PALMDALE

a place to call home

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

Pursuant to Title 14 of the California Code of Regulations, Sections 15072 and 15073, as amended to date, this is to advise that the City of Palmdale, which is the lead agency overseeing this project, has completed a Mitigated Negative Declaration for the proposed project described below.

Project No.: Conditional Use Permit 16-007 and Site Plan Review 19-007

Project Location: 38939 15th Street East on approximately 4.8 acres within Assessor Parcel Number (APN) 3022-015-009. The project site is located near the intersection of East Avenue Q and 15th Street East in the City of Palmdale, County of Los Angeles, California.

Project Description: Request to convert an existing single-family residence to an office for a proposed Heavy Processing Facility, which includes metal sorting and crushing for recycling purposes within and approval of an existing outdoor personal storage facility.

Public Review Period: The Mitigated Negative Declaration is available for public review and comment pursuant to California Code of Regulations, Title 14, Sections 15072 and 15073 (California Environmental Quality Act). All comments must be submitted in writing to the address below. Please refer to this project by the file/index numbers listed above. If you have no comment, no reply is necessary. The City of Palmdale does not limit public comments to only the circulation period. Comments can be submitted for consideration up until final action is taken by a vote of the approving authority. The review period has not been shortened pursuant to Section 15105 of the California Environmental Quality Act (CEQA) Guidelines. The comment period during which the City will receive comments on the Mitigated Negative Declaration is:

Starting Date: May 14, 2020 **Ending Date: June 3, 2020**

Public Hearing: The City of Palmdale Planning Commission is scheduled to make a decision regarding this project and the associated Mitigated Negative Declaration on June 11, 2020, in the City Council Chambers at 38300 Sierra Highway, Palmdale, California, 93550 at 7:00 p.m.

Responses and Comments: Please send your written comments to:

Benjamin Fiss, Senior Planner
City of Palmdale
Economic and Community Development Department
Planning Division
38250 Sierra Highway
Palmdale, California 93550
Phone (661) 267-5200 / FAX (661) 267-5233
Email: bfiss@cityofpalmdale.org

Document Availability: Copies of the application, maps, plans, environmental documents, and other pertinent materials related to this application are available for public review at the Planning Division (38250 Sierra Highway) from 7:30 am to 6:00 pm Monday through Thursday. In addition, environmental documents are available for review at the Palmdale City Library (700 East Palmdale Boulevard, Palmdale, CA 93550). Additional information is also available on the City website at www.cityofpalmdale.org.

Carlene Saxton
Acting Planning Manager

5/13/2020
Date

CITY OF PALMDALE

CONDITIONAL USE PERMIT 16-007
SITE PLAN REVIEW 19-007

INITIAL STUDY / MITIGATED NEGATIVE DECLARATION

Prepared for:

CITY OF PALMDALE
38250 SIERRA HIGHWAY
PALMDALE, CA 93550

Prepared by:

PSOMAS
3 HUTTON CENTER
SANTA ANA, CA 92707
ATTN: ALIA HOKUKI, PROJECT MANAGER

May 2020

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1. INTRODUCTION

A. Purpose and Background of the Initial Study

The purpose of the Initial Study (IS) is to (1) describe the proposed heavy processing facility for recycling purposes and outdoor storage (personal storage facility for contractors) project (hereinafter referred to as the "project", which is located in the City of Palmdale and the County of Los Angeles and (2) provide an evaluation of potential environmental effects associated with the project's construction and use. The IS has been prepared pursuant to the California Environmental Quality Act (CEQA), as amended (*California Public Resources Code* §21000 et seq.) and in accordance with the State CEQA Guidelines (*California Code of Regulations,* Title 14, §15000 et seq.).

As indicated above, the proposed project is located within City of Palmdale and County of Los Angeles jurisdiction and it has been determined that the City of Palmdale would be the lead agency for the environmental document. Therefore, pursuant to Section 15367 of the State CEQA Guidelines, the City of Palmdale (hereafter referred to as "the City") is the lead agency for the proposed project. The lead agency is the public agency that has the principal responsibility for carrying out or approving a project. The City, as lead agency, will have the authority for project approval and adoption of the accompanying environmental documentation.

B. Lead Agency

Benjamin Fiss, Senior Planner
City of Palmdale
Economic and Community Development Department
Planning Division
38250 Sierra Highway
Palmdale, CA 93550

C. Technical Studies

- Air Quality Study-Palmdale Recycling-APN 3022-015-009, M.S. Hatch Consulting, March 9, 2018
- Air Quality Model Runs, Psomas, September 9, 2019
- Hydrology Study, Hanbali & Associates, June 8, 2018

2. PROJECT DESCRIPTION

The project is located at 38939 15th Street East, on approximately 4.8 acres within Assessor Parcel Number (APN) 3022-015-009. The project site is located near the intersection of East Avenue Q and 15th Street East, in the City of Palmdale, County of Los Angeles, California. The regional and local vicinity are shown on

EXHIBIT 1, *Regional Location*, and 2, *Local Vicinity*. An aerial view of the project site is shown on EXHIBIT 3, *Aerial Photograph*.

A. Project Setting

The project site is generally bounded by East Avenue P-8 to the north, East Avenue Q to the south, and 12th Street East to the West. Currently within the project limits, is an existing vacant single-family house and a metal building in addition to a 12-space surface parking lot. Additionally, there is an outdoor storage facility that is rented to contractors. Each bin within the storage facility is rented separately to individuals. The house is 1,202 square feet in building area and is near the southeast corner of the site. The metal building is 2,450 square feet in area and is adjacent and to the west of the house. A dirt road extends east-west across the center of the site (see EXHIBIT 4, *Site Photographs*).

The project is bound by industrial uses to the north, northwest and west including a trucking company to the north at 39007 15th Street East, and a storage yard to the west at 38960 12th Street East; undeveloped land to the east (across 15th Street East) and to the south. Vegetation on the vacant land next to the site is mapped as sagebrush and annual grassland by the California Department of Fish and Wildlife (hereafter "CDFW") (CDFW 2018). EXHIBIT 3, *Aerial Photograph*, provides an aerial view of the project boundaries and its immediate surroundings.

Along the project site frontage on 15th Street East, aboveground power lines are located along both (eastern and western) sides of the street. In addition, existing aboveground power lines are located along the western side of 12th Street East, west of the project site.

B. Proposed Actions Addressed in the IS/MND

This IS/MND is intended to serve as the primary CEQA environmental document for all actions associated with the proposed heavy processing facility for recycling purposes project, including all discretionary approvals requested or required to implement the project. In addition, this is the primary reference document for the formulation and implementation of a Mitigation Monitoring and Reporting Program (MMRP) for the proposed project.

The primary actions that the City of Palmdale needs to consider for the proposed project and that are evaluated in this document are described below.

- Certification of the Heavy Processing Facility for Recycling Purposes Project Initial Study/Mitigated Negative Declaration.
- Approval of the Heavy Processing Facility for Recycling Purposes Project.
- Approval of outdoor storage associated with contractors.
- Approval and legalizing the existing on-site parking and construction material storage
- Dedication of additional right-of-way along 15th Street East at the southeast edge of the Project site.

Subsequent approvals (which would require separate processing through the City of Palmdale would include, but may not be limited to, the final plans, specifications, and estimates (PS&E) for implementation of the proposed project.

C. Project Components

The proposed project involves the operation of a heavy processing facility for recycling purposes. The project would reuse existing buildings onsite including the existing single-family residence as office space and an existing metal building as storage for the proposed facility. The facility would include a new sign.

In addition, the proposed project would legalize the existing on-site parking, truck, and construction material storage.

Material Processing and Transport

Proposed business operations for both the heavy processing facility for recycling purposes and storage use include materials collected for transport including scrap metal and metal parts (i.e. car metal parts and aluminum metals etc.). Metal materials from automobiles for recycling are transported via tow trucks to the facility, crushed, dismantled, and separated. Other metal materials including aluminum are transported via truck to the project site for separation to be processed for recycling. Liquid materials are removed from metal parts and stored temporarily on-site before being transported to a hazardous waste facility. Metal materials are weighed and transported by truck to a facility in Los Angeles. Materials are compacted and crushed on-site for truck shipment. Truck transports are done weekly by a haul truck that holds 20 tons.

New Construction

The project proposes installation of three metal bins, each 40 feet long and 12 feet wide, that would be located in the south-central part of the project site (see EXHIBIT 5, *Site Plan*). Proposed activities include the following:

- Modifications to existing structures
- Demolition of existing structures
- Removal of approximately 18 feet of block wall along the south side of the main driveway to accommodate the improvements
- Grading and paving of new concrete area

The project proposes construction of new concrete pavement on about 21,411 square feet, or 0.49 acre, in the southeast quadrant of the site west of the existing metal building (see EXHIBIT 5, *Site Plan*).

Reuse

The house onsite would be reused as an office building for the heavy processing facility for recycling purposes.

Landscaping

Site plan currently shows 10,533 square feet (sf) of landscaping. The Palmdale Municipal Code (PMC) Section 17.61.09.H requires 10 percent of project site (approximately 21,000 sf per City of Palmdale letter dated August 7, 2017) to be landscaped.

Drainage Improvements

The project proposes construction of a concrete curb and gutter on the project site frontage on 15th Street East. Two feet of additional right-of-way (ROW) would be dedicated to the City of Palmdale along the site frontage on 15th Street East. The proposed curb and gutter would be built within the additional ROW.

Access

Four existing access points are located on the project site. Two are accessible from 15th Street East and two are accessible internally from the internal access

road that runs through the site separating the truck parking from the storage area or main entrance. One main entrance is located at the gate adjacent to the office building along 15th Street East that leads to the front entrance near the "office". The second access gate is located along 15th Street East adjacent to the main entrance gate. The third access gate is located inside the project site and is located off of the internal access road that runs within the site from east to west. All access gates are secured. Direct access to the facility is from 15th Street East through the access gates.

The project includes relocation of the main gate, 11 feet west of its current location. The southerly of the two existing gates from 15th Street East (i.e., the gate into the office area), would be removed and replaced with an 8-foot-high block wall. Proposed access from 15th Street East to the office area would be via the remaining main gate.

Two feet of additional right-of-way (ROW) would be dedicated to the City of Palmdale along the site frontage on 15th Street East.

Eleven parking spaces, including one American with Disability Act (ADA) parking space, would be provided in the southeast corner of the site, adjacent to the office. Access to the parking lot would be from 15th Street East via the relocated main gate.

Lighting

Several existing parking lot light poles, currently in the north side of the east-west dirt roadway onsite, would be relocated onsite about 10 feet north of their current locations. Three new pole-mounted parking lot lights would be installed: one near the northeast site boundary, one in the north-central part of the site, and one next to the west site boundary. No other sources of lighting, including illuminated signage are proposed.

D. Existing Zoning and General Plan Designations

The existing Zoning designation for the project site is Light Industrial (M-1); and the existing General Plan land use designation is Industrial (Ind).

E. Regulatory Requirements, Permits, and Approvals

Project approval requires the following discretionary actions by the City of Palmdale:

- Adoption of the Heavy Processing Facility for Recycling Purposes Project Initial Study/Mitigated Negative Declaration.
- Approval of the Heavy Processing Facility for Recycling Purposes Project through a conditional use permit (CUP).
- Approval of site modifications through the Site Plan Review (SPR) application.

Approval also requires dedication of additional right-of-way along 15th Street East at the southeast edge of the project site by the City of Palmdale, a ministerial action.

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Regional Location

Exhibit 1

N W E S

10 5 0 10 Miles

PSOMAS

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Local Vicinity

Exhibit 2

N
W E
S

750 375 0 750
Feet

PSOMAS

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Aerial Photograph

Exhibit 3

N
W E
S

200 100 0 200

Feet

PSOMAS

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Photo 1: View looking southwest from the east end of the project site. The house in the southeast corner of the site is at left, and the metal building west of the house is in the center of the photo.

