robert and Duncan, Michael (2006) Which Reduces Vehicle Travel More: Jobs-Housing Balance or Retail-Housing Mixing? Journal of the American Planning Association 72 (4), 475-490, 482, *available at* http://reconnectingamerica.org/assets/Uploads/UTCT-825.pdf.

negotiating corporate participation in First Source as a condition of approval for development permits.

The City should consider utilizing skilled and trained workforce policies and requirements to benefit the local area economically and mitigate greenhouse gas, air quality and transportation impacts.

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Sincerely,

Mitchell M. Tsai
Attorneys for Southwest Regional
Council of Carpenters

Attached:

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling (Exhibit A);

Air Quality and GHG Expert Paul Rosenfeld CV (Exhibit B); and

Air Quality and GHG Expert Matt Hagemann CV (Exhibit C).

EXHIBIT A

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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March 8, 2021

Mitchell M. Tsai
155 South El Molino, Suite 104
Pasadena, CA 91101

Subject: Local Hire Requirements and Considerations for Greenhouse Gas Modeling

Dear Mr. Tsai,

Soil Water Air Protection Enterprise ("SWAPE") is pleased to provide the following draft technical report explaining the significance of worker trips required for construction of land use development projects with respect to the estimation of greenhouse gas ("GHG") emissions. The report will also discuss the potential for local hire requirements to reduce the length of worker trips, and consequently, reduced or mitigate the potential GHG impacts.

Worker Trips and Greenhouse Gas Calculations

The California Emissions Estimator Model ("CalEEMod") is a "statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects."[1] CalEEMod quantifies construction-related emissions associated with land use projects resulting from off-road construction equipment; on-road mobile equipment associated with workers, vendors, and hauling; fugitive dust associated with grading, demolition, truck loading, and on-road vehicles traveling along paved and unpaved roads; and architectural coating activities; and paving.[2]

The number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.[3]

[1] "California Emissions Estimator Model." CAPCOA, 2017, *available at:* http://www.aqmd.gov/caleemod/home.
[2] "California Emissions Estimator Model." CAPCOA, 2017, *available at:* http://www.aqmd.gov/caleemod/home.
[3] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

Specifically, the number and length of vehicle trips is utilized to estimate the vehicle miles travelled ("VMT") associated with construction. Then, utilizing vehicle-class specific EMFAC 2014 emission factors, CalEEMod calculates the vehicle exhaust, evaporative, and dust emissions resulting from construction-related VMT, including personal vehicles for worker commuting.[4]

Specifically, in order to calculate VMT, CalEEMod multiplies the average daily trip rate by the average overall trip length (see excerpt below):

> "$VMT_d = \Sigma(\text{Average Daily Trip Rate}_i * \text{Average Overall Trip Length}_i)_n$
>
> Where:
>
> n = Number of land uses being modeled."[5]

Furthermore, to calculate the on-road emissions associated with worker trips, CalEEMod utilizes the following equation (see excerpt below):

> "$\text{Emissions}_{pollutant} = VMT * EF_{running,pollutant}$
>
> Where:
>
> $\text{Emissions}_{pollutant}$ = emissions from vehicle running for each pollutant
>
> VMT = vehicle miles traveled
>
> $EF_{running,pollutant}$ = emission factor for running emissions."[6]

Thus, there is a direct relationship between trip length and VMT, as well as a direct relationship between VMT and vehicle running emissions. In other words, when the trip length is increased, the VMT and vehicle running emissions increase as a result. Thus, vehicle running emissions can be reduced by decreasing the average overall trip length, by way of a local hire requirement or otherwise.

Default Worker Trip Parameters and Potential Local Hire Requirements

As previously discussed, the number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.[7] In order to understand how local hire requirements and associated worker trip length reductions impact GHG emissions calculations, it is important to consider the CalEEMod default worker trip parameters. CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes be justified by substantial evidence.[8] The default number of construction-related worker trips is calculated by multiplying the

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[4] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14-15.
[5] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 23.
[6] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.
[7] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.
[8] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 1, 9.

number of pieces of equipment for all phases by 1.25, with the exception of worker trips required for the building construction and architectural coating phases.[9] Furthermore, the worker trip vehicle class is a 50/25/25 percent mix of light duty autos, light duty truck class 1 and light duty truck class 2, respectively."[10] Finally, the default worker trip length is consistent with the length of the operational home-to-work vehicle trips.[11] The operational home-to-work vehicle trip lengths are:

> "[B]ased on the *location* and *urbanization* selected on the project characteristic screen. These values were *supplied by the air districts or use a default average for the state*. Each district (or county) also assigns trip lengths for urban and rural settings" (emphasis added). [12]

Thus, the default worker trip length is based on the location and urbanization level selected by the User when modeling emissions. The below table shows the CalEEMod default rural and urban worker trip lengths by air basin (see excerpt below and Attachment A).[13]

Worker Trip Length by Air Basin		
Air Basin	**Rural (miles)**	**Urban (miles)**
Great Basin Valleys	16.8	10.8
Lake County	16.8	10.8
Lake Tahoe	16.8	10.8
Mojave Desert	16.8	10.8
Mountain Counties	16.8	10.8
North Central Coast	17.1	12.3
North Coast	16.8	10.8
Northeast Plateau	16.8	10.8
Sacramento Valley	16.8	10.8
Salton Sea	14.6	11
San Diego	16.8	10.8
San Francisco Bay Area	10.8	10.8
San Joaquin Valley	16.8	10.8
South Central Coast	16.8	10.8
South Coast	19.8	14.7
Average	**16.47**	**11.17**
Minimum	**10.80**	**10.80**
Maximum	**19.80**	**14.70**
Range	**9.00**	**3.90**

[9] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.
[10] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.
[11] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14.
[12] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 21.
[13] "Appendix D Default Data Tables." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-84 – D-86.

As demonstrated above, default rural worker trip lengths for air basins in California vary from 10.8- to 19.8-miles, with an average of 16.47 miles. Furthermore, default urban worker trip lengths vary from 10.8- to 14.7-miles, with an average of 11.17 miles. Thus, while default worker trip lengths vary by location, default urban worker trip lengths tend to be shorter in length. Based on these trends evident in the CalEEMod default worker trip lengths, we can reasonably assume that the efficacy of a local hire requirement is especially dependent upon the urbanization of the project site, as well as the project location.

Practical Application of a Local Hire Requirement and Associated Impact

To provide an example of the potential impact of a local hire provision on construction-related GHG emissions, we estimated the significance of a local hire provision for the Village South Specific Plan ("Project") located in the City of Claremont ("City"). The Project proposed to construct 1,000 residential units, 100,000-SF of retail space, 45,000-SF of office space, as well as a 50-room hotel, on the 24-acre site. The Project location is classified as Urban and lies within the Los Angeles-South Coast County. As a result, the Project has a default worker trip length of 14.7 miles.[14] In an effort to evaluate the potential for a local hire provision to reduce the Project's construction-related GHG emissions, we prepared an updated model, reducing all worker trip lengths to 10 miles (see Attachment B). Our analysis estimates that if a local hire provision with a 10-mile radius were to be implemented, the GHG emissions associated with Project construction would decrease by approximately 17% (see table below and Attachment C).

Local Hire Provision Net Change	
Without Local Hire Provision	
Total Construction GHG Emissions (MT CO_2e)	3,623
Amortized Construction GHG Emissions (MT CO_2e/year)	120.77
With Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,024
Amortized Construction GHG Emissions (MT CO_2e/year)	100.80
% Decrease in Construction-related GHG Emissions	***17%***

As demonstrated above, by implementing a local hire provision requiring 10 mile worker trip lengths, the Project could reduce potential GHG emissions associated with construction worker trips. More broadly, any local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

This serves as an example of the potential impacts of local hire requirements on estimated project-level GHG emissions, though it does not indicate that local hire requirements would result in reduced construction-related GHG emission for all projects. As previously described, the significance of a local hire requirement depends on the worker trip length enforced and the default worker trip length for the project's urbanization level and location.

[14] "Appendix D Default Data Tables." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-85.

Disclaimer

SWAPE has received limited discovery. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,



Matt Hagemann, P.G., C.Hg.



Paul E. Rosenfeld, Ph.D.

Attachment A

Location Type	Location Name	Rural H-W (miles)	Urban H-W (miles)
Air Basin	Great Basin	16.8	10.8
Air Basin	Lake County	16.8	10.8
Air Basin	Lake Tahoe	16.8	10.8
Air Basin	Mojave Desert	16.8	10.8
Air Basin	Mountain	16.8	10.8
Air Basin	North Central	17.1	12.3
Air Basin	North Coast	16.8	10.8
Air Basin	Northeast	16.8	10.8
Air Basin	Sacramento	16.8	10.8
Air Basin	Salton Sea	14.6	11
Air Basin	San Diego	16.8	10.8
Air Basin	San Francisco	10.8	10.8
Air Basin	San Joaquin	16.8	10.8
Air Basin	South Central	16.8	10.8
Air Basin	South Coast	19.8	14.7
Air District	Amador County	16.8	10.8
Air District	Antelope Valley	16.8	10.8
Air District	Bay Area AQMD	10.8	10.8
Air District	Butte County	12.54	12.54
Air District	Calaveras	16.8	10.8
Air District	Colusa County	16.8	10.8
Air District	El Dorado	16.8	10.8
Air District	Feather River	16.8	10.8
Air District	Glenn County	16.8	10.8
Air District	Great Basin	16.8	10.8
Air District	Imperial County	10.2	7.3
Air District	Kern County	16.8	10.8
Air District	Lake County	16.8	10.8
Air District	Lassen County	16.8	10.8
Air District	Mariposa	16.8	10.8
Air District	Mendocino	16.8	10.8
Air District	Modoc County	16.8	10.8
Air District	Mojave Desert	16.8	10.8
Air District	Monterey Bay	16.8	10.8
Air District	North Coast	16.8	10.8
Air District	Northern Sierra	16.8	10.8
Air District	Northern	16.8	10.8
Air District	Placer County	16.8	10.8
Air District	Sacramento	15	10

Air District	San Diego	16.8	10.8
Air District	San Joaquin	16.8	10.8
Air District	San Luis Obispo	13	13
Air District	Santa Barbara	8.3	8.3
Air District	Shasta County	16.8	10.8
Air District	Siskiyou County	16.8	10.8
Air District	South Coast	19.8	14.7
Air District	Tehama County	16.8	10.8
Air District	Tuolumne	16.8	10.8
Air District	Ventura County	16.8	10.8
Air District	Yolo/Solano	15	10
County	Alameda	10.8	10.8
County	Alpine	16.8	10.8
County	Amador	16.8	10.8
County	Butte	12.54	12.54
County	Calaveras	16.8	10.8
County	Colusa	16.8	10.8
County	Contra Costa	10.8	10.8
County	Del Norte	16.8	10.8
County	El Dorado-Lake	16.8	10.8
County	El Dorado-	16.8	10.8
County	Fresno	16.8	10.8
County	Glenn	16.8	10.8
County	Humboldt	16.8	10.8
County	Imperial	10.2	7.3
County	Inyo	16.8	10.8
County	Kern-Mojave	16.8	10.8
County	Kern-San	16.8	10.8
County	Kings	16.8	10.8
County	Lake	16.8	10.8
County	Lassen	16.8	10.8
County	Los Angeles-	16.8	10.8
County	Los Angeles-	19.8	14.7
County	Madera	16.8	10.8
County	Marin	10.8	10.8
County	Mariposa	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Merced	16.8	10.8
County	Modoc	16.8	10.8
County	Mono	16.8	10.8
County	Monterey	16.8	10.8
County	Napa	10.8	10.8

County	Nevada	16.8	10.8
County	Orange	19.8	14.7
County	Placer-Lake	16.8	10.8
County	Placer-Mountain	16.8	10.8
County	Placer-	16.8	10.8
County	Plumas	16.8	10.8
County	Riverside-	16.8	10.8
County	Riverside-	19.8	14.7
County	Riverside-Salton	14.6	11
County	Riverside-South	19.8	14.7
County	Sacramento	15	10
County	San Benito	16.8	10.8
County	San Bernardino-	16.8	10.8
County	San Bernardino-	19.8	14.7
County	San Diego	16.8	10.8
County	San Francisco	10.8	10.8
County	San Joaquin	16.8	10.8
County	San Luis Obispo	13	13
County	San Mateo	10.8	10.8
County	Santa Barbara-	8.3	8.3
County	Santa Barbara-	8.3	8.3
County	Santa Clara	10.8	10.8
County	Santa Cruz	16.8	10.8
County	Shasta	16.8	10.8
County	Sierra	16.8	10.8
County	Siskiyou	16.8	10.8
County	Solano-	15	10
County	Solano-San	16.8	10.8
County	Sonoma-North	16.8	10.8
County	Sonoma-San	10.8	10.8
County	Stanislaus	16.8	10.8
County	Sutter	16.8	10.8
County	Tehama	16.8	10.8
County	Trinity	16.8	10.8
County	Tulare	16.8	10.8
County	Tuolumne	16.8	10.8
County	Ventura	16.8	10.8
County	Yolo	15	10
County	Yuba	16.8	10.8
Statewide	Statewide	16.8	10.8

Worker Trip Length by Air Basin		
Air Basin	**Rural (miles)**	**Urban (miles)**
Great Basin Valleys	16.8	10.8
Lake County	16.8	10.8
Lake Tahoe	16.8	10.8
Mojave Desert	16.8	10.8
Mountain Counties	16.8	10.8
North Central Coast	17.1	12.3
North Coast	16.8	10.8
Northeast Plateau	16.8	10.8
Sacramento Valley	16.8	10.8
Salton Sea	14.6	11
San Diego	16.8	10.8
San Francisco Bay Area	10.8	10.8
San Joaquin Valley	16.8	10.8
South Central Coast	16.8	10.8
South Coast	19.8	14.7
Average	**16.47**	**11.17**
Mininum	**10.80**	**10.80**
Maximum	**19.80**	**14.70**
Range	**9.00**	**3.90**

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1713	1.8242	1.1662	2.4000e-003	0.4169	0.0817	0.4986	0.1795	0.0754	0.2549	0.0000	213.1969	213.1969	0.0601	0.0000	214.6993
2022	0.6904	4.1142	6.1625	0.0189	1.3058	0.1201	1.4259	0.3460	0.1128	0.4588	0.0000	1,721.6826	1,721.6826	0.1294	0.0000	1,724.9187
2023	0.6148	3.3649	5.6747	0.0178	1.1963	0.0996	1.2959	0.3203	0.0935	0.4138	0.0000	1,627.5295	1,627.5295	0.1185	0.0000	1,630.4925
2024	4.1619	0.1335	0.2810	5.9000e-004	0.0325	6.4700e-003	0.0390	8.6300e-003	6.0400e-003	0.0147	0.0000	52.9078	52.9078	8.0200e-003	0.0000	53.1082
Maximum	**4.1619**	**4.1142**	**6.1625**	**0.0189**	**1.3058**	**0.1201**	**1.4259**	**0.3460**	**0.1128**	**0.4588**	**0.0000**	**1,721.6826**	**1,721.6826**	**0.1294**	**0.0000**	**1,724.9187**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1713	1.8242	1.1662	2.4000e-003	0.4169	0.0817	0.4986	0.1795	0.0754	0.2549	0.0000	213.1967	213.1967	0.0601	0.0000	214.6991
2022	0.6904	4.1142	6.1625	0.0189	1.3058	0.1201	1.4259	0.3460	0.1128	0.4588	0.0000	1,721.6823	1,721.6823	0.1294	0.0000	1,724.9183
2023	0.6148	3.3648	5.6747	0.0178	1.1963	0.0996	1.2959	0.3203	0.0935	0.4138	0.0000	1,627.5291	1,627.5291	0.1185	0.0000	1,630.4921
2024	4.1619	0.1335	0.2810	5.9000e-004	0.0325	6.4700e-003	0.0390	8.6300e-003	6.0400e-003	0.0147	0.0000	52.9077	52.9077	8.0200e-003	0.0000	53.1082
Maximum	**4.1619**	**4.1142**	**6.1625**	**0.0189**	**1.3058**	**0.1201**	**1.4259**	**0.3460**	**0.1128**	**0.4588**	**0.0000**	**1,721.6823**	**1,721.6823**	**0.1294**	**0.0000**	**1,724.9183**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2021	11-30-2021	1.4103	1.4103
2	12-1-2021	2-28-2022	1.3613	1.3613
3	3-1-2022	5-31-2022	1.1985	1.1985
4	6-1-2022	8-31-2022	1.1921	1.1921
5	9-1-2022	11-30-2022	1.1918	1.1918
6	12-1-2022	2-28-2023	1.0774	1.0774
7	3-1-2023	5-31-2023	1.0320	1.0320
8	6-1-2023	8-31-2023	1.0260	1.0260

9	**9-1-2023**	**11-30-2023**	1.0265	1.0265
10	**12-1-2023**	**2-29-2024**	2.8857	2.8857
11	**3-1-2024**	**5-31-2024**	1.6207	1.6207
		Highest	2.8857	2.8857

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0012	51.0012	0.0144	0.0000	51.3601
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0012**	**51.0012**	**0.0144**	**0.0000**	**51.3601**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.7000e-004	7.5000e-004	8.5100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.2251	2.2251	7.0000e-005	0.0000	2.2267
Total	**2.9000e-003**	**0.0641**	**0.0233**	**2.0000e-004**	**6.4100e-003**	**2.1000e-004**	**6.6200e-003**	**1.7300e-003**	**2.0000e-004**	**1.9300e-003**	**0.0000**	**19.6816**	**19.6816**	**1.2800e-003**	**0.0000**	**19.7136**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0011	51.0011	0.0144	0.0000	51.3600
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0011**	**51.0011**	**0.0144**	**0.0000**	**51.3600**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.7000e-004	7.5000e-004	8.5100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.2251	2.2251	7.0000e-005	0.0000	2.2267
Total	**2.9000e-003**	**0.0641**	**0.0233**	**2.0000e-004**	**6.4100e-003**	**2.1000e-004**	**6.6200e-003**	**1.7300e-003**	**2.0000e-004**	**1.9300e-003**	**0.0000**	**19.6816**	**19.6816**	**1.2800e-003**	**0.0000**	**19.7136**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7061**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814
Total	**7.7000e-004**	**6.0000e-004**	**6.8100e-003**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7801**	**1.7801**	**5.0000e-005**	**0.0000**	**1.7814**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7060**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814
Total	**7.7000e-004**	**6.0000e-004**	**6.8100e-003**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7801**	**1.7801**	**5.0000e-005**	**0.0000**	**1.7814**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5405	103.5405	0.0335	0.0000	104.3776
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5405**	**103.5405**	**0.0335**	**0.0000**	**104.3776**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6400e-003	1.2700e-003	0.0144	4.0000e-005	4.1600e-003	3.0000e-005	4.2000e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7579	3.7579	1.1000e-004	0.0000	3.7607
Total	**1.6400e-003**	**1.2700e-003**	**0.0144**	**4.0000e-005**	**4.1600e-003**	**3.0000e-005**	**4.2000e-003**	**1.1100e-003**	**3.0000e-005**	**1.1400e-003**	**0.0000**	**3.7579**	**3.7579**	**1.1000e-004**	**0.0000**	**3.7607**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5403	103.5403	0.0335	0.0000	104.3775
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5403**	**103.5403**	**0.0335**	**0.0000**	**104.3775**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6400e-003	1.2700e-003	0.0144	4.0000e-005	4.1600e-003	3.0000e-005	4.2000e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7579	3.7579	1.1000e-004	0.0000	3.7607
Total	**1.6400e-003**	**1.2700e-003**	**0.0144**	**4.0000e-005**	**4.1600e-003**	**3.0000e-005**	**4.2000e-003**	**1.1100e-003**	**3.0000e-005**	**1.1400e-003**	**0.0000**	**3.7579**	**3.7579**	**1.1000e-004**	**0.0000**	**3.7607**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684
Total	**2.8000e-004**	**2.1000e-004**	**2.4400e-003**	**1.0000e-005**	**7.7000e-004**	**1.0000e-005**	**7.7000e-004**	**2.0000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**0.6679**	**0.6679**	**2.0000e-005**	**0.0000**	**0.6684**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684
Total	**2.8000e-004**	**2.1000e-004**	**2.4400e-003**	**1.0000e-005**	**7.7000e-004**	**1.0000e-005**	**7.7000e-004**	**2.0000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**0.6679**	**0.6679**	**2.0000e-005**	**0.0000**	**0.6684**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1324	293.1324	0.0702	0.0000	294.8881
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1324**	**293.1324**	**0.0702**	**0.0000**	**294.8881**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.4088	0.3066	3.5305	0.0107	1.1103	8.8700e-003	1.1192	0.2949	8.1700e-003	0.3031	0.0000	966.8117	966.8117	0.0266	0.0000	967.4773
Total	**0.4616**	**2.0027**	**3.9885**	**0.0152**	**1.2243**	**0.0121**	**1.2363**	**0.3278**	**0.0112**	**0.3390**	**0.0000**	**1,408.7952**	**1,408.7952**	**0.0530**	**0.0000**	**1,410.1208**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1321	293.1321	0.0702	0.0000	294.8877
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1321**	**293.1321**	**0.0702**	**0.0000**	**294.8877**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.4088	0.3066	3.5305	0.0107	1.1103	8.8700e-003	1.1192	0.2949	8.1700e-003	0.3031	0.0000	966.8117	966.8117	0.0266	0.0000	967.4773
Total	**0.4616**	**2.0027**	**3.9885**	**0.0152**	**1.2243**	**0.0121**	**1.2363**	**0.3278**	**0.0112**	**0.3390**	**0.0000**	**1,408.7952**	**1,408.7952**	**0.0530**	**0.0000**	**1,410.1208**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2789	286.2789	0.0681	0.0000	287.9814
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2789**	**286.2789**	**0.0681**	**0.0000**	**287.9814**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.3753	0.2708	3.1696	0.0101	1.0840	8.4100e-003	1.0924	0.2879	7.7400e-003	0.2957	0.0000	909.3439	909.3439	0.0234	0.0000	909.9291
Total	**0.4135**	**1.5218**	**3.5707**	**0.0144**	**1.1953**	**9.8700e-003**	**1.2051**	**0.3200**	**9.1400e-003**	**0.3292**	**0.0000**	**1,327.3369**	**1,327.3369**	**0.0462**	**0.0000**	**1,328.4916**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2785	286.2785	0.0681	0.0000	287.9811
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2785**	**286.2785**	**0.0681**	**0.0000**	**287.9811**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.3753	0.2708	3.1696	0.0101	1.0840	8.4100e-003	1.0924	0.2879	7.7400e-003	0.2957	0.0000	909.3439	909.3439	0.0234	0.0000	909.9291
Total	**0.4135**	**1.5218**	**3.5707**	**0.0144**	**1.1953**	**9.8700e-003**	**1.2051**	**0.3200**	**9.1400e-003**	**0.3292**	**0.0000**	**1,327.3369**	**1,327.3369**	**0.0462**	**0.0000**	**1,328.4916**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.7000e-004	3.1200e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8963	0.8963	2.0000e-005	0.0000	0.8968
Total	**3.7000e-004**	**2.7000e-004**	**3.1200e-003**	**1.0000e-005**	**1.0700e-003**	**1.0000e-005**	**1.0800e-003**	**2.8000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8963**	**0.8963**	**2.0000e-005**	**0.0000**	**0.8968**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.7000e-004	3.1200e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8963	0.8963	2.0000e-005	0.0000	0.8968
Total	**3.7000e-004**	**2.7000e-004**	**3.1200e-003**	**1.0000e-005**	**1.0700e-003**	**1.0000e-005**	**1.0800e-003**	**2.8000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8963**	**0.8963**	**2.0000e-005**	**0.0000**	**0.8968**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.1000e-004	4.9200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4697	1.4697	4.0000e-005	0.0000	1.4706
Total	**5.9000e-004**	**4.1000e-004**	**4.9200e-003**	**2.0000e-005**	**1.8100e-003**	**1.0000e-005**	**1.8200e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4697**	**1.4697**	**4.0000e-005**	**0.0000**	**1.4706**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.1000e-004	4.9200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4697	1.4697	4.0000e-005	0.0000	1.4706
Total	**5.9000e-004**	**4.1000e-004**	**4.9200e-003**	**2.0000e-005**	**1.8100e-003**	**1.0000e-005**	**1.8200e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4697**	**1.4697**	**4.0000e-005**	**0.0000**	**1.4706**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	6.9900e-003	0.0835	2.8000e-004	0.0307	2.3000e-004	0.0309	8.1500e-003	2.2000e-004	8.3700e-003	0.0000	24.9407	24.9407	6.1000e-004	0.0000	24.9558
Total	**0.0101**	**6.9900e-003**	**0.0835**	**2.8000e-004**	**0.0307**	**2.3000e-004**	**0.0309**	**8.1500e-003**	**2.2000e-004**	**8.3700e-003**	**0.0000**	**24.9407**	**24.9407**	**6.1000e-004**	**0.0000**	**24.9558**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	6.9900e-003	0.0835	2.8000e-004	0.0307	2.3000e-004	0.0309	8.1500e-003	2.2000e-004	8.3700e-003	0.0000	24.9407	24.9407	6.1000e-004	0.0000	24.9558
Total	**0.0101**	**6.9900e-003**	**0.0835**	**2.8000e-004**	**0.0307**	**2.3000e-004**	**0.0309**	**8.1500e-003**	**2.2000e-004**	**8.3700e-003**	**0.0000**	**24.9407**	**24.9407**	**6.1000e-004**	**0.0000**	**24.9558**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Unmitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
NaturalGas Mitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478
NaturalGas Unmitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Unmitigated	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

7.0 Water Detail

7.1 Mitigation Measures Water

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	585.8052	3.0183	0.0755	683.7567
Unmitigated	585.8052	3.0183	0.0755	683.7567

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	207.8079	12.2811	0.0000	514.8354
Unmitigated	207.8079	12.2811	0.0000	514.8354

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2769	46.4588	31.6840	0.0643	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,234.7974	6,234.7974	1.9495	0.0000	6,283.5352
2022	5.3304	38.8967	49.5629	0.1517	9.8688	1.6366	10.7727	3.6558	1.5057	5.1615	0.0000	15,251.5674	15,251.5674	1.9503	0.0000	15,278.5288
2023	4.8957	26.3317	46.7567	0.1472	9.8688	0.7794	10.6482	2.6381	0.7322	3.3702	0.0000	14,807.5269	14,807.5269	1.0250	0.0000	14,833.1521
2024	237.1630	9.5575	15.1043	0.0244	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,361.3989	2,361.3989	0.7177	0.0000	2,379.3421
Maximum	**237.1630**	**46.4588**	**49.5629**	**0.1517**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**15,251.5674**	**15,251.5674**	**1.9503**	**0.0000**	**15,278.5288**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2769	46.4588	31.6840	0.0643	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,234.7974	6,234.7974	1.9495	0.0000	6,283.5352
2022	5.3304	38.8967	49.5629	0.1517	9.8688	1.6366	10.7727	3.6558	1.5057	5.1615	0.0000	15,251.5674	15,251.5674	1.9503	0.0000	15,278.5288
2023	4.8957	26.3317	46.7567	0.1472	9.8688	0.7794	10.6482	2.6381	0.7322	3.3702	0.0000	14,807.5269	14,807.5269	1.0250	0.0000	14,833.1520
2024	237.1630	9.5575	15.1043	0.0244	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,361.3989	2,361.3989	0.7177	0.0000	2,379.3421
Maximum	**237.1630**	**46.4588**	**49.5629**	**0.1517**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**15,251.5674**	**15,251.5674**	**1.9503**	**0.0000**	**15,278.5288**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

EXHIBIT E

EXHIBIT E

STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

In the Matter of: Former Hughes Missile Systems Facility 8433 Fallbrook Avenue Canoga Park, California EPA I.D. CAD041162124 Raytheon Company 1151 East Hermans Road, Building 807 Tucson, Arizona 85706	Docket No. HWCA -FY22/23-003 CORRECTIVE ACTION CONSENT AGREEMENT Health and Safety Code Section 25187

INTRODUCTION

1. The Department of Toxic Substances Control (DTSC) and Raytheon Company (Respondent) enter into this Corrective Action Consent Agreement (Consent Agreement) and agree as follows:

1.1. Jurisdiction exists pursuant to Health and Safety Code section 25187, which authorizes DTSC to issue an order to require corrective action when DTSC determines that there is or may be a release of hazardous waste or hazardous waste constituents into the environment from a hazardous waste facility. DTSC is the overall lead agency in overseeing corrective action, closure and post-closure caret at the facility.

1.2. The parties enter into this Consent Agreement to avoid the expense of litigation and to carry out promptly the corrective action described below.

1.3. Respondent is the former owner of a hazardous waste facility located at 8433 Fallbrook Avenue, Canoga Park California (Facility).

Parcel	Acreage		
2005-002-013	8.66+/-	2005-22-003	1.78+/-
2005-002-014	42.34+/-	2005-22-004	3.29+/-
2005-002-901	5+/-	2005-22-005	1.90+/-
2005-22-001	5.90+/-	2005-22-006	4.99+/-
2005-22-002	5.20+/-	2005-22-007	3.74+/-
Parcel	Acreage		

1.4. The Facility received authorization to operate as a hazardous waste storage facility from the Department of Health Services, which was DTSC's predecessor agency, pursuant to a Hazardous Waste Management Permit issued to Hughes Missile Systems Company (Hughes) that became effective on June 28, 1985. The permit expired on June 28, 1990 and the 1996 approved Closure Plan was implemented. In 1997 the Respondent acquired the Facility from the Hughes.

1.5. The terms used in this Consent Agreement are as defined in California Code of Regulations, title 22, section 66260.10, except as otherwise provided.

1.6. Respondent agrees to implement all DTSC-approved workplans and to undertake all actions required by the terms and conditions of this Consent Agreement, including any portions of this Consent Agreement incorporated by reference.

1.7. Respondent waives any right to request a hearing on this Consent Agreement pursuant to Health and Safety Code section 25187.

FINDINGS OF FACT

2.1. On January 30, 2008, DTSC completed a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA). The RFA identifies nine (9) solid waste management units (SWMUs) and thirteen (13) areas of concern (AOCs) that either have released or may release hazardous waste or hazardous waste constituents into the environment. The SWMUs and AOCs are as follow:

SWMU-1 Former Hazardous Waste Storage Area (HWSA)

SWMU-2 Former Underground Storage Tank (UST) for Waste (T3)

SWMU-3 Former Building 272

SWMU-4 Former Building 282 Former Drum Storage Room

SWMU-5 Pits #1 and #2 near Former Building 269

SWMU-6 Parking area between Buildings Former 274 & Former 276

SWMU-7 Cooling Unit outside of Building Former 274

SWMU-8 Former USTs T-1/T2 pump island near Former Buildings 272 & 282

SWMU-9 Site wide sewer line

AOC-1 Building 262 drains and feeder sewer lines

AOC-2 Building 263 drains, sumps and feeder sewer lines

AOC-3 Building 265 drains and feeder sewerlines

AOC-4 Former Building 269 interior: plating pit,drains, sumps, degreaser exterior clarifier pit and feeder sewer lines

AOC-5 Former Building 271 industrial waste clarifier,drains and feeder sewer lines

AOC-6 Former Building 274 drains and feeder sewerlines

AOC-7 Former Building 276 drains and feeder sewerlines

AOC-8 Building 281 drains and feeder sewerlines

AOC-9 Former USTs T-5 & T-6

AOC-10 Former USTs T-7, T-8 and T-9

AOC-11 Above ground tank, T-14

AOC-12 Site wide storm water system

AOC-13 Northeast plume (Well CM-8D Area)

2.2. On August 6, 1996, DTSC approved a Closure Plan (CH2M Hill) (CP) for the T3 (SWMU-2) and HWSA (SWMU-1) pursuant to the "remove or decontaminate" standards (or "clean closure") specified in sections 66264.197 and 66264.178, title 22, California Code of Regulations (CCR), respectively. Since clean closure was not achieved as evidence by the results of subsurface investigations conducted, the Facility is required to submit a revised CP with the goal to meet risk-based clean closure or if clean closure is not achieved, a revised CP and post-closure care will be prepared and submitted to DTSC for approval to close the units as landfills in accordance with section 66264.310, title 22, CCR.

2.3. Based on the RFA and a Facility inspection in June 2013, DTSC concluded that Facility should continue with groundwater remediation, develop a site conceptual model, prepare a current conditions report to identify gaps, conduct additional investigation to address data gaps, complete a soil vapor survey to evaluate vapor intrusion risk, prepare a Facility-wide human health risk assessment, and evaluate remediation goals.

2.4. The hazardous waste and hazardous waste constituents of concern at the Facility are volatile organic compounds, total petroleum hydrocarbons and metals.

2.5. Hazardous wastes or hazardous waste constituents have migrated or may migrate from the Facility into the environment through the following pathways: air, soil, groundwater and surface water.

2.6. The Facility is located 8433 Fallbrook Avenue in Canoga Park, California. The Facility is bounded to the east by Fallbrook Avenue, to the south by Roscoe Boulevard, to the north by open space land adjacent to the Chatsworth reservoir, and to the west by single family residential housing. Residential neighborhoods are located across Fallbrook Avenue and Roscoe Boulevard.

2.7. The Facility has been conducting groundwater remediation and monitoring under the Los Angeles Regional Water Quality Control Board's (RWQCB) oversight since 1995 in accordance with the RWQCB-approved Corrective Action Plan (CAP) (Groundwater Technology, Inc., 1992) and its Addendums.