Photo 2: View looking west from the east part of the site of the dirt road extending the length of the middle of the project site.

Photo 3: View looking east from the center of the site of the dirt road extending east-west in the middle of the site; the main gate to the project site is in the center background.

Photo 4: View looking south from the east-central part of the site of the metal building in the southeast part of the site, with scrap metal and vehicles in the foreground.

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Site Photographs

Exhibit 4

PSOMAS

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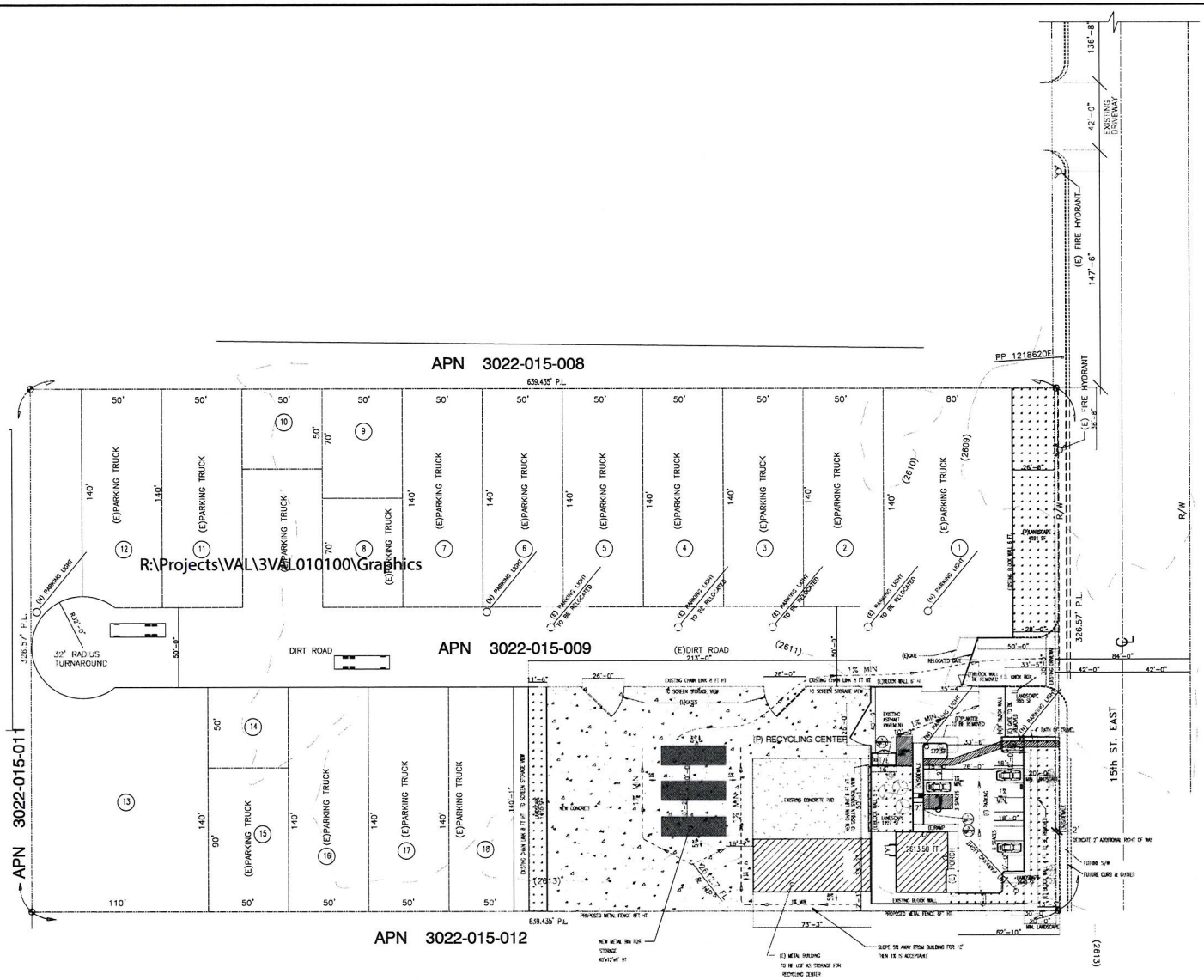

Source: J&E Design

Site Plan

Exhibit 5

PSOMAS

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3. ENVIRONMENTAL CHECKLIST

A. Background

1. Project Title:

Conditional Use Permit 16-007 and Site Plan Review 19-007

2. Lead Agency Name and Address:

City of Palmdale
Economic and Community Development Department
Planning Division
38250 Sierra Highway
Palmdale, CA 93550

3. Contact Person and Phone Number:

Benjamin Fiss, Senior Planner
City of Palmdale
Economic and Community Development Department
Planning Division
38250 Sierra Highway
Palmdale, CA 93550
(661) 267-5319

4. Project Location:

38939 15th Street East
Palmdale, CA 93550

5. Project Applicant's Name and Address:

Antonio Valles
38939 15th Street East
Palmdale, CA 93550

6. Existing Land Use / Zoning / General Plan:

SITE	SURROUNDING LAND USE	ZONING	GENERAL PLAN
NORTH	Industrial	Light Industrial (M-1)	Industrial (IND)
SOUTH	Vacant Land	Light Industrial (M-1)	Industrial (IND)
EAST	Vacant Land	Light Industrial (M-1)	Industrial (IND)
WEST	Industrial	Light Industrial (M-1)	Industrial (IND)

7. Description of Project:

The project is a metal sorting and crushing or processing facility for recycling purposes. For more detail, see Section 2.D, Project Components, above.

8. Surrounding Land Uses and Setting:

The project site is surrounded by an outdoor truck storage use to the north; a storage yard to the west; and undeveloped land to the south and east, across 15th Street East. Beyond the undeveloped land, the uses to the south and west are predominantly residential, with the nearest residential located more than 1,000 feet away from the proposed use. For more detail, see Section 2.B, Project Setting, above.

B. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact", as indicated by the checklist on the following pages. Potentially significant impacts that are mitigated to "Less Than Significant" are now shown here.

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

C. Determination

On the basis of this initial evaluation: (Select one)

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

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.

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

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

☐ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project.

5/13/2020
Date

Carlene Saxton
Acting Planning Manager

D. Evaluation of Environmental Impacts

Each of the responses in the following environmental checklist considers the whole action involved, including project-level, cumulative, on-site, off-site, indirect, construction, and operational impacts. A brief explanation is provided for all answers and supported by the information sources cited.

1. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone).

2. A "Less Than Significant Impact" applies when the proposed project would not result in a substantial and adverse change in the environment. This impact level does not require mitigation measures.

3. A "Less Than Significant Impact With Mitigation Incorporated" applies when the proposed project would not result in a substantial and adverse change in the environment after additional mitigation measures are applied.

4. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant" entries when the determination is made, an EIR is required.

4. ENVIRONMENTAL ANALYSIS

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
I	AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

a) **No Impact:** The City of Palmdale General Plan Environmental Resources Element defines the "scenic backdrop" of the City as the San Gabriel Mountains, the Sierra Pelona and the Ritter and Portal Ridges that form the City's skyline views (City of Palmdale 1993a). The proposed project includes the operation of a heavy processing facility for recycling purposes; personal storage in individually-leased outdoor bins; and reuse of existing buildings located at the project site, in addition to minor site modifications including grading, paving, and drainage improvements. However, these improvements and modifications would not change the scenic backdrop for the City. Further, no new buildings are proposed as part of the project. Additionally, according to the Los Angeles County Antelope Valley Area Plan Project (Los Angeles County 2015), the project site is not located in a designated scenic area. No Impact would occur, and no mitigation is required.

b) **Less Than Significant Impact:** There are no designated State scenic highways within or near the vicinity of the project site. The nearest designated state scenic

highway to the project site is State Route 2, the Angeles Crest Highway, about 19 miles to the south (Caltrans 2019). According to the City of Palmdale General Plan Environmental Resources Element, there are no scenic vistas within or adjacent to the project site (City of Palmdale 1993a). The nearest designated City Scenic Highway is Sierra Highway, south of Avenue S, which is approximately 2.5 miles southwest of the project site and due to topography and distance, the project site is not visible from this part of the highway.

There are no rock outcroppings or historic buildings located on site. The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway. Impacts would be less than significant, and no mitigation is required.

c) **Less Than Significant Impact:** The project site is surrounded by industrial uses and vacant land. As described in Section 2, *Project Description*, the project proposes the reuse of existing on-site buildings for the operation of a heaving processing facility for recycling purposes, and continued personal storage use in individually-leased bins; including modifications to existing structures, and the installation of curb and gutter and drainage features, which would result in a visually- improved and enhanced facility. These improvement features are similar to what is currently on and near the project site. Upon completion, views of the p roject site would be similar to existing views; project development would not degrade the visual character or quality of public views from the existing roadways. Impacts would be less than significant, and no mitigation is required.

d) **Less Than Significant Impact:** The project proposes the reuse of existing on-site buildings for the operation of a heavy processing facility for recycling purposes, including modifications to existing structures; relocation of parking; low-level security lighting and drainage improvements. To avoid potential impact from light pollution and spill over, the low-level security lighting will be shielded and directed onto the site. None of the proposed elements would create additional sources of glare. As part of the project, existing on-site lighting would be relocated, and new low-level lighting elements are proposed to meet the minimum intensity of 0.5-foot candles and an average illumination of 2.4-foot candles throughout the site, in conformance with the requirements of the PMC Section 17.86.030. Impacts would be less than significant, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II	AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d)	Result in the loss of forestland or conversion of forestland to non-forest use?	☐	☐	☐	☒
e)	Involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forestland to non-forest use?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

a) **No Impact:** According to the California Important Farmland Finder, California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP), the project site is designated as Urban and Built-Up Land. The project site and surrounding land are not used for agriculture. The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), to non-agricultural use (DLRP 2019). No Impact would occur, and no mitigation is required.

b) **No Impact:** The project site is zoned Light Industrial (M-1) by the City of Palmdale and is not zoned for agricultural use. Williamson Act contracts restrict the use of privately-owned land to agriculture and compatible open space uses under

contract with local governments; in exchange, the land is taxed based on actual use rather than potential market value. The project site is not subject to a Williamson Act contract. No impact would occur, and no mitigation is required.

c) **No Impact:** The project site and surrounding area is zoned Light Industrial (M-1) and is not zoned forestland or timber land (Palmdale 2012). Therefore, the proposed project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland production. No impacts would occur, and no mitigation is required.

d) **No Impact:** There is no forest vegetation on or in the vicinity of the project site. Vacant land next to the site is mapped as annual grassland and sagebrush by the CDFW (CDFW 2018). Therefore, the proposed project would not result in the loss of forestland or conversion of forestland to non-forest use. No impacts would occur, and no mitigation is required.

e) **No Impact:** There are no agricultural resources or forestland adjacent to the project. Therefore, the project would not result in conversion of farmland to nonagricultural use or conversion of forestland to non-forest use. No impacts would occur, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III	AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d)	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

a) **Less Than Significant Impact:** Pursuant to the federal Clean Air Act (CAA), the Antelope Valley Air Quality Management District (AVAQMD) is required to reduce emissions of criteria pollutants for which the Mojave Desert Air Basin (MDAB or Basin) is in nonattainment (i.e., pollutants ozone [O_3] and particulate matter [PM10 and PM2.5]).

The AVAQMD's current air quality planning documentation, pursuant to State Implementation Plan (SIP) and the CAA requirements applicable at the Project site, includes the following separate documents: the AVAQMD 2004 Ozone Attainment Plan (State and Federal); the AVAQMD List and Implementation Schedule for District Measures to Reduce PM Pursuant to Health & Safety Code Section 39614(d); the 8-Hour Reasonably Available Control Technology – State Implementation Plan Analysis; the 2014 8-Hour Ozone Reasonably Available Control Technology (RACT) SIP Analysis – Supplemental Analysis; and the AVAQMD Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-attainment Area). The AVAQMD adopted the 2004 Ozone Plan in response to the designation of the western portions of the MDAB, including the Antelope Valley, as nonattainment areas for the O_3 National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) and in accordance with the Federal CAA requirement to prepare plans demonstrating attainment. The overall control strategy for the 2004

Ozone Plan is to implement all federal RACT rules to reduce O_3 precursors in the Antelope Valley (AVAQMD 2015a, AVAQMD 2015b).

The project would be subject to the AVAQMD's attainment plan for ozone (Attainment Plan) and the Rules in the SIP for the AVAQMD, which contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards (AVAQMD 2005). These strategies are developed, in part, based on regional population, housing, and employment projections prepared by the Southern California Association of Governments (SCAG).

A project is consistent with the Attainment Plan if it is consistent with the population, housing, and employment assumptions that were used in the development of the attainment plan. The most recent Attainment Plan adopted by AVAQMD (AVAQMD 2008) incorporates SCAG's motor vehicle inventory. It is anticipated that a smaller number of employees would be employed at the project site. This small number of employees would not affect the assumptions used in the development of the attainment plan. The recycling of materials from automobiles would reduce the need to extract raw materials and would also reduce the amount of landfill space necessary for disposal of these vehicles. A reduction in the need for the development of landfill space would likewise result in less air pollution. Thus, the project would result in less than significant impacts related to consistency with the AVAQMD's Attainment Plan.

Additionally, all construction activities would be in compliance with AVAQMD regulatory measures, including AVAQMD rules pertaining to fugitive dust (Rule 403), visibility of emissions (Rule 401), and nuisance activities (Rule 402). Accordingly, a less than significant impact would occur with respect to AQMP implementation, and no mitigation measure is required.

b) **Less than Significant Impact:** The proposed project would contribute to air pollutant emissions during short-term construction and long-term operations, as discussed below.

Construction Impacts

Project construction has potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the project site. Construction related emissions are associated with the paving of approximately 0.49 acre of parking lots. Construction activity emissions were estimated using the California

Emissions Estimator Model (CalEEMod) (Version 2016.3.2) and presented below in TABLE 1. As shown therein, the estimate of construction-period daily emissions would not exceed AVAQMD daily regional significance thresholds. As such, impacts would be less than significant, and no mitigation measure is required. The AVAQMD also has annual regional emissions thresholds. The project's construction emissions were also evaluated against these annual thresholds as shown in TABLE 2 below. As shown in TABLE 2, annual construction emissions would not exceed AVAQMD thresholds.

TABLE 1
DAILY CONSTRUCTION EMISSIONS

Emissions Source	Daily Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Paving	1	5	5	<1	<1	<1
AVAQMD Significant Emissions Threshold	**137**	**137**	**548**	**137**	**82**	**65**
Exceed Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NOX: oxides of nitrogen; CO: Carbon monoxide; SOX: Oxides of sulfur; PM2.5: particulate matter less than 2.5 micrometers in diameter; PM10: particulate matter less than 10 micrometers in diameter.

PM10 and PM2.5 emissions assume compliance with AVAQMD Rule 403.

Source: Psomas 2019, Appendix A-1.

TABLE 2
ESTIMATE OF ANNUAL CONSTRUCTION EMISSIONS

Construction Phase	Annual Emissions (tons per year)					
	ROG	NO_X	CO	SO_X	PM10[a]	PM2.5[a]
Paving	<1	<1	<1	<1	<1	<1
AVAQMD Regional Thresholds	**25**	**25**	**100**	**25**	**15**	**12**
Exceed Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NOX: oxides of nitrogen; CO: Carbon monoxide; SOX: Oxides of sulfur; PM2.5: particulate matter less than 2.5 micrometers in diameter; PM10: particulate matter less than 10 micrometers in diameter.

CalEEMod output sheets are provided in the Air Quality Appendix.

PM10 and PM2.5 emissions assume compliance with AVAQMD Rule 403.

Source: Psomas 2019, Appendix A-1.

Operational Impacts

The AVAQMD has also established significance thresholds to evaluate potential impacts associated with long-term project operations. Long-term air pollutant emissions come from mobile sources, stationary sources and area sources. Operational emissions consist of area sources (e.g., re-applying architectural coatings, consumer products, and landscaping equipment), energy use (i.e., electricity and natural gas), mobile sources (e.g., commuting), and off-road equipment (e.g., forklifts, excavator) used during the operation of the project. Mobile source emissions and energy use emissions were calculated using CalEEMod default factors.

For area-source architectural coating operations (i.e., re-applying coatings), VOC emissions were calculated based on the assumption that the coatings would be compliant with the VOC content limits of AVAQMD Rule 1113.1. All other area source emissions were calculated using CalEEMod default factors.

The total operational criteria pollutant emissions from the project are well below the AVAQMD CEQA daily and annual thresholds.

TABLE 3
DAILY EMISSIONS SUMMARY AND SIGNIFICANCE THRESHOLDS

Emissions Source	Total Emissions (pounds per day)						
	ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
Total Operational Emissions	0.82	6.61	6.70	0.01	0.57	0.42	1,091
Significant Emissions Threshold	**137**	**137**	**548**	**137**	**82**	**65**	**548,000**

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NOX: oxides of nitrogen; CO: Carbon monoxide; SOX: Oxides of sulfur; PM2.5: particulate matter less than 2.5 micrometers in diameter; PM10: particulate matter less than 10 micrometers in diameter; CO2e: Carbon dioxide equivalent

Source: M.S. Hatch Consulting, LLC 2018 (Appendix A-2)

[1] For building coatings, assumed to be 90% flat paints (50 g/L) and 10% non-flat paints (100 g/L). For the parking lot coatings, assumed to be compliant with the Traffic Marking Coating category (100 g/L). VOC limits based on AVAQMD Rule 1113.

TABLE 4
ANNUAL EMISSIONS SUMMARY AND SIGNIFICANCE THRESHOLDS

Emissions Source	Total Emissions (tons per year)						
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$	CO_2e
Total Operational Emissions	0.11	0.87	0.87	< 0.01	0.07	0.05	150
Significant Emissions Threshold	**25**	**25**	**100**	**25**	**15**	**12**	**100,000**

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NOX: oxides of nitrogen; CO: Carbon monoxide; SOX: Oxides of sulfur; PM2.5: particulate matter less than 2.5 micrometers in diameter; PM10: particulate matter less than 10 micrometers in diameter; CO2e: Carbon dioxide equivalent

Source: M.S. Hatch Consulting, LLC 2018 (Appendix A-2)

As discussed earlier in Section 4.III.a, above, the proposed project would be consistent with the goals of the Attainment Plan, which is intended to bring the Basin into attainment for all criteria pollutants. In addition, the emissions calculated for the proposed project presented in TABLES 1 and 2 (construction emissions) are less than the applicable AVAQMD daily and annual significance thresholds, which factor in cumulative effects and are designed to assist the region in attaining the applicable state and national ambient air quality standards. Because the project is below the CEQA project-level significance thresholds for construction activities, construction-related emissions are not considered to be cumulatively considerable. The emissions occurring during the operational phase of the project were also evaluated and found to be below the AVAQMD's daily and annual significance thresholds as shown, above, in TABLES 3 and 4, respectively. As such, cumulative impacts would be less than significant, and no mitigation is required.

c) **Less than Significant Impact**: The AVAQMD CEQA Guidelines require certain projects to be evaluated for potentially exposing sensitive receptors to substantial pollutant concentrations. This project is considered an industrial project. Based on satellite images of the location, it appears that there are abandoned homes on the adjacent lot (approximately 500 feet from the northwest corner of the lot). Based on the Palmdale Zoning Map, both lots are zoned for Light Industrial (M-1) use. Since the adjacent lot is not zoned for residential use, the abandoned homes were likely used for an industrial purpose, such as the proposed office (i.e., house) that the Palmdale Recycling Center plans to utilize. Housing structures used in this manner would not be considered permanent residences.

This topic was discussed with the City of Palmdale Planning Division. Based on this communication, it was determined that a Health Risk Assessment and analyses of localized air pollutants would not be required for this project (M.S.

Hatch Consulting, LLC 2018) (Appendix A-2). As such, hazardous air pollutants and localized pollutant concentrations were not calculated, and the project was not evaluated for potential health risks to sensitive receptors. Based on the nature of the project, the City determined that a localized air pollutant concentration related to construction or operations is not required. Based on the minimal construction activities that would be required to develop the project (i.e., paving activities), there would not be substantial air pollutant concentrations due to the small number of off-road construction vehicles and lack of soil disturbance activities. Operationally, the project does not involve substantial quantities of air pollutants due to the nature of sorting and crushing processes, which require 2 forklifts, 1 excavator and machinery used in the crushing and processing of vehicles into recovered metals. Therefore, impacts would be less than significant, and no mitigation is required.

d) **Less than Significant Impact:** Land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any of the above identified uses and, therefore, would not produce objectionable odors that constitute a public nuisance during the operations phase of the project. Potential odor emitters during construction activities include diesel exhaust and the use of architectural coatings and solvents. While construction activities would have an olfactory presence, no construction activities or materials are proposed that would create a significant level of objectionable odors that would constitute a public nuisance. A s such, potential impacts during short-term construction would be less than significant, and no mitigation is required.

The proposed project would operate as a metal sorting and crushing or processing facility for recycling purposes upon completion of construction. As long as proper storage of liquids (e.g., gasoline, diesel, brake fluid, and coolant) follows regulatory requirements, the project would not generate odors that would constitute a public nuisance. In addition, due to the lack of sensitive land uses proximate to the project site, the operational phase would result in a less than significant impact, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV	BIOLOGICAL RESOURCES. Would the project:				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nesting sites?	☐	☒	☐	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

a) **No Impact:** The entire project site is intensively disturbed. Parts of the project site are used for outdoor personal storage. Portions of the site are developed with a vacant house, a metal building, concrete pavement, and an asphalt parking lot. Vegetation onsite is limited to two trees between the house and the metal building; a few other trees in the central part of the site, one of which may be dead; two small trees on the edge of the parking lot in the southeast corner of the site; and

some shrubs and grasses in parking lot planters in the southeast corner of the site. Nearly the entire site is unsuitable for habitation by sensitive plant and animal species due to the intensive use and the lack of vegetation. Project development would not impact sensitive species directly or through habitat modification. No impact would occur, and no mitigation is required.

b) **No Impact:** No sensitive natural communities are present onsite. Riparian habitats are those occurring along the banks of rivers and streams. No riparian habitats are present onsite, as there are no rivers, streams, and drainages on the project site. No impact would occur, and no mitigation is required.

c) **No Impact:** An area is a wetland if, under normal circumstances (1) the area has continuous or recurrent saturation of the upper soil caused by groundwater, shallow surface water, or both: (2) the duration of such saturation is sufficient to cause anaerobic conditions—that is, a lack of oxygen—in the upper soil; and (3) the area's vegetation is dominated by aquatic plants (hydrophytes) or lacks vegetation (SWRCB 2019). Site soils are well-drained (NRCS 2019), and there are no wetlands onsite. No impact would occur, and no mitigation is required.

d) **Less than Significant Impact with Mitigation Incorporated:** The project site is fenced and thus is unavailable for overland wildlife movement. As indicated above, there are a few trees, grasses, and shrubs onsite that could be used for nesting by birds protected under federal law (Migratory Bird Treaty Act; 16 USC Sections 703-712) and state law (California Fish and Game Code Sections 3503 et seq.). Project development would relocate one parking lot planter vegetated with some shrubs and grasses. Existing vegetation would be cleared from the planter before demolition of the existing planter. Vegetation clearance could disturb nesting birds.

The Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703–711), as amended in 1972, makes it unlawful at any time, by any means or in any manner, unless permitted by regulations, to

> "pursue; hunt; take; capture; kill; attempt to take, capture, or kill; possess; offer for sale; sell; offer to barter; barter; offer to purchase; purchase; deliver for shipment; ship; export; import; cause to be shipped, exported or imported; deliver for transportation; transport or cause to be transported; carry or cause to be carried; or receive for shipment, transportation, carriage, or export, any migratory bird; any part, nest, or eggs of any such bird; or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof. . . ." (16 USC 703).

The MBTA covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. This regulation seeks to protect migratory birds and active nests. The MBTA protects over 800 species.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). The provisions of the 1972 amendment to the MBTA protect all species and subspecies of these families.

On December 22, 2017, the Department of the Interior Office of the Solicitor released Memorandum M-37050 stating that the MBTA's "taking" or "killing of migratory birds applies only to deliberate acts such as hunting intended to take a migratory bird. This administration will not seek criminal penalties against companies and individuals who incidentally take migratory birds through otherwise lawful activities. This reverses the previous administration's interpretation, which issued Memorandum M-37041 stating that the MBTA applied to both intentional and incidental take. However, because of the court's split interpretation on the MBTA, it is recommended that companies continue to implement Best Management Practices (BMPs) to mitigate impacts on migratory birds (Perkins Coie 2018; USDOI 2017).

California Fish and Game Code

These sections duplicate federal protection under the MBTA. Section 3503 of the *California Fish and Game Code* makes it unlawful to take, possess, or destroy any bird's nest or any bird's eggs. Further, any birds of prey, such as hawks, eagles, and owls and their nests and eggs are protected under Section 3503.5 of the *California Fish and Game Code*. Section 3513 of the *California Fish and Game Code* prohibits the take and possession of any migratory nongame bird, as designated in the MBTA.

In light of the discussion, impacts to nesting birds would be potentially significant. However, implementation of Mitigation Measure (MM) BIO-1 would reduce this impact to less than significant.

e) **No Impact:** PMC Chapter 14.04 protects native desert vegetation including Joshua Trees, California junipers, and other species protected by the California Desert Native Plants Act. The project site consists of bare ground except for ornamental trees and shrubs on a few small portions of the site; see the description in Section 4.IV.a above. Project development would not involve removal or disturbance of vegetation protected by Municipal Code Chapter 14.04. No impact would occur, and no mitigation is required.

f) **No Impact:** The project site is not in the plan area of a habitat conservation plan (HCP) (USFWS 2015) or natural community conservation plan (NCCP) (CDFW 2019). No impact would occur, and no mitigation is required.

Mitigation Measures

BIO-1 **Nesting Birds/Raptors.** To avoid impacts on active nests for common and special status birds and raptors, the City of Palmdale (City) or its designee shall schedule vegetation clearing during the non-breeding season (i.e., September 16 to January 31), to the extent feasible. If project timing requires that vegetation clearing occur between February 1 and September 15, the City or its designee shall retain a qualified Biologist to conduct a pre-construction survey for nesting birds and raptors. The pre-construction survey shall be conducted by a qualified Biologist within three days prior to vegetation clearing. The pre-construction nesting bird survey area shall include the project impact area (i.e., disturbance footprint) plus a 250-foot buffer to search for nesting birds and a 500-foot buffer to search for nesting raptors. If blasting is necessary, the pre-construction nesting bird survey shall be expanded to include 500 feet from the blasting area. If no active nests are found, no further mitigation would be required.

If an active nest is located in the pre-construction nesting bird survey area, the Biologist shall delineate an appropriate buffer to protect the nest. The protective buffer shall be determined by the Biologist based on site topography, existing disturbance, sensitivity of the species, sensitivity of the individuals (established by observing the individuals at the nest), and the type of construction activity. No construction activities shall be allowed in the designated buffer until the Biologist determines that nesting activity has ended. Construction may proceed within the buffer once the Biologist determines that nesting activity has ceased (i.e., fledglings have left the nest or the nest has failed). The designated buffer will be clearly marked in the field and will be mapped as Environmentally Sensitive Areas (ESAs) on construction plans. The Worker Environmental Awareness Program (WEAP) training shall include information on active nests and protective buffers.

Prior to the initiation of construction activities, an email summary of the results shall be submitted to the City with a map of any active nests found and their designated buffers. The Biologist shall then prepare a formal Letter Report describing methods used, results of the survey, and recommended buffers. The Letter Report shall be submitted to the City

within one week of completion of the survey. If an active nest is observed during the survey, the Letter Report shall include a map showing the designated protective buffer.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
V	CULTURAL RESOURCES. Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	☐	☐	☐	☒
b)	Cause a substantial adverse change in the significance of an archaeological resource as defined in Public Resources Code Section 21083.2 and 21084.1, and CEQA Guidelines Section 15064.5, respectively?	☐	☒	☐	☐
c)	Disturb any Native American tribal cultural resources or human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

A cultural resource records search was conducted by Psomas on September 11, 2019, at the South-Central Coastal Information Center (SCCIC) at California State University, Fullerton. The SCCIC is the designated branch of the California Historical Resources Information System (CHRIS), one of ten statewide repositories that house records of archaeological and historic resources, in Orange, Los Angeles, Ventura, and San Bernardino Counties. The review consisted of an examination of the USGS' Palmdale 7.5-minute quadrangles to evaluate the project site for any archaeological sites and built environment resources recorded or cultural resource studies conducted on the property and within its ½-mile radius. Data sources consulted at the SCCIC include the Historic Property Data File (HPDF) maintained by the California Office of Historic Preservation, archaeological records, Archaeological Determinations of Eligibility, and historic maps. The HPDF contains listings for the California Register of Historic Resources (CRHR), the National Register of Historic Places (NRHP), California Historical Landmarks, and California Points of Historical Interest. Due to the disturbed nature of the Project site a pedestrian survey was not warranted.

The records search and literature review conducted for the proposed project revealed that 35 cultural resource studies have been conducted within 1-mile of the project site; none of the studies included the project site. The studies consisted primarily of block archaeological surveys and several linear surveys. Seven of these studies were conducted within a ½-mile of the project site. The remaining 28 cultural resources studies were located to the south, southeast, southwest, north, northeast, and northwest of the

project site and are all within 1-mile of the project site boundaries.

Psomas submitted a request to the Native American Heritage Commission (NAHC) on September 5, 2019 to review the Sacred Lands File database regarding the possibility of Native American cultural resources and/or sacred places in the project vicinity that are not documented on other databases. The results for Tribal Cultural Resources and/or sacred sites are negative.

Regulatory Requirement

Notwithstanding of the results of the 2019 SCCIC and NAHC record searches, the following Regulatory Requirement (RR) is required to be implemented and has been incorporated into the proposed project. This RR will be included in the MMRP for the proposed project.

CULT-1 In the event that human remains are unearthed during excavation and grading activities of any future project, all activity shall cease immediately. Pursuant to *California Health and Safety Code* Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to *California Public Resources Code* Section 5097.98. If the remains are determined to be of Native American descent, the Coroner shall, within 24 hours, notify the NAHC. The NAHC shall then contact the most likely descendant of the deceased Native American, who shall serve as consultant on how to proceed with the remains.

Project Impacts and Mitigation Measures

a) **No Impact:** Based on aerial imagery, no historically significant built environmental resources appear on the surface; however, the SCCIC records search results are pending. Nevertheless, historic topographic maps depict the Valley Drive-In Theater immediately due southwest of the project area. The drive-in theater was built in 1958 and closed in 1990. The project will not impact the structural remains of the drive-in theater. No impact would occur, and no mitigation is required.

b) **Potentially Significant Unless Mitigation Incorporated:** Due to the disturbed nature of the site a pedestrian survey for the project was not warranted. The records search/literature review results for the proposed project were negative for cultural resources within the project site. However, there is always a potential for archaeological resources to be uncovered during grading activities, thus resulting in a potentially significant impact. Therefore, with implementation of mitigation

measure CULT-2 requiring that any resources that are inadvertently uncovered during ground disturbance be evaluated by a qualified Archaeologist to determine their significance and the need to protect in place; salvage and preserve; or other measure(s) to reduce impacts to important cultural resources, potential impacts to archaeological resources would be reduced to less than significant levels.

c) **Potentially Significant Unless Mitigation Incorporated:** Due to the level of past disturbance on the project site, it is not anticipated that human remains, including those interred outside formal cemeteries, would be encountered during grading activities at the project site. If human remains are found, the remains would require proper treatment, in accordance with applicable laws (CULT-1), which have been incorporated into the project.

Sections 7050.5–7055 of the California Health and Safety Code describe the general provisions for the handling of human remains. Specifically, Section 7050.5 describes the protocols to be followed if human remains are accidentally discovered during ground disturbance or excavation. If human remains are found during excavation, construction activities must stop in the vicinity of the find and in any area that is reasonably suspected to overlie adjacent remains until the County Coroner has been notified; the remains have been investigated; and appropriate recommendations have been made for the treatment and disposition of the remains. In addition, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would have to be implemented. If the Coroner, with the aid of a qualified Archaeologist, determines that the remains are prehistoric, the Coroner will contact the NAHC. The NAHC shall be responsible for designating the most likely descendant (MLD), who will be responsible for the ultimate disposition of the remains.

With implementation of CULT-1, which details the appropriate actions necessary in the event human remains are encountered, potential impacts on human remains would be reduced to a less than significant level.

Mitigation Measures

CULT-2 In the event that cultural (archaeological) resources are inadvertently unearthed during excavation activities, the contractor shall immediately cease all earth-disturbing activities within a 100-foot radius of the area of discovery. The project applicant/developer shall retain a qualified professional archaeologist, subject to approval by the City of Palmdale, to evaluate the significance of the find and determine an appropriate course of action. If avoidance of the resource(s) is not feasible, salvage operation

requirements pursuant to Section 15064.5 of the State CEQA Guidelines shall be followed. After the find has been appropriately avoided or mitigated, work in the area may resume.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI	ENERGY. Would the project:				
a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

a) **Less than Significant Impact:** The project would consume energy for both the construction and operational phases. The amount of energy that is anticipated to be consumed is estimated and an evaluation is provided as to whether it would be wasteful, inefficient, or an unnecessary consumption of energy resources

Construction

Project construction would require the use of construction equipment for paving activities; all off-road construction equipment is assumed to use diesel fuel. Construction also includes the vehicles of construction workers and vendors traveling to and from the project site. Off-road construction equipment use was calculated from the equipment data (mix, hours per day, horsepower, load factor, and days per phase) provided in the CalEEMod construction output files included in Appendix A-1 of this IS/MND. The total horsepower hours for the project was then multiplied by fuel usage estimates per hours of construction activities included in the OffRoad Model.

Fuel consumption from construction worker, vendor, and delivery/haul trucks was calculated using the trip rates and distances provided in the CalEEMod construction output files in Appendix A-1 of this IS/MND. Total vehicle miles traveled (VMT) was then calculated for each type of construction-related trip and divided by the corresponding miles per gallon factor using California Air Resources Board's (CARB's) Emissions Factor (EMFAC) 2014 model. EMFAC provides the

total annual VMT and fuel consumed for each vehicle type. Construction vendor and delivery/haul trucks were assumed to be heavy-duty diesel trucks.

As shown in TABLE 5, a total 212 gallons of gasoline and 307 gallons of diesel fuel is estimated to be consumed during project construction.

TABLE 5
ENERGY USE DURING CONSTRUCTION

Source	Gasoline - gallons	Diesel Fuel - gallons
Off-road Construction Equipment	0	154
Worker commute	193	0
Vendor trips	17	0
On-road haul	2	153
Totals	212	307
Sources: Psomas 2019 based on data from CalEEMod, OffRoad and EMFAC2014, Appendix A-1.		

Fuel energy consumed during construction would be temporary in nature and would not represent a significant demand on energy resources. Furthermore, there are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the State. Energy used in the construction of the project would improve the operational efficiency of the intersection thereby reducing energy usage associated with increased idling and reduced vehicle speeds. Therefore, the proposed construction activities would not result in inefficient, wasteful, or unnecessary fuel consumption.