- The Facility conducted soil remediation at SWMU-1 and SWMU-2 and has been conducting groundwater monitoring and/or remediation under the RWQCB oversight since 1995.
- Remediation of hexavalent chromium in groundwater at SWMU-1 was conducted in 2010. In December 2013, groundwater remediation was completed and the RWQCB granted a No Further Active remediation letter (December 30, 2013) for hexavalent chromium at the former HWSU.
- Remediation of VOC in groundwater at SWMU-2 was conducted via air sparging and pump and treat from 1995 to 2005. From 2005 to the present, groundwater remediation has been conducted via Enhanced In-Situ Bioremediation (a total of 9 injection events). Current VOC concentrations in groundwater are below RWQCB-approved CAP levels in most wells.
- Groundwater under SWMU-6 in the southern portion of the Facility was monitored for Freon-11 from 1993 to 2012. In 2018, the RWQCB granted No Further Action for groundwater in the southern parcels, including SWMUs 6, -7, and -9 and AOCs -3, -6, and -7 (add).
- Groundwater under AOC-13 in the northeastern portion of the Facility has been monitored for VOCs since 1995 with an Enhanced In-Situ Bioremediation remedy from 2006 to 2016. Ongoing groundwater monitoring data demonstrates that VOCs are below RWQCB-approved CAP levels.
- Raytheon continues to monitor the results of ongoing groundwater remedial measures. Site-wide current VOC concentrations in groundwater are below RWQCB-approved CAP levels in most wells.

PROJECT COORDINATOR

3. Within 14 days of the effective date of this Consent Agreement, DTSC and Respondent shall each designate a Project Coordinator and shall notify each other in writing of the Project Coordinator selected. Each Project Coordinator shall be responsible for overseeing the implementation of this Consent Agreement and for designating a person to act in his/her absence. All communications between Respondent and DTSC, and all documents, report approvals, and other correspondence concerning the activities performed pursuant to this Consent Agreement shall be directed through the Project Coordinators. Each party may change its Project Coordinator with at least seven days prior written notice.

WORK TO BE PERFORMED

4. Respondent agrees to perform the work required by this Consent Agreement in accordance with the applicable state and federal laws, their implementing

regulations, and the applicable DTSC and the United States Environmental Protection Agency guidance documents.

INTERIM MEASURES (IM)

5.1. Respondent shall evaluate available data and assess the need for interim measures in addition to those specifically required by this Consent Agreement. Interim measures shall be used whenever possible to control or abate immediate threats to human health and/or the environment, and to prevent and/or minimize the spread of contaminants while long-term corrective action alternatives are being evaluated.

5.2. Within 30 days of the effective date of this Consent Agreement, Respondent shall submit a Current Conditions Report to DTSC. The Current Conditions Report is subject to approval by DTSC and shall be developed in a manner consistent with the Scope of Work for a RCRA Facility Investigation contained in Attachment 4. The Current Conditions Report shall contain an assessment of interim measures. The assessment must include both previously implemented interim measures and other interim measures that could be implemented at the Facility. The assessment must also identify any additional data needed for making decisions on interim measures. This new data or information shall be collected during the early stages of the RCRA Facility Investigation. DTSC will review the Respondent's assessment and determine which interim measures, if any, Respondent will implement at the Facility. If deemed appropriate by DTSC, such determination may be deferred until additional data are collected. The Current Conditions report shall include but not be limited to all previous investigations and remediations conducted at the facility including closure of the HWMUs and information pertaining to all AOCs and SWMUs.

5.3. If at any time Respondent identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous waste constituents, or discovers new solid waste management units not previously identified, Respondent shall notify DTSC Project Coordinator orally within 48 hours of discovery and notify DTSC in writing within 10 days of discovery summarizing the findings, including the immediacy and magnitude of the potential threat to human health and/or the environment. Within 30 days of receiving DTSC's written request, Respondent shall submit to DTSC an IM Workplan for approval. The IM Workplan shall include a schedule for submitting to DTSC an IM Operation and Maintenance Plan and IM Plans and Specifications. The IM Workplan, IM Operation and Maintenance Plan, and IM Plans and Specifications shall be developed in a manner consistent with the Scope of Work for Interim Measures Implementation contained in as Attachment 1. If DTSC determines that immediate action is required, DTSC Project Coordinator may orally authorize the Respondent to act prior to DTSC's receipt of the IM Workplan.

5.4. If DTSC identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous

waste constituents, or discovers new solid waste management units not previously identified, DTSC will notify Respondent in writing. Within 30 days of receiving DTSC's written notification, Respondent shall submit to DTSC for approval an IM Workplan that identifies Interim Measures that will mitigate the threat. The IM Workplan shall include a schedule for submitting to DTSC an IM Operation and Maintenance Plan and IM Plans and Specifications. The IM Workplan, IM Operation and Maintenance Plan, and IM Plans and Specifications shall be developed in a manner consistent with the Scope of Work for Interim Measures Implementation contained in as Attachment 1. If DTSC determines that immediate action is required, DTSC Project Coordinator may orally authorize Respondent to act prior to receipt of the IM Workplan.

5.5. All IM Workplans shall ensure that the Interim Measures are designed to mitigate current or potential threats to human health and/or the environment, and should, to the extent practicable, be consistent with the objectives of, and contribute to the performance of, any remedy which may be required at the Facility.

5.6. Concurrent with the submission of an IM Workplan, Respondent shall submit to DTSC a Health and Safety Plan in accordance with the Scope of Work for a Health and Safety Plan contained in Attachment 2.

5.7. Concurrent with the submission of an IM Workplan, Respondent shall submit to DTSC for approval a Community Profile in accordance with Attachment 3. Based on the information provided in the Community Profile, if DTSC determines that there is a high level of community concern about the Facility, DTSC may require Respondent to prepare a Public Participation Plan.

RCRA FACILITY INVESTIGATION (RFI)

6.1. Within 60 days of the effective date of this Consent Agreement, Respondent shall submit to DTSC a Workplan for a RCRA Facility Investigation ("RFI Workplan"). The RFI Workplan is subject to approval by DTSC and shall be developed in a manner consistent with the Scope of Work for a RCRA Facility Investigation contained in Attachment 4. DTSC will review the RFI Workplan and notify Respondent in writing of DTSC's approval or disapproval.

6.2. The RFI Workplan shall detail the methodology to: (1) gather data needed to make decisions on interim measures/ stabilization during the early phases of the RCRA Facility Investigation; (2) identify and characterize all sources of contamination; (3) define the nature, degree and extent of contamination; (4) define the rate of movement and direction of contamination flow; (5) characterize the potential pathways of contaminant migration; (6) identify actual or potential human and/or ecological receptors; and (7) support development of alternatives from which a corrective measure will be selected by DTSC. A specific schedule for implementation of all activities shall be included in the RFI Workplan.

6.3. Respondent shall submit a RFI Report to DTSC for approval in accordance with DTSC-approved RFI Workplan schedule. The RFI Report shall be

developed in a manner consistent with the Scope of Work for a RCRA Facility Investigation contained in Attachment 4. If there is a phased investigation, separate RFI Reports and a report that summarizes the findings from all phases of the RFI must be submitted to DTSC. DTSC will review the RFI Report(s) and notify Respondent in writing of DTSC's approval or disapproval.

6.4. Concurrent with the submission of a RFI Workplan, Respondent shall submit to DTSC a Health and Safety Plan in accordance with Attachment 2. If Workplans for both an IM and RFI are required by this Consent Agreement, Respondent may submit a single Health and Safety Plan that addresses the combined IM and RFI activities.

6.5. Respondent shall submit a RFI Summary Fact Sheet to DTSC that summarizes the findings from all phases of the RFI. The RFI Summary Fact Sheet shall be submitted to DTSC in accordance with the schedule contained in the approved RFI Workplan. DTSC will review the RFI Summary Fact Sheet and notify Respondent in writing of DTSC's approval or disapproval, including any comments and/or modifications. When DTSC approves the RFI Summary Fact Sheet, Respondent shall mail the approved RFI Summary Fact Sheet to all individuals on the Facility mailing list established pursuant to California Code Regulations, title 22, section 66271.9(c)(1)(D), within15 calendar days of receipt of written approval.

6.6. Concurrent with the submission of a RFI Workplan, Respondent shall submit to DTSC for approval a Community Profile in accordance with Attachment 3. Based on the information provided in the Community Profile and any Supplement to the Community Profile, if DTSC determines that there is a high level of community concern about the Facility, Respondent shall prepare a Public Participation Plan.

RISK ASSESSMENT

7. Based on the information available to DTSC, Respondent may be required to conduct a Risk Assessment to evaluate potential human health risk and ecological risk and to establish site-specific action levels and cleanup standards. If DTSC determines that a Risk Assessment is required, Respondent shall submit to DTSC for approval a Risk Assessment Workplan within 30 days of receipt of DTSC's determination. Respondent shall submit to DTSC for approval a Risk Assessment Report in accordance with DTSC-approved Risk Assessment Workplan schedule.

CORRECTIVE MEASURES STUDY (CMS)

8.1. Respondent shall prepare a Corrective Measures Study, if contaminant concentrations exceed human health-based or ecologically-based action levels established by the DTSC-approved Risk Assessment Report if one is required under this Consent Agreement, or if DTSC otherwise determines that the contaminant releases pose a potential threat to human health or the environment.

8.2. Within 45 days of DTSC's approval of the Risk Assessment Report, Respondent shall submit a CMS Workplan to DTSC. The CMS Workplan is subject to approval by DTSC and shall be developed in a manner consistent with the Scope of Work for a Corrective Measures Study contained in Attachment 5.

8.3. The CMS Workplan shall detail the methodology for developing and evaluating potential corrective measures to remedy any contamination at the Facility. The CMS Workplan shall identify the potential corrective measures, including any innovative technologies, that may be used for the containment, treatment, remediation, and/or disposal of contamination.

8.4. Respondent shall prepare treatability studies for all potential corrective measures that involve treatment except where Respondent can demonstrate to DTSC's satisfaction that they are not needed. The CMS Workplan shall include, at a minimum, a summary of the proposed treatability study including a conceptual design, a schedule for submitting a treatability study workplan, or Respondent's justification for not proposing a treatability study.

8.5. Respondent shall submit a CMS Report to DTSC for approval in accordance with DTSC-approved CMS Workplan schedule. The CMS Report shall be developed in a manner consistent with the Scope of Work for a Corrective Measures Study contained in Attachment 5. DTSC will review the CMS Report and notify Respondent in writing of DTSC's approval or disapproval.

8.6. Respondent shall include a corrective action cost estimate in the CMS Report submitted to DTSC; demonstrate financial assurance within 90 days of DTSC's approval of the cost estimate; and maintain the DTSC-approved financial assurance mechanism until DTSC determines that the required corrective action is complete.

REMEDY SELECTION

9.1. DTSC will provide the public with an opportunity to review and comment on the final draft of the CMS Report, DTSC's proposed corrective measures for the Facility, and DTSC's justification for selection of such corrective measures. Depending on the level of community concern, DTSC may conduct a public hearing to obtain comments.

9.2. Following the public comment period, DTSC may select final corrective measures or require Respondent to revise the CMS Report and/or perform additional corrective measures studies.

9.3. DTSC will notify Respondent of the final corrective measures selected by DTSC in the Final Decision and Response to Comments. The notification will include DTSC's reasons for selecting the corrective measures.

CORRECTIVE MEASURES IMPLEMENTATION (CMI)

10.1. Within 60 days of Respondent's receipt of notification of DTSC's selection of the corrective measures, Respondent shall submit to DTSC a Corrective Measures Implementation (CMI) Workplan. The CMI Workplan is subject to approval by DTSC and shall be developed in a manner consistent with the Scope of Work for Corrective Measures Implementation contained in Attachment 6.

10.2. Concurrent with the submission of a CMI Workplan, Respondent shall submit to DTSC a Health and Safety Plan in accordance with Attachment 2.

10.3. Concurrent with the submission of a CMI Workplan, Respondent shall submit to DTSC for approval a Community Profile in accordance with Attachment 3. Based on the information provided in the Community Profile and any Supplement to the Community Profile, if DTSC determines that there is a high level of community concern about the Facility, DTSC may require Respondent to prepare a Public Participation Plan.

10.4. The CMI program shall be designed to facilitate the design, construction, operation, maintenance, and monitoring of corrective measures at the Facility. In accordance with the schedule contained in the approved CMI Workplan, Respondent shall submit to DTSC the documents listed below, to the extent applicable. These documents shall be developed in a manner consistent with the Scope of Work for Corrective Measures Implementation contained in Attachment 6.

- o Operation and Maintenance Plan
- o Corrective Measures Completion Report

10.5. DTSC will review all required CMI documents and notify Respondent in writing of DTSC's approval or disapproval.

10.6. Respondent shall provide a financial assurance mechanism for corrective action to DTSC within 90 days of DTSC's approval of a corrective measures implementation workplan or a DTSC-approved equivalent. The financial assurance mechanism must consist of one of the options specified in California Code of Regulation section 66264.143. Respondent shall establish the financial assurance mechanism to allow DTSC access to the funds to undertake corrective measures implementation tasks if Respondent is unable or unwilling to undertake the required tasks. If Respondent proposes to use the financial test or corporate guarantee as the financial assurance mechanism for corrective action, Respondent shall also establish a process that allows DTSC access to the funds to undertake corrective measures implementation tasks if DTSC determines that Respondent is unable or unwilling to undertake the required tasks. Any financial assurance mechanism or process proposed by Respondent shall be subject to DTSC's approval.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

11. DTSC must comply with the California Environmental Quality Act (CEQA) insofar as activities required by this Consent Agreement are projects subject to CEQA. Respondent shall provide all information necessary to facilitate any CEQA analysis. DTSC will make an initial determination regarding the applicability of CEQA. If the activities are not exempt from CEQA, DTSC will conduct an Initial Study. Based on the results of the Initial Study, DTSC will determine if a Negative Declaration or an Environmental Impact Report (EIR) should be prepared. DTSC will prepare and process any such Negative Declaration. However, should DTSC determine that an EIR is necessary, such an EIR would be prepared under a separate agreement between DTSC and Respondent.

DTSC APPROVAL

12.1. Respondent shall revise any workplan, report, specification, or schedule in accordance with DTSC's written comments. Respondent shall submit to DTSC any revised documents by the due date specified by DTSC. Revised submittals are subject to DTSC's approval or disapproval.

12.2. Upon receipt of DTSC's written approval, Respondent shall commence work and implement any approved workplan in accordance with the schedule and provisions contained therein.

12.3. Any DTSC-approved workplan, report, specification, or schedule required under this Consent Agreement shall be deemed incorporated into this Consent Agreement.

12.4. Verbal advice, suggestions, or comments given by DTSC representatives will not constitute an official approval or decision.

SUBMITTALS

13.1. Beginning with the first full month following the effective date of this Consent Agreement, Respondent shall provide DTSC with quarterly progress reports of corrective action activities conducted pursuant to this Consent Agreement. Progress reports are due on the 15th day of the first month following the close of each reporting period. The progress reports shall conform to the Scope of Work for Progress Reports contained in Attachment 7. DTSC may adjust the frequency of progress reporting to be consistent with site-specific activities.

13.2. Any report or other document submitted by Respondent pursuant to this Consent Agreement shall be signed and certified by the project coordinator, a responsible corporate officer, or a duly authorized representative.

13.3. The certification required by paragraph 13.2 above, shall be in the following form:

I certify that the information contained in or accompanying this submittal is true, accurate, and complete. As to those portions of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared at my direction in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted.

Signature: _____

Name: _____

Title: _____

Date: _____

13.4. Respondent shall provide two copies of all documents, including but not limited to, workplans, reports, and correspondence. Submittals specifically exempted from this copy requirement are all progress reports and correspondence of less than 15 pages, of which one copy is required.

13.5. Unless otherwise specified, all reports, correspondence, approvals, disapprovals, notices, or other submissions relating to this Consent Agreement shall be in writing and shall be sent to the current Project Coordinators.

PROPOSED CONTRACTOR/CONSULTANT

14. All work performed pursuant to this Consent Agreement shall be under the direction and supervision of a professional engineer or registered geologist, registered in California, with expertise in hazardous waste site cleanup. Respondent's contractor or consultant shall have the technical expertise sufficient to fulfill his or her responsibilities. Within 14 days of the effective date of this Consent Agreement, Respondent shall notify DTSC Project Coordinator in writing of the name, title, and qualifications of the professional engineer or registered geologist and of any contractors or consultants and their personnel to be used in carrying out the terms of this Consent Agreement.

ADDITIONAL WORK

15. DTSC may determine or Respondent may propose that certain tasks, including additional work regarding closure plan and post closure-care for SWMU1 and SWMU2, investigatory work, engineering evaluation, or procedure/methodology modifications are necessary in addition to, or in lieu of, the tasks and deliverables included in any part of DTSC-approved workplans. DTSC shall request in writing that

Respondent perform the additional work and shall specify the basis and reasons for DTSC's determination that the additional work is necessary. Within 14 days after the receipt of such determination, Respondent may confer with DTSC to discuss the additional work DTSC has requested. If required by DTSC, Respondent shall submit to DTSC a workplan for the additional work. Such workplan shall be submitted to DTSC within 30 days of receipt of DTSC's determination or according to an alternate schedule established by DTSC. Upon approval of a workplan, Respondent shall implement it in accordance with the provisions and schedule contained therein. The need for, and disputes concerning, additional work are subject to the dispute resolution procedures specified in this Consent Agreement.

QUALITY ASSURANCE

16.1. All sampling and analyses performed by Respondent under this Consent Agreement shall follow applicable DTSC and U.S. EPA guidance for sampling and analysis. Workplans shall contain quality assurance/quality control and chain of custody procedures for all sampling, monitoring, and analytical activities. Any deviations from the approved workplans must be approved by DTSC prior to implementation, must be documented, including reasons for the deviations, and must be reported in the applicable report.

16.2. The names, addresses, and telephone numbers of the California State certified analytical laboratories Respondent proposes to use must be specified in the applicable workplans.

SAMPLING AND DATA/DOCUMENT AVAILABILITY

17.1. Respondent shall submit to DTSC upon request the results of all sampling and/or tests or other data generated by its employees, agents, consultants, or contractors pursuant to this Consent Agreement.

17.2. Respondent shall notify DTSC in writing at least seven days prior to beginning each separate phase of field work approved under any workplan required by this Consent Agreement. If Respondent believes it must commence emergency field activities without delay, Respondent may seek emergency telephone authorization from DTSC Project Coordinator or, if the Project Coordinator is unavailable, his/her Branch Chief, to commence such activities immediately.

17.3. At the request of DTSC, Respondent shall provide or allow DTSC or its authorized representative to take split or duplicate samples of all samples collected by Respondent pursuant to this Consent Agreement. Similarly, at the request of Respondent, DTSC shall allow Respondent or its authorized representative to take split or duplicate samples of all samples collected by DTSC under this Consent Agreement.

ACCESS

18. Subject to the Facility's security and safety procedures, Respondent agrees to provide DTSC and its representatives access at all reasonable times to the Facility and any off-site property to which access is required for implementation of this Consent Agreement and shall permit such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Consent Agreement and that are within the possession or under the control of Respondent or its contractors or consultants.

RECORD PRESERVATION

19.1. Respondent shall retain, during the pendency of this Consent Agreement and for a minimum of six years after its termination, all data, records, and documents that relate in any way to the performance of this Consent Agreement or to hazardous waste management and/or disposal at the Facility. Respondent shall notify DTSC in writing 90 days prior to the destruction of any such records, and shall provide DTSC with the opportunity to take possession of any such records. Such written notification shall reference the effective date, caption, and docket number of this Consent Agreement and shall be addressed to:

Javier Hinojosa

Branch Chief

Site Mitigation and Restoration Program

Department of Toxic Substances Control

9211 Oakdale Avenue

Chatsworth, California 91311

19.2. If Respondent retains or employs any agent, consultant, or contractor for the purpose of carrying out the terms of this Consent Agreement, Respondent will require any such agents, consultants, or contractors to provide Respondent a copy of all documents produced pursuant to this Consent Agreement.

19.3. All documents pertaining to this Consent Agreement shall be stored in a central location at the Facility, or at a location otherwise agreed to by the parties, to afford easy access by DTSC and its representatives.

DISPUTE RESOLUTION

20.1. The parties agree to use their best efforts to resolve all disputes informally. The parties agree that the procedures contained in this section are the sole administrative procedures for resolving disputes arising under this Consent Agreement.

If Respondent fails to follow the procedures contained in this section, it shall have waived its right to further consideration of the disputed issue.

20.2. If Respondent disagrees with any written decision by DTSC pursuant to this Consent Agreement, Respondent's Project Coordinator shall orally notify DTSC's Project Coordinator of the dispute. The Project Coordinators shall attempt to resolve the dispute informally.

20.3. If the Project Coordinators cannot resolve the dispute informally, Respondent may pursue the matter formally by placing its objection in writing. Respondent's written objection must be forwarded to Javier Hinojosa, Branch Chief, Site Mitigation & Restoration Program, Department of Toxic Substances Control, with a copy to DTSC's Project Coordinator. The written objection must be mailed to the Branch Chief within 14 days of Respondent's receipt of DTSC's written decision. Respondent's written objection must set forth the specific points of the dispute and the basis for Respondent's position.

20.4. DTSC and Respondent shall have 14 days from DTSC's receipt of Respondent's written objection to resolve the dispute through formal discussions. This period may be extended by DTSC for good cause. During such period, Respondent may meet or confer with DTSC to discuss the dispute.

20.5. After the formal discussion period, DTSC will provide Respondent with its written decision on the dispute. DTSC's written decision will reflect any agreements reached during the formal discussion period and be signed by the Branch Chief or his/her designee.

20.6. During the pendency of all dispute resolution procedures set forth above, the time periods for completion of work required under this Consent Agreement that are affected by such dispute shall be extended for a period of time not to exceed the actual time taken to resolve the dispute. The existence of a dispute shall not excuse, toll, or suspend any other compliance obligation or deadline required pursuant to this Consent Agreement.

RESERVATION OF RIGHTS

21.1. DTSC reserves all of its statutory and regulatory powers, authorities, rights, and remedies, which may pertain to Respondent's failure to comply with any of the requirements of this Consent Agreement. Respondent reserves all of its statutory and regulatory rights, defenses and remedies, as they may arise under this Consent Agreement. This Consent Agreement shall not be construed as a covenant not to sue, release, waiver, or limitation on any powers, authorities, rights, or remedies, civil or criminal, that DTSC or Respondent may have under any laws, regulations or common law.

21.2. DTSC reserves the right to disapprove of work performed by Respondent pursuant to this Consent Agreement and to request that Respondent perform additional tasks.

21.3. DTSC reserves the right to perform any portion of the work consented to herein or any additional site characterization, feasibility study, and/or remedial actions it deems necessary to protect human health and/or the environment. DTSC may exercise its authority under any applicable state or federal law or regulation to undertake response actions at any time. DTSC reserves its right to seek reimbursement from Respondent for costs incurred by the State of California with respect to such actions. DTSC will notify Respondent in writing as soon as practicable regarding the decision to perform any work described in this section.

21.4. If DTSC determines that activities in compliance or noncompliance with this Consent Agreement have caused or may cause a release of hazardous waste and/or hazardous waste constituents, or a threat to human health and/or the environment, or that Respondent is not capable of undertaking any of the work required, DTSC may order Respondent to stop further implementation of this Consent Agreement for such period of time as DTSC determines may be needed to abate any such release or threat and/or to undertake any action which DTSC determines is necessary to abate such release or threat. The deadlines for any actions required of Respondent under this Consent Agreement affected by the order to stop work shall be extended to take into account DTSC's actions.

21.5. This Consent Agreement is not intended to be nor shall it be construed to be a permit. This Consent Agreement is not a substitute for, and does not preclude DTSC from requiring, any hazardous waste facility permit, post closure permit, closure plan or post closure plan. The parties acknowledge and agree that DTSC's approval of any workplan, plan, and/or specification does not constitute a warranty or representation that the workplans, plans, and/or specifications will achieve the required cleanup or performance standards. Compliance by Respondent with the terms of this Consent Agreement shall not relieve Respondent of its obligations to comply with the Health and Safety Code or any other applicable local, state, or federal law or regulation.

OTHER CLAIMS

22. Except as provided in this Consent Agreement, nothing in this Consent Agreement shall constitute or be construed as a release by DTSC or Respondent from any claim, cause of action, or demand in law or equity against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken or migrating from the Facility.

COMPLIANCE WITH WASTE DISCHARGE REQUIREMENTS

23. Respondent shall comply with all applicable waste discharge requirements issued by the State Water Resources Control Board or a California regional water quality control board.

OTHER APPLICABLE LAWS

24. All actions required by this Consent Agreement shall be conducted in accordance with the requirements of all local, state, and federal laws and regulations. Respondent shall obtain or cause its representatives to obtain all permits and approvals necessary under such laws and regulations.

REIMBURSEMENT OF DTSC'S COSTS

25.1. Respondent shall pay DTSC's costs incurred in the implementation of this Consent Agreement. Such costs must include DTSC's costs incurred in the preparation and implementation of this Consent Agreement prior to the effective date of this Consent Agreement.

25.2. An estimate of DTSC's costs is attached as Exhibit A showing the amount of $93,104.00. It is understood by the parties that this amount is only a cost estimate for the activities shown on Exhibit A and it may differ from the actual costs incurred by DTSC in overseeing these activities or in implementing this Consent Agreement. DTSC will provide additional cost estimates to Respondent as the work progresses under the Consent Agreement.

25.3. Respondent shall make an advance payment to DTSC in the amount of $46,552.00 within 30 days of the effective date of this Consent Agreement. If the advance payment exceeds DTSC's costs, DTSC will refund the balance within 120 days after the execution of the Acknowledgment of Satisfaction pursuant to Section 27 of this Consent Agreement.

25.4. DTSC will provide Respondent with a billing statement at least quarterly, which will include the name(s) of the employee(s), identification of the activities, the amount of time spent on each activity, and the hourly rate charged. If Respondent does not pay an invoice within 60 days of the date of the billing statement, the amount is subject to interest as provided by Health and Safety Code section 25360.1.

25.5. DTSC will retain all costs records associated with the work performed under this Consent Agreement as required by state law. DTSC will make all documents that support the DTSC's cost determination available for inspection upon request, as provided by the Public Records Act.

25.6. Any dispute concerning DTSC's costs incurred pursuant to this Consent Agreement is subject to the Dispute Resolution provision of this Consent Agreement and the dispute resolution procedures as established pursuant to Health and Safety Code section 25269.2. DTSC reserves its right to recover unpaid costs under applicable state and federal laws.

25.7. All payments shall be made within 30 days of the date of the billing statement by check payable to the Department of Toxic Substances Control and shall be sent to:

Accounting Unit

Department of Toxic Substances Control

P. O. Box 806

Sacramento, California 95812-0806

All checks shall reference the name of the Facility, the Respondent's name and address, and the docket number of this Consent Agreement. Copies of all checks and letters transmitting such checks shall be sent simultaneously to DTSC's Project Coordinator.

MODIFICATION

26.1. This Consent Agreement may be modified by mutual agreement of the parties. Any agreed modification shall be in writing, shall be signed by both parties, shall have as its effective date the date on which it is signed by all the parties, and shall be deemed incorporated into this Consent Agreement.

26.2. Any requests for revision of an approved workplan requirement must be in writing. Such requests must be timely and provide justification for any proposed workplan revision. DTSC has no obligation to approve such requests, but if it does so, such approval will be in writing and signed by the Branch Chief of the Site Mitigation & Restoration Program, Department of Toxic Substances Control, or his or her designee. Any approved workplan revision shall be incorporated by reference into this Consent Agreement.

TERMINATION AND SATISFACTION

27. The provisions of this Consent Agreement shall be deemed satisfied upon the execution by both parties of an Acknowledgment of Satisfaction (Acknowledgment). DTSC will prepare the Acknowledgment for Respondent's signature. The Acknowledgment will specify that Respondent has demonstrated to the satisfaction of DTSC that the terms of this Consent Agreement including payment of DTSC's costs have been satisfactorily completed. The Acknowledgment will affirm Respondent's continuing obligation to preserve all records after the rest of the Consent Agreement is satisfactorily completed.

EFFECTIVE DATE

28. The effective date of this Consent Agreement shall be the date on which this Consent Agreement is signed by all the parties. Except as otherwise specified, "days" means calendar days.

SIGNATORIES

29. Each undersigned representative certifies that he or she is fully authorized to enter into this Consent Agreement.

DATE: 8/30/22 BY: _____
Representing Respondent

J Hyte Johnson / Director, EHS Raytheon (AKA. RTX)
Name and title of Respondent's Representative

DATE: 9-14-22 BY: _____
Javier Hinojosa
Branch Chief
Site Mitigation & Restoration Program
Department of Toxic Substances Control

ATTACHMENT 1

SCOPE OF WORK FOR INTERIM MEASURES IMPLEMENTATION

PURPOSE

Interim measures are actions to control and/or eliminate releases of hazardous waste and/or hazardous constituents from a facility prior to the implementation of a final corrective measure. Interim measures must be used whenever possible to achieve the goal of stabilization which is to control or abate threats to human health and/or the environment, and to prevent or minimize the spread of contaminants while long-term corrective action alternatives are being evaluated.

SCOPE

The documents required for Interim Measures (IM) are, unless the Department of Toxic Substances Control (Department) specifies otherwise, an IM Workplan, an Operation and Maintenance Plan and IM Plans and Specifications. The scope of work (SOW) for each document is specified below. The SOWs are intended to be flexible documents capable of addressing both simple and complex site situations. If the Owner/Operator or Respondent can justify, to the satisfaction of the Department, that a plan or portions thereof are not needed in the given site specific situation, then the Department may waive that requirement.

The Department may require the Owner/Operator or Respondent to conduct additional studies beyond what is discussed in the SOWs in order to support the IM program. The Owner/Operator or Respondent will furnish all personnel, materials and services necessary to conduct the additional tasks.

A. Interim Measures Workplan

The Owner/Operator or Respondent shall prepare an IM Workplan that evaluates interim measure options and clearly describes the proposed interim measure, the key components or elements that are needed, describes the designer's vision of the interim measure in the form of conceptual drawings and schematics, and includes procedures and schedules for implementing the interim measure(s). The IM Workplan must be approved by the Department prior to implementation. The IM Workplan must, at a minimum, include the following elements:

1. Introduction/Purpose

Describe the purpose of the document and provide a summary of the project.

2. Conceptual Model of Contaminant Migration

It is important to know where the contaminants are and to understand how they are moving before an adequate interim measure can be developed. To address this critical question, the Owner/Operator or Respondent must present a conceptual model of the site and contaminant migration. The conceptual model consists of a working hypothesis of how the contaminants may move from the release source to the receptor population. The conceptual model is developed by looking at the applicable physical parameters (e.g., water solubility, density, Henry's Law Constant, etc.) for each contaminant and assessing how the contaminant may migrate given the existing site conditions (geologic features, depth to groundwater, etc.). Describe the phase (water, soil, gas, non-aqueous) and location where contaminants are likely to be found. This analysis may have already been done as part of earlier work (e.g., Current Conditions Report). If this is the case, then provide a summary of the conceptual model with a reference to the earlier document.

3. Evaluation of Interim Measure Alternatives

List, describe and evaluate interim measure alternatives that have the potential to stabilize the facility. Propose interim measures for implementation and provide rationale for the selection. Document the reasons for excluding any interim measure alternatives.

4. Description of Interim Measures

Qualitatively describe what the proposed interim measure is supposed to do and how it will function at the facility.

5. Data Sufficiency

Review existing data needed to support the design effort and establish whether or not there are sufficient accurate data available for this purpose. The Owner/Operator or Respondent must summarize the assessment findings and specify any additional data needed to complete the interim measure design. The Department may require or the Owner/Operator or Respondent may propose that sampling and analysis plans and/or treatability study workplans be developed to obtain the additional data. Submittal times for any new sampling and analysis plans and/or treatability study workplans must be included in the project schedule.

6. Project Management

Describe the levels of authority and responsibility (include organization chart), lines of communication and a description of the qualifications of key personnel who will direct the interim measure design and implementation effort (including contractor personnel).

7. Project Schedule

The project schedule must specify all significant steps in the process, when any key documents (e.g., plans and specifications, operation and maintenance plan) are to be submitted to the Department and when the interim measure is to be implemented.

8. Design Basis

Discuss the process and methods used to design all major components of the interim measure. Discuss the significant assumptions made and possible sources of error. Provide justification for the assumptions.

9. Conceptual Process/Schematic Diagrams.

10. Site plan showing preliminary plant layout and/or treatment area.

11. Tables listing number and type of major components with approximate dimensions.

12. Tables giving preliminary mass balances.

13. Site safety and security provisions (e.g., fences, fire control, etc.).

14. Waste Management Practices

Describe the wastes generated by the construction of the interim measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed.

15. Required Permits

List and describe the permits needed to construct the interim measure. Indicate on the project schedule when the permit applications will be submitted to the applicable agencies and an estimate of the permit issuance date.

16. Sampling and Monitoring

Sampling and monitoring activities may be needed for design and during construction of the interim measure. If sampling activities are necessary, the IM Workplan must include a complete sampling and analysis section which specifies the following information:

a. Description and purpose of monitoring tasks;
b. Data quality objectives;
c. Analytical test methods and detection limits;
d. Name of analytical laboratory;
e. Laboratory quality control (include laboratory QA/QC procedures in appendices)

f. Sample collection procedures and equipment;
g. Field quality control procedures:

- duplicates (10% of all field samples)
- blanks (field, equipment, etc.)
- equipment calibration and maintenance
- equipment decontamination
- sample containers
- sample preservation
- sample holding times (must be specified)
- sample packaging and shipment
- sample documentation (field notebooks, sample labeling, etc);

h. Criteria for data acceptance and rejection; and
i. Schedule of monitoring frequency.

17. The Owner/Operator or Respondent shall follow all Department and USEPA guidance for sampling and analysis. The Department may request that the sampling and analysis section be a separate document.

18. Appendices including:

- Design Data - Tabulations of significant data used in the design effort;
- Equations - List and describe the source of major equations used in the design process;
- Sample Calculations - Present and explain one example calculation for significant calculations; and
- Laboratory or Field Test Results.

B. Interim Measures Operation and Maintenance Plan

The Owner/Operator or Respondent shall prepare an Interim Measures Operation and Maintenance (O&M) Plan that includes a strategy and procedures for performing operations, maintenance, and monitoring of the interim measure(s). An Interim Measures Operation and Maintenance Plan shall be submitted to the Department simultaneously with the Plans and Specifications. The O&M plan shall, at a minimum, include the following elements:

1. Purpose/Approach

Describe the purpose of the document and provide a summary of the project.