Operations

The project would result in processing of automobile parts for recycling purposes that would otherwise be disposed of in a landfill. Estimated energy consumption attributable to the project is shown in TABLE 6. While the project would result in energy consumption related to electricity use for machinery and lighting, natural gas for heating and transportation fuels used for employees and transport of vehicles and materials, the operation of a heavy processing facility for recycling purposes would provide reuse of materials as opposed to energy use to develop or mine raw materials. It would also reduce energy consumption related to the development and use of landfills. As such, the project would not result in the wasteful, inefficient, or unnecessary consumption of energy.

TABLE 6
ENERGY USE DURING OPERATIONS

Land Use	Gasoline (Gallons/yr)	Diesel (Gallons/yr)	Natural Gas (kBtu/yr)	Electricity (kWh/yr)
Industrial	2,341	504	66,101	40,537
Parking Lot	0	0	0	1,525
Onsite Equipment	0	2,280	1,980	0
Total	**2,341**	**2,785**	**68,081**	**42,062**

yr: year; kBtu: kilo-British thermal unit; kWh: kilowatt hour.
Sources: Psomas 2019b

b) **No Impact:** The City of Palmdale has published an Energy Action Plan (Palmdale 2011). This Energy Action Plan identifies numerous goals and measures that promote energy conservation and energy efficiency. The proposed project is consistent with the following Energy Action Plan Goal and Measure.

Goal 6: Reduce Waste

"...the City has recognized that by treating even waste as a resource, there is a large potential to expand the city's economic base."

Measure 6.2: Solid Waste Diversion

Achieve an 80 percent of landfilled waste by 2020.

Measure 6.2.1

Implement and expand waste reduction programs, including expansion of commercial recycling service initiated in 2010.

The Energy Action Plan identifies that waste conversion projects have the potential to reduce landfilled waste. The project would recycle materials from automobiles and consequently reduce the amount of landfill space necessary for disposal. The State of California has developed energy standards for new buildings, such as the State's Title 24 Building Energy Efficiency Standards. However, the project does not require the development of new buildings or additions to the development of project site and, therefore, the project would not be subject to Title 24 Building Energy Efficiency Standards. As such, the project is consistent with the goals of the City's Energy Action Plan and would have no impact related to whether it would conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would occur, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII	GREENHOUSE GAS EMISSIONS. Would the project:				
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b)	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

a) **Less than Significant Impact:** Global climate change is caused by combined worldwide greenhouse gas (GHG) emissions and mitigating global climate change will require worldwide solutions. GHGs play a critical role in the Earth's radiation budget by trapping infrared radiation emitted from the Earth's surface, which could have otherwise escaped to space. Prominent GHGs contributing to this process include water vapor, carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), and certain hydro- and fluorocarbons. This phenomenon, known as the "greenhouse effect," keeps the Earth's atmosphere near the surface warmer than it would be otherwise and allows for successful habitation by humans and other forms of life. Increases in these gases lead to more absorption of radiation and warm the lower atmosphere further, thereby increasing evaporation rates and temperatures near the surface. Emissions of GHGs in excess of natural ambient concentrations are thought to be responsible for the enhancement of the greenhouse effect and to contribute to what is termed "global warming," a trend of unnatural warming of the Earth's natural climate. Climate change is a global problem, and GHGs are global pollutants, unlike criteria air pollutants (such as O_3 precursors) and toxic air contaminants (TACs), which are pollutants of regional and local concern. CO_2 is the most important component of GHGs because it constitutes the majority of total GHG emissions and its longevity within the atmosphere and oceans. For this reason, estimated CO_2 emissions are used as the benchmark for analysis.

Construction Impacts

During construction, existing California Air Resources Board (ARB) regulations (Title 13 of the California Code of Regulations, Sections 2480 and 2485), which limit idling of diesel-fueled commercial motor vehicles, would help to limit GHG emissions associated with project-related construction vehicles. The proposed project's contribution to GHG emissions during short-term construction activities is estimated to be 8 metric tons of carbon dioxide equivalent per year ($MTCO_2e/yr$) and 947 pounds per day, as shown in TABLE 7.

Operational Impacts

The AVAQMD's CEQA and Federal Conformity Guidelines (AVAQMD 2016) establish significance thresholds to assess the regional impact of project-related air pollutant emissions in the AVAQMD. The AVAQMD threshold for GHG emissions is 100,000 $MTCO_2e$ per year. A project with emission rates below this threshold is considered to have a less than significant impact relative to contributions of GHG emissions. Because the project would result in GHG emissions that are less than the AVAQMD annual and daily thresholds, the potential impacts associated with the project would be less than significant, and no mitigation is required.

TABLE 7
GHG EMISSIONS SUMMARY AND SIGNIFICANCE THRESHOLDS

GHG Emissions	Construction Phase GHG Emissions	Operations Phase GHG Emissions*	Significance Threshold	Exceeds Thresholds?
Annual GHG Emissions ($MTCO_2e/Yr$)	8	150	100,000	No
Daily GHG Emissions (Pounds per Day)	947	1,091	548,000	No
$MTCO_2e$: metric tons of carbon dioxide equivalent/year *Source: M.S. Hatch Consulting, LLC 2018 (Appendix A-2)				

b) **Less than Significant Impact:** CARB approved a Climate Change Scoping Plan (CARB 2015) as required by AB 32 in 2008; this plan is required to be updated every five years. The Climate Change Scoping Plan proposes a "comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (CARB 2008).

The Climate Change Scoping Plan has a range of GHG-reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation regulation to fund the program. The latest update occurred in November 2017 and incorporates the 40 percent reduction to 1990 emissions levels by 2030. California is on track to meet the near-term 2020 GHG limit. Executive Order B-30-15 and SB 32 extended the goals of AB 32 and established a 2030 goal of reducing emissions 40 percent from 2020 levels.

The proposed project would not affect any AB 32 Scoping Plan measures, nor be inconsistent in any way with the AB 32 goal of reducing state-wide GHG emissions to 1990 levels by year 2020 and the 2030 goal of a 40 percent reduction from 2020 levels. The project would facilitate the recycling of materials from automobiles. As discussed previously, the project is consistent with the goals of the City's Energy Action Plan by recycling and reducing the amount of landfill space. This Plan has also identified GHG reductions associated with recycling. As such, potential impacts related consistency with GHG reduction plans would be less than significant, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII	GEOLOGY AND SOILS. Would the project:				
a)	Directly or indirectly cause potential substantial adverse effects, including the risk of injury, damage or death involving?				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Map issued by the State Geologist for the area or based upon on other substantial evidence of a known fault?	☐	☐	☐	☒
	ii) Strong seismic ground shaking?	☐	☐	☒	☐
	iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
	iv) Landslides?	☐	☐	☐	☒
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

a) i) **No Impact:** The State has established Earthquake Fault Zones for the purpose of mitigating the hazard of surface fault rupture by prohibiting the location of most structures for human occupancy across the traces of active faults. The project site is not within an Alquist-Priolo Earthquake Fault Zone, and there are no known faults that underlie the site. The nearest fault to the project site is the San Andreas

Fault, approximately 2 miles to the south of the project site (CGS 2019). Therefore, development of the proposed project would not cause an impact related to surface rupture of a known earthquake fault. No impacts would occur, and no mitigation is required.

ii) **Less Than Significant Impact:** Like most of California, the City of Palmdale, including the project site, is situated in a seismically active area that has historically been affected by generally moderate to occasionally high levels of ground motion. As indicated above, the closest known fault is located approximately 2 miles to the south of the project site. The peak ground acceleration onsite with a two percent chance of recurrence in 50 years, that is, an estimated average recurrence interval of 2,475 years, is 0.998g where g is the acceleration of gravity (CGS 2019a). Ground acceleration of 0.998g correlates with intensity IX on the Modified Mercalli Intensity (MMI) Scale (Wald et. al. 1999), a subjective scale of how earthquakes are felt by people and the effects of earthquakes on buildings. The project does not propose development of structures for human occupancy, and proposed project would not cause hazards arising from strong ground shaking. No impact would occur, and no mitigation is required.

iii) **Less Than Significant Impact**: Liquefaction is a phenomenon where cyclic stresses, which are produced by earthquake-induced ground motions, create excess pore pressures in cohesionless soil (often due to the presence of shallow water). As a result, the surface soils may acquire a high degree of mobility, which can lead to lateral spreading, consolidation, and settlement of loose sediments, ground oscillation flow failure, loss of bearing strength, ground fissuring, sand boils, and other damaging deformations.

The project site is not mapped in a Zone of Required Investigation for Liquefaction by the California Geological Survey (CGS 2019b).

The groundwater level near the site in March 2018 was about 2,050 feet above mean sea level (AMSL); that is, more than 550 feet below ground surface (bgs) (AVWM 2018).

The project does not propose development of structures for human occupancy. Project development would not cause hazards arising from seismic ground failure including liquefaction. No impact would occur, and no mitigation is needed.

iv) **No Impact**: There are no slopes on or next to the site that could pose a landslide hazard to the site. The site and surroundings have a northeast slope of about 0.8

percent. Project development would not cause hazards arising from earthquake-induced landslides. No impact would occur, and no mitigation is required.

b) **Less than Significant Impact:** The project would be required to implement construction site best management practices (BMPs) set forth in the City of Palmdale Storm Water Management Program (SWMP) (Palmdale 2003). Categories of construction BMPs are described below in TABLE 8.

TABLE 8
CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPS)

Category	Purpose	Examples
Erosion Controls	Consists of using project scheduling and planning to reduce soil or vegetation disturbance (particularly during the rainy season), preventing or reducing erosion potential by diverting or controlling drainage, as well as preparing and stabilizing disturbed soil areas.	Scheduling, preservation of existing vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextile and mats, wood mulching, earth dikes and drainage swales, velocity dissipation devices, slope drains, streambank stabilization, compost blankets, soil preparation/roughening, and non-vegetative stabilization
Sediment Controls	Filter out soil particles that have been detached and transported in water.	Silt fence, sediment basin, sediment rap, check dam, fiber rolls, gravel bag berm, street sweeping and vacuuming, sandbag barrier, straw bale barrier, storm drain inlet protection, manufactured linear sediment controls, compost socks and berms, and biofilter bags
Wind Erosion Controls	Consists of applying water or other dust palliatives to prevent or minimize dust nuisance.	Dust control soil binders, chemical dust suppressants, covering stockpiles, permanent vegetation, mulching, watering, temporary gravel construction, synthetic covers, and minimization of disturbed area
Tracking Controls	Minimize the tracking of soil offsite by vehicles	Stabilized construction roadways and construction entrances/exits, and entrance/outlet tire wash.
Non-Storm Water Management Controls	Prohibit discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment. Conduct various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-stormwater discharges and contamination of any such discharges.	Water conservation practices, temporary stream crossings, clear water diversions, illicit connection/discharge, potable and irrigation water management, and the proper management of the following operations: paving and grinding, dewatering, vehicle and equipment cleaning, fueling and maintenance, pile driving, concrete curing, concrete finishing, demolition adjacent to water, material over water, and temporary batch plants.
Waste Management and Controls (i.e., good housekeeping practices)	Management of materials and wastes to avoid contamination of stormwater.	Stockpile management, spill prevention and control, solid waste management, hazardous waste management, contaminated soil management, concrete waste management, sanitary/septic waste management, liquid waste management, and management of material delivery storage and use.

Project construction water quality impacts would be less than significant after implementation of construction BMPs pursuant to the City's SWMP, and no mitigation is required.

c) **Less Than Significant Impact:**

Liquefaction and Lateral Spreading. Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. Project development would not cause hazards related to lateral spreading, for the reasons explained respecting liquefaction above in Section 4.VIII.a.iv. No impacts would occur, and no mitigation is required.

Landslides. The project site and surroundings have a northeast slope of about 0.8 percent, and project development would not cause hazards arising from landslides. No impacts would occur, and no mitigation is required.