2. Project Management

Describe the levels of authority and responsibility (include organization chart), lines of communication and a description of the qualifications of key personnel who will operate and maintain the interim measure(s) (including contractor personnel).

3. System Description

Describe the interim measure and identify significant equipment.

4. Personnel Training

Describe the training process for O&M personnel. The Owner/Operator or Respondent shall prepare, and include in the technical specifications governing treatment systems, contractor requirements for providing: appropriate service visits by experienced personnel to supervise the installation, adjustment, start up and operation of the treatment systems, and training covering appropriate operational procedures once the start-up has been successfully accomplished.

5. Start-Up Procedures

Describe system start-up procedures including any operational testing.

6. Operation and Maintenance Procedures

Describe normal operation and maintenance procedures including:

a. Description of tasks for operation;
b. Description of tasks for maintenance;
c. Description of prescribed treatment or operation condition, and
d. Schedule showing frequency of each O&M task.

7. Replacement schedule for equipment and installed components.

8. Waste Management Practices

Describe the wastes generated by operation of the interim measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed.

9. Sampling and Monitoring

Sampling and monitoring activities may be needed for effective operation and maintenance of the interim measure. If sampling activities are necessary, the O&M plan must include a complete sampling and analysis section which specifies the following information:

a. Description and purpose of monitoring tasks;
b. Data quality objectives;
c. Analytical test methods, method detection limits and practical quantitation limits;
d. Name of analytical laboratory;
e. Laboratory quality control (include laboratory QA/QC procedures in appendices)
f. Sample collection procedures and equipment;
g. Field quality control procedures:

- duplicates (10% of all field samples)
- blanks (field, equipment, etc.)
- equipment calibration and maintenance
- equipment decontamination
- sample containers
- sample preservation
- sample holding times (must be specified)
- sample packaging and shipment
- sample documentation (field notebooks, sample labeling, etc.)

h. Criteria for data acceptance and rejection; and
i. Schedule of monitoring frequency.

The Owner/Operator or Respondent shall follow all Department and USEPA guidance for sampling and analysis. The Department may request that the sampling and analysis section be a separate document.

10. O&M Contingency Procedures:

a. Procedures to address system breakdowns and operational problems including a list of redundant and emergency back-up equipment and procedures;

b. Should the interim measure suffer complete failure, specify alternate procedures to prevent release or threatened releases of hazardous substances, pollutants or contaminants which may endanger public health and/or the environment or exceed cleanup standards; and

c. The O&M Plan must specify that, in the event of a major breakdown and/or complete failure of the interim measure (includes emergency situations), the Owner/Operator or Respondent will orally notify the Department within 24 hours of the event and will notify the Department in writing within 72 hours of the event. The written notification must, at a minimum, specify what happened, what response action is being taken and/or is planned, and any potential impacts on human health and the environment.

11. Data Management and Documentation Requirements

Describe how analytical data and results will be evaluated, documented and managed, including development of an analytical database. State the criteria that will be used by the project team to review and determine the quality of data.

The O&M Plan shall specify that the Owner/Operator or Respondent collect and maintain the following information:

a. Progress Report Information

- Work Accomplishments (e.g., performance levels achieved, hours of treatment operation, treated and/or excavated volumes, concentration of contaminants in treated and/or excavated volumes, nature and volume of wastes generated, etc.).
- Record of significant activities (e.g., sampling events, inspections, problems encountered, action taken to rectify problems, etc.).

b. Monitoring and laboratory data;

c. Records of operating costs; and

d. Personnel, maintenance and inspection records.

The Department may require that the Owner/Operator or Respondent submit additional reports that evaluate the effectiveness of the interim measure in meeting the stabilization goal.

C. Interim Measures Plans and Specifications

The Owner/Operator or Respondent shall prepare Plans and Specifications for the interim measure that are based on the conceptual design but include additional detail. The Department may require the submittal of other draft plans and specifications at different points in the design process. The Plans and Specifications shall be submitted to the Department simultaneously with the Operation and Maintenance Plan. The design package must include drawings and specifications needed to construct the interim measure. Depending on the nature of the interim measure, many different types of drawings and specifications may be needed. Some of the elements that may be required are:

- General Site Plans
- Process Flow Diagrams
- Mechanical Drawings

- Electrical Drawings
- Structural Drawings
- Piping and Instrumentation Diagrams
- Excavation and Earthwork Drawings
- Equipment Lists
- Site Preparation and Field Work Standards
- Preliminary Specifications for Equipment and Material

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the project specifications to the Department, the Owner/Operator or Respondent shall:

a. Proofread the specifications for accuracy and consistency with the conceptual design; and

b. Coordinate and cross-check the specifications and drawings.

ATTACHMENT 2

SCOPE OF WORK FOR A HEALTH AND SAFETY PLAN

1. Objectives

Describe the goals and objectives of the Health and Safety Plan (must apply to on-site personnel and visitors). The Health and Safety Plan must be consistent with the facility Contingency Plan, OSHA Regulations, NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985), all state and local regulations and other Implementing Agency guidance as provided.

2. Hazard Assessment

List and describe the potentially hazardous substances that could be encountered by field personnel during different phases of the activities.

Discuss the following:

- Inhalation Hazards
- Dermal Exposure
- Ingestion Hazards
- Physical Hazards
- Overall Hazard Rating

Include a table that, at a minimum, lists: Known Contaminants, Highest Observed Concentration, Media, Symptoms/Effects of Acute Exposure.

1. Personal Protection/monitoring Equipment

For each task, describe personal protection levels and identify all monitoring equipment.

Describe any action levels and corresponding response actions (i.e., when will levels of safety be upgraded).

Describe decontamination procedures and areas.

2. Site organization and Emergency Contacts

List and identify all contacts (include phone numbers). Identify the nearest hospital and provide a regional map showing the shortest route from the facility to the hospital.

Describe site emergency procedures and any site safety organizations. Include evacuation procedures for neighbors (where applicable).

Include a facility Map showing emergency station locations (e.g., first aid, eye wash areas, etc.).

The Health and Safety Plan shall be signed by a Certified Industrial Hygienist.

ATTACHMENT 3

SCOPE OF WORK FOR A COMMUNITY PROFILE

The following items should be included in the Community Profile:

SITE DESCRIPTION

- Description of proposed project.
- Map.
- Description of the site/facility location.
- Description of the surrounding land uses and environmental resources (including proximity to residential housing, schools, churches, etc.).
- Visibility of the site to neighbors.
- Demographics of community in which the site is located (e.g., socioeconomic level, ethnic composition, specific language considerations, etc.). This information may be found in local libraries (e.g., census records).

LOCAL INTEREST

- Contacts with community members - any inquiries from community members, groups, organizations, etc. (include names, phone numbers, and addresses on the key contact list).
- Community interactions - any current meetings, events, presentations, etc.
- Media coverage - any newspaper, magazine, television, etc., coverage.
- Government contacts - city and county staff, state and local elected officials.

KEY CONTACT LIST

- Names, addresses, and phone numbers of city manager, city/county planning department staff, local elected officials, and other community members with whom previous contact has been made.

PAST PUBLIC INVOLVEMENT ACTIVITIES

- Any ad hoc committees, community meetings, workshops, letters, newsletters, etc., about the site or similar activity.

KEY ISSUES AND CONCERNS

- Any specific concerns/issues raised by the community regarding the site/facility or any activities performed on the site/facility.
- Any anticipated concerns/issues regarding the site/facility.
- Any general environmental concerns/issues in the community.

ATTACHMENT 4

SCOPE OF WORK FOR A RCRA FACILITY INVESTIGATION

PURPOSE

The purpose of this RCRA Facility Investigation (RFI) is to determine the nature and extent of releases of hazardous waste or constituents from regulated units, solid waste management units, and other source areas at the Facility and to gather all necessary data to support the Corrective Measures Study. The RFI must include characterization of the facility (processes, waste management, etc), environmental setting, source areas, nature and extent of contamination, migration pathways (transport mechanisms) and all potential receptors.

SCOPE

The documents required for a RFI are, unless the Department of Toxic Substances Control (Department) specifies otherwise, a RCRA Facility Investigation Workplan and a RCRA Facility Investigation Report. The scope of work (SOW) for each document is specified below. The SOWs are intended to be flexible documents capable of addressing both simple and complex site situations. If the Owner/Operator or Respondent can justify, to the satisfaction of the Department, that a plan and/or report or portions thereof are not needed in the given site specific situation, then the Department may waive that requirement.

The scope and substance of the RFI should be focused to fit the complexity of the site-specific situation. It is anticipated that Owner/Operator's or Respondent's of sites with complex environmental problems may need more extensive RFI's than other facilities with less complex problems.

The Department may require the Owner/Operator or Respondent to conduct additional studies beyond what is discussed in the SOWs in order to meet the objectives of the RFI. The Owner/Operator or Respondent will furnish all personnel, materials and services necessary to conduct the additional tasks.

A. RCRA Facility Investigation Workplan

The RFI Workplan shall define the procedures necessary to:

- Gather all necessary data to determine where interim measures are needed and

to support the use of interim measures to address immediate threats to human health and/or the environment, to prevent or minimize the spread of contaminants, to control sources of contamination and to accelerate the corrective action process (required for all releases);

- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any ground water contamination in and around the facility (only required for releases to ground water);

- Characterize the geology and hydrogeology in and around the facility (only required for releases to ground water and possibly for releases to soil);

- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any soil contamination in and around the facility (only required for releases to soil);

- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any soil gas contamination in and around the facility (may be required for releases to ground water and/or soil depending on the circumstances);

- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any surface water contamination (includes surface water sediments) at the facility (only required for releases to surface water);

- Characterize the presence, magnitude, extent (horizontal and vertical), rate of movement and direction of any air releases at the facility (only required for air releases);

- Characterize any potential sources of contamination (required for all releases);

- Characterize the potential pathways of contaminant migration (required for all releases);

- Identify any actual or potential receptors (required for all releases);

- Gather all data to support a risk and/or ecological assessment (if required);

- Gather all necessary data to support the Corrective Measures Study (required for all releases). This could include conducting treatability, pilot, laboratory and/or bench scale studies to assess the effectiveness of a treatment method.

The RFI Workplan shall describe all aspects of the investigation, including project management, sampling and analysis, well drilling and installation and quality assurance and quality control. If the scope of the investigation is such that more than one phase is necessary, the "Phase 1" RFI Workplan must include a summary description of each phase. For example, the first phase of a RFI could be used to gather information necessary to focus the second phase into key areas of the facility that need further investigation.

The required format for a RFI Workplan is described below:

1. Introduction

Briefly introduce the RFI Workplan. Discuss the Order or Permit requiring the RFI and how the RFI Workplan is organized.

2. Investigation Objectives

2.1 Project Objectives

Describe the overall objectives and critical elements of the RFI. State the general information needed from the site (e.g., soil chemistry, hydraulic conductivity of aquifer, stratigraphy, ground water flow direction, identification of potential receptors, etc.). The general information should be consistent with the objectives of the RFI and the data needs identified in the Current Conditions Report.

2.2 Data Quality Objectives

Provide data quality objectives that identify what data are needed and the intended use of the data.

3. Project Management

Describe how the investigation will be managed, including the following information:

- Organization chart showing key personnel, levels of authority and lines of communication;
- Project Schedule; and
- Estimated Project Budget.

Identify the individuals or positions who are responsible for: project management, field activities, laboratory analysis, database management, overall quality assurance, data

validation, etc. Include a description of qualifications for personnel performing or directing the RFI, including contractor personnel.

4. Facility Background

Summarize existing contamination (e.g., contaminants, concentrations, etc.), local hydrogeologic setting and any other areas of concern at the facility. Include a map showing the general geographic location of the facility and a more detailed facility map showing the areas of contamination. Provide a reference to the Current Conditions Report and/or other applicable documents as a source of additional information.

5. Field Investigation

5.1 Task Description

Provide a qualitative description of each investigation task. Example tasks may include, but are not limited to the following:

Task 1: Surface Soil Sampling
Task 2: Surface Geophysics, Subsurface Soil Boring, and Borehole Geophysics
Task 3: Data Gathering to Support Interim Corrective Measures
Task 4: Monitoring Well Installation
Task 5: Aquifer Testing
Task 6: Ground Water Sampling
Task 7: Potential Receptor Identification
Task 8: Treatability Studies

5.2 Rationale for Sampling

Describe where all samples will be collected (location and depth), types of media that will be sampled and the analytical parameters. Explain the rationale for each sampling point, the total number of sampling points, and any statistical approach used to select these points. The conceptual model of contaminant migration developed in the Current Conditions Report should be considered when selecting sampling locations and depths. If some possible sampling points are excluded, explain why. Describe any field screening techniques that will be used to identify samples for laboratory analysis. Include the rationale for use of field screening techniques and criteria for sample selection.

5.2.1 Background Samples

Background samples should be analyzed for the complete set of parameters for each medium; treat sediments, surface soils and subsurface soils as separate media. Background samples are collected, numbered, packaged, and sealed in the same

manner as other samples. For long term and/or especially large projects, it is recommended that 10% of samples collected be from background locations.

5.3 Sample Analysis

List and discuss all analyses proposed for the project. Include a table that summarizes the following information for each analysis to be performed:

- Analytical Parameters
- Analytical Method Reference Number (from USEPA SW 846)
- Sample Preparation and/or Extraction Method Reference Number (from USEPA SW 846)
- Detection and Practical Quantitation Limits (Data above the detection limit but below the practical quantitation limit must be reported with the estimated concentration.)

Discuss the rationale for selection of the analytical parameters. The rationale must relate to site history and the RFI objectives. The achievable detection limits or quantitation limits stated in the selected methods must be adequate for valid comparisons of analytical results against any action levels or standards. For example, the objective may be to collect ground water data for comparison with Maximum Contaminant Levels (MCL's). If this were the case, it would be important to ensure that any ground water test methods had detection limits below the MCL's. Give an explanation if all samples from the same medium will not be analyzed for the same parameters.

Provide the name(s) of the laboratory(s) that will be doing the analytical work. Indicate any special certifications or ratings of the laboratory. Describe the steps that will be taken to select and pre-qualify analytical laboratories to be used including any previous audits and/or other criteria. If a definite laboratory has not yet been selected, list at least 3 laboratories that are being considered for the analytical work.

5.4 Sample Collection Procedures

Describe how sampling points will be selected in the field, and how these locations will be documented and marked for future reference. If a sampling grid will be used, describe the dimensions and lay out planned for the grid.

Outline sequentially or step-by-step the procedure for collecting a sample for each medium and each different sampling technique. Include a description of sampling equipment (including materials of construction), field measurements, sample preservation, housekeeping/ cleanliness techniques and well purging procedures. The procedure described must ensure that a representative sample is collected, and that sample handling does not result in cross contamination or unnecessary loss of

contaminants. Special care in sample handling for volatile organic samples must be addressed.

Describe how and when duplicates, blanks, laboratory quality control samples and background samples will be collected. If samples will be filtered, describe filtration equipment and procedures.

The Owner/Operator or Respondent must include sufficient maps and tables to fully describe the sampling effort. This shall include, at a minimum, a map showing all proposed sampling locations and tables that contain the following information:

Sample Collection Table:

- Sampling Location/Interval
- Analytical Parameters (e.g., volatile organic compounds)
- Analytical Method Number
- Medium
- Preservation Method
- Holding Times (as specified in USEPA SW 846)
- Containers (quantity, size, type plus footnotes that discuss source and grade of containers)

Sample Summary Table:

- Sample Description/Area (include QC samples)
- Analytical Parameters
- Analytical Method Number
- Preparation or Extraction Method Number
- Medium
- Number of Sample Sites
- Number of Analyses

5.4.1 Equipment Decontamination

Describe the decontamination procedure for all drilling, sampling equipment (including metal sleeves), and field-parameter testing equipment.

The following is a recommended generic procedure for decontamination of sampling equipment:

- Wash with non-phosphate detergent
- Tap water rinse
- 0.1Mole nitric acid rinse (when cross contamination from metals is a concern)

- Deionized/distilled water rinse
- Pesticide grade solvent rinse (when semi volatiles and non-volatile organic contamination may be present)
- Deionized/distilled water rinse (twice)
- Organic free water rinse [High Performance Liquid Chromatography (HPLC) grade]

The above procedure is not appropriate for every field condition. Clearly document the decontamination procedures.

5.4.2 Equipment Calibration and Maintenance

Logbooks or pre-formatted calibration worksheets should be maintained for major field instruments, to document servicing, maintenance and instrument modification. The calibration, maintenance and operating procedures for all instruments, equipment and sampling tools must be based upon manufacturer's instructions. List all field equipment to be used, specify the maintenance/calibration frequency for each instrument and the calibration procedures (referenced in text and included in appendices).

5.4.3 Sample Packaging and Shipment

Describe how samples will be packaged and shipped. All applicable Department of Transportation regulations must be followed.

5.4.4 Sample Documentation

Discuss the use of all paperwork including field notebooks, record logs, photographs, sample paperwork, and Chain of Custody forms (include a blank copy in FI Workplan Appendices) and seals.

Describe how sample containers will be labeled and provide an example label if available. At a minimum, each sample container label should include: project ID, sample location, analytical parameters, date sampled and any preservative added to the sample.

A bound field log book must be maintained by the sampling team to provide a daily record of events. Field log books shall provide the means of recording all data regarding sample collection. All documentation in field books must be made in permanent ink. If an error is made, corrections must be made by crossing a line through the error and entering the correct information. Changes must be initialed, no entries shall be obliterated or rendered unreadable. Entries in the log book must include, at a minimum, the following for each day's sampling:

- Date
- Starting Time
- Meteorological Conditions
- Field Personnel Present
- Level of Personal Protection
- Site Identification
- Field Observations/Parameters
- Sample Identification Numbers
- Location and Description of Sampling Points
- Number of Samples Collected
- Time of Sample Collection
- Signature of Person Making the Entry
- Observation of Sample Characteristics
- Photo Log
- Deviations

5.4.5 Disposal of Contaminated Materials

Describe the storage and disposal methods for all contaminated cuttings, well development and purge water, disposable equipment, decontamination water, and any other contaminated materials. The waste material must be disposed of in a manner consistent with local, state and federal regulations.

5.4.6 Standard Operating Procedures

If Standard Operating Procedures (SOPs) are referenced, the relevant procedure must be summarized in the FI Workplan. The SOP must be specific to the type of tasks proposed and be clearly referenced in the FI Workplan. The SOP must also be directly applicable, as written, to the FI Workplan; otherwise, modifications to the SOP must be discussed. Include the full SOP description in the FI Workplan appendix.

5.5 Well Construction and Aquifer Testing

When new monitoring wells (or piezometers) are proposed, describe the drilling method, well design and construction details (e.g., depth of well, screen length, slot size, filter pack material, etc.) and well development procedures. Describe the rationale for proposed well locations and selection of all well design and construction criteria (i.e., provide rationale for selection of slot size and screen length).

When aquifer testing is proposed, describe the testing procedures, flow rates, which wells are involved, test periods, how water levels will be measured, and any other pertinent information.

6. Quality Assurance and Quality Control

Quality control checks of field and laboratory sampling and analysis serve two purposes: to document the data quality, and to identify areas of weakness within the measurement process which need correction.

Include a summary table of data quality assurance objectives that, at a minimum, lists:

- Analysis Group (e.g., volatile organic compounds)
- Medium
- Practical Quantitation Limits (PQL) and Method Detection Limits (MDL)
- Spike Recovery Control Limits (%R)
- Duplicate Control Limits +/- Relative Percent Difference (RPD)
- QA Sample Frequency
- Data Validation

A reference may note the specific pages from USEPA's SW 846 Guidance Document that list the test method objectives for precision and accuracy. If the field and laboratory numerical data quality objectives for precision are the same and presented on a single table, then a statement should be made to this effect and added as a footnote to the table (e.g., "These limits apply to both field and laboratory duplicates"). Include a copy of the analytical laboratory quality assurance/quality control plan in the appendices of the RFI Workplan and provide the equations for calculating precision and accuracy.

6.1 Field Quality Control Samples

6.1.1 Field Duplicates

Duplicates are additional samples that must be collected to check for sampling and analytical precision. Duplicate samples for all parameters and media must be collected at a frequency of at least one sample per week or 10 percent of all field samples, whichever is greater.

Duplicates should be collected from points which are known or suspected to be contaminated. For large projects, duplicates should be spread out over the entire site and collected at regular intervals.

Duplicates must be collected, numbered, packaged, and sealed in the same manner as other samples; duplicate samples are assigned separate sample numbers and submitted blind to the laboratory.

6.1.2 Blank Samples

Blanks are samples that must be collected to check for possible cross-contamination during sample collection and shipment and in the laboratory. Blank samples should be analyzed for all parameters being evaluated. At least one blank sample per day must be done for all water and air sampling. Additionally, field blanks are required for soil sampling if non-dedicated field equipment is being used for sample collection.

Blank samples must be prepared using analytically- certified, organic-free (HPLC-grade) water for organic parameters and metal-free (deionized-distilled) water for inorganic parameters. Blanks must be collected, numbered, packaged, and sealed in the same manner as other samples; blank samples are assigned separate sample numbers and submitted blind to the laboratory. The following types of blank samples may be required:

Equipment Blank: An equipment blank must be collected when sampling equipment (e.g., bladder pump) or a sample collection vessel (e.g., a bailer or beaker) is decontaminated and reused in the field. Use the appropriate "blank" water to rinse the sampling equipment after the equipment has been decontaminated and then collect this water in the proper sample containers.

Field Bottle Blank: This type of blank must be collected when sampling equipment decontamination is not necessary. The field bottle blank is obtained by pouring the appropriate "blank" water into a container at a sampling point.

6.2 Laboratory Quality Control Samples

Laboratories routinely perform medium spike and laboratory duplicate analysis on field samples as a quality control check. A minimum of one field sample per week or 1 per 20 samples (including field blanks and duplicates), whichever is greater, must be designated as the "Lab QC Sample" for the medium and laboratory duplicate analysis.

Laboratory quality control samples should be selected from sampling points which are suspected to be moderately contaminated. Label the bottles and all copies of the paperwork as "Lab QC Sample"; the laboratory must know that this sample is for their QC analyses. The first laboratory QC sample of the sampling effort should be part of the first or second day's shipment. Subsequent laboratory QC samples should be spread out over the entire sampling effort.

For water media, 2-3 times the normal sample volume must be collected for the laboratory QC sample. Additional volume is usually not necessary for soil samples.

6.3 Performance System Audits by Respondent

This section should describe any internal performance and/or system audit which Respondent will conduct to monitor the capability and performance of the project. The extent of the audit program should reflect the data quality needs and intended data

uses. Audits are used to quickly identify and correct problems thus preventing and/or reducing costly errors. For example, a performance audit could include monitoring field activities to ensure consistency with the workplan. If the audit strategy has already been addressed in a QA program plan or standard operating procedure, cite the appropriate section which contains the information.

7. Data Management

Describe how investigation data and results will be evaluated, documented and managed, including development of an analytical database. State the criteria that will be used by the project team to review and determine the quality of data. To document any quality assurance anomalies, the FI QC Summary Forms must be completed by the analytical laboratory and submitted as part of the FI Report. In addition, provide examples of any other forms or checklists to be used.

Identify and discuss personnel and data management responsibilities, all field, laboratory and other data to be recorded and maintained, and any statistical methods that may be used to manipulate the data.

8. References

Provide a list of references cited in the FI Workplan.

B. RCRA Facility Investigation Report

A RFI Report must be prepared that describes the entire site investigation and presents the basic results. The RFI Report must clearly present an evaluation of investigation results (e.g., all potential contaminant source areas must be identified, potential migration pathways must be described, and affected media shown, etc.).

The RFI Report must also include an evaluation of the completeness of the investigation and indicate if additional work is needed. This work could include additional investigation activities and/or interim corrective measures to stabilize contaminant release areas and limit contaminant migration. If additional work is needed, the Owner/Operator or Respondent must submit a Phase 2 RFI Workplan and/or Interim Corrective Measures Workplan must be submitted to the Department along with the RFI Report.

At a minimum, the RFI Report must include:

- A summary of investigation results (include tables that summarize analytical results).
- A complete description of the investigation, including all data necessary to

understand the project in its entirety including all investigative methods and procedures.

- A discussion of key decision points encountered and resolved during the course of the investigation.

- Graphical displays such as isopleths, potentiometric surface maps, cross-sections, plume contour maps (showing concentration levels, isoconcentration contours), facility maps (showing sample locations, etc.) and regional maps (showing receptor areas, water supply wells, etc.) that describe report results. Highlight important facts such as geologic features that may affect contaminant transport.

- Tables that list all chemistry data for each medium investigated.

- An analysis of current and existing ground water data to illustrate temporal changes for both water chemistry and piezometric data (use graphics whenever possible).

- A description of potential or known impacts on human and environmental receptors from releases at the facility. Depending on the site specific circumstances, this analysis could be based on the results from contaminant dispersion models if field validation is performed.

- A discussion of any upset conditions that occurred during any sampling events or laboratory analysis that may influence the results. The discussion must include any problems with the chain of custody procedures, sample holding times, sample preservation, handling and transport procedures, field equipment calibration and handling, field blank results that show potential sample contamination and any field duplicate results that indicate a potential problem. Summary tables must be provided that show the upset condition and the samples that could be impacted. The RFI QC Summary Forms (see Appendix A of this attachment) must be completed by the analytical laboratory and submitted as part of the RFI Report.

- Assessment of the entire QA/QC program effectiveness.

- Data validation results should be documented in the RFI Report.

In addition to the RFI Report, the Department may require the Owner/Operator or Respondent to submit the analytical results (database) on a floppy disk (Department will specify the format). All raw laboratory and field data (e.g., analytical reports) must be kept at the facility and be made available or sent to the Department upon request.

ATTACHMENT 5

SCOPE OF WORK FOR A CORRECTIVE MEASURES STUDY

PURPOSE

The purpose of the Corrective Measures Study (CMS) is to:

1. Develop and evaluate corrective measure alternatives (or a single corrective measure) that may be taken at the Facility to address releases of hazardous wastes (including hazardous constituents); and

2. Recommend the corrective measures to be taken at the Facility that are protective of human health and the environment.

SCOPE

A Corrective Measures Study Workplan and Corrective Measures Study Report are, unless otherwise specified by the Department of Toxic Substances Control (Department), required elements of the CMS. The Scope of Work (SOW) for the Corrective Measures Study Workplan and Report describe what should be included in each document. The SOW's are intended to be flexible documents capable of addressing both simple and complex site situations. If the Owner/Operator or Respondent can justify, to the satisfaction of the Department, that sections of a plan and/or report are not needed in the given site specific situation, then the Department may waive that requirement.

The Department may require the Owner/Operator or Respondent to conduct additional studies beyond what is discussed in the SOW's in order to support the CMS. The Owner/Operator or Respondent will furnish all personnel, materials and services necessary to conduct the additional tasks. The SOW for the Corrective Measures Study Workplan and Report are specified below:

A. Corrective Measures Study Workplan

The Corrective Measures Study (CMS) Workplan shall, at a minimum, include the following elements:

1. A description of the overall purpose of the Corrective Measure Study;

2. Corrective measure objectives including proposed media cleanup standards

(promulgated federal and state standards, risk derived standards) and points of compliance;

3. A description of the specific corrective measure technologies and/or corrective measure alternatives which will be studied;

4. A description of the general approach to investigating and evaluating potential corrective measures;

5. A summary description of any proposed pilot, laboratory and/or bench scale studies. Proposed studies must be further detailed in either the CMS Workplan or in separate workplans. Submittal times for separate workplans must be included in the CMS Workplan project schedule;

6. A proposed outline for the CMS Report including a description of how information will be presented;

7. A description of overall project management including overall approach, levels of authority (include organization chart), lines of communication, budget and personnel. Include a description of qualifications for personnel directing or performing the work; and

8. A project schedule that specifies all significant steps in the process and when key documents (e.g., CMS Report) are to be submitted to the Department.

9. Cost estimate for implementation of corrective action.

B. Corrective Measures Study Report

The Corrective Measures Study (CMS) Report shall, at a minimum, include the following elements:

1. Introduction/Purpose

Describe the purpose and intent of the document.

2. Description of Current Conditions

The Owner/Operator or Respondent shall include a brief discussion of any new information that has been developed since the RCRA Facility Investigation Report was finalized. This discussion should concentrate on those issues which could significantly affect the evaluation and selection of the corrective measure alternative(s).

3. Corrective Action Objectives

The Owner/Operator or Respondent shall propose corrective action objectives including applicable media cleanup standards. The corrective action objectives must be based on available promulgated federal and state cleanup standards, risk derived standards, data and information gathered during the corrective action process (e.g., from interim measures, RCRA Facility Investigation, etc.), and/or other applicable guidance documents. If no specific standards exist for a given contaminant and media, the Owner/Operator or Respondent shall propose and justify a media cleanup standard. The Department may require that the Owner/Operator or Respondent conduct a risk assessment to develop appropriate cleanup standards.

4. Identification and Screening of Corrective Measure Technologies

a. Identification

List and briefly describe potentially applicable technologies for each affected media that may be used to achieve the corrective action objectives. The Owner/Operator or Respondent should consider including a table that summarizes the available technologies.

The Owner/Operator or Respondent should consider innovative treatment technologies, especially in situations where there are a limited number of applicable corrective measure technologies. Innovative technologies are defined as those technologies for source control other than incineration, solidification/stabilization and pumping with conventional treatment for contaminated groundwater. Innovative treatment technologies may require extra initial effort to gather information, analyze options and to adapt the technology to site specific situations. However, in the long run, innovative treatment technologies could be more cost effective. Pilot, laboratory and/or bench scale studies are useful for evaluating innovative treatment technologies. Depending on the site-specific situation, the Department may require the Owner/Operator or Respondent to consider additional technologies.

b. Screening

Technologies must be screened to eliminate those that may prove unfeasible to implement given the existing set of waste and site-specific conditions. The screening is accomplished by evaluating technology limitations (e.g., for volume, area, contaminant concentrations, interferences, etc.) and using contaminant and site characterization information from the RCRA Facility Investigation to screen out technologies that cannot be fully implemented at the facility. The screening process must focus on eliminating those technologies which have severe limitations for a given set of waste and site-specific conditions (e.g., depth to groundwater and aquitards). As with all decisions

during the CMS, the screening of technologies must be fully documented. This is especially true if the screening step indicates that only one corrective action technology should proceed to the next step and be evaluated in detail. List the corrective action technologies selected for further evaluation. Also document the reasons for excluding any corrective action technologies. The Owner/Operator or Respondent should consider including a table that summarizes the findings.

5. Corrective Measure Alternative Development

Assemble the technologies that pass the screening step into specific alternatives that have potential to meet the corrective action objectives. Options for addressing less complex sites could be relatively straightforward and may only require evaluation of a single or limited number of alternatives.

Each alternative may consist of an individual technology or a combination of technologies used in sequence (e.g., treatment train). Depending on the site specific situation, different alternatives may be considered for separate areas of the facility. List and briefly describe each corrective measure alternative.

6. Evaluation of Corrective Measure Alternatives

Each corrective measure alternative must be evaluated (including its components) based on Short- and Long-Term Effectiveness, Reduction of Toxicity, Mobility and/or Volume, Long Term Reliability, Implementability, and Preliminary Cost.

a. Short-and Long-Term Effectiveness

Each corrective measure alternative must be evaluated for effectiveness in protecting human health and the environment and meeting the corrective action objectives. Both short- and long-term components of effectiveness must be evaluated; short-term referring to the construction and implementation period, and long-term referring to the period after the remedial action is complete. Estimate approximately how much time it will take to implement each corrective measure alternative, how much time to see initial beneficial results, and how much time to achieve the corrective action objectives.

The evaluation of short-term effectiveness must include possible threats to the safety of nearby communities, workers, and environmentally sensitive areas (e.g., oceans, wetlands) during construction of the corrective measure alternative. Factors to consider are fire, explosion, exposure to hazardous substances and potential threats associated with treatment, excavation, transportation and re-disposal or containment of waste material. Laboratory and/or field studies are extremely useful in estimating the effectiveness of corrective measures and should be used whenever possible.

The evaluation of long-term effectiveness must include possible threats to the safety of nearby communities, workers, and environmentally sensitive areas (e.g., oceans, wetlands) during operation of the corrective measure alternative.

b. Reduction of Toxicity, Mobility and/or Volume

Each corrective measure alternative must be evaluated for its ability to reduce the toxicity, mobility, and/or volume of the contaminated media. Reduction in toxicity, mobility, and/or volume refers to changes in one or more characteristics of the contaminated media by the use of corrective measures that decrease the inherent threats associated with the media.

Estimate how much the corrective measure alternative will reduce the waste toxicity, volume and/or mobility (compare initial site conditions to post-corrective measure conditions). In general, corrective measures that have a high degree of permanence and reduce the contaminant toxicity, mobility and volume through treatment.

c. Long-Term Reliability

Each corrective measure alternative must be evaluated as to its long-term reliability. This evaluation includes consideration of operation and maintenance requirements.

Demonstrated and expected reliability is a way of assessing the risk and effect of failure. Discuss whether the technology or combination of technologies have been used effectively together under analogous site conditions, whether failure of any one technology in the alternative has an impact on receptors or contaminant migration, and whether the alternative would have the flexibility to deal with uncontrollable changes at the site (e.g., heavy rain storms, earthquakes, etc).

Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements must also be considered.

Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure alternative shall be evaluated in terms of the projected useful life of the overall alternative and of its component technologies. Useful life is defined as the length of time the necessary or required level of effectiveness can be maintained.

d. Implementability of Corrective Measure Alternatives

The implementability criterion addresses the technical and administrative feasibility of implementing a corrective measure alternative and the availability of various services and materials needed during implementation. Each corrective measure alternative must be evaluated using the following criteria:

Construction and Operation: Corrective measure alternatives must be feasible to implement given the existing set of waste and site-specific conditions. This evaluation was initially done for specific technologies during the screening process and is addressed again in this detailed analysis of the alternative as a whole. It is not intended that the screening process be repeated here, but instead to highlight key differences and/or changes from the screening analysis that may result from combining technologies.