Subsidence. The major cause of ground subsidence is the excessive withdrawal of groundwater. Soils with high silt or clay content are particularly susceptible to subsidence. The project site is not in an area of land subsidence mapped by the US Geological Survey and not in an area of potential land subsidence mapped by the Antelope Valley – East Kern Water Agency (USGS 2019; AVEK 2020). Impacts would be less than significant, and no mitigation is required.

Collapsible Soils. Collapsible soils shrink upon being wetted and/or being subject to a load. The project does not propose construction of structures for human occupancy and would involve construction of about 21,411 square feet—or about 0.49 acre—of concrete pavement. A geotechnical investigation report is a requirement for issuance of a grading permit for the proposed project by the City of Palmdale pursuant to California Building Code Section J104 and City of Palmdale Municipal Code Chapter 8.04, Adoption of Health, Safety and Technical Construction Codes. The geotechnical investigation for the proposed project would include sampling and testing of subsurface site soils to determine suitability for supporting the proposed pavement and metal bins. The geotechnical investigation report would recommend any needed measures—such as remedial grading—to address any soils onsite that may be unsuitable for supporting the proposed improvements. Compliance with recommendations of the geotechnical investigation report is required as a condition of the grading permit. Impacts would be less than significant after adherence with recommendations of the geotechnical investigation report.

d) **Less Than Significant Impact:**

Expansive soils contain substantial amounts of clay that swells when wetted and shrinks when dried; the swelling or shrinking can shift, crack, or break structures built on such soils. Based on the Palmdale General Plan Safety Element Soil Expansion Potential map (Palmdale General Plan, Exhibit S-10), the project site is not located on or near any expansion potential area. Construction of the proposed pavement and metal bins would not cause substantial hazards arising from expansive soils. Impacts would be less than significant, and no mitigation is needed.

e) **No Impact:** The proposed project would not involve the use of septic tanks or an alternative wastewater disposal system. No impacts would occur, and no mitigation is required.

f) **Less than Significant Impact:** The Mojave Desert Geomorphic Province is a broad interior region of isolated mountain ranges separated by expanses of desert plains. It has interior enclosed drainages; that is, water in streams infiltrates into soil in desert valleys, and does not reach the ocean; and many playas or dry lakes.

The Antelope Valley forms the extreme western portion of the Mojave Desert. The Antelope Valley's northern boundary is the Tehachapi Mountains, and its southern boundary is the Sierra Pelona of the San Gabriel Mountains. The southern part of the Antelope Valley, in the Lancaster-Palmdale area, is primarily underlain by unconsolidated alluvial fill that is mostly 1,000 to 2,000 feet thick but in some areas exceeds 5,000 feet. This sediment package is composed of several gently sloping and overlapping alluvial fans that are middle to late Pleistocene in age. The Pleistocene Epoch extends from about 2.58 million years before present to approximately 12,000 years before present.

The sand and gravel of the Quaternary modern alluvial fan deposit (Qf) and Quaternary modern alluvium (Qa) are present at the surface in the Project area.[2] These sediments consist of loosely consolidated alluvial gravel, sand, and silt originating from the San Gabriel Mountains to the southwest. Because of its young age (i.e., very late Holocene or modern), the potential for yielding significant paleontological resources is very low.[3] Quaternary old alluvial fan deposits may be encountered during deeper excavations. T hese sediments increase in age with depth, perhaps to early-late Pleistocene (older than 100,000 years) age.

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2 The Quaternary Period extends from about 2.58 million years before present to the present.
3 The Holocene Epoch extends from about 12,000 years before present to the present.

Elsewhere in the Mojave Desert, fossils are known from pit excavations for roads, housing projects, and quarries in similar deposits. Remains of extinct Ice Age animals (such as mastodons, mammoths, horses, bison, camels, tapirs, sabertooth cats, and sloths) have been located during earth-moving activities in these formations.

A previously requested Los Angeles County Museum of Natural History (LACM) records search from a nearby project was used to analyze the paleontological potential for the project site. The results indicate that no vertebrate fossil localities are directly within the boundaries of the project site; however, three fossil-bearing localities are recorded within approximately 10 miles of the project site. Results of the records search are detailed in TABLE 9 below.

As no paleontological resources were identified within the project's boundaries, the project would not cause an adverse change in the significance of any known paleontological resources.

The proposed project includes approximately 0.49 acre of concrete paving; and includes utility trenching for relocation of existing parking lot lights. Grading and trenching are expected to be at depths less than five feet below ground surface (bgs).

There is little likelihood that unique paleontological resources are present onsite at such depths, and thus grading and trenching are unlikely to damage paleontological resources. Impacts would be less than significant, and no mitigation is required.

TABLE 9
FOSSIL LOCALITIES NEAR THE PROJECT SITE

Locality Number	Resource Type	Taxa	Proximity to Area of Potential Effect ("APE")	Depth
LACM 5942-5953	Vertebrate Fossils	*Pituophis sp.* (gopher snake) *Lampropeltis sp.* (kingsnake) *Gambelia wislizensii* (leopard lizard) *Sylvilagus sp.* (cottontail rabbit) *Chaetodipus sp.* (pocket mouse) *Dipodomys sp.* (kangaroo rat) *Thomomys sp.* (pocket gopher)	Outside (~ 8 miles from APE)	unknown
LACM 7884	Vertebrate Fossils	*Camelops hesternus* (camel)	Outside (~6 miles from APE)	4 feet below surface
LACM 7853	Vertebrate Fossils	Osmeridae (smelts) *Masticophis* sp. (whipsnake) *Phyllorrhynchus* sp. (leaf-nosed snake) *Trimorphodon biscutatus* (lyre snake) *Dipsosaurus dorsalis* (desert iguana) *Elgaria* sp. (alligator lizard) *Sceloporus magister* (desert spiny lizard) *Uta stansburiana* (side-blotched lizard) Phrynosomatidae (horned lizard) *Plestiodon sp.* (skink) *Aspidoscelis tigris* (western whiptail) *Xantusia vigilis* (desert night lizard) *Sylvilagus audobonii* (rabbit) *Neotoma* sp. (wood rat) *Peromyscus* sp. (deer mouse) *Thomomys bottae* (pocket gopher) *Dipodomys* sp. (kangaroo rat) *Perognathus* sp. (pocket mouse) *Ammospermophilus leucurus* (ground squirrel) *Camelops* sp. (camel)	Outside (~10 miles from APE)	3 feet below surface

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With 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, emission or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonable 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 which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e)	For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, 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?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

a) **Less than Significant Impact:** Project operation involves the onsite collection, and transport and disposal, of hazardous materials including motor oil and other lubricants such as grease; automotive fluids including brake, transmission, and steering fluids and antifreeze; and metals.

The use of hazardous materials is regulated and monitored under the Emergency Planning and Community Right-to-Know Act (EPCRA; United States Code Title 42

Sections 11001 et seq.); the Resource Conservation and Recovery Act (RCRA; United States Code Title 42 Sections 6901 et seq.); and the Hazardous Materials Disclosure Program. Transportation of hazardous materials and/or wastes is regulated under RCRA, the Hazardous Materials Transportation Act (United States Code Title 49 Sections 5101 et seq.); the Hazardous Wastes Control Law (California Health and Safety Code Sections 25001 et seq.), and California Code of Regulations (CCR) Title 22. Disposal of hazardous wastes is regulated under RCRA, Hazardous Wastes Control Law, and CCR Title 22. CCR Title 22 Sections 2729 through 2732 provide requirements for the reporting, inventory, and release response plans for hazardous materials. These requirements establish procedures and minimum standards for hazardous material plans, inventory reporting and submittal requirements, emergency planning/response, and training.

In addition, all regulated substance handlers are required to register with local fire or emergency response departments per the California Accidental Release Prevention Program (Cal ARP). Cal ARP is administered by the Los Angeles County Fire Department (LACoFD) Health Hazardous Materials Division (HHMD) within the City of Palmdale. HHMD also administers the Hazardous Materials Program. Any business that handles a hazardous material and/or hazardous waste of quantities at any one time during a year equal to, or greater than a total volume of 55 gallons, a total weight of 500 pounds, or 200 cubic feet of a compressed gas is a hazardous materials handler and must report Owner/Operator, Business Activities, Inventory, Site Map, and Emergency Response and Contingency Plan and Employee Training Plan information in the California Environmental Reporting System (CERS) (LACoFD 2019). It is expected that the heavy processing facility will be required to register as a Hazardous Waste Generator with the HHMD, which is the Certified Unified Program Agency (CUPA) for much of Los Angeles County, including the City of Palmdale. The CUPA coordinates and makes consistent enforcement of several state and federal regulations governing hazardous materials. In compliance with these requirements, and with the established procedures and minimum standards for hazardous materials in place, the potential impacts would be less than significant, and no mitigation is required.

b) **Less than Significant Impact:** Project operation includes the collection, storage, transport, and disposal of hazardous materials as described above in Section 4.VIII.a. Operation, therefore, could involve accidental releases of hazardous materials. The project operator will keep supplies and equipment for containing and cleaning up hazardous materials spills onsite and will train employees on safely containing and cleaning up small spills of hazardous materials. In the event of a release of hazardous materials of amount and/or toxicity that onsite workers

could not safely contain and clean up, the project operator would notify the LACoFD HHMD immediately. The HHMD provides emergency response to hazardous materials incidents in much of Los Angeles County including the City of Palmdale. Thus, in light of compliance with the said regulations, potential impacts arising from accidental release of hazardous materials would be less than significant, and no mitigation is required.

c) **No Impact:** There are no schools within 0.25 mile of the project site; the nearest school to the site is Tamarisk Elementary School at 1843 East Avenue Q-5, about 0.9 mile to the southeast of the project site (Greeninfo 2019). Project implementation would not expose people at schools to hazards from hazardous emissions or hazardous materials. No impact would occur, and no mitigation is needed.

d) **No Impact:** There is one site within 0.5 mile of the project site listed on the GeoTracker database maintained by the State Water Resources Control Board (SWRCB):

Lockheed Martin-Related work at 1101 Lockheed Way, about 0.4 mile to the south, is listed as a Leaking Underground Storage Tank (LUST) site. The potential contaminants of concern are chromium, petroleum/fuels/oils, and volatile organic compounds. The case was closed in 2010. That site is not an environmental concern for the proposed project due to the case closure. No impact would occur, and no mitigation is needed.

e) **Less than Significant Impact:** Palmdale Regional Airport (PRA) is about 1.2 miles north of the project site. The project site is outside of the Airport Influence Area for PMD; the Airport Influence Area boundary is on 15th Street East next to the east site boundary (LACALUC 2019). The project site is not in an area where land uses are regulated to minimize aviation-related hazards to people on the ground. Project development would not subject people to hazards or excessive noise from aircraft approaching or departing PRA. Impacts would be less than significant, and no mitigation is required.

f) **No Impact:** The City of Palmdale Emergency Operations Plan was approved by the City in 2012. Project implementation would not block 15th Street East. The nearest evacuation route to the project site mapped in the City of Palmdale General Plan Safety Element is Palmdale Boulevard, SR-138, about 0.7 mile to the south (Palmdale 1993). No adverse impact would occur, and no mitigation is required.

g) **Less than Significant Impact:** Project development would not substantially exacerbate wildfire risks, as substantiated below in Section XIX, *Wildfire*.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
X	HYDROLOGY AND WATER QUALITY. Would the project:				
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course or a stream or river or through the addition of impervious surfaces, in a manner that would:	☐	☐	☒	☐
	i) Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
	(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
	(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
	(iv) impede or redirect flood flows?	☐	☐	☒	☐
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

a) **Less than Significant Impact:**

Construction: The project would be required to implement construction site BMPs set forth in the City's SWMP (Palmdale 2003). Categories of construction BMPs are described in TABLE 8 set forth in Section VIII.b.

Project construction water quality impacts would be less than significant after implementation of construction BMPs pursuant to the City's Storm Water Management Program, and no mitigation is required.