Administrative Feasibility: Discuss the administrative activities needed to implement the corrective measure alternative (e.g., permits, public acceptance, rights of way, off-site approvals, etc.).

Availability of Services and Materials: Discuss the availability of adequate off-site treatment, storage capacity, disposal services, needed technical services and materials, and the availability of prospective technologies for each corrective measure alternative.

e. Preliminary Cost Estimates

Develop a preliminary cost estimate for each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include both capital and operation and maintenance costs. Include a description of how the costs were estimated and what assumptions were used.

- The preliminary capital cost estimate must consider all key costs including, at a minimum, costs for engineering, mobilization, demobilization, site preparation, construction, materials, labor, equipment purchase and rental, sampling, analysis, waste disposal, permitting and health and safety measures.

- The preliminary operation and maintenance cost estimate must consider all key costs including, at a minimum, costs for labor, training, sampling, analysis, maintenance materials, utilities, waste disposal, waste treatment, permitting and health and safety measures.

- Calculate the net present value of preliminary capital and operation and maintenance costs for each corrective measure alternative.

7. Recommendation and Justification of the Corrective Measure Alternative

The Owner/Operator or Respondent shall recommend and justify a corrective measure alternative using the five criteria specified in Section 6. This recommendation shall include summary tables which allow the alternative or alternatives to be easily understood. Tradeoffs among implementability, effectiveness, reliability, and other pertinent factors shall be highlighted.

In addition, the recommended corrective measure alternative(s) must meet the following corrective action standards:

a. Protect human health and the environment;

b. Attain corrective action objectives including media cleanup standards;

c. Control the source(s) of releases so as to reduce or eliminate, to the extent practicable, further releases of hazardous wastes (including hazardous constituents) that may pose a threat to human health and the environment; and

d. Comply with any applicable federal, state, and local standards for management of wastes.

The Owner/Operator or Respondent must document how the recommended alternative meets the corrective action standards (a-d above).

8. Summary of Recommended Corrective Measure Alternative

Provide a description of the recommended corrective measure alternative and qualitatively describe what the alternative is supposed to do and how it will function at the facility.

ATTACHMENT 6

SCOPE OF WORK FOR CORRECTIVE MEASURES IMPLEMENTATION

PURPOSE

The purpose of the Corrective Measures Implementation (CMI) program is to design, construct, operate, maintain and monitor the performance of the corrective measure or measures selected by the Department. Corrective measures are intended to protect human health and/or the environment from hazardous waste releases from the Facility. The Owner/Operator or Respondent will furnish all personnel, materials and services necessary to implement the corrective measures program.

SCOPE

The documents required for Corrective Measures Implementation are, unless the Department of Toxic Substances Control (Department) specifies otherwise, a Conceptual Design, Operation and Maintenance Plan, Draft Plans and Specifications, Final Plans and Specifications, Construction Workplan, Construction Completion Report, Corrective Measure Completion Report, Health and Safety Plan and Progress Reports. The scope of work (SOW) for each document is specified below. The SOW's are intended to be flexible documents capable of addressing both simple and complex site situations. If the Owner/Operator or Respondent can justify, to the satisfaction of the Department, that a plan and/or report or portions thereof are not needed in the given site specific situation, then the Department may waive that requirement.

The Department may require the Owner/Operator or Respondent to conduct additional studies beyond what is discussed in the SOW's in order to support the CMI program. The Owner/Operator or Respondent will furnish all personnel, materials and services necessary to conduct the additional tasks.

A. Conceptual Design

The Owner/Operator or Respondent shall prepare a Conceptual Design (CD) that clearly describes the size, shape, form, and content of the proposed corrective measure, the key components or elements that are needed, describes the designers vision of the corrective measure in the form of conceptual drawings and schematics, and includes procedures and schedules for implementing the corrective measure(s).

It should be noted that more that one conceptual design may be needed in situations where there is a complex site with multiple technologies being employed at different

locations. The CD must be approved by the Department prior to implementation. The CD must, at a minimum, include the following elements:

1. Introduction/Purpose

Describe the purpose of the document and provide a summary description of the project.

2. Corrective Measure Objectives

Discuss the corrective measure objectives including applicable media cleanup standards.

3. Conceptual Model of Contaminant Migration

It is important to know where the contaminants are and to understand how they are moving before an adequate corrective measure can be developed. To address this critical question, the Owner/Operator or Respondent must present a conceptual model of the site and contaminant migration. The conceptual model consists of a working hypothesis of how the contaminants may move from the release source to the receptor population. The conceptual model is developed by looking at the applicable physical parameters (e.g., water solubility, density, Henry's Law Constant, etc.) for each contaminant and assessing how the contaminant may migrate given the existing site conditions (geologic features, depth to groundwater, etc.). Describe the phase (water, soil, gas, non-aqueous) and location where contaminants are likely to be found. This analysis may have already been done as part of earlier work (e.g., Current Conditions Report). If this is the case, then provide a summary of the conceptual model with a reference to the earlier document;

4. Description of Corrective Measures

Considering the conceptual model of contaminant migration, qualitatively describe what the corrective measure is supposed to do and how it will function at the Facility. Discuss the constructability of the corrective measure and its ability to meet the corrective measure objectives.

5. Data Sufficiency

Review existing data needed to support the design effort and establish whether or not there are sufficient accurate data available for this purpose. The Owner/Operator or Respondent must summarize the assessment findings and specify any additional data needed to complete the corrective measure design. The Department may require or the Owner/Operator or Respondent may propose that sampling and analysis plans and/or

treatability study workplans be developed to obtain the additional data. Submittal times for any new sampling and analysis plans and/or treatability study workplans must be included in the project schedule.

6. Project Management

Describe the management approach including levels of authority and responsibility (include organization chart), lines of communication and the qualifications of key personnel who will direct the corrective measure design and implementation effort (including contractor personnel).

7. Project Schedule

The project schedule must specify all significant steps in the process and when all CMI deliverables (e.g., Operation and Maintenance Plan, Corrective Measure Construction Workplan, etc.) are to be submitted to the Department.

8. Design Criteria

Specify performance requirements for the overall corrective measure and for each major component. The Owner/Operator or Respondent must select equipment that meets the performance requirements.

9. Design Basis

Discuss the process and methods for designing all major components of the corrective measure. Discuss the significant assumptions made and possible sources of error. Provide justification for the assumptions;

10. Conceptual Process/Schematic Diagrams.

11. Site plan showing preliminary plant layout and/or treatment area.

12. Tables listing number and type of major components with approximate dimensions.

13. Tables giving preliminary mass balances.

14. Site safety and security provisions (e.g., fences, fire control, etc.).

15. Waste Management Practices

Describe the wastes generated by the construction of the corrective measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed;

16. Required Permits

List and describe the permits needed to construct and operate the corrective measure. Indicate on the project schedule when the permit applications will be submitted to the applicable agencies and an estimate of the permit issuance date.

17. Long-Lead Procurement Considerations

The Owner/Operator or Respondent shall prepare a list of any elements or components of the corrective measure that will require custom fabrication or for some other reason must be considered as long-lead procurement items. The list must include the reason why the items are considered long-lead items, the length of time necessary for procurement, and recognized sources of such procurement;

18. Appendices including:

- Design Data - Tabulations of significant data used in the design effort;
- Equations - List and describe the source of major equations used in the design process; Sample Calculations - Present and explain one example calculation for significant or unique design calculations; and
- Laboratory or Field Test Results.

B. Operation and Maintenance Plan

The Owner/Operator or Respondent shall prepare an Operation and Maintenance (O&M) Plan that includes a strategy and procedures for performing operations, long term maintenance, and monitoring of the corrective measure. A draft Operation and Maintenance Plan shall be submitted to the Department simultaneously with the draft Plans and Specifications. A final Operation and Maintenance Plan shall be submitted to the Department simultaneously with the final Plans and Specifications. The O&M plan shall, at a minimum, include the following elements:

1.Introduction/Purpose

Describe the purpose of the document and provide a summary description of the project.

2. Project Management

Describe the management approach including levels of authority and responsibility (include organization chart), lines of communication and the qualifications of key personnel who will operate and maintain the corrective measures (including contractor personnel);

3. System Description

Describe the corrective measure and identify significant equipment.

4. Personnel Training

Describe the training process for O&M personnel. The Owner/Operator or Respondent shall prepare, and include in the technical specifications governing treatment systems, contractor requirements for providing: appropriate service visits by experienced personnel to supervise the installation, adjustment, start up and operation of the treatment systems, and training covering appropriate operational procedures once the start-up has been successfully accomplished.

5. Start-Up Procedures

Describe system start-up procedures including any operational testing.

6. Operation and Maintenance Procedures

Describe normal operation and maintenance procedures including:

a. Description of tasks for operation;
b. Description of tasks for maintenance;
c. Description of prescribed treatment or operation conditions; and
d. Schedule showing frequency of each O&M task.

7. Replacement schedule for equipment and installed components.

8. Waste Management Practices

Describe the wastes generated by operation of the corrective measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed.

9. Sampling and Monitoring

Sampling and monitoring activities may be needed for effective operation and maintenance of the corrective measure. If sampling activities are necessary, the O&M plan must include a complete sampling and analysis section which specifies the following information:

a. Description and purpose of monitoring tasks;
b. Data quality objectives;
c. Analytical test methods and detection limits;
d. Name of analytical laboratory;
e. Laboratory quality control (include laboratory QA/QC procedures in appendices)
f. Sample collection procedures and equipment;
g. Field quality control procedures:
   - duplicates (10% of all field samples)
   - blanks (field, equipment, etc.)
   - equipment calibration and maintenance
   - equipment decontamination
   - sample containers
   - sample preservation
   - sample holding times (must be specified)
   - sample packaging and shipment
   - sample documentation (field notebooks, sample labeling, etc);
h. Criteria for data acceptance and rejection; and
i. Schedule of monitoring frequency.

The Owner/Operator or Respondent shall follow all EPA guidance for sampling and analysis. The Department may request that the sampling and analysis section be a separate document.

10. Corrective Measure Completion Criteria

Describe the process and criteria (e.g., groundwater cleanup goal met at all compliance points for 1 year) for determining when corrective measures may cease. Also describe the process and criteria for determining when maintenance and monitoring may cease. Criteria for corrective measures such as a landfill cap must be carefully crafted to account for the fact that a landfill cap will never actually "cease" but will need to be maintained and monitored for a long period of time. Satisfaction of the completion criteria will trigger preparation and submittal of the Corrective Measures Completion Report.

11. O&M Contingency Procedures:

a. Procedures to address system breakdowns and operational problems including a list of redundant and emergency back-up equipment and procedures;

b. Should the corrective measure suffer complete failure, specify alternate procedures to prevent release or threatened releases of hazardous substances, pollutants or contaminants which may endanger public health and/or the environment or exceed cleanup standards;

c. The O&M Plan must specify that, in the event of a major breakdown and/or complete failure of the corrective measure (includes emergency situations), the Owner/Operator or Respondent will orally notify the Department within 24 hours of the event and will notify the Department in writing within 72 hours of the event. The written notification must, at a minimum, specify what happened, what response action is being taken and/or is planned, and any potential impacts on human health and/or the environment; and

d. Procedures to be implemented in the event that the corrective measure is experiencing major operational problems, is not performing to design specifications and/or will not achieve the cleanup goals in the expected timeframe. For example, in certain circumstances both a primary and secondary corrective measure may be selected for the Facility. If the primary corrective measure were to fail, then the secondary would be implemented. This section would thus specify that if the primary corrective measure failed, then design plans would be developed for the secondary measure.

12. Data Management and Documentation Requirements

Describe how analytical data and results will be evaluated, documented and managed, including development of an analytical database. State the criteria that will be used by the project team to review and determine the quality of data.

The O&M Plan shall specify that the Owner/Operator or Respondent collect and maintain the following information:

a. Progress Report Information

- Work Accomplishments (e.g., performance levels achieved, hours of treatment operation, treated and/or excavated volumes, concentration of contaminants in treated and/or excavated volumes, nature and volume of wastes generated, etc.).

- Record of significant activities (e.g., sampling events, inspections, problems encountered, action taken to rectify problems, etc.).

b. Monitoring and laboratory data;
c. Records of operating costs; and
d. Personnel, maintenance and inspection records.

These data and information should be used to prepare Progress Reports and the Corrective Measure Completion Report.

C. Draft Plans and Specifications

The Owner/Operator or Respondent shall prepare draft Plans and Specifications that are based on the Conceptual Design but include additional design detail. A draft Operation and Maintenance Plan and Construction Workplan shall be submitted to the Department simultaneously with the draft Plans and Specifications. The draft design package must include drawings and specifications needed to construct the corrective measure. Depending on the nature of the corrective measure, many different types of drawings and specifications may be needed. Some of the elements that may be required are:

- General Site Plans
- Process Flow Diagrams
- Mechanical Drawings
- Electrical Drawings
- Structural Drawings
- Piping and Instrumentation Diagrams
- Excavation and Earthwork Drawings
- Equipment Lists
- Site Preparation and Field Work Standards
- Preliminary Specifications for Equipment and Material

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the project specifications to the Department, the Owner/Operator or Respondent shall:

a. Proofread the specifications for accuracy and consistency with the conceptual design; and

b. Coordinate and cross-check the specifications and drawings.

D. Final Plans and Specifications (100% Design Point)

The Owner/Operator or Respondent shall prepare final Plans and Specifications that are sufficient to be included in a contract document and be advertised for bid. A final Operation and Maintenance Plan and Construction Workplan shall be submitted to the Department simultaneously with the final Plans and Specifications. The final design package must consist of the detailed drawings and specifications needed to construct the corrective measure. Depending on the nature of the corrective measure, many different types of drawings and specifications may be needed. Some of the elements that may be required are:

- General Site Plans
- Process Flow Diagrams
- Mechanical Drawings
- Electrical Drawings
- Piping and Instrumentation Diagrams
- Structural Drawings
- Excavation and Earthwork Drawings
- Site Preparation and Field Work Standards
- Construction Drawings
- Installation Drawings
- Equipment Lists
- Detailed Specifications for Equipment and Material

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the final project specifications to the Department, the Owner/Operator or Respondent shall:

a. Proofread the specifications for accuracy and consistency with the preliminary design; and

b. Coordinate and cross-check the specifications and drawings.

E. Construction Workplan

The Owner/Operator or Respondent shall prepare a Construction Workplan which documents the overall management strategy, construction quality assurance procedures and schedule for constructing the corrective measure. A draft Construction Workplan shall be submitted to the Department simultaneously with the draft Plans and Specifications and draft Operation and Maintenance Plan. A final Construction Workplan shall be submitted to the Department simultaneously with the final Plans and Specifications and final Operation and Maintenance Plan. Upon receipt of written

approval from the Department, the Owner/Operator or Respondent shall commence the construction process and implement the Construction Workplan in accordance with the schedule and provisions contained therein. The Construction Workplan must be approved by the Department prior to the start of corrective measure construction. The Construction Workplan must, at a minimum, include the following elements:

1. Introduction/Purpose

Describe the purpose of the document and provide a summary description of the project.

2. Project Management

Describe the construction management approach including levels of authority and responsibility (include organization chart), lines of communication and the qualifications of key personnel who will direct the corrective measure construction effort and provide construction quality assurance/quality control (including contractor personnel);

3. Project Schedule

The project schedule must include timing for key elements of the bidding process, timing for initiation and completion of all major corrective measure construction tasks as specified in the Final Plans and Specifications, and specify when the Construction Completion Report is to be submitted to the Department;

4. Construction Quality Assurance/Quality Control Program

The purpose of construction quality assurance is to ensure, with a reasonable degree of certainty, that a completed corrective measure will meet or exceed all design criteria, plans and specifications. The Construction Workplan must include a complete construction quality assurance program to be implemented by the Owner/Operator or Respondent.

5. Waste Management Procedures

Describe the wastes generated by construction of the corrective measure and how they will be managed.

6. Sampling and Analysis

Sampling and monitoring activities may be needed for construction quality assurance/quality control and/or other construction related purposes. If sampling

activities are necessary, the Construction Workplan must include a complete sampling and analysis section which specifies the following information:

a. Description and purpose of monitoring tasks;
b. Data quality objectives;
c. Analytical test methods and detection limits;
d. Name of analytical laboratory;
e. Laboratory quality control (include laboratory QA/QC procedures in appendices)
f. Sample collection procedures and equipment;
g. Field quality control procedures:
   - duplicates (10% of all field samples)
   - blanks (field, equipment, etc.)
   - equipment calibration and maintenance
   - equipment decontamination
   - sample containers
   - sample preservation
   - sample holding times (must be specified)
   - sample packaging and shipment
   - sample documentation (field notebooks, sample labeling, etc);
h. Criteria for data acceptance and rejection; and
i. Schedule of monitoring frequency.

The Owner/Operator or Respondent shall follow all Department and USEPA guidance for sampling and analysis. The Department may request that the sampling and analysis section be a separate document.

7. Construction Contingency Procedures

a. Changes to the design and/or specifications may be needed during construction to address unforeseen problems encountered in the field. Procedures to address such circumstances, including notification of the Department, must be included in the Construction Workplan;

b. The Construction Workplan must specify that, in the event of a construction emergency (e.g., fire, earthwork failure, etc.), the Owner/Operator or Respondent will orally notify the Department within 24 hours of the event and will notify the Department in writing within 72 hours of the event. The written notification must, at a minimum, specify what happened, what response action is being taken and/or is planned, and any potential impacts on public health and/or the environment; and

c. Procedures must be implemented if unforeseen events prevent corrective measure construction. For example, in certain circumstances both a primary

and secondary corrective measure may be selected for the Facility. If the primary corrective measure could not be constructed, then the secondary would be implemented. This section would thus specify that if the primary corrective measure could not be constructed, then design plans would be developed for the secondary measure.

8. Construction safety procedures should be specified in a separate Health and Safety Plan.

9. Data Management and Documentation Requirements

Describe how analytical data and results will be evaluated, documented and managed, including development of an analytical database. State the criteria that will be used by the project team to review and determine the quality of data.

The Construction Workplan shall specify that the Owner/Operator or Respondent collect and maintain the following information:

a. Progress Report Information

- Work Accomplishments (e.g., hours of operation, excavated volumes, nature and volume of wastes generated, area of cap completed, length of trench completed, etc.).

- Record of significant activities (e.g., sampling events, inspections, problems encountered, action taken to rectify problems, etc.).

b. Monitoring and laboratory data;
c. Records of construction costs; and
d. Personnel, maintenance and inspection records. This data and information should be used to prepare progress reports and the Construction Completion Report.

10. Cost Estimate/Financial Assurance

If financial assurance for corrective measure construction and operation is required by an enforcement order, facility permit, or through use of Department discretion, the Construction Workplan must include a cost estimate, specify which financial mechanism will be used and when the mechanism will be established. The cost estimate shall include both construction and operation and maintenance costs. An initial cost estimate shall be included in the draft Construction Workplan and a final cost estimate shall be included in the final Construction Workplan. The financial assurance mechanism may include a performance or surety bond, a trust fund, a letter of credit, financial test and corporate guarantee equivalent to that in 40 CFR 265.143 or any other mechanism acceptable to the Department.

Financial assurance mechanisms are used to assure the Department that the Owner/Operator or Respondent has adequate financial resources to construct and operate the corrective measure.

F. Construction Completion Report

The Owner/Operator or Respondent shall prepare a Construction Completion (CC) Report which documents how the completed project is consistent with the Final Plans and Specifications. A CC Report shall be submitted to the Department when the construction and any operational tests have been completed. The CC Report shall, at a minimum, include the following elements:

1. Purpose;

2. Synopsis of the corrective measure, design criteria, and certification that the corrective measure was constructed in accordance with the Final Plans and Specifications;

3. Explanation and description of any modifications to the Final Plans and Specifications and why these were necessary for the project;

4. Results of any operational testing and/or monitoring, indicating how initial operation of the corrective measure compares to the design criteria;

5. Summary of significant activities that occurred during construction. Include a discussion of problems encountered and how they were addressed;

6. Summary of any inspection findings (include copies of key inspection documents in appendices);

7. As built drawings; and

8. A schedule indicating when any treatment systems will begin full scale operations.

G. Corrective Measure Completion Report

The Owner/Operator or Respondent shall prepare a Corrective Measure Completion (CMC) Report when the Owner/Operator or Respondent believes that the corrective measure completion criteria have been satisfied. The purpose of the CMC Report is to fully document how the corrective measure completion criteria have been satisfied and to justify why the corrective measure and/or monitoring may cease. The CMC Report shall, at a minimum, include the following elements:

1. Purpose;

2. Synopsis of the corrective measure;

3. Corrective Measure Completion Criteria

   Describe the process and criteria for determining when corrective measures, maintenance and monitoring may cease. Corrective measure completion criteria were given in the final Operation and Maintenance (O&M) Plan;

4. Demonstration that the completion criteria have been met. Include results of testing and/or monitoring, indicating how operation of the corrective measure compares to the completion criteria;

5. Summary of work accomplishments (e.g., performance levels achieved, total hours of treatment operation, total treated and/or excavated volumes, nature and volume of wastes generated, etc.);

6. Summary of significant activities that occurred during operations. Include a discussion of problems encountered and how they were addressed;

7. Summary of inspection findings (include copies of key inspection documents in appendices); and

8. Summary of total operation and maintenance costs.

H. Health and Safety Plan

The Owner/Operator or Respondent must prepare a Health and Safety Plan for construction, operation and maintenance of the corrective measure. The Health and Safety Plan will not be approved by the Department. The Health and Safety Plan must, at a minimum, include the following elements:

1. Objectives

Describe the goals and objectives of the Health and Safety Plan (must apply to on-site personnel and visitors). The Health and Safety Plan must be consistent with the Facility Contingency Plan, Occupational Safety and Health Administration (OSHA) Regulations, NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site

Activities (1985), all state and local regulations and other Department guidance as provided.

2. Hazard Assessment

List and describe the potentially hazardous substances that could be encountered by field personnel during construction and/or operation and maintenance activities. Discuss the following:

- Inhalation Hazards
- Dermal Exposure
- Ingestion Hazards
- Physical Hazards
- Overall Hazard Rating

Include a table that, at a minimum, lists: known contaminants, highest observed concentration, media, symptoms/effects of acute exposure.

3. Personal Protection/Monitoring Equipment

For each operational task, describe personal protection levels and identify all monitoring equipment. Describe any action levels and corresponding response actions (i.e., when will levels of safety be upgraded). Describe decontamination procedures and areas.

4. Site Organization and Emergency Contacts

List and identify all contacts (include phone numbers). Identify the nearest hospital and provide a regional map showing the shortest route from the facility to the hospital. Describe site emergency procedures and any site safety organizations. Include evacuation procedures for neighbors (where applicable). Include a Facility Map showing emergency station locations (first aid, eye wash areas, etc.).

I. Progress Reports

The Owner/Operator or Respondent shall provide the Department with signed bi-monthly progress reports during corrective measure design, construction, operation and maintenance. The Department may adjust the frequency of progress reporting to address site specific needs. For example, more frequent progress reports may be needed to track critical activities such as corrective measure construction and start-up. Progress reports must, at a minimum, include the following elements:

1. A description of significant activities and work completed during the reporting period;

2. Summary of system effectiveness. Provide a comparison of system operation to predicted performance levels (applicable only during operation of the corrective measure);

3. Summaries of all findings (including any inspection results);

4. Summaries of all contacts with representatives of the local community, public interest groups or State government during the reporting period;

5. Summaries of all problems or potential problems encountered during the reporting period;

6. Actions being taken and/or planned to rectify problems;

7. Changes in personnel during the reporting period;

8. Projected work for the next reporting period; and

9. If requested by the Department, the results of any sampling tests and/or other data generated during the reporting period.

J. Submittal Summary

The following list provides a summary of when and how key documents should be submitted to the Department.

1. The submittal schedule for the documents listed below should be included in an enforcement order, permit or otherwise specified by the Department.

   - Conceptual Design

2. The submittal schedule for the documents listed below must be specified in the Conceptual Design. The groupings reflect which documents should be submitted together.

   - Draft Plans and Specifications
   - Draft Operation and Maintenance Plan
   - Draft Construction Workplan
   - Final Plans and Specifications
   - Final Operation and Maintenance Plan
   - Final Construction Workplan

- Health and Safety Plan

3. The submittal schedule for the document listed below must be specified in the Final Construction Workplan.

   - Construction Completion Report

4. The submittal schedule for the document listed below is based on when the Owner/Operator or Respondent believes the completion criteria have been satisfied.

   - Corrective Measure Completion Report

5. The submittal schedule for Progress Reports shall be bimonthly unless otherwise specified by the Department.

ATTACHMENT 7

SCOPE OF WORK FOR PROGRESS REPORTS

The Owner/Operator or Respondent shall provide the Department with signed quarterly progress reports. The Department may adjust the frequency of progress reporting to address site specific needs. For example, more frequent progress reports may be needed to track critical activities such as corrective measure construction and start-up. Progress reports must, at a minimum, include the following elements:

1. All Actions taken during the reporting period to achieve compliance with the Consent Order;
2. A summary of any findings made during the reporting period;
3. All problems or potential problems encountered during the well reporting period (also discuss problem solutions);
4. List all documents and dates submitted to DTSC during the reporting period and dates documents are anticipated to be submitted to DTSC during the next reporting period;
5. All projected work for the next reporting period;
6. A discussion of any changes in personnel and/or contractors that have occurred during the reporting period;
7. Summaries of all contacts with representatives of the press, local community or public interest groups;
8. Submit copies of published press or news articles associated with onsite and offsite facility or historical facility operations;
9. Provided an updated MS Project Schedule;
10. If requested by the Department, the results of any sampling, tests or other data generated during the RCRA Facility Investigations or Corrective Measure Study;
11. Provide a current list of documents available in the information repository. Provide verification that these documents are present and are easily assessable.

EXHIBIT A
COST ESTIMATE WORKSHEET
Corrective Action Consent Agreement
Date: April 21, 2022
Raytheon Systems Co.
Site Code 300336

DTSC Project Team		Site Mitigation		Toxicology	Geology	Industrial Hygienist	Engineering	Public Participation	CEQA	Legal	Project Assistants	
		Project Manager	Supervisor									
Classification (personnel)		ES	Sr. HSE (Sup)	Staff Toxicologist	Engineering Geologist	Assoc IH	HSE	PPS	Enviromental Planner	Attorney	OT	APA
TASK												
Agreement preparation, negotiation and issuance		6								2		
Scoping Meeting/Site Visit		8	8	8	8							
Revised Closure Plan		8	4	5	5		5					
Review and comment Current Conditions Report		15	5	10	10		8					
Interim Measures												
- Workplan		15		10	10	4	8					
- Implementation		8			8							
- Report		15		10	10		8					
- Public Participation (Community Profile, public notice and community update)		10						15				
- CEQA		16							16			
Facility Investigation												
- Workplan		15		8	8							
- Implementation		10		8	8	2						
- Health and Safety Plan						4						
- Report		15		10	10							
8 Project Management		15	8	8	8		8			2		
Total No. Hours/Class		156	25	77	85	10	37	15	16	4	0	0
Hourly Rate/Class		$189	$339	$256	$263	$305	$261	$161	$219	$305	$102	
Cost/Class		$29,484	$8,475	$19,712	$22,355	$3,050	$9,657	$2,415	$3,504	$1,220	$0	$0
Total	$99,872											
Advance Payment	**$49,936**											

EXHIBIT F

EXHIBIT F

DEPARTMENT OF CITY PLANNING
COMMISSION OFFICE
(213) 978-1300

CITY PLANNING COMMISSION

SAMANTHA MILLMAN
PRESIDENT

CAROLINE CHOE
VICE-PRESIDENT

HELEN CAMPBELL
JENNA HORNSTOCK
HELEN LEUNG
YVETTE LOPEZ-LEDESMA
KAREN MACK
DANA M. PERLMAN
RENEE DAKE WILSON

CITY OF LOS ANGELES
CALIFORNIA

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Case No. **DIR-2021-10327-SPR**
CEQA: ENV-2021-10328-MND
Location: 22815-22825 West Roscoe Boulevard
Council District: 12 – Lee
Neighborhood Council: West Hills
Community Plan Area: Chatsworth – Porter Ranch
Land Use Designation: Limited Industrial
Zone: [T][Q]M1-1
Legal Description: Lot FR A of Tract P M 7115

Last Day to File an Appeal: September 29, 2022

DETERMINATION – SITE PLAN REVIEW

Pursuant to Los Angeles Municipal Code Section 16.05, as the designee of the Director of Planning, I hereby:

FIND, pursuant to CEQA Guidelines Section 15074(b), after consideration of the whole of the administrative record, including the Mitigated Negative Declaration, No. ENV-2021-10328-MND, adopted on September 9, 2022 ("Mitigated Negative Declaration"), and all comments received, with the imposition of mitigation measures, there is no substantial evidence that the project will have a significant effect on the environment; FIND that the Mitigated Negative Declaration reflects the independent judgment and analysis of the City; FIND that the mitigation measures have been made enforceable conditions on the project and all mitigation measures required for the project are described in the Mitigation Monitoring Program ("MMP") prepared for the Mitigated Negative Declaration; and, ADOPT the Mitigated Negative Declaration and the MMP;

CONDITIONALLY APPROVE a Site Plan Review for a development project which creates 50,000 gross square feet or more of nonresidential floor area;

ADOPT the attached findings; and

ADVISE the Applicant that pursuant to the California State Public Resources Code Section 21081.6, the City shall monitor or require evidence that environmental mitigation measures are

implemented and maintained through the life of the project and the City may require any necessary fees to cover the cost of such monitoring.

This approval is subject to the following terms and conditions:

Conditions of Approval

1. **Site Plan.** The use and development of the subject property shall be in substantial conformance with the site plan, and elevations, dated July 7, 2022, and labeled as "Exhibit A" attached to the subject case file. The location, type, and size of signage is not a part of this approval. Minor deviations may be allowed in order to comply with provisions of the Municipal Code and the conditions of approval.

2. **Use.** The use of the subject site shall be limited to the regulations of the M1 Zone and subject to the further limitations listed in Ordinance No. 180844.

3. **Floor Area.** The total floor area shall be limited to a maximum of 98,614 square feet.

4. **Vehicular Parking.** On-site automobile parking shall be provided in accordance with L.A.M.C. Section 12.21-A, 4 of the Municipal Code.

5. **Bicycle Parking.** All bicycle parking shall be provided in conformance with the bicycle parking requirements of L.A.M.C. Sections 12.21-A, 4 and 12.21-A,16.

6. **Pedestrian Connectivity and Access.** Provide direct and clearly identifiable path of travel for pedestrians from Fallbrook Avenue and Roscoe Boulevard using landscaping, special paving, or otherwise well-marked pedestrian walkways to, from and across the site.

7. **Landscaping**.

    a. All open areas not used for buildings, driveways, parking areas, or walkways shall be attractively landscaped and maintained in accordance with a landscape plan and an automatic irrigation plan, prepared by a licensed Landscape Architect and to the satisfaction of the decision maker.

    b. Planting of any required trees within the public right-of-way shall obtain approval from the Urban Forestry Division prior to obtaining approval from the Department of City Planning. In the event that a required tree cannot be planted within the public right-of-way, those trees shall be planted on-site.

8. **Trash.** All trash collection and storage areas shall be located on-site and not visible from the public right-of-way.

    a. Trash bins shall be located within a gated, covered, enclosure constructed of materials to match the exterior wall and materials of the building.

    b. Trash storage bins shall not be placed in or block access to required parking.

9. **Maintenance:**

    a. The subject property (including all trash storage areas, associate parking facilities, sidewalks, yard areas, parkways, and exterior walls along the property lines) shall be

maintained in an attractive condition and shall be kept free of trash and debris.

b. All graffiti on the site shall be removed or painted over to match the color of the surface to which it is applied within 24 hours of its occurrence.

10. **Lighting.** Outdoor lighting shall be designed and installed with shielding, such that the light source does not illuminate adjacent residential properties or the public right- of-way, nor the above night skies.

11. **Signage.** On-site signs shall be limited to the maximum allowable under the Municipal Code.

12. **Rooftop Screening.** All mechanical equipment on the roof shall be fully screened from view of any abutting properties and the public right-of-way.

13. **Transportation Demand Management (TDM).** At the time of occupancy, owners or tenants of the Project shall implement the following TDM measures shall be implemented by owners or tenants at the time of occupancy:

    a. Provide marketing tools to educate and inform employees about alternative transportation options and the effects of their travel choices.

        i. The Project shall utilize promotional and marketing tools that can be accessed by employees such as posters, information boards, or a website to provide information about alternative transportation options and the effects of their travel choices.

    b. Implement a ride-share program.

        i. The Project shall proactively aim to increase employee vehicle occupancy by providing ride-share matching services, designating preferred parking for rideshare participants, designing adequate passenger loading/unloading and waiting areas for rideshare vehicles, and providing a website or message board to connect riders and coordinate rides.

14. **Soil Sampling and Remediation.**

    a. There shall be no restrictions on development in those areas on the Property not identified as an Area of Concern (AOC) or Solid Waste Management Unit (SWMU) in the documents entitled, "RCRA Facility Assessment, Hughes Missile Systems Company, Canoga Park Facility (Raytheon), EPA ID – CAD041162124", dated January 30, 2008.

    b. A soil sampling work plan shall be submitted to the Department of Toxic Substances Control (DTSC) for approval, before the issuance of a building permit for any construction in an identified AOC or SWMU within the Property.

    c. The applicant shall enter into a contract with a qualified, independent third-party firm to conduct the soil sampling and laboratory testing to implement the soil sampling work plan as approved by DTSC.

    d. The soil sampling plan shall at a minimum include soil testing within areas of the property that the project would disturb within the AOC or SWMU identified in the RCRA Facility Assessment, Hughes Missile Systems Company, Canoga Park Facility (Raytheon), EPA ID – CAD041162124", dated January 30, 2008, which consists of the storm sewers (AOC-12) and the sanitary sewer (SWMU-9).

e. The soil sampling plan shall include testing for the presence of volatile organic compounds and determine if they are detected in concentrations exceeding any applicable Screening Level for Commercial/Industrial Soil (mg/kg), Cancer Endpoint levels established by the DTSC, which are listed in the Human Health Risk Assessment (HHRA) Note Number 3, DTSC-modified Screening Levels (June 2020) within Table 1: HHRA Note 3, June 2020, DTSC-recommended Screening Levels for Soil Analytes of that document.

f. The applicant shall submit the results of the soil sampling plan to the DTSC for review and comment before the issuance of a building permit for any construction in an identified AOC or SWMU within the Property.

g. Development and use of the Property may continue without further DTSC requirements, if DTSC determines that contaminants are at or below acceptable levels for the intended use of the particular areas of the Property.

h. If DTSC determines that contaminants are above acceptable levels for the intended use on a particular area of the Property, DTSC shall require submission and approval of a remediation plan to address the contamination and concentrations are reduced to acceptable levels for the intended use of the particular areas of the Property prior to issuance of a building permit.

Administrative Conditions

15. **Approval, Verification and Submittals.** Copies of any approvals, guarantees or verification of consultations, review of approval, plans, etc., as may be required by the subject conditions, shall be provided to the Department of City Planning for placement in the subject file.

16. **Code Compliance.** Use, area, height, and area regulations of the zone classification(s) of the subject property shall be complied with, except where granted conditions differ herein.

17. **Covenant.** Prior to the issuance of any permits relative to this matter, an agreement concerning all the information contained in these conditions shall be recorded in the County Recorder's Office. The agreement shall run with the land and shall be binding on any subsequent property owners, heirs or assigns. The agreement shall be submitted to the Department of City Planning for approval before being recorded. After recordation, a copy bearing the Recorder's number and date shall be provided to the Department of City Planning for attachment to the file.

18. **Definition.** Any agencies, public officials or legislation referenced in these conditions shall mean those agencies, public offices legislation or their successors, designees, or amendments to any legislation.

19. **Enforcement.** Compliance with these conditions and the intent of these conditions shall be to the satisfaction of the Department of City Planning and any designated agency, or the agency's successor and in accordance with any stated laws or regulations, or any amendments thereto.

20. **Building Plans.** Page 1 of this grant and all conditions of approval shall be printed on the building plans submitted to the Department of City Planning and the Department of Building and Safety.

21. **Utilization of Concurrent Entitlement.** Site Plan Review requires completion of all applicable conditions of approval to the satisfaction of the Department of City Planning. The applicant/owner shall have a period of three years from the effective date of the subject grant

for the Site Plan Review to effectuate the terms of this entitlement by securing a building permit. Thereafter, the entitlements shall be deemed terminated and the property owner shall be required to secure a new authorization for the use. If a building permit is obtained during this period, but subsequently expires, this determination shall expire with the building permit.

22. **Corrective Conditions.** The authorized use shall be conducted at all times with due regard for the character of the surrounding district, and the right is reserved to the City Planning Commission or the Director of Planning, pursuant to Section 12.27.1 of the Municipal Code, to impose additional corrective conditions, if in the decision makers' opinion, such actions are proven necessary for the protection of persons in the neighborhood or occupants of adjacent property.

23. **Expedited Processing Section Fees.** Prior to the clearance of any conditions, the applicant shall show proof that all fees have been paid to the Department of City Planning, Expedited Processing Section.

24. INDEMNIFICATION AND REIMBURSEMENT OF LITIGATION COSTS.

Applicant shall do all of the following:

a. Defend, indemnify and hold harmless the City from any and all actions against the City relating to or arising out of, in whole or in part, the City's processing and approval of this entitlement, including but not limited to, an action to attack, challenge, set aside, void, or otherwise modify or annul the approval of the entitlement, the environmental review of the entitlement, or the approval of subsequent permit decisions, or to claim personal property damage, including from inverse condemnation or any other constitutional claim.

b. Reimburse the City for any and all costs incurred in defense of an action related to or arising out of the City's processing and approval of the entitlement, including but not limited to payment of all court costs and attorney's fees, costs of any judgments or awards against the City (including an award of attorney's fees), damages, and/or settlement costs.

c. Submit an initial deposit for the City's litigation costs to the City within 10 days' notice of the City tendering defense to the Applicant and requesting a deposit. The initial deposit shall be in an amount set by the City Attorney's Office, in its sole discretion, based on the nature and scope of action, but in no event shall the initial deposit be less than $50,000. The City's failure to notice or collect the deposit does not relieve the Applicant from responsibility to reimburse the City pursuant to the requirement in paragraph (b).

d. Submit supplemental deposits upon notice by the City. Supplemental deposits may be required in an increased amount from the initial deposit if found necessary by the City to protect the City's interests. The City's failure to notice or collect the deposit does not relieve the Applicant from responsibility to reimburse the City pursuant to the requirement in paragraph (b).

e. If the City determines it necessary to protect the City's interest, execute an indemnity and reimbursement agreement with the City under terms consistent with the requirements of this condition.

The City shall notify the applicant within a reasonable period of time of its receipt of any action and the City shall cooperate in the defense. If the City fails to notify the applicant of any claim, action, or proceeding in a reasonable time, or if the City fails to reasonably cooperate in the defense, the applicant shall not thereafter be responsible to defend, indemnify or hold

harmless the City.

The City shall have the sole right to choose its counsel, including the City Attorney's office or outside counsel. At its sole discretion, the City may participate at its own expense in the defense of any action, but such participation shall not relieve the applicant of any obligation imposed by this condition. In the event the Applicant fails to comply with this condition, in whole or in part, the City may withdraw its defense of the action, voids its approval of the entitlement, or take any other action. The City retains the right to make all decisions with respect to its representations in any legal proceeding, including its inherent right to abandon or settle litigation.

For purposes of this condition, the following definitions apply:

"City" shall be defined to include the City, its agents, officers, boards, commissions, committees, employees, and volunteers.

"Action" shall be defined to include suits, proceedings (including those held under alternative dispute resolution procedures), claims, or lawsuits. Actions include actions, as defined herein, alleging failure to comply with any federal, state or local law.

Nothing in the definitions included in this paragraph are intended to limit the rights of the City or the obligations of the Applicant otherwise created by this condition.

BACKGROUND

The subject property is a sloping, irregular-shaped parcel of land consisting of 12 contiguous lots which encompasses approximately 50 acres of total lot area. Altogether, this assemblage of lots comprise the "Corporate Pointe at West Hills" office park and light industrial campus located along the intersection of Roscoe Boulevard and Fallbrook Avenue.

The project site is one (1) of these 12 lots which totals approximately 304,479 square feet, or 6.99 acres, of lot area, located at 22815-22825 West Roscoe Boulevard on the northwest corner of Fallbrook Avenue and Roscoe Boulevard. The project site is currently improved with surface parking and associated parking lot landscaping. The proposed project involves the development, use, and maintenance of an approximately 98,614 square-foot light industrial complex consisting of three (3) single-story plus mezzanine buildings, each built to a maximum height of 40 feet. The proposed project would result in a floor area ratio (FAR) of approximately 0.32:1 and 28.8 percent building coverage across the site. The project would also provide 262 parking spaces on a surface parking lot surrounding the proposed buildings.

The project site is zoned [T][Q]M1-1 and is located within the Chatsworth – Porter Ranch Community Plan area which designates the land use of the subject property as Limited Industrial. The subject property has a Height District No. 1 designation, which places no limitation on building height and restricts development to a maximum floor area ratio (FAR) of 1.5:1.

The subject property is situated approximately eight (8) feet above street level from Roscoe Boulevard and Fallbrook Avenue. However, beyond the initial slope up to the subject property, the parcel is relatively flat over a distance of approximately 660 feet resulting in a downward slope (north to south) of approximately 1.5 percent. The subject property has approximately 549 feet of frontage on the north side of Roscoe Boulevard and approximately 718 feet of frontage along the west side of Fallbrook Avenue. As part of the business park campus, the subject property has reciprocal community driveway access easements with adjacent parcels (8401 and 8403 Fallbrook). Thus, vehicular access to the subject property is available via community driveways from Roscoe Boulevard

(located adjacent to the west property line of the subject property) and from Fallbrook Avenue (adjacent to the northern property boundary). Landscape planters are located along both the Roscoe Boulevard and Fallbrook Avenue street frontages.

The proposed project implements the Phase II development of the overarching Corporate Pointe at West Hills office/industrial campus project, consistent with Ordinance No. 180,844 (which was subsequently amended by Case No. DIR-2019-7507-ACI-CLG). Pursuant to Qualified "Q" Condition No. A.3 of Ordinance No. 180,844, the property may be used for a range of commercial and light industrial uses, including but not limited to warehouse, office, research and development facilities, and light manufacturing. Thus, the proposed warehouse/light manufacturing and ancillary office uses are permitted. Additionally, the proposed project results in a considerable decrease in both building floor area (decreased from 180,000 square feet to 98,614 square feet) and height (decreased from 45 feet to 40 feet) from what was previously approved.

The Applicant is requesting a Site Plan Review for the construction, use, and maintenance of three (3) one-story (plus mezzanine) buildings for light industrial use as follows: 1) Building 1 is a 49,892 square-foot building located on the southerly portion of the project site which includes 12,000 square feet of office space, 10,000 square feet of manufacturing space, and 27,892 square feet of warehouse space; 2) Building 2 is a 31,169 square-foot building located at the central portion of the project site which includes 9,500 square feet of office space, 7,000 square feet of manufacturing space, and 14,669 square feet of warehouse space; and 3) Building 3 is a 17,553 square-foot building located on the northerly portion of the project site which includes 2,000 square feet of office space, 2,000 square feet of manufacturing space, and 13,553 square feet of warehouse space. Each building contains loading bays/docks and will rise to a maximum height of 40 feet.

All three buildings share similar architectural features which are a modern-contemporary industrial concrete tilt-up design utilizing a variety of building materials (including stucco, Eldorado stone, blue reflective glazing, and anodized aluminum trims) and colors. The south-facing façade of Building 1, which exposes onto Roscoe Boulevard, extends for 373 feet and is modulated into eight segments with a combination of four (4) glass building entrances and four (4) building segments/exterior wall panels, each of which are separated by a vertical architectural element. As a result, the design of the building's elevation provides a high quality and modern design that enhances the view of the subject property from public vantage points along Roscoe Boulevard, particularly on the corner. Buildings 2 and 3 are similarly designed to enhance the exposure of the subject property from public vantage points along Fallbrook Avenue.

Surrounding properties generally share the same zoning as the project site, zoned [T][Q]M1-1, with single-family residential neighborhoods further beyond and a large regional park, Chatsworth Reservoir, farther north which is zoned [Q]OS-1XL. Properties directly abutting the project to the north and west are part of the Corporate Pointe business park, improved with surface parking and a three-story Quest Diagnostics building to the north and a two-story Thermo Fischer office building, surface parking, and landscape buffer to the west. Residential properties across Fallbrook Avenue to the east are zoned RE11-1 while residential properties across Roscoe Boulevard to the south are zoned RS-1. Located southeast, diagonally across the intersection of Roscoe Boulevard and Fallbrook Avenue is a one-story neighborhood commercial center zoned [Q]C2-1VL.

General Plan Land Use

The Chatsworth – Porter Ranch Community Plan Map designates the subject property for Limited Industrial land uses, corresponding to the CM, MR1, and M1 Zones. The project site is zoned [T][Q]M1-1 and is thus consistent with the General Plan's land use designation for the site. The subject property is located within a State Enterprise Zone: Los Angeles (ZI-2374), Local Emergency Temporary Regulations – Time Limits and Parking Relief – LAMC 16.02.1 (ZI-2498), Urban Agriculture Incentive

Zone, Very High Fire Hazard Severity Zone, and Special Grading Area (BOE Basic Grid Map A-13372). The property is not within the boundaries of or subject to any other Specific Plan, Community Design Overlay, or Interim Control Ordinance.

Streets

Fallbrook Avenue, adjoining the subject property to the east, is designated Avenue II, dedicated to a variable right-of-way width between 80 and 89 feet along the project frontage, and improved with asphalt roadway, concrete curb, gutter, and sidewalk.

Roscoe Boulevard, adjoining the subject property to the south, is a designated Boulevard II, dedicated to a right-of-way width of 102 feet and improved with asphalt roadway, concrete curb, gutter, and sidewalk.

Previous Relevant Cases

Case No. DIR-2019-7507-ACI-CLQ – In April of 2020, the Director of Planning approved modifications of the "T" and "Q" Conditions to clarify that the building would be developed on the project site (Parcel 2A), taking into account the 2018 lot line adjustment (Case No. AA-2017-1168-PMEX) that separated Parcel 2 into Parcels 2A and 2B. The permitted building floor area and height for Parcel 2A was also reduced from 250,000 square feet and 85-feet in height to 180,000 square feet and 45-feet in height, along with the elimination of a parking structure.

Case No. DIR-2017-2024-ACI-CLQ – On May 23, 2017, the applicant requested further clarification for a discrepancy in building height to permit a maximum 38-foot addition to the existing former school building. As a result, construction of an approximately 46,900 square-foot, 38-foot-high building on Parcel 1 (Phase I) was recently completed. The building was originally approved as a 110,000 square-foot office building with a maximum building height of 45 feet but was reduced in size to accommodate requirements of the current owner and operator (Thermo Fisher Labs).

Case No. DIR-2016-317-ACI-CLQ – On February 4, 2016, the applicant, BSREP West Hills Office Campus, requested amendments to the council instructions, "T" Conditions, and clarification on the "Q" Conditions, in order to develop the project in two construction phases. Phase I consists of the portion of the Project Site identified as Parcel 1, which was approved for a maximum 110,000 square-foot building (Building 22951) and the change of use of the existing 106,000 square-foot school building (Building 22801) to an office and research and development facility. Phase II would occupy Parcel 2 and would consist of a maximum approved 250,000 square-foot building and a 969-space parking garage.

Ordinance No. 180,844 – On August 7, 2009, the Los Angeles City Council affirmed the City Planning Commission action and adopted the General Plan Amendment and Zone Changes. The City Council adopted a General Plan Amendment from Minimum Density Residential land use to Limited Manufacturing land use over the entire project site and a corresponding Zone Change from the A1-1 Zone to the [T][Q]M1-1 Zone (Ordinance No. 180,844; effective on September 28, 2009). The total amount of floor area permitted on the subject property was limited to 806,000 square feet.

Case No. CPC-2007-237-ZC-GPA-CU-SPR – On June 3, 2009, the Los Angeles City Planning Commission conditionally approved CPC-2007-237-ZC-GPA-CU-SPR and adopted Mitigated Negative Declaration ENV-2006-10437-MND to permit: the change of use of an existing 106,000-square foot school building (formerly DeVry University) to an office building, the addition of a new office building consisting of approximately 250,000 square feet, the addition of a new office building consisting of approximately 110,000 square feet, and a new parking structure to accommodate approximately 969 parking spaces, located on an approximately 51 acre site (part of an existing 80 acre campus) at the northwestern corner of Roscoe Boulevard and Fallbrook Avenue. The City

Planning Commission determination was not appealed and became effective on June 11, 2009. Shortly thereafter, City Planning Commission transmitted the requested Zone Change and General Plan Amendment entitlements to City Council for final action.

SITE PLAN REVIEW FINDINGS

I have reviewed the subject development project and hereby find the following findings based on the information contained in the application, the report of the Site Plan Review, staff reports received from other departments, supplemental written documents submitted, and review of environmental impacts associated with the project pursuant to Section 16.05-C of the Municipal Code:

1. **The project is in substantial conformance with the purposes, intent and provisions of the General Plan, applicable community plan, and does not conflict with any applicable regulations, standards, and any applicable specific plan.**

   There are eleven elements of the General Plan. Each of these Elements establishes policies that provide for the regulatory environment in managing the City and for addressing environmental concerns and problems. The majority of the policies derived from these Elements are in the form of code requirements of the Los Angeles Municipal Code. The project does not propose to deviate from any of the requirements of the Los Angeles Municipal Code.

   The Chatsworth – Porter Ranch Community Plan Map designates the subject property for Limited Industrial land uses, corresponding to the CM, MR1, and M1 Zones. The project site is zoned [T][Q]M1-1 and is thus consistent with the General Plan's land use designation for the site. The subject property is located within a State Enterprise Zone: Los Angeles (ZI-2374), Local Emergency Temporary Regulations – Time Limits and Parking Relief – LAMC 16.02.1 (ZI-2498), Urban Agriculture Incentive Zone, Very High Fire Hazard Severity Zone, and Special Grading Area (BOE Basic Grid Map A-13372). The property is not within the boundaries of or subject to any other Specific Plan, Community Design Overlay, or Interim Control Ordinance.

   Framework Element

   The Framework Element for the General Plan (Framework Element) was adopted by the City of Los Angeles in December 1996 and re adopted in August 2001. The Framework Element provides guidance regarding policy issues for the entire City of Los Angeles, including the project site. The Framework Element also sets forth a Citywide comprehensive long range growth strategy and defines Citywide polices regarding such issues as land use, housing, urban form, neighborhood design, open space, economic development, transportation, infrastructure, and public services. The Framework Element includes the following goals, objectives and policies relevant to the instant request:

   Goal 3J: Industrial growth that provides job opportunities for the City's residents and maintains the City's fiscal viability.

   Objective 3.14: Provide land and supporting services for the retention of existing and attraction of new industries.

   Policy 3.14.1: Accommodate the development of industrial uses in the areas designated as "Industrial-Light," and "Industrial-Heavy," and "Industrial-Transit"

Policy 3.14.3 Provide flexible zoning to facilitate the clustering of industries and supporting uses, thereby establishing viable "themed" sectors (e.g., movie/television/media production, set design, reproductions, etc.)

The project site is part of a larger industrial business park ("Corporate Pointe at West Hills") approved under CPC-2007-237-GPA-ZA-CU, which adopted a General Plan Amendment resulting in a Land Use Designation of Limited Manufacturing and a Zone Change from A1-1 to [T][Q]M1-1 allowing for phased development of approximately 806,000 SF of industrial uses. The proposed project would complete Phase II of this development. Pursuant to DIR-2019-7507-ACI-CLQ, Phase II would accommodate up to 180,000 SF of Floor Area for the project site. Although a General Plan Amendment and Zone Change were adopted in 2009, the "Corporate Pointe at West Hills," including the project site, has continuously been in use as a light industrial research and development campus since the 1950's.

The project proposes the construction, use, and maintenance of a light industrial and manufacturing complex consisting of three (3) one-story (plus mezzanine) buildings which total approximately 98,614 square feet of floor area. Pursuant to Condition A.3 of Ordinance No. 180,844, the subject property may be used for a range of commercial and light industrial uses, including but not limited to warehouse, office, research and development facilities, and light manufacturing. The project proposes a flexible design to accommodate warehouse uses and various light industrial/light manufacturing uses along with ancillary offices which are all permitted uses consistent with the site's Qualified "Q" Condition and Ordinance No. 180,844. While the project will share access with the larger Corporate Pointe at West Hills complex, the project also features internal circulation among the three buildings with ample parking, clearly delineated walkways, and several loading docks and bay doors scattered throughout. The proposed project will enhance the existing business campus and promote its economic viability through the site's redevelopment. The project would enable similar uses that complement one another to cluster without adversely impacting any sensitive uses.

Mobility Plan 2035

The Mobility Element guides development of a citywide transportation system with the goal of ensuring the efficient movement of people and goods. The Mobility Element recognizes that primary emphasis must be placed on maximizing the efficiency of existing and proposed transportation infrastructure through advanced transportation technology, reduction of vehicle trips, and focused growth in proximity to public transit.

The Mobility Element of the General Plan (Mobility Plan 2035) is not likely to be affected by the recommended action herein. The project is subject to the following public right-of-way improvements (Planning Case Referral Form Reference Number 202100203): 5-foot foot dedication will be required to provide half Right-of-Way of 55-feet along Roscoe Boulevard; install street tree wells as required by Urban Forestry Division; and install street lights as required by Bureau of Street Lighting.

Adjoining the project site is Roscoe Boulevard, a Boulevard II, to the south, and Fallbrook Avenue, an Avenue II, to the east. The project as designed and conditioned meets the following policies of Mobility Plan 2035:

Policy 2.3: Recognize walking as a component of every trip and ensure high-quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.

The project's design, including building orientation, will facilitate walking both into and within the development site, creating a safe and comfortable walking environment. The project includes dedicated walkways from the public right of way to the main entrances of Building 1 and Building 3. In addition, the project will include extensive landscaping with evergreen tree species and striped crosswalks throughout the parking lot.

Policy 3.1: Recognize all modes of travel, including pedestrian, bicycle, transit, and vehicular modes - including goods movement - as integral components of the City's transportation system.

The project will provide Code-required bicycle parking thereby supporting "first-mile, last-mile solutions," creating the opportunity for workers to access the project by bicycle and transit.

Policy 3.8: Provide bicyclists with convenient, secure and well-maintained bicycle facilities.

The project will provide both short-term and long-term bicycle parking stalls within each of the three buildings across the campus. Thus, both employees and visitors will have access to bike parking that is conveniently distributed throughout the project site.

Chatsworth – Porter Ranch Community Plan

Adopted in 1993, the purpose of the Chatsworth – Porter Ranch Community Plan is to guide future development of the Community. The Plan is intended to promote an arrangement of land use, circulation, and services which will encourage and contribute to the economic, social and physical health, safety, welfare, and convenience of the Community, within the larger framework of the City; guide the development, betterment, and change of the Community to meet existing and anticipated needs and conditions; contribute to a healthful and pleasant environment; balance growth and stability; reflect economic potentialities and limitations, land development and other trends; and protect investment to the extent reasonable and feasible. The project meets the intent of the following goal, objectives and policies of the Chatsworth – Porter Ranch Community Plan relating to light industrial uses:

Objective 4: To promote economic well-being and public convenience through: a.) allocating and distributing commercial lands for retail, service, and other facilities in quantities and patterns based on Los Angeles City Planning Department accepted planning principles and standards; and b.) designating lands for industrial development that can be used without detriment to adjacent uses of other types, and imposing such restrictions on the types and intensities of industrial uses as are necessary to this purpose.

Furthermore, the Plan states: *"The growth of new technological industries, the advent of sophisticated communication systems, and the affinity between office and industrial uses suggest the need for more flexible zoning… The Plan encourages continued development of research and development-type industries which do not generate excessive noise, dust, and fumes and are compatible with the residential character of the north and west San Fernando Valley."*

The proposed Project is three light industrial buildings for office, light manufacturing, and warehouse purposes, consistent with the policies and land use standards of the respective Limited Industrial land use designation and [T][Q]M1-1 Zone. Additionally, the proposed Project will carry out the final phase of development of the Corporate Pointe at West Hills office/industrial campus, which was originally approved in 2009 pursuant to Ordinance No. 180,844 and associated City Planning Case No. CPC-2007-237-ZC-GPA-CU-SPR. Modified over the years,

the approved site plan allows for the development of a larger approximately 51-acre site in two phases, as follows:

Phase I: Thermo-Fisher at 22801-22951 W. Roscoe Boulevard – The approved project consisted of a maximum 110,000-square foot building and a change of use of the existing 106,000-square foot school building (Building 22801) to an office and research and development facility on Parcel 1. Phase I was recently completed with the construction of an approximately 49,000 square foot building (Building 22951) in lieu of the maximum permitted 110,000 square feet; and

Phase II: Proposed Project at 22815-22825 W. Roscoe Boulevard – The originally approved project consisted of a maximum 250,000-square foot building and parking structure on Parcel 2. In April 2020, the "T" and "Q" Conditions were modified under Case No. DIR-2019-7507-ACI-CLQ to clarify that the building would be developed on the subject Property (Parcel 2A), taking into account the 2018 lot line adjustment (Case No. AA-2017-1168-PMEX) that separated Parcel 2 into Parcels 2A and 2B. The project was also reduced in the permitted building floor area and height for Parcel 2A from 250,000 square feet and 85-feet to 180,000 square feet and 45-feet. Additionally, the parking structure was eliminated.

The site is located in an industrially zoned and designated area south of the Simi Valley Freeway and north of the Ventura Freeway. The project's proposed uses are permitted by the project site's Qualified "Q" condition, pursuant to Ordinance No. 180,844, as well as the underlying Limited Industrial M1-1 zoning and land use designation. Surrounding properties are developed with similar uses, as the project is only one portion of a larger project that spans over approximately 51 acres. In addition, the project's proposed design will enhance the visual appearance and appeal of the existing development while posing minimal nuisance potential to sensitive uses in the vicinity.

Therefore, the project is in substantial conformance with the purposes, intent and provisions of the General Plan and Community plan and does not conflict with any applicable regulations or standards.

2. **That the project consists of an arrangement of buildings and structures (including height, bulk and setbacks), off-street parking facilities, loading areas, lighting, landscaping, trash collection, and other such pertinent improvements that is or will be compatible with existing and future development on neighboring properties.**

Compatibility with Existing and Future Development

Surrounding properties generally share the same zoning as the project site, zoned [T][Q]M1-1, with single-family residential neighborhoods further beyond and a large regional park, Chatsworth Reservoir, farther north which is zoned [Q]OS-1XL. Properties directly abutting the project to the north and west are part of the Corporate Pointe business park, improved with surface parking and a three-story Quest Diagnostics building to the north and a two-story Thermo Fischer office building, surface parking, and landscape buffer to the west. Residential properties across Fallbrook Avenue to the east are zoned RE11-1 while residential properties across Roscoe Boulevard to the south are zoned RS-1. Located southeast, diagonally across the intersection of Roscoe Boulevard and Fallbrook Avenue is a one-story neighborhood commercial center zoned [Q]C2-1VL.

The project site is located along the north side of Roscoe Boulevard and the west side of Fallbrook Avenue and is within the "Corporate Pointe of West Hills" business park. The proposed

project implements the Phase II development of the overarching Corporate Pointe at West Hills office/industrial campus project, consistent with Ordinance No. 180,844 (which was subsequently amended by Case No. DIR-2019-7507-ACI-CLG). The project site is situated along the corner, fronting the public rights-of-way, which is ideal for the redevelopment of the site to construct three (3) new, one-story (plus mezzanine) buildings with Code-required vehicle and bicycle parking as well as mature landscape planters to buffer the proposed project from the adjacent residential neighborhood. Pursuant to Qualified "Q" Condition No. A.3 of Ordinance No. 180,844, the property may be used for a range of commercial and light industrial uses, including but not limited to warehouse, office, research and development facilities, and light manufacturing. Thus, the proposed warehouse/light manufacturing and ancillary office uses are permitted. Additionally, the proposed project results in a considerable decrease in both building floor area (decreased from 180,000 square feet to 98,614 square feet) and height (decreased from 45 feet to 40 feet) from what was previously approved.

The project proposes the construction, use, and maintenance of three (3) one-story (plus mezzanine) buildings for light industrial use as follows: 1) Building 1 is a 49,892 square-foot building located on the southerly portion of the project site which includes 12,000 square feet of office space, 10,000 square feet of manufacturing space, and 27,892 square feet of warehouse space; 2) Building 2 is a 31,169 square-foot building located at the central portion of the project site which includes 9,500 square feet of office space, 7,000 square feet of manufacturing space, and 14,669 square feet of warehouse space; and 3) Building 3 is a 17,553 square-foot building located on the northerly portion of the project site which includes 2,000 square feet of office space, 2,000 square feet of manufacturing space, and 13,553 square feet of warehouse space. Each building contains loading bays/docks and will rise to a maximum height of 40 feet.

All three buildings share similar architectural features which are a modern-contemporary industrial concrete tilt-up design utilizing a variety of building materials (including stucco, Eldorado stone, blue reflective glazing, and anodized aluminum trims) and colors. The south-facing façade of Building 1, which exposes onto Roscoe Boulevard, extends for 373 feet and is modulated into eight segments with a combination of four (4) glass building entrances and four (4) building segments/exterior wall panels, each of which are separated by a vertical architectural element. As a result, the design of the building's elevation provides a high quality and modern design that enhances the view of the subject property from public vantage points along Roscoe Boulevard, particularly on the corner. Buildings 2 and 3 are similarly designed to enhance the exposure of the subject property from public vantage points along Fallbrook Avenue. Furthermore, the project complies with Condition No. A.1 of Case No. CPC-2007-237-ZC-GPA-CU-SPR in that the design of the facilities are of a high quality, campus park-like, nuisance-free environment for light manufacturing, assembly, research and development, advanced technology development, and general office use.

The project site consists of one lot which totals approximately 304,479 square feet, or 6.99 acres, of lot area. The project site is currently improved with surface parking and associated parking lot landscaping. The proposed project would result in a floor area ratio (FAR) of approximately 0.32:1 and 28.8 percent building coverage across the site. The project would also provide 262 parking spaces on a surface parking lot surrounding the proposed buildings. The subject property has a Height District No. 1 designation, which places no limitation on building height and restricts development to a maximum floor area ratio (FAR) of 1.5:1.

The subject property sits approximately eight (8) feet above street level from Roscoe Boulevard and Fallbrook Avenue. However, beyond the initial slope up to the subject property, the parcel is relatively flat over a distance of approximately 660 feet resulting in a downward slope (north to south) of approximately 1.5 percent. The subject property has approximately 549 feet of frontage on the north side of Roscoe Boulevard and approximately 718 feet of frontage along the west

side of Fallbrook Avenue. As part of the business park campus, the subject property has reciprocal community driveway access easements with adjacent parcels (8401 and 8403 Fallbrook). Thus, vehicular access to the subject property is available via community driveways from Roscoe Boulevard (located adjacent to the west property line of the subject property) and from Fallbrook Avenue (adjacent to the northern property boundary). Landscape planters are located along both the Roscoe Boulevard and Fallbrook Avenue street frontages.

Arrangement of Buildings (Height, Bulk, Setbacks)

As previously stated, the project site totals approximately 304,479 square feet, or 6.99 acres, of lot area and is currently improved with surface parking and associated parking lot landscaping. The proposed project results in a considerable decrease in both building mass (decreased from 180,000 square feet to 98,614 square feet) and height (decreased from 45 feet to 40 feet) from what was previously approved. The proposed project would result in a floor area ratio (FAR) of approximately 0.32:1 and 28.8 percent building coverage across the site. The project would also provide 262 parking spaces on a surface parking lot surrounding the proposed buildings. The subject property has a Height District No. 1 designation, which places no limitation on building height and restricts development to a maximum floor area ratio (FAR) of 1.5:1.

The proposed project maintains a minimum 103-foot setback from the easterly (Fallbrook Avenue) property line and 146-foot setback from the southerly (Roscoe Boulevard) property line. Located within the southerly setback is an approximately 65-foot-wide planter while a 27-foot-wide planter is located within the easterly setback. The proposed setbacks substantially exceed the minimum 40-foot setbacks required along the street frontages as established by Ordinance No. 180,844. Additionally, the project site sits atop a steep slope at approximately 8 feet above street level.

Parking, Loading Areas, Trash Collection

The project proposes 262 vehicle parking spaces which exceeds the total of 150 off-street parking spaces as required per LAMC Section 12.21-A,4. The vehicle parking spaces would be provided throughout the property, including along the periphery and adjacent to building entrances, distributed to accommodate Code required parking for each of the three proposed buildings. Presently, the project site is improved as a surface parking lot with 659 parking spaces which served as off-site parking for the former DeVry University school use on an adjacent lot (22801 Roscoe Boulevard). The school use has since been vacated and replaced with a Thermo Fisher medical research use which has a lower parking requirement and thus the previous off-site parking Covenant and Agreement was terminated on May 27, 2021 (Document No. 20210849998). The project will also provide at least the minimum required amount of bicycle parking which amounts to 10 short-term and 13 long-term bicycle parking spaces.

The project proposes loading bay access for each of the three buildings in a manner that is located interior to the site to minimize exposure to the public streets and surrounding residential uses. All truck deliveries will utilize the primary driveway access from Roscoe Boulevard for ingress and egress, as required by Condition No. B3 of Case No. CPC-2007-237-ZC-GPA-CU-SPR. Building 1 has up for four leasable spaces, each with a business office, open floor area available for warehousing or manufacturing, and one loading bay/dock, for a total of four loading bay docks located at the rear (north elevation) of the building. Building 2 has up to three leasable spaces, each with a business office and open floor area, and a total of four loading bay/docks located at the rear (south elevation) of the building with shared truck access with Building 1. Building 3 has one leasable space which includes a business office, open floor area, and two loading bays/docks which are located at the side (westerly elevation) of the building.

In conformance with LAMC Section 16.05, all buildings are required to include their own individual on-site trash collection area for both refuse and recyclable materials. The project provides trash storage areas for each building which are enclosed so as to minimize noise and visibility from the public right-of-way.

Landscaping

The project will provide approximately 108,576 square feet of landscaped area. As depicted in the landscape plan and planting schedule in the project plans, there will be 143 new trees (minimum 24-inch boxes) planted throughout the parking area and within the landscape buffers along Roscoe Boulevard and Fallbrook Avenue. Pursuant to Condition No. 6 of Case No. CPC-2007-237-ZC-GPA-CU-SPR, the proposed surface parking area shall provide one (1) canopy tree for every four (4) net new surface parking spaces. Trees shall be shade-producing trees that are a minimum of eight (8) feet in height at the time of planting with the expectation that trees will be at least 20-30 feet in height with a minimum tree canopy diameter of 50% of its height at maturity. A total of 32 existing trees will remain on site for a total of 175 trees for the entire project. The proposed tree species and quantities of new trees to be planted include Chinese Flame Tree (8), Crape Myrtle (24), Magnolia (4), Afghan Pine (8), Chinese Pistache (38), Coast Live Oak (9), Agrican Sumac (33), and Brisbane Box (19). The total landscaped area amounts to approximately 35.7% of the entire project site.

Lighting

The project has been conditioned to ensure that any outdoor lighting shall be designed and installed with shielding so that the light source does not illuminate adjacent properties, public right-of-way, or night skies. The project's proposed lighting scheme will be compatible with surrounding development. Exterior lighting will illuminate on-site facilities in order to provide sufficient lighting for circulation and security while minimizing impacts on adjacent properties.