Operation: The City of Palmdale is a permittee on the Statewide Small MS4 Permit, Order No. 2013-0001-DWQ, issued by the SWRCB in 2013. Regulated projects under the Small MS4 Permit must implement BMPs from the following categories:

- **Source Control BMPs** reduce the potential for pollutants to enter runoff. They include non-structural and structural practices that prevent or reduce pollutants from entering stormwater. They also include activity restrictions—such as vehicle and equipment cleaning, pesticide use, parking area maintenance, and outdoor cooking.
- **Low-Impact Development BMPs** combine hydrologically functional site design with pollution prevention measures to compensate for land development impacts of hydrology and water quality. Low Impact Development (LID) techniques mimic the site pre-development hydrology by using site design techniques that store, infiltrate, evapotranspire, biofilter, or detain runoff close to its source.
- **Treatment Control BMPs** remove pollutants from urban runoff through engineered systems designed and constructed to do so. Pollutant removal is achieved by simple gravity settling of particulate pollutants, filtration biological uptake, media adsorption, or any other physical, biological, or chemical process.

Project operation would not cause substantial stormwater pollution after implementation of BMPs. Impacts would be less than significant, and no mitigation is required.

b) **Less than Significant Impact:** The project site is over the Antelope Valley Groundwater Basin (DWR 2019) and is not used for intentional groundwater recharge. The project proposes construction of about 0.49 acre of concrete pavement, that is, approximately 10 percent of the project site. Project development would not interfere with groundwater recharge. The Palmdale Water District (PWD) provides water to the project site. PWD water supplies consist of imported surface water from northern California; local surface water from Little Rock Reservoir; and groundwater from the Antelope Valley Groundwater Basin (PWD 2016). Reuse of the house onsite as an office is expected to involve some reduction in water use compared to residential use. Therefore, project

implementation would not deplete groundwater supplies. Impacts would be less than significant, and no mitigation is needed.

c) **Less than Significant Impact:** Existing project site drainage is via surface flow and a 24-inch concrete parkway storm drain channel. The nearest public storm drain to the project site is a 96-inch reinforced concrete box drain in 15th Street East (LACDPW 2019). Project development would not substantially change the drainage pattern on or next to the site. The project hydrology study—included as Appendix B to this IS/MND—determined that the existing storm drain is sufficient for site drainage in post Project conditions. Project development would not cause substantial erosion or siltation on- or off-site. Impacts would be less than significant, and no mitigation is needed.

i. Project development would not substantially change the drainage pattern onsite; and would not substantially increase the runoff rate from the site. Development would not cause flooding on- or off-site. Impacts would be less than significant, and no mitigation is required.

ii. Project development would not create runoff water exceeding the capacity of stormwater drainage systems, as explained above in Section 4.IX.c.ii. Impacts would be less than significant, and no mitigation is required.

iii. The project site is in Flood Zone X, that is a 500-year flood zone but is not in a 100-year flood zone (FEMA 2019). Project implementation would not impede or redirect flood flows. Impacts would be less than significant, and no mitigation is necessary.

d) **No Impact:**

Flood Zones. The project site is outside of 100-year flood zones, as shown above; project development would not risk release of pollutants due to flooding. No impact would occur, and no mitigation is required.

Tsunami. A tsunami is an ocean wave caused by a sudden displacement of the ocean floor, most often due to earthquakes. The project site is at over 2,600 feet AMSL elevation and about 46 miles inland from the Pacific Ocean and is thus not at risk of flooding due to tsunami. No impact would occur, and no mitigation is required.

Seiche. A seiche is a surface wave created when an inland water body is shaken, usually by an earthquake. There are no water bodies close enough to the project

site to flood the site due to a seiche. No impact would occur, and no mitigation is needed.

e) **Less than Significant Impact:** The Antelope Valley Groundwater Basin is managed by the Antelope Valley Watermaster (AVWM) under the Antelope Valley Groundwater Adjudication issued in 2015. The proposed project does not include a groundwater well and would not increase water use onsite and, thus, would not conflict with management of the groundwater basin by the AVWM. Impacts would be less than significant, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI	LAND USE AND PLANNING. Would the project:				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

a) **No Impact:** As shown on the Exhibit 3, *Aerial Photograph*, the project site is surrounded by industrial uses and vacant land. The project proposes continuation of an ongoing automobile and metal recycling use. The project site is fenced, and the site is not used for access between nearby properties. Project development would not divide an established community, as none exists on the site and immediately surrounding the site. No impact would occur, and no mitigation is required.

b) **No Impact:** The existing zoning designation for the project site is Light Industrial (M-1); and the existing General Plan land use designation is Industrial (Ind). The Industrial designation permits the most intensive types of manufacturing and industrial uses, subject to the height, coverage, and development regulations of the underlying zoning district. Thus, the heavy processing facility for recycling purposes and outdoor storage uses accord with the General Plan designation for

the site. The proposed project would be consistent with the following City of Palmdale General Plan policies:

Environmental Resources Element

Goal ER5: Promote the attainment of state and federal air quality standards.

Objective ER5.5: Reduce air pollution caused by energy consumption.

Policy ER5.5.2: Require local government, Palmdale citizens, and local businesses and industries to recycle, as mandated by state law, and to otherwise recycle to the extent possible.

Proposed project implementation would not conflict with City of Palmdale land use policies for the site. No impact would occur, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII	MINERAL RESOURCES. Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

a) **No Impact.** The project site is mapped Mineral Resource Zone 3 (MRZ-3) by the California Geological Survey, indicating that the area contains mineral deposits, the significance of which cannot be determined from available data (CGS 1994). No mines on or near the project site are mapped on Mines Online maintained by the Division of Mines Reclamation (DMR 2019). The site is proposed for personal outdoor storage and automobile and metal recycling use is proposed onsite. The site is not available for mining. Project development would not cause a loss of

availability of a known mineral resource. Impacts would be less than significant, and no mitigation is needed.

b) **No Impact:** The project site is not mapped as within a Regionally Significant Construction Aggregate Resource Area in the City of Palmdale General Plan (City of Palmdale 1993). Project development would not cause a loss of availability of a locally-important mining resource recovery site identified in the General Plan. No impact would occur, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII	NOISE. Would the project:				
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b)	Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	For a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Background

"Sound" is a vibratory disturbance created by a moving or vibrating source and is capable of being detected. "Noise" is defined as a sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. Although the terms "sound" and "noise" are often used synonymously, perceptions of sound and noise are highly subjective (Caltrans 2013). The effects of noise on people can include general annoyance; interference with speech communication; sleep disturbance; and, in the extreme, hearing impairment.

In its most basic form, a continuous sound can be described by its frequency or wavelength (pitch) and its amplitude (loudness). Frequency is expressed in cycles per second, or hertz. High-pitched sounds produce high frequencies; low-pitched sounds produce low frequencies. Sound pressure levels are described in units called the decibel (dB). Decibels are measured on a logarithmic scale of sound intensity. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB. A 10-dB change is perceived as a doubling (or halving) of the sound. A-weighted decibels (dBA) are an overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear. Noise levels in dBA for common activities are listed below in TABLE 10.

TABLE 10
NOISE LEVELS FOR COMMON ACTIVITIES

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
–	110	Rock Band
Jet Fly-over at 300 m (1,000 ft)	100	–
Gas Lawn Mower at 1 m (3 ft)	90	–
Diesel Truck at 15 m (50 ft) at 80 km/hr (50 mph)	80	Food Blender at 1 m (3 ft); Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower at 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area, Heavy Traffic at 90 m (300 ft)	60	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	50	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Bedroom at Night, Concert Hall (Background)
–	10	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing
dBA: A-weighted decibels, m: meter, km/hr: kilometers per hour, ft: feet, mph: miles per hour. Source: Caltrans 2013b.		

Existing Conditions

Existing noise sources audible on the project site include metal crushing and heavy processing operations; traffic on 15th Street East; and aircraft overflights (mostly military aircraft) to and from Palmdale Regional Airport (PRA) about 1.2 miles to the north of the project site. The project site is an industrial use and not considered noise sensitive. Despite this, the project site is outside the 65-CNEL noise contour for PRA (LACALUC 2019). Due to the lack of development and noise sources proximate to the project site, noise levels are generally considered quiet.

Sensitive Receptors

Sensitive receptors to noise include residences, schools, hospitals, libraries, churches, day care facilities, nursing homes, and hotels and motels. The nearest sensitive noise receptors to the project site are multifamily residences and a senior living facility located approximately 1,050 feet to the south and a church about 1,350 feet to the north of the project site.

City of Palmdale Noise Regulations

Pursuant to PMC Chapter 9.18, *Disturbing, Excessive, Loud, or Offensive Noise*, it shall be unlawful for any person to willfully make or continue, or cause or permit to be made or continued, any loud, unnecessary, or unusual noise which unreasonably disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.

The City of Palmdale uses land use compatibility guidelines set forth in the California General Plan Guidelines issued by the Governor's Office of Planning and Research (OPR 2017). The compatibility guidelines for industrial, manufacturing, utilities, and agricultural land uses are:

- Normally acceptable: 50-75 CNEL
- Conditionally unacceptable: 70-80 CNEL
- Normally unacceptable: 75-85 CNEL

The Noise Element of the General Plan also states:

Policy N1.1.3 When proposed stationary noise sources could exceed an exterior noise level of 65 dBA CNEL at present, or could impact future noise sensitive land uses, require preparation of an acoustical analysis and mitigation measures to reduce noise levels to no more than 65 dBA CNEL exterior and 45 dBA CNEL interior; if the noise level cannot

be reduced to these thresholds through mitigation, the new noise source should not be permitted.

Additionally, according to PMC Chapter 8.28, *Building Construction Hours of Operation and Noise Control*, no person shall perform any construction or repair work on Sunday, or any other day between the hours of 8:00 PM and 6:30 AM, in any residential zone, or within 500 feet of any residence, hotel, motel, or recreational vehicle park, unless permission is granted by the City Engineer.

Project Impacts and Mitigation Measures

a) **Less than Significant Impact:**

Permanent Noise Impacts

Project operation would consist of continued operation of the ongoing heavy processing facility for recycling purposes and outdoor personal storage. The project does not propose increasing the intensity of use of the existing facility. Noise generation associated with the project consists of vehicle trips related to worker commutes, trucks bringing vehicles to be recycled, and the transport of recovered materials. In addition, noise is generated from onsite use of two forklifts, one excavator, and machines used to crush, dismantle, and separate the vehicle into recovered metals. The proposed facility is subject to the PMC Chapter 9.18, Disturbing, Excessive, Loud, or Offensive Noise. There are no sensitive noise receptors within 500 feet of the project site and the nearest such receptors to the site are multifamily residences and a senior living facility located approximately 1,050 feet to the south. For both multifamily residences and nursing homes, exterior noise levels up to 65 dBA CNEL are allowed under the noise limits detailed in Policy N1.1.3 of the Noise Element of the General Plan (City of Palmdale 1993). Noise from the crusher and off-road equipment were approximated based on the Federal Highway Administration's Roadway Construction Noise Model (FHWA RCNM). The FHWA's RCNM model estimates that noise levels would be 55 dBA CNEL at the nearest noise sensitive uses to the south of the project site, which would result in noise levels below the 65 dBA CNEL noise limit specified under Policy N1.1.3 of the Noise Element of the General Plan. Thus, permanent noise impacts from onsite noise-generating activities would be less than significant.

Project operation is not anticipated to result in a substantial increase offsite traffic related noise from vehicle trips occurring to and from the site. Project-generated trips consist of worker commute trips, as well as trucks, including tow trucks hauling vehicles and metal to the facility for dismantling and/or separation; and one weekly

truck trip hauling processed metal to a facility in Los Angeles. The traffic volume on 15th Street East near the project site in August 2011 was measured as 1,436 vehicles per day, and the volume on Avenue Q south of the site was measured in March 2008 as 8,323 vehicles per day (City of Palmdale 2016). Project-related vehicle trips constitute a small percentage of the overall traffic volume, which would result in changes to noise levels that are inaudible (less than 3 dB). As such, the operations phase of the project would not cause a significant traffic noise impact.