Therefore, the project has been conditioned, herein, to ensure that the proposed arrangement of buildings, off-street parking facilities, and other such pertinent improvements will be compatible with existing and future development on neighboring properties.

3. **That any residential project provides recreational and service amenities in order to improve habitability for the residents and minimize impacts on neighboring properties.**

The proposed project involves the development of office and light manufacturing/light industrial uses. No residential uses are proposed. The proposed project is not subject to the City's open space requirements pursuant to LAMC Section 12.21-G,2; however, the project has been conditioned so that all open areas not used for buildings, driveways, and parking areas be attractively landscaped, include an automatic irrigation system, and maintained in accordance with a landscape plan prepared by a licensed landscape architect or licensed architect.

ADDITIONAL MANDATORY FINDINGS

4. The National Flood Insurance Program rate maps, which are a part of the Flood Hazard Management Specific Plan adopted by the City Council by Ordinance No. 172,081, have been reviewed and it has been determined that this project is located in Zone X, an area of minimal flood hazard.

Authorization - Time Limit and Transferability

The authorization granted herein shall be for a three-year period from the effective date. If building permits are not issued and construction work is not begun within such time and carried on diligently so that building permits do not lapse, this approval shall become null and void. There are no time extensions available beyond this three-year period. Furthermore, this grant is not a permit or license and that permits, and licenses required by all applicable laws must be obtained from the proper agency.

In the event the property is sold, leased, rented or occupied by any person or corporation other than yourself, it is incumbent that you advise such person or corporation regarding the conditions of this authorization. If any portion of the authorization is utilized, the conditions and requirement of the grant will become operative and must be strictly observed

Appeal Period - Effective Date

The applicant's attention is called to the fact that this grant is not a permit or license and that any permits and licenses required by law must be obtained from the proper public agency. Furthermore, if any condition of this grant is violated or if the same be not complied with, then the applicant or his successor in interest may be prosecuted for violating these conditions the same as for any violation of the requirements contained in the Municipal Code.

The Determination in this matter will become effective after fifteen (15) days from the date of mailing of this determination unless an appeal there from is filed with the Department of City Planning. It is strongly advised that appeals be filed early during the appeal period and in person so that imperfections/incompleteness may be corrected before the appeal period expires. Any appeal must be filed on the prescribed forms accompanied by the required fee, a copy of this Determination, and received and receipted at a public office of the Department of City Planning on or before the above date or the appeal will not be accepted. **Forms are available on-line at http://cityplanning.lacity.org/.** Planning Department public offices are located at:

Downtown	**San Fernando Valley**	**West Los Angeles**
Figueroa Plaza 201 North Figueroa Street, 4th Floor Los Angeles, CA 90012 (213) 482-7077	Marvin Braude San Fernando Valley Constituent Service Center 6262 Van Nuys Boulevard, Room 251 Van Nuys, CA 91401 (818) 374-5050	West Los Angeles Development Services Center 1828 Sawtelle Boulevard, 2nd Floor Los Angeles, CA 90025 (310) 231-2598

The applicant is further advised that all subsequent contact with this office regarding this Determination must be with the decision-maker who acted on the case. This would include clarification, verification of condition compliance and plans or building permit applications, etc., and shall be accomplished by appointment only, in order to assure that you receive service with a minimum amount of waiting. You should advise any consultant representing you of this requirement as well.

The time in which a party may seek judicial review of this determination is governed by California Code of Civil Procedures Section 1094.6. Under that provision, a petitioner may seek judicial review of any decision of the City pursuant to California Code of Civil Procedure Section 1090.18, only if the petition for writ of mandate pursuant to that section is filed no later than the 90th day following the date on which the City's decision becomes final.

VINCENT P. BERTONI, AICP
Director of Planning

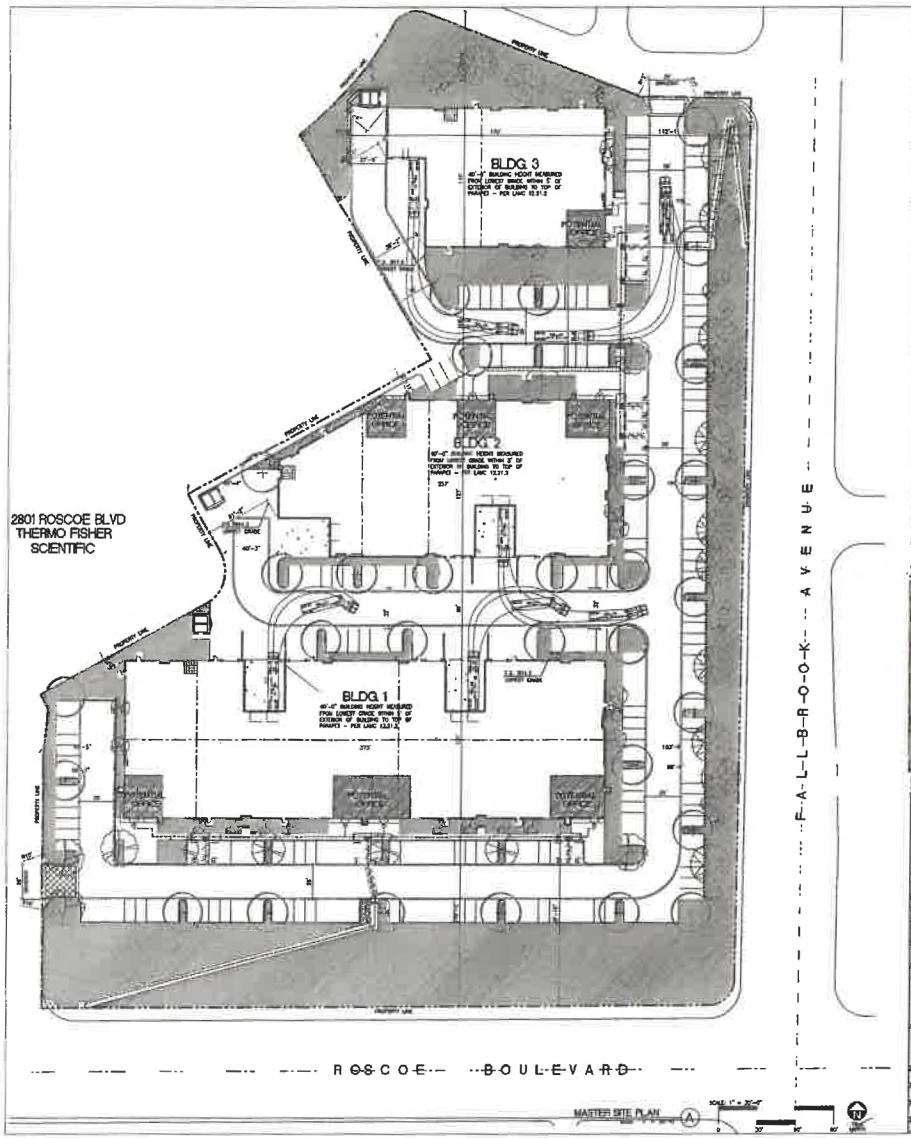
APPROVED BY:

Heather Bleemers
Senior City Planner

PREPARED BY:

Esther Ahn
City Planner

Attachments:
Exhibit A: Architectural and Landscape Plans



PROPERTY OWNER / APPLICANT

STALEY POINT CAPITAL
1801 CENTURY PARK EAST, STE. 1050
LOS ANGELES, CA 90067
ATTN: NICHOL STALEY

ADDRESS OF THE PROPERTY

22815 – 22825 ROSCOE BLVD, CANOGA PARK CA 91304

ASSESSOR'S PARCEL NUMBER

2005-028-018

APPLICANT'S REPRESENTATIVE

HPA, INC.
18831 BARDEEN AVE SUITE 100
IRVINE CA 92612
TEL: 949-863-1770
ATTN: STEVE KONG

LEGAL DESCRIPTION

TRACT #: (2005-002-018)

PARCEL 1):

THAT PORTION OF PARCEL 2 OF PARCEL MAP EXEMPTION NO. 2016-110-PMEX, RECORDED NOVEMBER 8, 2016 AS INSTRUMENT NO. 20161391125, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, STATE DESCRIBED AS THE FOLLOWING DESCRIBED LINE:

BEGINNING AT THE NORTHWESTERLY TERMINUS OF THE WESTERLY LINE OF SAID PARCEL 2 OF SAID PARCEL MAP EXEMPTION 2016-110-PMEX SHOWN HAVING A BEARING AND DISTANCE OF NORTH 21° 07' 13" WEST 253.33 FEET, BEING A POINT ON A NON-TANGENT CURVE, CONCAVE NORTHERLY, THENCE A RADIUS OF 284.00 FEET, AND TO WHICH POINT A RADIAL LINE BEARS NORTH 28° 44' 21" WEST; THENCE EASTERLY 114.49 FEET ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 23° 05' 13" TO THE BEGINNING OF A REVERSE CURVE, CONCAVE SOUTHERLY AND HAVING A RADIUS OF 50.00 FEET; THENCE EASTERLY 35.96 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 82° 32' 11"; THENCE SOUTH 89° 23' 06" EAST 178.83 FEET; THENCE NORTH 89° 07' 59" EAST 84.28 FEET TO THE EASTERLY LINE OF SAID PARCEL 2.

SAID LAND IS SHOWN AS ADJUSTED PARCEL 3 OF CERTIFICATE OF COMPLIANCE FOR LOT LINE ADJUSTMENT RECORDED JULY 13, 2016 AS INSTRUMENT NO. 2016-760370, OF OFFICIAL RECORDS.

PARCEL 2): (EASEMENT) – AFFECTS PORTION OF PROPERTY IN QUESTION

AN EASEMENT FOR ACCESS PURPOSES AS PROVIDED IN THAT CERTAIN DECLARATION OF REMOTE EASEMENT AND OPERATING AGREEMENT DATED MAY 15, 1997, EXECUTED BY CEDARS PERSONAL BANK, FEDERAL SAVINGS BANK, PERSONAL CHARTERED BANK, SCHOOL SAVINGS BANK, RECORDED MAY 20, 1997 AS INSTRUMENT NO. 97-761391 OFFICIAL RECORDS, OVER THAT PORTION OF PARCEL A OF PARCEL MAP 7113 IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS SHOWN ON MAP RECORDED IN BOOK 174 PAGES 3 THROUGH 5, INCLUSIVE, OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, AS SHOWN THEREON, EXCEPT THEREFROM ANY PORTION LYING WITHIN PARCEL 1B DESCRIBED ABOVE.

PARCEL 3): (EASEMENT) – AFFECTS PORTION OF PROPERTY IN QUESTION

AN EASEMENT FOR ACCESS PURPOSES AS PROVIDED IN THAT CERTAIN DECLARATION OF DRAINAGE EASEMENT AND OPERATING AGREEMENT DATED MAY 15, 1997, EXECUTED BY CEDARS PERSONAL BANK, FEDERAL SAVINGS BANK, PERSONAL CHARTERED BANK, SCHOOL SAVINGS BANK, RECORDED MAY 20, 1997 AS INSTRUMENT NO. 97-761391 OFFICIAL RECORDS, OVER THAT PORTION OF PARCEL A OF PARCEL MAP 7113 IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS SHOWN ON MAP RECORDED IN BOOK 174 PAGES 3 THROUGH 5, INCLUSIVE, OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, AS SHOWN THEREON, EXCEPT THEREFROM ANY PORTION LYING WITHIN PARCEL 1B DESCRIBED ABOVE.

PARCEL 10: (EASEMENT) – AFFECTS PROPERTY IN QUESTION

AN EASEMENT FOR ACCESS AND EGRESS PURPOSES AS PROVIDED IN THAT CERTAIN DECLARATION OF ACCESS AND EGRESS EASEMENT AND SPONSORS AGREEMENT DATED MAY 15, 1997, EXECUTED BY CEDARS PERSONAL BANK, FEDERAL SAVINGS BANK, A FEDERALLY CHARTERED SAVINGS BANK, RECORDED MAY 20, 1997 AS INSTRUMENT NO. 97-761391 OFFICIAL RECORDS, AND RECORDED ON JUNE 23, 1997 AS INSTRUMENT NO. 97-1076214, OFFICIAL RECORDS, OVER THAT PORTION OF SAID PARCEL B AS SHOWN THEREON.

PARCEL 12: (EASEMENT) – AFFECTS PROPERTY IN QUESTION

AN EASEMENT FOR ACCESS, EGRESS AND COMMUNITY DRIVEWAY PURPOSES AS CREATED IN THAT CERTAIN COVENANT AND AGREEMENT FOR COMMUNITY DRIVEWAY RECORDED NOVEMBER 8, 2016 AS INSTRUMENT NO. 20161391123 OF OFFICIAL RECORDS.

PARCEL 13: (EASEMENT) – AFFECTS PROPERTY IN QUESTION

AN EASEMENT FOR INGRESS, EGRESS AND COMMUNITY DRIVEWAY PURPOSES AS CREATED IN THAT CERTAIN COVENANT AND AGREEMENT FOR COMMUNITY DRIVEWAY OVER TWO OR MORE PARCELS RECORDED APRIL 15, 2016 AS INSTRUMENT NO. 20160387123 OF OFFICIAL RECORDS.

APN: 2005-002-018
NOTE: PARCELS 4, 5, 7, 8, 9, & 11 HAVE BEEN INTENTIONALLY DELETED

VICINITY MAP



GENERAL NOTES - SITE PLAN

A. THE SOILS REPORT PREPARED BY EDCON, GEO PACIFIC, INC. DATED ON _____ SHOULD BE A PART OF THESE CONTRACT DOCUMENTS.

B. 6" STEEL AND EXPANSION IN MASONRY, USE STEEL REINFORCING FOR ALL SITE CONCRETE.

C. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR EDGE UNLESS NOTED.

D. SEE "L" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. DETAILS ON SHEET A01 ARE SCHEDULE DIMENSIONS.

E. THE ENTIRE PROJECT SHALL BE PERMANENTLY IRRIGATED WITH AN AUTOMATIC IRRIGATION SYSTEM PRIOR TO INSULATION & AT LEAST 90 DAYS BEFORE FINAL COMPLETION.

F. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO CITY-WIDE UTILITIES. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO WORK. VERIFY LOCATIONS.

G. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.

H. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL DEPRESSIONS AND CONCRETE WORK. SITE PLANS ARE FOR ELEVATION AND CONTROL LAYOUT PURPOSES.

I. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.

J. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE AT MINIMUM OF 30. MAY W/ 1/2" SAND TROWEL EXPOSURE, JOINTS TO HAVE 1/2" EXPANSION FELLEN MATERIAL AT 1/4", SEE "L" DRAWINGS FOR FINISHES.

K. PAINT CURBS AND PAVEMENT SIGNS TO MATCH OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.

L. CONSTRUCTION DOCUMENT PACKAGES TO BE LANDSCAPE AND IRRIGATION PLANS, PLANTING PLANS, AND DETAILS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC WORKS PRIOR TO ISSUANCE OF BUILDING PERMITS.

M. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL CERTIFY IN WRITING THE COMPLETION OF PUBLIC FACILITIES DEVELOPMENT.

N. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS DEMANDED FROM PUBLIC FACILITIES DEVELOPMENT.

O. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB.

P. APPROVED CONFORMING LANDSCAPE PLAN PRIOR TO GRADING PERMIT

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT
2. NOT USED
3. CONCRETE WALKWAY, MEDIUM BROOM FINISH.
4. GRADIENT APPROVED TO BE CONSTRUCTED
5. 5'-0"(+)x5'-0"(+) AREA, WHICH CONCRETE EXTERIOR LANDING PAD TOP AT ALL EXTERIOR MAN DOORS TO LANDSCAPE AREAS PRIOR TO BE REDUCED BELOW 1" MAX. SLOPE TO BE 1/4" / 1'-0" MAX. IN DIRECTION AWAY FROM BUILDING. SLOPE TO PUBLIC WAY ON GRADE (MAY 4/2 1/2% MAX. AS REQ. BY CITY INSPECTOR.
6. NOT USED
7. PROVIDE 6'H TUBE STEEL, MANUALLY OPERATED GATES WITH KNOX-BOX LOCK PER FIRE DEPARTMENT STANDARDS FOR DRIVEWAY. SEE SHEET A1.0 FOR DESIGNATION FOR NFPA AND LOCAL EXPOSURE "C". CONTRACTOR TO DESIGN & DETAIL GATES.
8. NOT USED
9. TRANSFORMER. SCREENED. SEE E/SAB-AA.1
10. SEATING AREA
11. BICYCLE RACKS PER CBC/LOCAL PER CITY STANDARD – SEE E-11/SAB-AA.1
12. BICYCLE RACKS AND LONG TERM PER REQUIRED.
13. LANDSCAPE. SEE L-1 SHEET, LANDSCAPE AREAS INDICATED BY BRANCH PATTERN.
14. HANDICAPPED ENTRY SIGN.
15. HANDICAPPED PARKING STALL SIGN.
16. PRE-CAST CONCRETE WHEEL STOP.
17. TRANSLATED DOME.

SITE LEGEND

LANDSCAPED AREA
PAVING PER CIVIL
CONCRETE PAVING SEE "C" DRAWING FOR THICKNESS
24' FIRE LANE.
STANDARD PARKING STALL (9'-0" X 18')
HANDICAP PARKING STALL (9'-0" X 18')
PATH OF TRAVEL SLOPE NOT TO EXCEED 2% AND CROSS-SLOPE
PROPERTY LINE

PROJECT DATA

	BLDG 1	BLDG 2	BLDG 3	TOTAL
SITE AREA				
In s.f.				304,470 s.f.
In acres				6.99 ac
BUILDING AREA				
Footprint	69,353	27,169	10,823	97,914 s.f.
Office – 1st floor	6,000	5,000	1,500	12,500 s.f.
Mezzanine	6,000	4,500	1,500	11,000 s.f.
Manufacturing	15,000	7,000	2,000	24,000 s.f.
Warehouse	37,000	10,000	10,000	59,114 s.f.
TOTAL	69,353	31,169	17,823	197,914 s.f.
Floor Area Ratio (FAR)				33.5%
Permeable (Outside of Bldg. Area)				35.5%
Landscape Required				108,276 s.f.
Landscape Provided				108,289 s.f.
Percentage				35.5%
SITE PARKING REQUIRED				
Office 1/300	24	17	4	42 stalls
Mfg: 1/500 s.f.	30	14	4	28 stalls
Whse: 1st 100 SF 1/500	20	20	20	60 stalls
Whse: Abv. 100 SF 1/5,000	4	2	1	7 stalls
Whse: 1/1,000 s.f.	37	10	14	61 stalls
TOTAL	85	73	43	202 stalls
SITE PARKING PROVIDED				
Standard (9.0' x 18')	143	89	43	345 stalls
ADA Required	3	3	3	9 stalls
ADA Van	3	3	3	9 stalls
Total	149	79	43	363 stalls
SITE PARKING PER UNIT				
Zoning Designation – LAMR (Commercial)				
BUILDING SETBACKS: STREET FACING				
Height – 45'				
BUILDING FLOOR AREA WITHIN ALL STREET				
FAR – to be verified				
Density				
To be verified				

BICYCLE SHORT TERM AND LONG TERM CALC

BUILDING 1:
SHORT TERM REQUIRED OFFICE(1/10,000): 2
SHORT TERM REQUIRED WAREHOUSE (1/10,000): 4
LONG TERM REQUIRED OFFICE (1/2000): 3
LONG TERM REQUIRED WAREHOUSE (1/10,000): 4

BUILDING 2:
SHORT TERM REQUIRED OFFICE(1/10,000): 2
SHORT TERM REQUIRED WAREHOUSE (1/10,000): 2
LONG TERM REQUIRED OFFICE (1/2000): 3
LONG TERM REQUIRED WAREHOUSE (1/10,000): 3

BUILDING 3:
SHORT TERM REQUIRED OFFICE(1/10,000): 2
SHORT TERM REQUIRED WAREHOUSE (1/10,000): 2
LONG TERM REQUIRED OFFICE (1/2000): 2
LONG TERM REQUIRED WAREHOUSE (1/10,000): 2

ALL BUILDINGS WILL PROVIDE THE APPROPRIATE QUANTITY OF SHORT TERM BICYCLE SPACES. LONG TERM STORAGE WILL BE PLACED INSIDE OF THE BUILDING WHERE IT CAN BE SECURELY LOCKED AND STORED. REFER TO EACH BUILDINGS RESPECTIVE SITE PLAN AND FLOOR PLAN FOR LOCATION OF SHORT AND LONG TERM SPACES.

EXHIBIT "A"
Page No. 1 of 11
Case No. DIR-2021-10327-SPR

OFFICIAL USE ONLY

HPA
hpa, inc.
18831 bardeen avenue - ste. #100
Irvine, ca
92612
tel: 949-863-1770
fax: 949-863-0871
email: hpa@hparch.com

REGISTERED ARCHITECT
STEVEN KONG
3-31-23
STATE OF CALIFORNIA

Owner:
StaleyPoint CAPITAL
1801 CENTURY PARK EAST
SUITE 1050
LOS ANGELES, CA 90067

Project
ROSCOE / FALLBROOK
22815-22825
ROSCOE BLVD.
CANOGA PARK, CA 91304

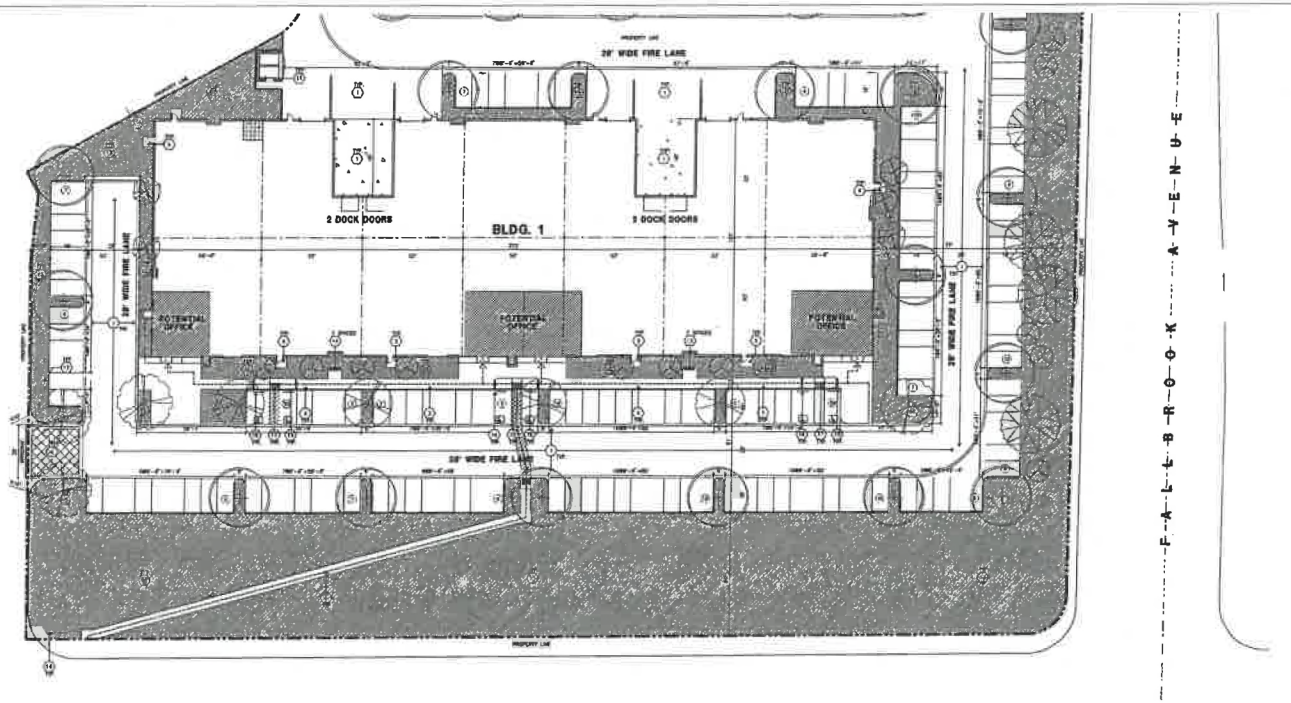
Consultants:

CIVIL	PSOMAS
STRUCTURAL	-
MECHANICAL	
PLUMBING	
ELECTRICAL	-
LANDSCAPE	HUNTER
PRE-PRETECTION	
SOILS ENGINEER	-

Title: MASTER SITE PLAN

Project Number: 20230
Drawn by: AW
Date: 07/07/22
Revisions:

Sheet:
DAB-A1.0



OVERALL SITE PLAN (A) SCALE: 1" = 30'-0"

GENERAL NOTES - SITE PLAN

A. SOILS REPORT PREPARED BY SOIL GEO ENGR, INC. DATED 10/2021 SHOULD BE A PART OF BASE CONTRACT DOCUMENTS.

B. F. BARS ARE CONTINUOUS IN MOTURE, LINE SHOW REINFORCING FOR ALL SITE CONCRETE.

C. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.

D. SEE "C" SHEETS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. SWALES TO SHOW ALL AND MINIMUM GRADIENTS.

E. THE GUTTER ENCLOSED SHALL BE INDEPENDENTLY LANTHERED WITH AN AUTOMATIC IRRIGATION SYSTEM. THE INSTALLATION IS AT LEAST 30 DAYS BEFORE BLDG. COMPLETION.

F. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONNECTION SHALL VERIFY ACTUAL UTILITY LOCATIONS.

G. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.

H. CONTRACTOR TO NOTIFY TO "C" DRAWINGS FOR ALL NOTIFICATION, CONTROL, ENGINEERING, SITE PLANS ARE FOR GUIDANCE AND STAKING LAYOUT POINTS.

I. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.

J. CONCRETE SIDEWALK TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 5' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MINIMUM 1/2" DIA. SET 1/2" LOW, SLOPE, EXPANSION JOINTS TO HAVE CONFORMING EXPANSION FILLER MATERIAL OF 1/2", SEE "C" DRAWINGS FOR FINISH.

K. ROOF DRAIN AND DOWNSPOUTS SHALL TO INTERIOR OF FINE LINES AS REQUIRED BY SOIL ENGINEERING.

L. CONFORM TO CONTRACTOR PERFORMING TO THE LANDSCAPE AND IRRIGATION PLANS AND SPECIFICATIONS THAT WILL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED AS PUBLIC BUILDING DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.

M. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC WORKS DEVELOPMENT.

N. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY WATER CONSERVATION ORDINANCES OR AS OBTAINED FROM PUBLIC WORKS DEVELOPMENT.

O. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB

P. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO OBTAINING PERMIT

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT
2. NOT USED
3. CONCRETE WALKWAY, MEDIUM BROOM FINISH.
4. DRIVEWAY APRONS TO BE CONSTRUCTED
5. 3'-0"x7'-0"x8'-0" VIN. THICK CONCRETE EXTERIOR LANDING PAD, TYP. ALL EXTERIOR MAN DOORS TO LANDSCAPE AREAS, FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" - 1/8" MAX. PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY W/ 1:20 MAX. AS REQ. BY CITY INSPECTION.
6. NOT USED
7. PROVIDE 6'H TUBE STEEL, MANUALLY OPERATED GATES WITH KNOX-PAD LOCK PER FIRE DEPARTMENT STANDARDS FOR DRIVEWAY. GATE TO BE DESIGNED FOR 50 MPH WIND LOAD, EXPERIAN "C". CONTRACTOR TO DESIGN & DETAIL GATES.
8. NOT USED
9. TRANSFORMER, SCHEDULE, SEE E/DAB-A1.1
10. BUILDING AREA.
11. CONCRETE TRASH ENCLOSURE PER CITY STANDARD – SEE E-1/DAB-A1.1
12. BICYCLE RACKS AND LONG TERM PER REQUIRED.
13. LANDSCAPE, SEE "L" SHEET, LANDSCAPE AREAS INDICATED BY SHADED PATTERN.
14. HANDICAPPED ENTRY SIGN.
15. HANDICAPPED PARKING WALL SIGN.
16. PRE-CAST CONCRETE WHEEL STOP.
17. TRUNCATED DOME.

SITE LEGEND

- LANDSCAPED AREA
- PAVING PER CIVIL
- CONCRETE PAVING SEE "C" DRAWING FOR THICKNESS
- 36" FIRE LANE.
- STANDARD PARKING STALL (9'-0" X 19')
- HANDICAP PARKING STALL (9'-0" X 19')
- PATH OF TRAVEL 36 WIDE MIN. 2% MAX CROSS SLOPE
- PROPERTY LINE

PROJECT DATA

	BLDG. 1	BLDG. 2	BLDG. 3	TOTAL
SITE AREA				
In s.f.	165,891	78,408	63,886	308,584 s.f.
In acres	3.79	1.80	1.46	7.01 ac
BUILDING AREA				
Office - 1st floor	4,000	4,000	1,000	13,000 s.f.
Office - 2nd floor	4,000	4,000	1,000	13,000 s.f.
Manufacturing	10,000	7,000	3,000	20,000 s.f.
Mezzanine	27,000	14,000	11,000	52,014 s.f.
TOTAL	45,000	21,000	16,000	98,014 s.f.
COVERAGE	39.0%	40.4%	36.4%	38.8%
AUTO PARKING REQUIRED				
Office: Uses (1st 10% exempt)	14	16	3	35 stalls
Mfg: 1/500 s.f.	20	14	7	41 stalls
Mezz: 1st 10k SF 0/500	20	20	20	60 stalls
Mezz: Abv. 10k SF 1/1,000	4	2	1	7 stalls
Mezz: 1/1,000 s.f.	20	10	12	55 stalls
TOTAL	68	60	43	198 stalls
AUTO PARKING PROVIDED				
Standard (8.5' x 19')	143	66	40	249 stalls
ADA Standard	3	3	2	stalls
ADA Van	3	1	1	stalls
Total	149	70	43	302 stalls
BUILDING HEIGHT PER CITY				
Zoning Designation – LAM1 (Commercial)				
MAXIMUM BUILDING HEIGHT ALLOWED				
Height – to be verified				
FAR				
FAR - to be verified				
SETBACKS				
to be verified				

VICINITY MAP



BICYCLE SHORT TERM AND LONG TERM CALC

BUILDING 1:
SHORT TERM REQUIRED OFFICE(1/10,000): 3
SHORT TERM REQUIRED WAREHOUSE (1/10,000): 4
LONG TERM REQUIRED OFFICE (1/5000): 3
LONG TERM REQUIRED WAREHOUSE (1/10,000) 4

BUILDING 2:
SHORT TERM REQUIRED OFFICE(1/10,000): 2
SHORT TERM REQUIRED WAREHOUSE (1/10,000): 2
LONG TERM REQUIRED OFFICE (1/5000): 2
LONG TERM REQUIRED WAREHOUSE (1/10,000) 3

BUILDING 3:
SHORT TERM REQUIRED OFFICE(1/10,000): 2
SHORT TERM REQUIRED WAREHOUSE (1/10,000): 2
LONG TERM REQUIRED OFFICE (1/5000): 2
LONG TERM REQUIRED WAREHOUSE (1/10,000) 3

EXHIBIT "A"
Page No. 2 of 11
Case No. DIR-2021-10327-SPR

OFFICIAL USE ONLY

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fax: 949-863-0851
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Owner:
StaleyPoint CAPITAL
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SUITE 1650
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Project:
ROSCOE / FALLBROOK
20815-20825
ROSCOE BLVD.
CANOGA PARK, CA 91304

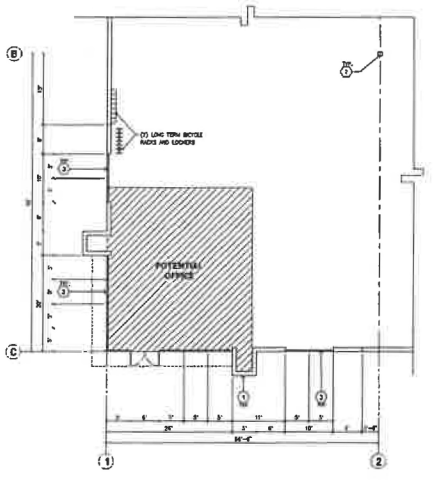
Consultants:

CIVIL	PSOMAS
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
ELECTRICAL	-
LANDSCAPE	HUNTER
FIRE PROTECTION	-
SOILS ENGINEER	-

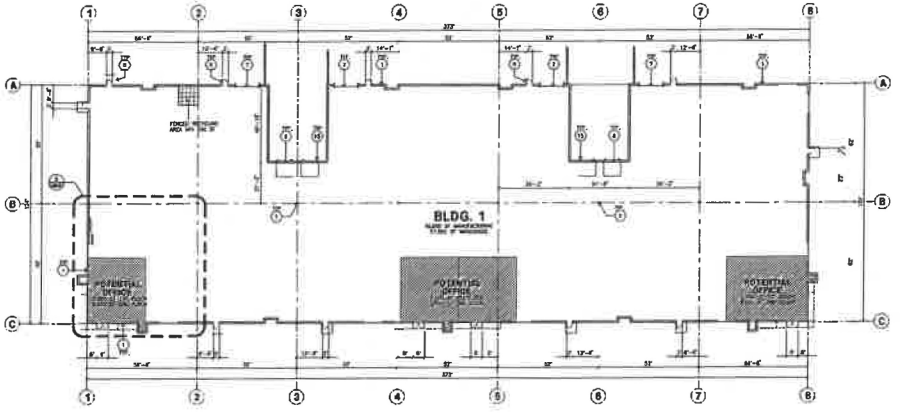
Title: OVERALL SITE PLAN

Project Number: 20088
Drawn by: AW
Date: 07/27/22
Revisions:

Sheet:
1-DAB-A1.1



ENLARGED FLOOR PLAN (B)



OVERALL FLOOR PLAN (A)

GENERAL NOTES - FLOOR PLAN

A. THIS BUILDING IS DESIGNED FOR HIGH PILE STORAGE WITH FIRE ACCESS MAN DOORS AT 125' MAXIMUM O.C. A SEPARATE PERMIT WILL BE REQUIRED FOR ANY RACKING/CONVEYOR SYSTEMS.
B. FIRE HOSE LOCATIONS SHALL BE APPROVED PER FIRE DEPARTMENT.
C. THE BUILDING FLOOR SLAB SLOPES 1/2%. SEE "C" DRAWINGS FOR FINISH SURFACE ELEVATIONS.
D. FLOOR SLAB SHALL BE SEALED WITH LAPOLIDITH MANUFACTURER, SONOBORN) OR APPROVED EQUAL.
E. WAREHOUSE INTERIOR CONCRETE WALLS ARE PAINTED WHITE. COLUMNS ARE TO RECEIVE ONLY PRIMER ONLY. ALL DYP, BD. WALLS IN WAREHOUSE TO RECEIVE 1 COAT OF WHITE TO COVER.
F. SLOPE POUR STRIP 1/2" TO EXTERIOR AT ALL PERSONAL EXITS. SEE "S" DRAWINGS FOR POUR STRIP LOCATION.
G. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE PANEL WALL, GRIDLINE, OR FACE OF STUD U.N.O.
H. SEE CIVIL DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR TO VERIFY ACTUAL UTILITY LOCATIONS.
I. FOR DOOR TYPES AND SPECS, SEE DRAWING SHEET A0.4. NOTE: ALL DOORS PER DOOR SCHEDULE ARE FINISH EXTERIOR.
J. CONTRACTOR TO PROTECT AND KEEP THE FLOOR SLAB CLEAN. ALL EQUIPMENT TO BE EVAPORATED INCLUDING CARS AND TRUCKS.

KEYNOTES - FLOOR PLAN

1. CONCRETE TILT-UP PANEL.
2. STRUCTURAL STEEL COLUMN.
3. TYPICAL STOREFRONT SYSTEM WITH GLAZING. SEE OFFICE ELEV.-EP AND ELEVATIONS FOR SIZE, COLOR AND LOCATIONS.
4. CONCRETE RAMP
5. 3'-6"(E)X4'-0" THICK CONCRETE EXTERIOR LANDING PAD TYPICAL AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREA. FINISH TO BE MEDIUM BROOM FINISH. PROVIDE WALK TO HARD SURFACE PER CITY REQUIREMENTS.
6. 8'X10' TRUCK DOOR, VERTICAL LIFT, STANDARD GRADE.
7. 12'X14' DRIVE THRU, VERTICAL LIFT, STANDARD GRADE.
8. 3'X7' HOLLOW METAL EXTERIOR MAN DOOR.
9. SOFFIT ABOVE
10. ROOF ACCESS LADDER
11. CONC. FILLED GUARD POST, 6" DIA. UNO 42"H.
12. INTERIOR ROOFDRAIN WITH OVERFLOW SCUPPER
13. CANOPY
14. EXTERIOR CONCRETE STAIR
15. DOCK BUMPER
16. METAL LOUVER

EXHIBIT "A"
Page No. 3 of 11
Case No. DIR-2021-10327-SPR

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Owner:
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Project:
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20615-20625
ROSCOE BLVD.
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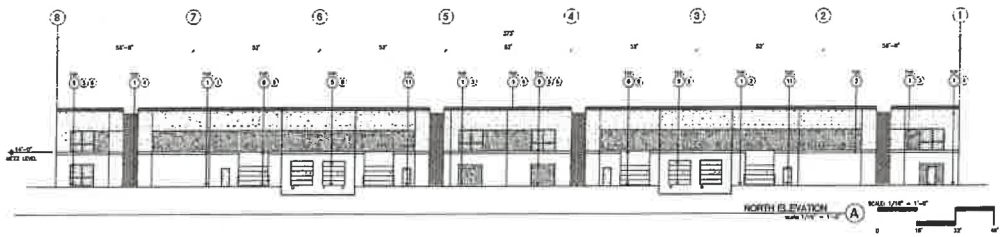
Consultants:

CIVIL	PSOMAS
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
ELECTRICAL	-
LANDSCAPE	HUNTER
PROTOTYPE	-
SOILS ENGINEER	-

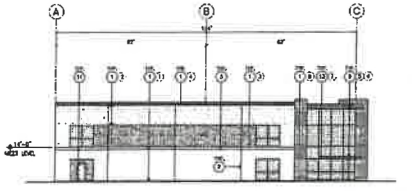
Title: OVERALL FLOOR PLAN

Project Number: 20289
Drawn by: AW
Date: 07/07/22
Revisions:

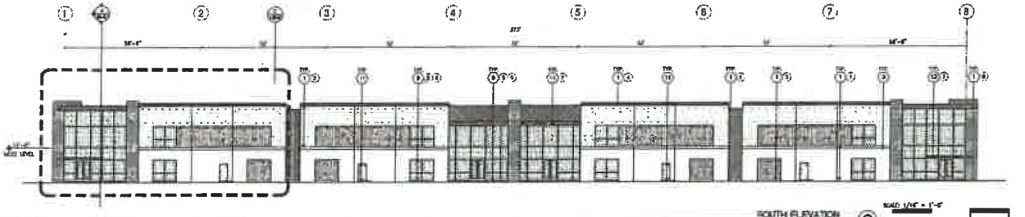
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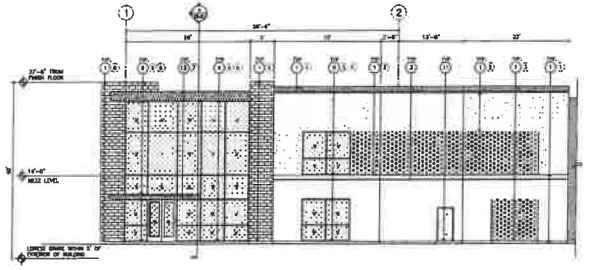
NORTH ELEVATION (A) SCALE: 1/16" = 1'-0"



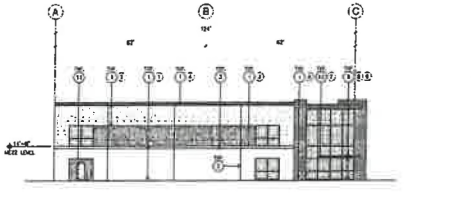
WEST ELEVATION (B) SCALE: 1/16" = 1'-0"



SOUTH ELEVATION (C) SCALE: 1/16" = 1'-0"



ENLARGED SOUTH ELEVATION (E) SCALE: 1/16" = 1'-0"



EAST ELEVATION (D) SCALE: 1/16" = 1'-0"

EXHIBIT "A"
Page No. 4 of 11
Case No. DIR-2021-10327-SPR

KEYNOTES - ELEVATIONS

1. CONCRETE TILT-UP PANEL (PAINTED).
2. PANEL JOINT.
3. PANEL REVEAL.
4. CONCRETE TILT-UP SCREEN WALL.
5. ENCHANTED DOOR @ DOCK WELL.
6. ENCHANTED DOOR @ RAMP WELL.
7. CONCRETE STAIR, LANDING AND CONC. COVERING.
8. DOCK BUMPER.
9. ALUMINUM STOREFRONT FRAMING W/ TEMPERED GLAZING AT ALL DOORS ADJUSTED ALUMINUM TO DOORS AND GLAZING W/ BOTTOMS LESS THAN 18" ABOVE F.F. ELEVATION.
10. LOUVER (SIZE AND LOCATION APPROVAL ONLY).
11. HOLLOW METAL DOORS.
12. INTERIOR ROOF DRAIN WITH OVERFLOW SCUPPER.
13. EXTERIOR CANOPY.

COLOR SCHEDULE - ELEVATIONS

1	CONCRETE TILT- UP PANEL	PAINT BRAND	SHERWIN WILLIAMS SW 7511 FRENCH ROAST
2	CONCRETE TILT- UP PANEL	PAINT BRAND	SHERWIN WILLIAMS SW 7551 ZINFANDEL TAN
3	CONCRETE TILT- UP PANEL	PAINT BRAND	SHERWIN WILLIAMS SW 7551 ZINFANDEL TRUFFLE
4	CONCRETE TILT- UP PANEL	PAINT BRAND	SHERWIN WILLIAMS SW 7552 HOT AS PEPPER
5	MULLIONS	FINISH	CLEAR ANODIZED
6	GLAZING	COLOR	BLUE GLAZING
7	METAL CANOPY	PAINT BRAND	SHERWIN WILLIAMS ACRYLIC LATEX SATIN HIGH PERFORMANCE SW 7552 HOT AS PEPPER
8	CONCRETE TILT- UP PANEL	PAINT BRAND	CLOVERLAND STONE CLIFFSTONE WHITE RUBBLE
9	DECK DOOR	PAINT BRAND	FACTORY MIXED

GLAZING LEGEND

TEMPERED VISION GLASS — TEMPERED SPANDREL GLASS

ALL GLASS TO BE NON-REFLECTIVE

GENERAL NOTES - ELEVATIONS

A. ALL PAINT COLOR CHANGES TO OCCUR AT INSIDE CORNERS UNLESS NOTED OTHERWISE.
B. ALL PAINT FINISHES ARE TO BE FLAT SHEEN UNLESS NOTED OTHERWISE.
C. T.O.P. = TOP OF PARAPET = ELEVATION
D. F.F. = FINISH FLOOR ELEVATION
E. STOREFRONT CONSTRUCTION GLASS, MEDIA ATTACHMENT AND LINTELS SHALL BE DESIGNED TO WITHST 20 MPH, EXPOSURE "C" WINDS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION.
F. CONTRACTOR SHALL FULLY PAINT ONE CONCRETE PANEL W/ SELECTED LUMINS, ARCHITECT AND OWNER SHALL APPROVE PRIOR TO PAINTING REMAINDER OF BUILDING.

LEGAL DESCRIPTION / APN

THIS PROPERTY SURVEYED AND SHOWN HEREON IS SITE SAME PROPERTY AS DESCRIBED IN EXHIBIT A OF FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE ORDER NO. NCS-1088317-CHT1 WITH COMMITMENT DATE OF JUNE 30, 2020.

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF MORENO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:

ALL THAT PORTION OF LOT SIXTY-EIGHT (68), AS SHOWN ON MAPS OF TRIUMBLE FARMS ON FILE IN MAP BOOK 11, AT PAGE 28 THEREOF, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EAST LINE OF SAID LOT 68, SAID POINT BEARS SOUTH 0° 11' 15" EAST A DISTANCE OF 66 FEET FROM THE NORTHEAST CORNER OF SAID LOT 68; THENCE NORTH 89° 42' WEST A DISTANCE OF 661.37 FEET; THENCE SOUTH 0° 15' EAST A DISTANCE OF 66 FEET; THENCE SOUTH 89° 42' EAST A DISTANCE OF 661.31 FEET TO THE EAST BOUNDARY OF SAID LOT 68; THENCE 0° 11' 15" WEST ALONG THE EAST BOUNDARY OF SAID LOT 68 A DISTANCE OF 66 FEET TO THE POINT OF BEGINNING.

PARCEL 2:

LOT 37, 38, 39, 58, 59 OF TRIUMBLE FARMS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 11, PAGE 28 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

EXCEPTING THEREFROM THE NORTH 66.00 FEET OF THE SOUTH 198.00 FEET OF LOT 37.

ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT AS SHOWN IN DOCUMENT RECORDED SEPTEMBER 12, 2014 INSTRUMENT NUMBERS 2014-0347907 AND 2014-0347908, BOTH OF OFFICIAL RECORDS

PARCEL 3:

LOT 55, 57, 68, 69, 78, 79, 81, 83, 93, 94 AND 95 OF TRIUMBLE FARMS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 11, PAGE 28 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

EXCEPT THE SOUTH 66.00 FEET OF THE NORTH 132.00 FEET OF LOT 69.

ALSO EXCEPT THE NORTH 66.00 FEET OF LOT 95.

FURTHER EXCEPTING THEREFROM THAT PORTION CONVEYED TO RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT AS SHOWN IN DOCUMENT RECORDED SEPTEMBER 12, 2011 INSTRUMENT NUMBER 2011-0347908, OF OFFICIAL RECORDS.

PARCEL 4:

THAT PORTION OF LOT 37 OF TRIUMBLE FARMS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 11, PAGE 28 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA BY METES AND BOUNDS, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY LINE OF SAID LOT WHICH BEARS SOUTH 0° 18 MINUTES 43 SECONDS EAST, 132 FEET FROM THE NORTHEAST CORNER OF SAID LOT;

THENCE NORTH 89° 43 MINUTES WEST, 660.80 FEET TO THE WESTERLY LINE OF SAID LOT;

THENCE SOUTH 0° 23 MINUTES, 30 SECONDS EAST ON THE WESTERLY LINE, 66 FEET;

THENCE SOUTH 89° 43 MINUTES EAST, 660.61 FEET TO THE EASTERLY LINE OF SAID LOT;

THENCE NORTH 0° 43 SECONDS WEST, 66 FEET TO THE POINT OF BEGINNING.

PURSUANT TO CERTIFICATE OF COMPLIANCE NO. 5545 RECORDED JANUARY 6, 2004 AS INSTRUMENT NO. 04-11423, OF OFFICIAL RECORDS.

FOR CONVEYANCING PURPOSES ONLY: APN 331-110-010-1 (AFFECTS PARCEL 1); 331-110-041-6 (AFFECTS PORTION OF PARCEL 2); 331-110-035-1 (AFFECTS PORTION OF PARCEL 2); 331-110-020-3 (AFFECTS PARCEL 3); AND 331-110-027-4 (AFFECTS PARCEL 4)

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Project:
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28615-28635
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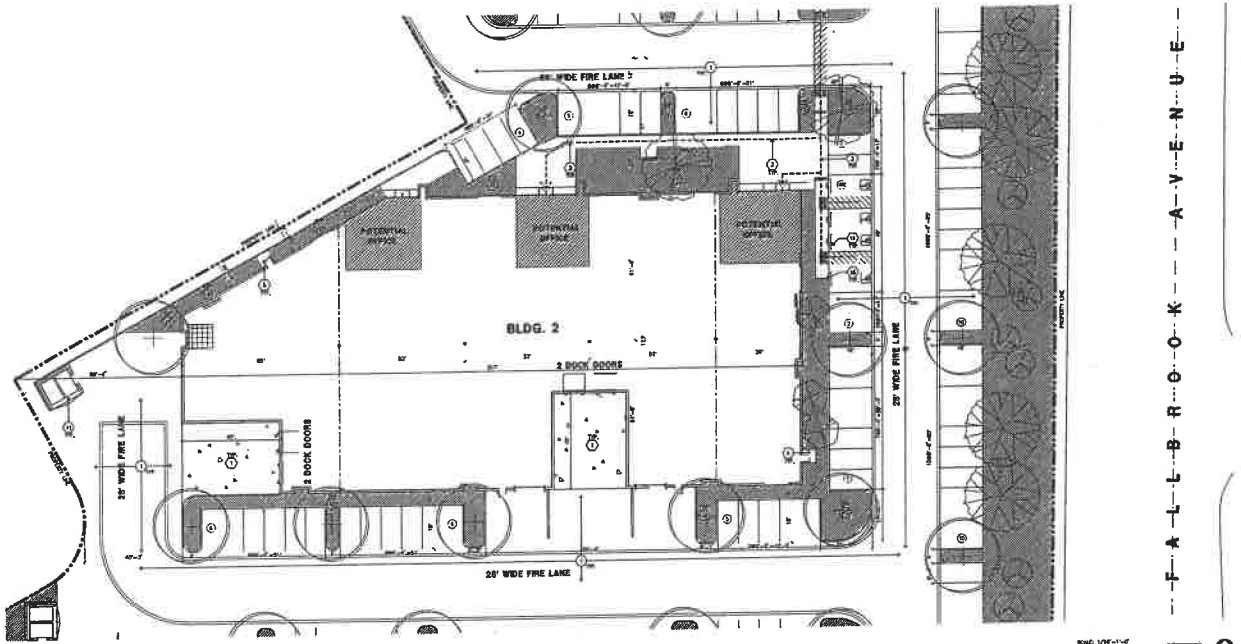
Consultants:

CIVIL	PROMAS
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
ELECTRICAL	-
LANDSCAPE	HUNTER
FIRE PROTECTION	-
SOILS ENGINEER	-

Title: ELEVATIONS

Project Number: 20048
Drawn by: JW
Date: 07/07/22
Revision:

Sheet:
1-DAB-A3.1



GENERAL NOTES - SITE PLAN

A. THE SOILS REPORT PREPARED BY _____ DATED _____ SHALL BE CONSIDERED A PART OF BASIC CONTRACT DOCUMENTS.

B. IF SOILS ARE EXPANSIVE BY NATURE, USE SIZES REINFORCING FOR ALL SITE CONCRETE.

C. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL FACE OF CONCRETE CURB OR END LINE OF STRIPE, U.N.O.

D. SEE "L" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES. REFER TO SHEET A0.1 FOR SYMBOLS SUMMARIES.

E. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM, PRIOR TO INSTALLATION A AT LEAST TWO WEEK BEFORE BLDG. COMPLETION.

F. SEE "U" DRAWINGS FOR POINT OF CONNECTIONS. NO OFF-SITE UTILITIES CONSTRUCTION SHALL VERIFY ACTUAL UTILITY CONSTRUCTION SHALL VERIFY ACTUAL INVERT LOCATIONS.

G. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.

H. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR CLEARANCE AND STAKING LAYOUT POINTS.

I. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.

J. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS @ 6'-0" O.C. WITH EXPANSION JOINTS @ 24'-0" O.C. MAXIMUM. ALL CONSTRUCTION JOINTS SHALL BE A MINIMUM 1/3 OF SLAB THICKNESS. EXPANSION JOINTS TO HAVE COMPRESSIBLE EXPANSION FILLER MATERIAL OF 1/4". SEE "L" DRAWINGS FOR FINISH.

K. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.

L. CONSTRUCTION DOCUMENTS RELATIVE TO THE LANDSCAPE AND IRRIGATION SYSTEMS AND PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.

M. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.

N. ALL LANDSCAPE AND IRRIGATION DESIGN SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS REVISED FROM PUBLIC FACILITIES DEVELOPMENT.

O. LANDSCAPED AREAS SHALL BE BOUNDED WITH A MINIMUM SIX INCHES (6") HIGH CURB

P. APPROVED CONCEPTUAL LANDSCAPE PLAN PRIOR TO GRADING PERMIT

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT
2. HOT JOED
3. CONCRETE WALKWAY, MEDIUM BROOM FINISH.
4. DRIVEWAY APRONS TO BE CONSTRUCTED
5. 5'-4"X5'-4"X6" MIN. THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR PANEL DOORS. LANDING FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" - 1" MAX. PROVIDE SLOPE TO PUBLIC WAY OR SWALE ONLY W/ 1/20 MAX. AS REQ. BY CITY INSPECTOR.
6. NOT USED
7. PROVIDE 6'H TUBE STEEL, MANUALLY OPERATED GATES WITH KNOX-PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRAWING. GATE TO BE DESIGNED FOR 30 MPH WIND LOAD, EXPOSURE "C". CONTRACTOR TO DESIGN & DETAIL GATES.
8. NOT USED
9. TRANSFORMER, SCREENED. SEE E/DAB-A1.1
10. BACKING AREA.
11. COVERED TRASH ENCLOSURE PER CITY STANDARD
12. BICYCLE RACKS AND LONG TERM PER REQUIRED.
13. LANDSCAPE. SEE "L" DRGS. LANDSCAPE AREAS INDICATED BY SHADED PATTERN.
14. HANDICAPPED ENTRY SIGN.
15. HANDICAPPED PARKING STALL SIGN.
16. PRE-CAST CONCRETE WHEEL STOP.
17. TRANSITED CURB.

SITE LEGEND

LANDSCAPED AREA
PAVING PER CIVIL
CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
28' FIRE LANE.
STANDARD PARKING STALL (9'-0" X 19')
HANDICAP PARKING STALL (9'-0" X 19')
PATH OF TRAVEL 36 MAX SLOPE 2% MAX CROSS-SLOP
PROPERTY LINE

PROJECT DATA

	BLDG. 1	BLDG. 2	BLDG. 3	TOTAL
GROSS AREA				
In s.f.	163,941	79,655	83,980	326,576 s.f.
In acres	3.76	1.83	1.93	7.51 ac
NET BUILDING AREA				
Office - 1st floor	9,828	6,000	1,500	13,500 s.f.
Office - 2nd floor	9,000	4,800	1,500	12,800 s.f.
Mezzanine	10,000	7,800	1,500	20,500 s.f.
Warehouse	27,000	14,000	51,000	92,016 s.f.
TOTAL	49,828	31,800	56,000	98,816 s.f.
COVERAGE	30.9%	40.0%	66.6%	32.9%
AUTO PARKING REQUIRED				
Office: 1/300 (Net 90% assumed)	74	19	5	98 stalls
Mfg: 1/500 n.f.	20	14	7	41 stalls
Mezz: 1st 10k SF 1/500	20	20	20	60 stalls
Mezz: Abv. 10k SF 1/1,000	4	2	1	7 stalls
Wrhse: 1/1,000 s.f.	28	15	12	55 stalls
TOTAL	66	69	43	260 stalls
AUTO PARKING PROVIDED				
Standard (8.5' x 19')	143	89	48	340 stalls
ADA Standard	3	3	3	stalls
ADA Van	3	1	1	stalls
Total	149	73	43	265 stalls
ZONING CLASSIFICATION / USE DATA				
Zoning Classification - Lot(s) (Commercial)				
Overlays (incl. zone, density, etc.)				
PA/A - to be verified				
Height - to be verified				
Number of Stories				
to be verified				

VICINITY MAP



BICYCLE SHORT TERM AND LONG TERM CALC

BUILDING 1:
SHORT TERM REQUIRED OFFICE(1/10,000): 2
SHORT TERM REQUIRED WAREHOUSE (1/100,000): 4
LONG TERM REQUIRED OFFICE (1/1,000): 3
LONG TERM REQUIRED WAREHOUSE (1/15,000) 4

BUILDING 2:
SHORT TERM REQUIRED OFFICE(1/10,000): 2
SHORT TERM REQUIRED WAREHOUSE (1/100,000): 3
LONG TERM REQUIRED OFFICE (1/1,000): 3
LONG TERM REQUIRED WAREHOUSE (1/15,000) 3

BUILDING 3:
SHORT TERM REQUIRED OFFICE(1/10,000): 0
SHORT TERM REQUIRED WAREHOUSE (1/100,000): 2
LONG TERM REQUIRED OFFICE (1/1,000): 2
LONG TERM REQUIRED WAREHOUSE (1/15,000) 2

EXHIBIT "A"
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Case No. DIR-2021-10327-SPR

OFFICIAL USE ONLY

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92612
tel: 949-863-1770
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Owner:
StaleyPoint CAPITAL
1901 CENTURY PARK EAST
SUITE 1050
LOS ANGELES, CA 90067

Project:
ROSCOE / FALLBROOK
20815-20855
ROSCOE BLVD.
CANOGA PARK, CA 91304

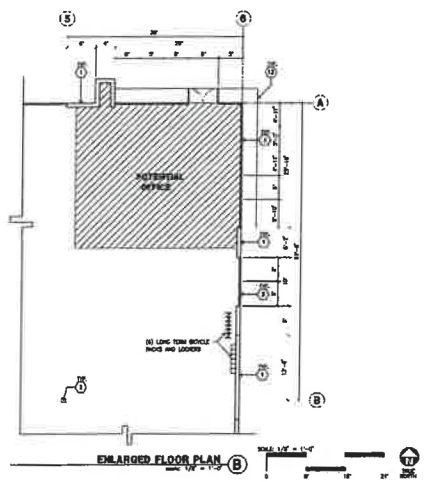
Consultants:

CIVIL	PSOMAS
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
ELECTRICAL	-
LANDSCAPE	HUNTER
FIRE PROTECTION	-
SOILS ENGINEER	-

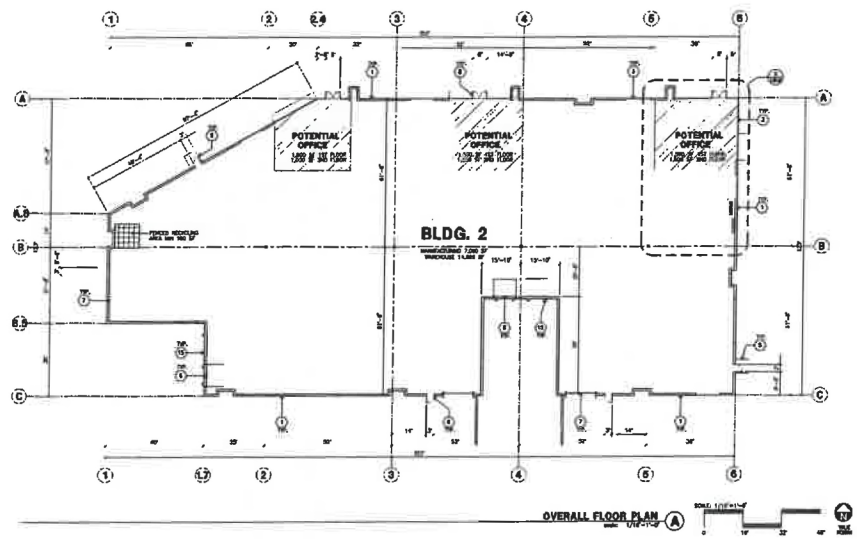
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Project Number: 20289
Drawn by: RW
Date: 07/07/22
Revision:

Sheet:
2-DAB-A1.1



ENLARGED FLOOR PLAN B



OVERALL FLOOR PLAN A

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Page No. 6 of 11
Case No. DIR-2021-10327-SPR

GENERAL NOTES - FLOOR PLAN

A. THIS BUILDING IS DESIGNED FOR HIGH PILE STORAGE WITH FIRE ACCESS MAN DOORS AT 125' MAXIMUM O.C. A SEPARATE PERMIT WILL BE REQUIRED FOR ANY RACKING/CONVEYOR SYSTEMS.
B. FIRE HOSE LOCATIONS SHALL BE APPROVED PER FIRE DEPARTMENT.
C. THE BUILDING FLOOR SLAB SLOPES 1/2%, SEE 'C' DRAWINGS FOR FINISH SURFACE ELEVATIONS.
D. FLOOR SLAB SHALL BE SEALED WITH LAPOLEITH MANUFACTURER: SONOBORN) OR APPROVED EQUAL.
E. WAREHOUSE INTERIOR CONCRETE WALLS ARE PAINTED WHITE. COLUMNS ARE TO RECEIVE GREY PRIMER ONLY, ALL OFF, BD. WALLS IN WAREHOUSE TO RECEIVE 1 COAT OF WHITE TO COVER.
F. SLOPE POUR STRIP 1/2" TO EXTERIOR AT ALL PERSONAL ENTS. SEE "S" DRAWINGS FOR POUR STRIP LOCATION.
G. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE PANEL WALL, BRICKLINE, OR FACE OF STUD U.N.O.
K. SEE CIVIL DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR TO VERIFY ACTUAL UTILITY LOCATIONS.
L. FOR DOOR TYPES AND SIZES, SEE DETAIL SHEET A0.4. NOTE: ALL DOORS PER DOOR SCHEDULE ARE FINISH OPENINGS.
4. CONTRACTOR TO PROTECT AND KEEP THE FLOOR SLAB CLEAN. ALL EQUIPMENT TO BE SHEATHED INCLUDING CARS AND TRUCKS.

KEYNOTES - FLOOR PLAN

1. CONCRETE TILT-UP PANEL.
2. STRUCTURAL STEEL COLUMN.
3. TYPICAL STOREFRONT SYSTEM WITH GLAZING. SEE OFFICE ELEVATIONS FOR SIZE, COLOR AND LOCATIONS.
4. CONCRETE RAMP
5. 5'-8"X8'3-4" THICK CONCRETE EXTERIOR LANDING PAD TYPICAL AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREA. FINISH TO BE MEDIUM BROOM FINISH. PROVIDE WALK TO HARD SURFACE PER CITY REQUIREMENTS.
6. 9'X10' TRUCK DOOR, VERTICAL LIFT, STANDARD GRADE.
7. 12'X14' DRIVE THRU, VERTICAL LIFT, STANDARD GRADE.
8. 3'X7' HOLLOW METAL EXTERIOR MAN DOOR.
9. SOFFIT ABOVE
10. ROOF ACCESS LADDER
11. CONC. FILLED GUARD POST, 8" DIA. UNO 42"H.
12. INTERIOR ROOFDRAIN WITH OVERFLOW SCUPPER
13. CANOPY
14. EXTERIOR CONCRETE STAIR
15. DOCK BUMPER
16. METAL LOUVER

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Project:
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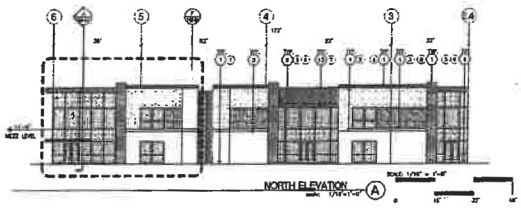
Consultants:

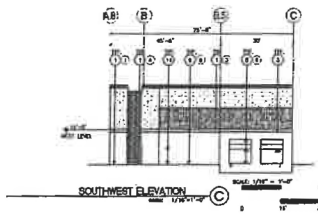
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STRUCTURAL	
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PLUMBING	
ELECTRICAL	
LANDSCAPE	HUNTER
FIRE PROTECTION	
SOILS ENGINEER	

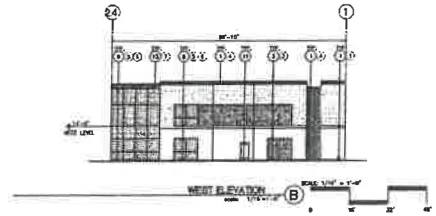
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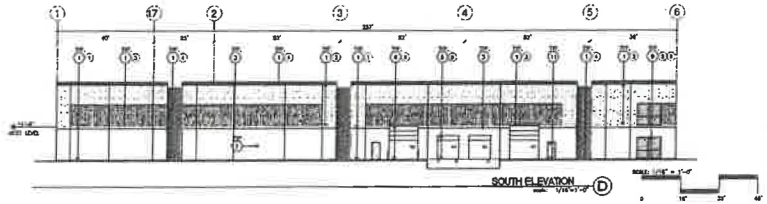
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Drawn by: ASY
Date: 07/07/22
Revisions:

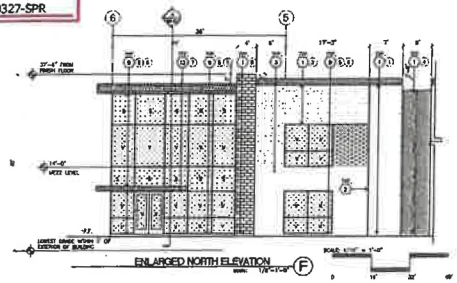
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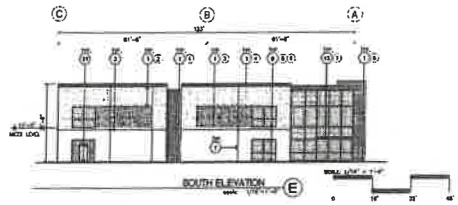


EXHIBIT "A"
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KEYNOTES - ELEVATIONS

1. CONCRETE TILT-UP PANEL (PAINTED).
2. PANEL JOINT.
3. PANEL REVEAL.
4. CONCRETE TILT-UP SCREEN WALL.
5. OVERHEAD DOOR @ DOCK HIGH.
6. OVERHEAD DOOR @ GRADE THRU.
7. CONCRETE STAIRS, LANDING AND CONC. ELEVATORS.
8. RAIN GUTTER.
9. ALUMINUM STOREFRONT FRAMING W/ TEMPERED GLAZING AT ALL DOORS SHIELDED ADJACENT TO DOORS AND GLAZING W/ BOTTOMS LESS THAN 18" ABOVE F.F. ELEVATION.
10. LOUVER (SIZE AND LOCATION APPROX. ONLY).
11. HOLLOW METAL DOORS.
12. PREFINISH ROOF BRAKE WITH OVERFLOW SCUPPER.
13. EXTERIOR CANOPY.

COLOR SCHEDULE - ELEVATIONS

①	CONCRETE TILT- UP PANEL	PAINT BRAND	SHERWIN WILLIAMS SW 7551 GREEN TEA
①1	CONCRETE TILT- UP PANEL	PAINT BRAND	SHERWIN WILLIAMS SW 7551 GREEN TEA
②1	CONCRETE TILT- UP PANEL	PAINT BRAND	SHERWIN WILLIAMS SW 7551 GREEN TEA
③1	CONCRETE TILT- UP PANEL	PAINT BRAND	SHERWIN WILLIAMS SW 7552 HOT AIR
①	MULLIONS	FINISH	CLEAR ANODIZED
②	GLAZING	COLOR	BLUE GLAZING
③	METAL CANOPY	PAINT BRAND	SHERWIN WILLIAMS ACRYLIC LATEX SYSTEM HIGH GLOSS/HIGH PERFORMANCE SW 7551 GREEN TEA
④	CONCRETE TILT- UP PANEL	PAINT BRAND	ELEVATED SHINE ELEVATED MATT SHINE
⑤	DOCK DOOR	PAINT BRAND	FACTORY WHITE

GLAZING LEGEND

TEMPERED NEON GLASS — TEMPERED SPANDREL GLASS

ALL GLASS TO BE NON-REFLECTIVE

GENERAL NOTES - ELEVATIONS

A. ALL PAINT COLOR CHANGES TO OCCUR AT INSIDE CORNERS UNLESS NOTED OTHERWISE.
B. ALL PAINT FINISHES ARE TO BE FLAT UNLESS NOTED OTHERWISE.
C. T.O.P. = TOP OF PARAPET - ELEVATION.
D. F.F. = FINISH FLOOR ELEVATION.
E. STOREFRONT CONSTRUCTION (GLASS, METAL ATTACHMENTS AND LINELS SHALL BE SECURED TO RESIST BY APPL EXPOSURE 'C' WIND. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION.
F. CONTRACTOR SHALL FULLY PAINT ONE CONCRETE PANEL W/ SELECTED COLORS. ARCHITECT AND OWNER SHALL APPROVE PRIOR TO PAINTING REMAINDER OF BUILDING.

LEGAL DESCRIPTION / APN

THE PROPERTY SURVEYED AND SHOWN HEREON IS THE SAME PROPERTY AS DESCRIBED IN EXHIBIT A OF FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE ORDER NO. NCS-1099643-CT1 WITH COMMITMENT DATE OF JUNE 30, 2020.

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF MENIFEE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:

ALL THAT PORTION OF LOT SIXTY-EIGHT (68), AS SHOWN ON MAPS OF TRIANGLE FARMS ON FILE IN MAP BOOK 11, AT PAGE 38 THEREOF, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EAST LINE OF SAID LOT 68B, SAID POINT BEARS SOUTH 0° 11' 16" EAST A DISTANCE OF 66 FEET FROM THE NORTHEAST CORNER OF SAID LOT 68; THENCE NORTH 89° 47' WEST A DISTANCE OF 661.20 FEET; THENCE SOUTH 0° 25' EAST A DISTANCE OF 66 FEET; THENCE SOUTH 89° 47' EAST A DISTANCE OF 661.31 FEET TO THE EAST BOUNDARY OF SAID LOT 68; THENCE 0° 11' 16" WEST ALONG THE EAST BOUNDARY OF SAID LOT 68 A DISTANCE OF 66 FEET TO THE POINT OF BEGINNING.

PARCEL 2:

LOT 37, 38, 39, 56, 57 OF TRIANGLE FARMS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 11, PAGE 38 OF MAPS RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

EXCEPTING THEREFROM THE NORTH 66.00 FEET OF THE SOUTH 198.00 FEET OF LOT 37.

ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT AS SHOWN IN DOCUMENT RECORDED SEPTEMBER 19, 2014 INSTRUMENT NUMBERS 2014-0347907 AND 2014-0347908, BOTH OF OFFICIAL RECORDS

PARCEL 3:

LOT 58, 67, 68, 69, 70, 71, 91, 92, 93, 94 AND 95 OF TRIANGLE FARMS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 11, PAGE 38 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

EXCEPT THE SOUTH 66.00 FEET OF THE NORTH 132.00 FEET OF LOT 68.

ALSO EXCEPT THE NORTH 66.00 FEET OF LOT 95.

FURTHER EXCEPTING THEREFROM THAT PORTION CONVEYED TO RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT AS SHOWN IN DOCUMENT RECORDED SEPTEMBER 19, 2014 INSTRUMENT NUMBER 2014-0347908, OF OFFICIAL RECORDS.

PARCEL 4:

THAT PORTION OF LOT 37 OF TRIANGLE FARMS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 11, PAGE 38 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA BY METES AND BOUNDS, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY LINE OF SAID LOT WHICH BEARS SOUTH 0° 18 MINUTES 43 SECONDS EAST, 132 FEET FROM THE NORTHEAST CORNER OF SAID LOT;

THENCE NORTH 89° 43 MINUTE WEST, 594.98 FEET TO THE WESTERLY LINE OF SAID LOT;

THENCE SOUTH 0° 25 MINUTES, 30 SECONDS EAST ON THE WESTERLY LINE, 66 FEET;

THENCE SOUTH 89° 43 MINUTES EAST, 594.84 FEET TO THE EASTERLY LINE OF SAID LOT;

THENCE NORTH 0° 18 SECONDS WEST, 66 FEET TO THE POINT OF BEGINNING.

PURSUANT TO CERTIFICATE OF COMPLIANCE NO. 5540 RECORDED JANUARY 9, 2004 AS INSTRUMENT NO. 04-13121, OF OFFICIAL RECORDS.

FOR CONVEYANCING PURPOSES ONLY: APN 331-140-010-1 (AFFECTS PARCEL 1); 331-110-041-6 (AFFECTS PORTION OF PARCEL 2); 331-110-035-1 (AFFECTS PORTION OF PARCEL 2); 331-140-026-5 (AFFECTS PARCEL 3) AND 331-110-021-4 (AFFECTS PARCEL 4)

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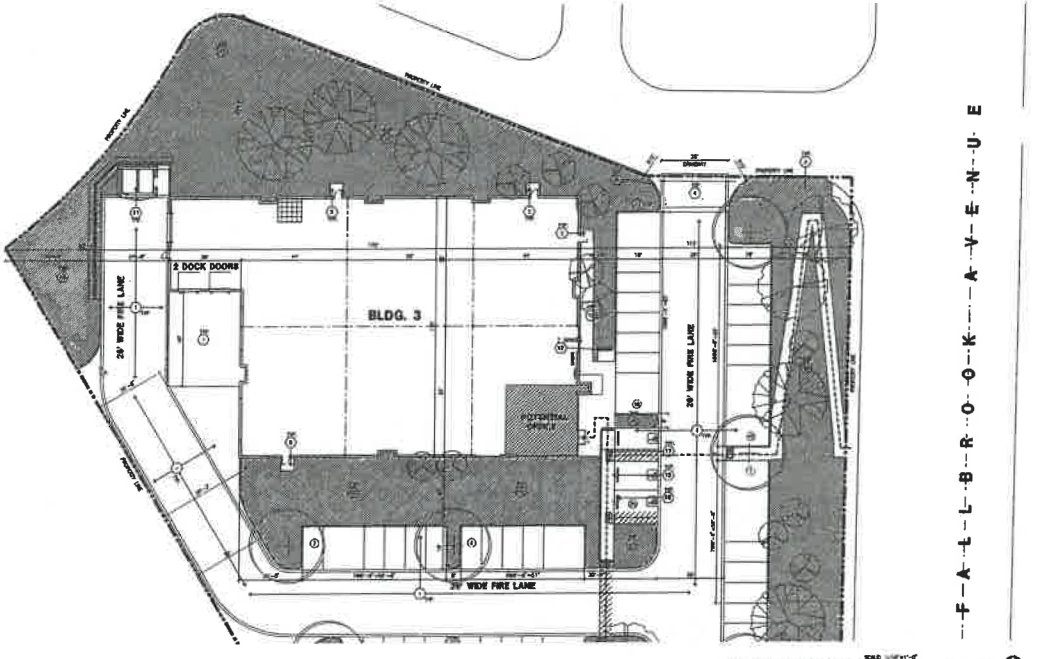
Consultants:

CIVIL	PSOMAS
STRUCTURAL	
MECHANICAL	
PLUMBING	
ELECTRICAL	
LANDSCAPE	HUNTER
PM/PROJECTION	
EA/ENGINEER	

Title: ELEVATIONS

Project Number: 20259
Drawn by: AW
Date: 07/07/22
Revisions:

Sheet:
2-DAB-A3.1



OVERALL SITE PLAN

GENERAL NOTES - SITE PLAN

A. THE SOILS REPORT PREPARED BY SEOW, DED PHILL, PE DATED 07-__-__ SHOULD BE A PART OF THESE CONTRACT DOCUMENTS.

B. # BOLD ARE EXPANSION IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.

C. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR BACK OF CURB.

D. SEE "I" SHEET FOR ALL CONCRETE CURBS, GUTTERS AND WALKS. ALL CURB RAMPS MUST ARE PER CITY STANDARDS.

E. THE ENTIRE PROJECT SHALL BE HORTICULTURALLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM PRIOR TO INSTALLATION & AT LEAST 60 DAYS BEFORE BLDG. COMPLETION.

F. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO CITY-OWNED UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY CONFIGURATION WITH ACTUAL UTILITY LOCATIONS.

G. FINISHED POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.

H. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND SHOWING LARGEST POSITIONS.

I. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.

J. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 5'-0" O.C. MAXIMUM EXPANSION JOINTS SHALL BE 1/2" MINIMUM AT EA. 45' W/ 1/2" EXP. MATL. EXPANSION JOINTS TO BE USED AT ALL BUILDING FILLED WHERE# OR 1/4". SEE "C" DRAWINGS FOR DETAILS.

K. PAINT CURBS AND PROVIDE SIGNS TO SYSTEM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.

L. CONSTRUCTION ASSOCIATED WITH/WORK TO THE LANDSCAPE AND IRRIGATION OF THIS ENTIRE PROJECT (PER WORK) TO BE SUBMITTED TO THE BUILDING DEPARTMENT AS APPROVED BY PUBLIC WORKS DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.

M. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC WORKS DEVELOPMENT.

N. ALL LANDSCAPE AND IRRIGATION SHOWN SHALL MEET CURRENT CITY OF LOS ANGELES CODE AS AMENDED OR AS CALLED FROM PUBLIC WORKS DEVELOPMENT.

O. LANDSCAPED AREAS SHALL BE BOUNDED WITH A MINIMUM SIX INCHES (6") HIGH CURB.

P. ATTENDED CONDITIONS, LANDSCAPE PLAN PRIOR TO GRADING PERMIT

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONC. PAVEMENT
2. NOT USED
3. CONCRETE SIDEWALK, MEDIUM BROOM FINISH.
4. DRIVEWAY APRONS TO BE CONSTRUCTED
5. 6'-0" HT. CHAIN LINK, BLACK COVERED, EXTERIOR LANDING, PAD TYP. AT ALL EXTERIOR MAN DOORS W/ LANDSCAPE PRIOR. FINISH TO BE MEDIUM BROOM FINISH. SLOPE TO BE 1/4" / 1'-0" MAX. PROVIDE SIGN TO PUBLIC WAY OR DRIVE NOT W/ 1:20 MAX. AS REQ. BY CITY INSPECTOR.
6. NOT USED
7. PROVIDE 8'0 TUBE STEEL, MANUALLY OPERATED GATES WITH KNOX-PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRAWING. GATE TO BE DESIGNED FOR 30 MPH WIND LOAD, EXPOSURE "C". CONTRACTOR TO ASSERT & DETAIL SHOP.
8. NOT USED
9. TRANSFORMER, SCREENED. SEE E/SHS-A1.1
10. SHOWING AREA.
11. CONCRETE FINISH DISCLOSURE PER CITY STANDARD — SEE E-12/SHS-A1.1
12. BICYCLE RACKS AND LONG TERM FOR REQUIRED.
13. LANDSCAPE, SEE "L" SHEET, LANDSCAPE AREAS SURROUNDED BY SHRUB PATTERN.
14. HANDICAPPED CARRY SIGN.
15. HANDICAPPED PARKING STALL SIGN.
16. PRE-CAST CONCRETE WHEEL STOP.
17. TRUNCATED DOME.

SITE LEGEND

LANDSCAPE AREA
PAVING FOR CIRC.
CONCRETE PAVING FOR "C" GRADE FOR SIDEWALK
20' FIRE LANE.
STANDARD PARKING STALL (9'-0" X 19')
HANDICAP PARKING STALL (9'-0" X 19')
PATH OF TRAVEL 36 MIN WIDTH 2% MAX CROSS-SLOP
PROPERTY LINE

PROJECT DATA

	BLDG. 1	BLDG. 2	BLDG. 3	TOTAL
SITE AREA				
In s.f.	165,591	75,466	63,599	304,656 s.f.
In acres	3.75	1.65	1.49	7.01 ac
BUILDING AREA				
Office - 1st floor	6,000	6,000	1,300	13,000 s.f.
Office - 2nd floor	6,000	6,000	1,300	13,000 s.f.
Manufacturing	19,000	7,000	3,000	29,000 s.f.
Warehouse	27,000	14,500	11,000	52,511 s.f.
TOTAL	48,000	31,000	16,053	89,514 s.f.
COVERAGE	29.0%	46.4%	25.4%	32.8%
AUTO PARKING REQUIRED				
Office: 1/300 (1st 10% exempt)	14	19	3	36 stalls
Mfg: 1/500 s.f.	20	14	7	41 stalls
Ware: 1st 10k SF 1/500	20	20	20	60 stalls
Ware: Abv. 40k SF 1/5,000	4	2	1	7 stalls
Ware: 1/1,000 s.f.	28	15	13	56 stalls
TOTAL	89	69	43	199 stalls
AUTO PARKING PROVIDED				
Standard (8.5' x 18')	143	99	48	349 stalls
ADA Standard	3	3	3	stalls
ADA Van	3	1	1	stalls
Total	149	79	43	349 stalls
ZONING INFORMATION FOR SITE:				
Zoning Designation - LAM (Commercial)				
MAXIMUM BUILDING HEIGHT ALLOWED				
Height - to be verified				
MAXIMUM FLOOR AREA RATIO				
FAR - to be verify				
DESCRIPTION				
to be verified				

VICINITY MAP



BICYCLE SHORT TERM AND LONG TERM CALC

BUILDING 1:
SHORT TERM REQUIRED OFFICE(1/40,000): 1
SHORT TERM REQUIRED WAREHOUSE (1/40,000): 4
LONG TERM REQUIRED OFFICE (1/2000): 3
LONG TERM REQUIRED WAREHOUSE (1/1,5000) 4

BUILDING 2:
SHORT TERM REQUIRED OFFICE(1/40,000): 2
SHORT TERM REQUIRED WAREHOUSE (1/40,000): 3
LONG TERM REQUIRED OFFICE (1/2000): 2
LONG TERM REQUIRED WAREHOUSE (1/1,5000) 3

BUILDING 3:
SHORT TERM REQUIRED OFFICE(1/40,000): 2
SHORT TERM REQUIRED WAREHOUSE (1/40,000): 2
LONG TERM REQUIRED OFFICE (1/2000): 2
LONG TERM REQUIRED WAREHOUSE (1/1,5000) 1

HPA
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fax: 949-863-8851
email: hpa@hparchs.com

Owner:
StaleyPoint CAPITAL
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SUITE 1600
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Project:
ROSCOE / FALLBROOK
8815-8825
ROSCOE BLVD.
CANOGA PARK, CA 91304

Consultants:

CIVIL	PSOMAS
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
ELECTRICAL	-
LANDSCAPE	HUNTER
FIRE PROTECTION	-
SOILS ENGINEER	-

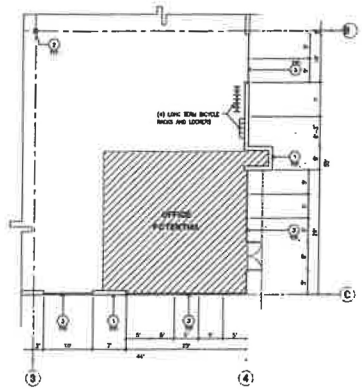
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Revision:

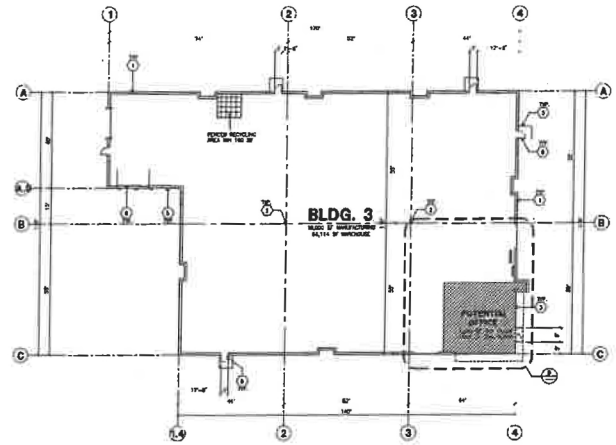
EXHIBIT "A"
Page No. 8 of 11
Case No. DIR-2021-10327-SPR

OFFICIAL USE ONLY

Sheet:
3-DAB-A1.1



ENLARGED FLOOR PLAN (B)



OVERALL FLOOR PLAN (A)

GENERAL NOTES - FLOOR PLAN

A. THIS BUILDING IS DESIGNED FOR HIGH PILE STORAGE WITH FIRE ACCESS MAN DOORS AT 125' MAXIMUM O.C. A SEPARATE PERMIT WILL BE REQUIRED FOR ANY RACKING/CONVEYOR SYSTEMS.
B. FIRE HOSE LOCATIONS SHALL BE APPROVED PER FIRE DEPARTMENT.
C. THE BUILDING FLOOR SLAB SLOPES 1/2%, SEE "C" DRAWINGS FOR FINISH SURFACE ELEVATIONS.
D. FLOOR SLAB SHALL BE SEALED WITH LAPIDOLITH (MANUFACTURED) SONNEBORN OR APPROVED EQUAL.
E. WAREHOUSE INTERIOR CONCRETE WALLS ARE PAINTED WHITE. COLUMNS ARE TO RECEIVE GREY PRIMER ONLY. ALL SYP. BD. WALLS IN WAREHOUSE TO RECEIVE 1 COAT OF WHITE TO COVER.
F. SLOPE POUR STRIP 1/2" TO EXTERIOR AT ALL PERSONAL EXITS. SEE "S" DRAWINGS FOR POUR STRIP LOCATION.
G. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE PANEL WALL, GRIDLINE, OR FACE OF STUD U.N.O.
H. SEE CIVIL DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR TO VERIFY ACTUAL UTILITY LOCATIONS.
I. FOR DOOR TYPES AND SIZES, SEE DETAIL SHEET A0.4. NOTE: ALL DOORS PER DOOR SCHEDULE ARE FINISH OPENINGS.
J. CONTRACTOR TO PROTECT AND KEEP THE FLOOR SLAB CLEAN. ALL EQUIPMENT TO BE DIAPERED INCLUDING CARS AND TRUCKS.

KEYNOTES - FLOOR PLAN

1. CONCRETE TILT-UP PANEL.
2. STRUCTURAL STEEL COLUMN.
3. TYPICAL STOREFRONT SYSTEM WITH GLAZING. SEE OFFICE BLOW-UP AND ELEVATIONS FOR SIZE, COLOR AND LOCATIONS.
4. CONCRETE RAMP.
5. 5'-8"X3'X6" THICK CONCRETE EXTERIOR LANDING PAD TYPICAL AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREA. FINISH TO BE MEDIUM BROOM FINISH. PROVIDE WALK TO HARD SURFACE PER CITY REQUIREMENTS.
6. 9'X10' TRUCK DOOR, VERTICAL LIFT, STANDARD GRADE.
7. 12'X14' DRIVE THRU, VERTICAL LIFT, STANDARD GRADE.
8. 3'X7' HOLLOW METAL EXTERIOR MAN DOOR.
9. SOFFIT ABOVE.
10. ROOF ACCESS LADDER
11. CONC. FILLED GUARD POST, 8" DIA. UNO 4'-0" H.
12. INTERIOR ROOFDRAIN WITH OVERFLOW SCUPPER
13. CANOPY
14. EXTERIOR CONCRETE STAIR
15. DOCK BUMPER
16. METAL LOUVER

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Case No. DIR-2021-10327-SPR

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Project:
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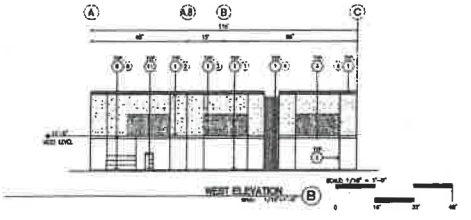
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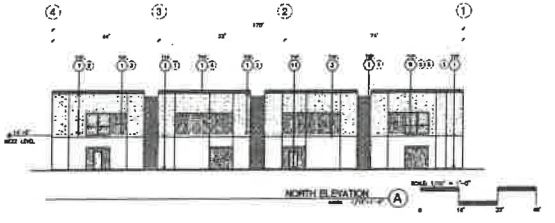
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LANDSCAPE	HUNTER
RENDERING	-
SOILS ENGINEER	-

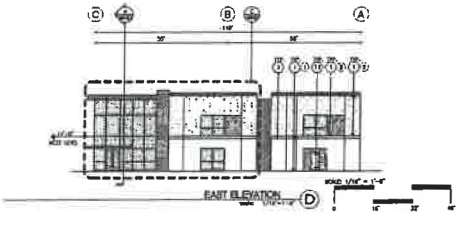
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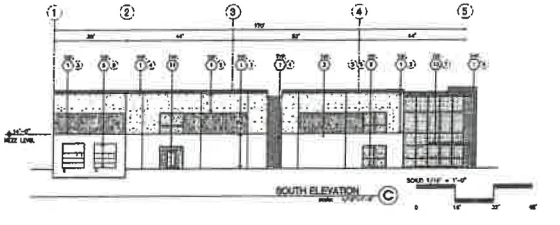
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Revisions:

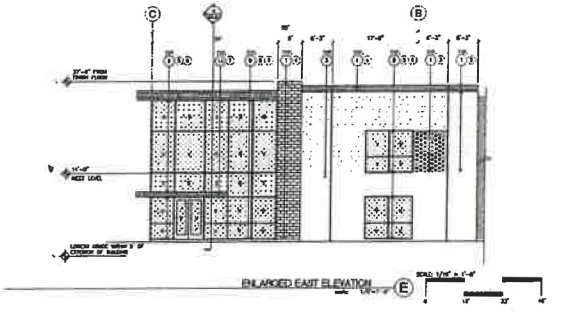
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KEYNOTES - ELEVATIONS

1. CONCRETE TILT-UP PANEL (PAINTED)
2. PANEL JOINT.
3. PANEL REVEAL
4. CONCRETE TILT-UP SCREEN WALL
5. OVERHEAD DOOR @ DOCK WELL
6. OVERHEAD DOOR @ RAMP WELL
7. CONCRETE EDGE, LANDING AND CONC. SURROUND.
8. DOCK BUMPER
9. ALUMINUM STOREFRONT FRAMING W/ TEMPERED GLAZING AT ALL DOORS AND FIXED FENESTRA IN SHAPES AND GLAZING W/ BOTTOMS LESS THAN 18" ABOVE F.F. ELEVATION.
10. LOGO(S) (SIZE AND LOCATION APPROX. ONLY).
11. ROLLDOR METAL SCREEN.
12. HYDROUS ROOF BRASS SIGN OVERFLOW SCUPPER.
13. EXTERIOR CANOPY.

COLOR SCHEDULE - ELEVATIONS

	(1) CONCRETE TILT- UP PANEL	PAINT BRAND	SHERWIN WILLIAMS SW 7041 DETAIL GRAY
	(2) CONCRETE TILT- UP PANEL	PAINT BRAND	SHERWIN WILLIAMS SW 7069 IRON ORE
	(3) CONCRETE TILT- UP PANEL	PAINT BRAND	SHERWIN WILLIAMS SW 7043 WORLDLY GRAY
	(4) CONCRETE TILT- UP PANEL	PAINT BRAND	SHERWIN WILLIAMS SW 7069 IRON ORE
	(5) MULLIONS	FINISH	CLEAR ANODIZED
	(6) GLAZING	COLOR	BLUE REFLECTIVE
	(7) METAL CANOPY	PAINT BRAND	SHERWIN WILLIAMS ACRYLIC LATEX SATIN MOD ELASTOMERIC PERFORMANCE SW 7069 IRON ORE
	(8) CONCRETE TILT- UP PANEL	PAINT BRAND	SHERWIN WILLIAMS CLEARWATER SW 7242
	(9) DOCK DOOR	PAINT BRAND	FACTORY PAINT

GLAZING LEGEND

- (GW) TEMPERED SPANDREL GLASS
- (GW) TEMPERED SPANDREL GLASS

ALL GLASS TO BE NON-REFLECTIVE

GENERAL NOTES - ELEVATIONS

A. ALL PAINT COLOR CHANGES TO occur AT INSIDE CORNERS UNLESS NOTED OTHERWISE.
B. ALL PAINT FINISHES ARE TO BE FLAT UNLESS NOTED OTHERWISE.
C. T.O.P. = TOP OF PARAPET – ELEVATION.
D. F.F. = FINISH FLOOR ELEVATION.
E. STOREFRONT CONSTRUCTION GLASS, METAL ATTACHMENTS AND LABELS SHALL BE DESIGNED TO RECEIVE 30 MPH. EXPOSURE "C" WIND. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO INSTALLATION.
F. CONTRACTOR SHALL FULLY PAINT ONE CONCRETE PANEL W/ RECESSED COLUMN, INCHDELY AND CHECK SHALL APPROVE PRIOR TO PAINTING REMAINDER OF BUILDING.

LEGAL DESCRIPTION / APN

THE PROPERTY SURVEYED AND SHOWN HEREON IS THE SAME PROPERTY AS DESCRIBED IN EXHIBIT A OF FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE ORDER NO. NCS-1044247-ONT1 WITH COUNTERSAINT DATE OF JUNE 30, 2021.

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF MENIFEE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:

ALL THAT PORTION OF LOT SIXTY-EIGHT (68), AS SHOWN ON MAPS OF TRUMBLE FARMS ON FILE IN MAP BOOK 11, AT PAGE 28 THEREOF, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EAST LINE OF SAID LOT 68B, SAID POINT BEARS SOUTH 0° 11' 15" EAST A DISTANCE OF 66 FEET FROM THE NORTHEAST CORNER OF SAID LOT 68; THENCE NORTH 89° 48' WEST A DISTANCE OF 664.37 FEET; THENCE SOUTH 0° 11' 15" EAST A DISTANCE OF 66 FEET; THENCE SOUTH 89° 47' EAST A DISTANCE OF 661.31 FEET TO THE EAST BOUNDARY OF SAID LOT 68; THENCE 0° 11' 15" WEST ALONG THE EAST BOUNDARY OF SAID LOT 68 A DISTANCE OF 66 FEET TO THE POINT OF BEGINNING.

PARCEL 2:

LOT 27, 28, 29, 30, 36 OF TRUMBLE FARMS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 11, PAGE 28 OF MAPS RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

EXCEPTING THEREFROM THE NORTH 66.00 FEET OF THE SOUTH 198.00 FEET OF LOT 27.

ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT AS SHOWN BY DOCUMENT RECORDED SEPTEMBER 12, 2014 INSTRUMENT NUMBERS 2014-0347697 AND 2014-0347698, BOTH OF OFFICIAL RECORDS.

PARCEL 3:

LOT 64, 67, 68, 69, 70, 71, 81, 82, 83, 84 AND 85 OF TRUMBLE FARMS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 11, PAGE 28 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

EXCEPT THE SOUTH 99.00 FEET OF THE NORTH 132.00 FEET OF LOT 69.

ALSO EXCEPT THE NORTH 99.00 FEET OF LOT 85.

FURTHER EXCEPTING THEREFROM THAT PORTION CONVEYED TO RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT AS SHOWN BY DOCUMENT RECORDED SEPTEMBER 12, 2014 INSTRUMENT NUMBER 2014-0347697 OF OFFICIAL RECORDS.

PARCEL 4:

THAT PORTION OF LOT 32 OF TRUMBLE FARMS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 11, PAGE 28 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY LINE OF SAID LOT WHICH BEARS SOUTH 0° 16' MINUTES 43 SECONDS EAST, 132 FEET FROM THE NORTHEAST CORNER OF SAID LOT;

THENCE NORTH 89° 43 MINUTES WEST, 640.86 FEET TO THE WESTERLY LINE OF SAID LOT;

THENCE SOUTH 0° 32 MINUTES, 20 SECONDS EAST ON THE WESTERLY LINE, 66 FEET;

THENCE SOUTH 89° 43 MINUTES EAST, 640.91 FEET TO THE EASTERLY LINE OF SAID LOT;

THENCE NORTH 0° 45 SECONDS WEST, 66 FEET TO THE POINT OF BEGINNING.

PURSUANT TO CERTIFICATE OF COMPLIANCE NO. 5540 RECORDED JANUARY 8, 2004 AS INSTRUMENT NO. 04-12423, OF OFFICIAL RECORDS.

FOR CONVEYANCING PURPOSES ONLY: APN 331-140-010-1 (AFFECTS PARCEL 1); 331-116-041-6 (AFFECTS PORTION OF PARCEL 2); 331-140-026-1 (AFFECTS PORTION OF PARCEL 3); 331-140-025-3 (AFFECTS PARCEL 3) AND 331-116-027-1 (AFFECTS PARCEL 4)

EXHIBIT "A"
Page No. 10 of 11
Case No. DIR-2021-10327-SPR

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Owner:
StaleyPoint CAPITAL
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SUITE 1020
LOS ANGELES, CA 90067

Project:
ROSCOE / FALLBROOK
20615-20625
ROSCOE BLVD.
CANOGA PARK, CA 91304

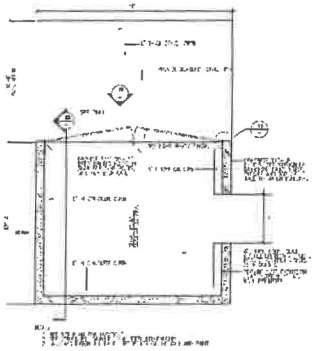
Consultants:

CIVIL	PSOMAS
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
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FIRE/SPRINKLER	-
SOILS ENGINEER	-

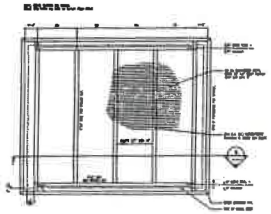
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Drawn by: AM
Date: 07/07/23
Revisions:

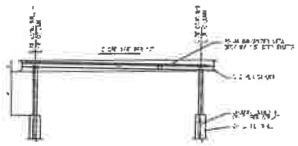
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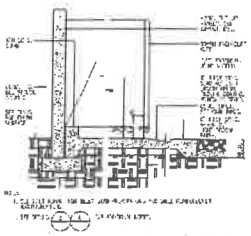
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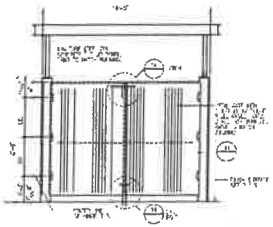
TRASH ENCLOSURE / ROOF PLAN (8)



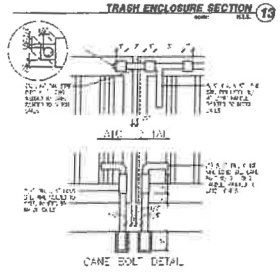
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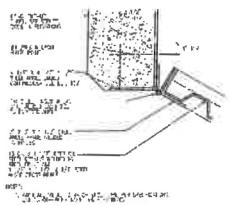
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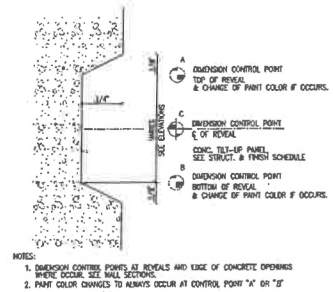
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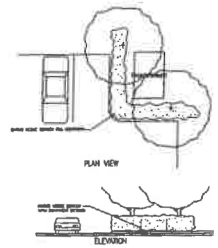
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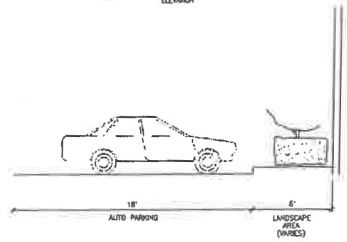


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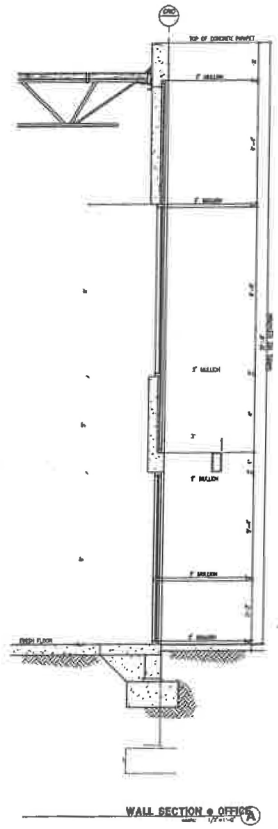


TYP. CONCRETE REVEAL (1)





GROUND MOUNTED EQUIPMENT SCREENING, TYP. (8)



WALL SECTION @ OFFICE (A)

EXHIBIT "A"
Page No. 11 of 11
Case No. DIR-2021-10327-SPR

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Owner:
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Project:
ROSCOE / FALLBROOK
20615-20635
ROSCOE BLVD.
CANOGA PARK, CA 91304

Consultants:

CIVIL	PSOMAS
STRUCTURAL	-
MECHANICAL	-
PLUMBING	-
ELECTRICAL	-
LANDSCAPE	HUNTER
ENVIRONMENTAL	-
SOILS ENGINEER	-

Title: DETAILS
Project Number: 20089
Drawn by: AW
Date: 07/07/22
Revisions:

Sheet
DAB-A4.1

COVID-19 UPDATE
Interim Appeal Filing Procedures
Fall 2020

LOS ANGELES CITY PLANNING

Consistent with Mayor Eric Garcetti's "Safer At Home" directives to help slow the spread of COVID-19, City Planning has implemented new procedures for the filing of appeals for non-applicants that eliminate or minimize in-person interaction.

OPTION 1: Online Appeal Portal

(planning.lacity.org/development-services/appeal-application-online)

Entitlement and CEQA appeals can be submitted online and payment can be made by credit card or e-check. The online appeal portal allows appellants to fill out and submit the appeal application directly to the Development Services Center (DSC). Once the appeal is accepted, the portal allows for appellants to submit a credit card payment, enabling the appeal and payment to be submitted entirely electronically. A 2.7% credit card processing service fee will be charged - there is no charge for paying online by e-check. Appeals should be filed early to ensure DSC staff has adequate time to review and accept the documents, and to allow Appellants time to submit payment. On the final day to file an appeal, the application must be submitted and paid for by 4:30PM (PT). Should the final day fall on a weekend or legal holiday, the time for filing an appeal shall be extended to 4:30PM (PT) on the next succeeding working day. Building and Safety appeals (LAMC Section 12.26K) can only be filed using Option 2 below.

OPTION 2: Drop off at DSC

An appellant may continue to submit an appeal application and payment at any of the three Development Services Center (DSC) locations. City Planning established drop off areas at the DSCs with physical boxes where appellants can drop.

Metro DSC
(213) 482-7077
201 N. Figueroa Street
Los Angeles, CA 90012

Van Nuys DSC
(818) 374-5050
6262 Van Nuys Boulevard
Van Nuys, CA 91401

West Los Angeles DSC
(310) 231-2901
1828 Sawtelle Boulevard
West Los Angeles, CA 90025

City Planning staff will follow up with the Appellant via email and/and or phone to:
- Confirm that the appeal package is complete and meets the applicable LAMC provisions
- Provide a receipt for payment