Temporary Noise Impacts

The project proposes construction of about 21,411 square feet (0.49 acre) of concrete pavement, development of curb and gutters, as well as installation of three metal bins, each 40 feet long by 12 feet wide. These construction activities are anticipated to last a few months. Construction would be limited to the hours permitted by the City of Palmdale within 500 feet of residences, that is, 6:30 AM to 8:00 PM Monday through Saturday. Concrete trucks delivering concrete for paving would occur intermittently throughout the construction period. Due to the minimal amount of construction-related activities, noise generation related to construction activities is expected to be of relatively low magnitude. In addition, there are no sensitive noise receptors within 500 feet of the project site and the nearest sensitive receptors to the site are about 1,050 feet to the south. Overall, because the project would involve few construction-related vehicles, occur for a short duration, and is not located proximate to noise sensitive uses, construction noise impacts would be less than significant, and no mitigation is required.

b) **Less than Significant Impact:**

Construction

Construction activities generate varying degrees of ground vibration, depending on the construction procedures, construction equipment used, and proximity to vibration-sensitive uses. The generation of vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight damage at the highest levels.

The nearest structures to the project site are metal buildings on a trucking business property at 39007 15th Street East, which is located about 100 feet north of the project site; and a metal building on a vehicle storage yard at 39010 12th Street East, about 90 feet northwest of the project site. There are no buildings near the project site constructed of in plaster, drywall, tile, or stucco. Vibration-related building damage associated with construction vehicles may occur within very close

proximate (less than 30 feet) of adjacent structures. Because construction activities are located at distances for which no vibration-induced damage would occur, construction vibration impacts related to building damage would be less than significant, and no mitigation is required. Project related construction activities are also located approximately 1,050 feet from vibration-sensitive residential uses. Vibration levels associated with construction of the project would be imperceptible at this distance and consequently would result less than significant impacts related to vibration induced annoyance at the closest vibration sensitive uses.

Operation

Project operations would not involve equipment or processes that would generate substantial levels of vibration. There would be off-road vehicles (two forklifts, one excavator, and machinery used for crushing and processing vehicles into recovered metals). This equipment would generate perceptible vibration within 20 to 30 feet of the source. Vibration generated by onsite activities are attenuated due to the large distance (1,050 feet) from the project site to the nearest vibration-sensitive residential use. Vibration-levels generated by the project would not be perceptible at these residential uses. Thus, construction and operation of the project would result in a less than significant impact, and no mitigation is required.

c) **Less than Significant Impact:** The project site is immediately outside of the Airport Influence Area for PRA; the Influence Area boundary is in 15th Street East next to the northeast corner of the project site (LACALUC 2019). The project site is outside the 65 CNEL noise contour for PRA (LACALUC 2019). In addition, the project site is an industrial use and not considered to be noise sensitive. Project development would not expose people to excessive noise levels from aircraft approaching or departing PRA. There are no private airstrips within one mile of the project site. Impacts would be less than significant, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV	POPULATION AND HOUSING. Would the project:				
a)	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

a) **No Impact:** Project implementation would not induce population growth, as it is an industrial use. The project consists of continuation of the existing outdoor personal storage use and proposed heavy processing facility. The project does not propose development of housing or businesses and would not extend roads or other infrastructure into currently under-served areas. No impact would occur, and no mitigation is required.

b) **No Impact:** There are no residences onsite; the one house onsite will be converted to an office by the proposed heavy processing facility for recycling purposes. Project implementation would not displace housing or residents, as none exists on the site. No impact would occur, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV	PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
a)	Fire protection?	☐	☐	☒	☐
b)	Police protection?	☐	☐	☒	☐
c)	Schools?	☐	☐	☐	☒
d)	Parks?	☐	☐	☐	☒
e)	Other public facilities?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

a) **Less than Significant Impact:** The Los Angeles County Fire Department (LACoFD) provides fire protection and emergency medical service to the City of Palmdale. The nearest fire station to the site is LACoFD Station 37 at 38318 9th Street East in the City of Palmdale, about one mile to the southwest. The project consists of continuation of the existing outdoor personal storage use and proposed heavy processing facility. Project implementation could cause a very slight increase in demands for fire protection and emergency medical services. Such slight increase would not require construction of a new or expanded fire station. Impacts would be less than significant, and no mitigation is required.

b) **Less than Significant Impact:** The Los Angeles County Sheriff's Department provides law enforcement and police protection services to the City of Palmdale. The Sheriff's Palmdale Station is at 750 East Avenue Q in the City of Palmdale, about 0.7 mile southwest of the project site. The project consists of continuation of the existing outdoor personal storage use and proposed heavy processing facility. Project implementation could cause a very slight increase demands for police services onsite. Such slight increase would not require construction of a new or expanded Sheriff's station. Impacts would be less than significant, and no mitigation is required.

c) **No Impact:** Demands for schools are generated by the numbers of households in the schools' service areas. The proposed project would continue the existing

personal outdoor storage use, and add heavy processing use onsite. The project does not propose development of housing that would result in increased demand for schools. Therefore, project development would not impact demands for school facilities, and no mitigation is required.

d) **No Impact:** Demands for parks are generated by the population in the parks' service areas. Project implementation would not add population to the City of Palmdale, such that demand for schools would increase. No impacts would occur, and no mitigation is required.

e) **No Impact:** Demands for libraries are generated by the population in the libraries' service areas. Project implementation would not add population to the City of Palmdale, such that demand for libraries would increase. No impacts for occur, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI	RECREATION				
a)	Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

a) **No Impact:** Demands for parks are generated by the population in the park service areas. Project implementation would not add population to the City of Palmdale that would increase demand for parks. No impacts would occur, and no mitigation is required.

b) **No Impact:** The project does not propose development of new or expanded recreational facilities. Project development would not result in generation of

population to the City of Palmdale and thus would not increase demand for such facilities. No impacts would occur, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII TRANSPORTATION. Would the project:					
a)	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b)	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)?	☐	☐	☒	☐
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curve or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☒	☐
d)	Result in inadequate emergency access?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

a) **Less than Significant Impact:**

Existing Conditions

The adjacent street, 15th Street East, is a two-lane, north-south roadway classified as a Secondary Arterial in the City of Palmdale General Plan (City of Palmdale 1993d). Avenue Q, about 0.2 mile south of the project site, is a two-lane, east-west roadway classified as a Major Arterial in the General Plan. Avenue P-8, about 0.25 mile north of the project site, is an east-west dirt roadway classified as a Major Arterial. The intersection of 15th Street East with Avenue Q is controlled by all-way stop signs, and the intersection of 15th Street East and Avenue P-8 is uncontrolled.

The traffic volume on 15th Street East near the project site in August 2011 was measured as 1,436 vehicles per day, and the volume on Avenue Q south of the site was measured in March 2008 as 8,323 vehicles per day (City of Palmdale 2016).

There are no sidewalks or bicycle facilities near the project site.

One Antelope Valley Transit Authority (AVTA) bus route operates east-west on Avenue Q south of the project site. Route 8, extends north-south between the City of Palmdale and the City of Lancaster and operates Monday through Friday at frequencies of about 90 minutes (AVTA 2019). A second AVTA bus route, Route 98, operates on Avenue Q; Route 98 extends between downtown Palmdale and Pete Knight High School and operates one round trip per day (AVTA 2019).

Project Impacts

The project consists of continuation of the existing outdoor storage use and proposed heavy processing facility. Project construction and operation is not expected to significantly change trip generation in light of existing trips to the site. As such, less than significant impact would occur, and no mitigation is required.

Project construction would generate very small numbers of daily trips over a brief construction period. Due to the temporary nature of construction, construction traffic would not substantially affect operation of roadways or intersections near the project site. Impacts would be less than significant, and no mitigation is required.

Project development would not affect bicycle or pedestrian facilities or public transit service, as no such facilities or services are present in the vicinity of the site.

Cumulative Impacts

The Palmdale Development Summary (June 2018 – June 2019) does not list approved projects, or projects that have submitted applications to the City, on 15th Street East, 12th Street East, 10th Street East, 20th Street East, Avenue Q, or Avenue P-8, within 0.5 mile of the project site (City of Palmdale 2019). Project impacts would not combine with impacts of related projects to cause significant cumulative traffic impacts, as the City's Development Summary does not identify related projects that would add trips to 15th Street East, Avenue Q, or Avenue P-8.

b) **Less than Significant Impact:** Threshold TRANS-b addresses vehicle miles traveled (VMT) and the methodology for determining the significance of transportation impacts. Considering the temporary nature of construction for a brief duration and project construction and operation trips not significantly increasing in light of the existing trips to the site, transportation impacts are anticipated to be less than significant without a VMT analysis. No mitigation is required.

c) **Less than Significant Impact:** The main entrance to the project site would continue to be the driveway from 15th Street East in the middle of the project site frontage. The gate on the main entrance would be relocated 11 feet east of its current location, that is, closer to 15th Street East. The existing entrance south of the main entrance, from 15th Street East into the small parking lot next to the house, would be demolished and replaced with a block wall. The project does not propose changes to the intersection of the driveway with 15th Street East that could pose substantial hazards. Project operation would not add incompatible uses to area roadways. Therefore, in light of the above, impacts would be less than significant, and no mitigation is needed.

d) **Less than Significant Impact:** Project implementation would not cause inadequate emergency access. Site access would be via one driveway from 15th Street East. Project implementation would not block 15th Street East. The project site plan includes a 32-foot-radius turnaround at the west end of the driveway bisecting the site east-to-west. No impact would occur, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII	TRIBAL CULTURAL RESOURCES. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a)	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☐	☐	☒
b)	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) to Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Section V, Cultural Resources of this IS/MND addressed other cultural resources, including historical resources, archaeological resources, and human remains and concluded that impacts on these resources would be less than significant. Additionally, the project site is not included in a Local Register of Historical Resources; on a map of Historical Resources; or on a map of Historic Districts. F or archaeological resources, the analysis concluded the project could result in unanticipated discovery of previously unknown archaeological resources. In order to reduce this impact, the analysis required implementation of CULT-2, which includes retaining a professional archaeologist to evaluate the significance of archaeological resources and determine an appropriate course of action, as necessary. For human remains, the regulatory requirement CULT-1 addresses the handling of human remains if previously unknown human remains are encountered, as well as if the remains are determined to be Native American. Compliance with the state required regulations would ensure such impacts are reduced to a less than significant level. The following subsections will address the potential for the discovery of tribal cultural resources and the implementation of mitigation measures to reduce impacts to such discoveries to a less than significant level.

Furthermore, as indicated in Section V, Cultural Resources, the NAHC conducted a Sacred Lands File (SLF) search for the project. The search failed to identify any sacred places or objects with cultural value to a California Native American tribe on the project site. However, consistent with requirements of Assembly Bill (AB) 52, the City of Palmdale has sent letters to tribes that have expressed an interest in being consulted regarding Native American resources for the projects being undertaken in the City of Palmdale. Four individual letters were sent to the following tribal representatives:

- San Gabriel Band of Mission Indians;
- San Manuel Band of Mission Indians;
- Gabrieleno Band of Mission Indians; and
- Fernandeno Tataviam Band of Mission Indians

Project Impacts and Mitigation Measures

a) **No Impact:**

For purposes of impact analysis, a tribal cultural resource is considered a site, feature, place, cultural landscape, sacred place, or object, which is of cultural value to a California Native American Tribe and is either eligible for the CRHR or a local register. As indicated in Section V of this IS/MND, based on a SCCIC record search results, there are no resources on the project site that are currently listed on the CRHR. Therefore, the proposed project would not have an impact on tribal

cultural resources and is not associated with an impact to a resource that is listed or eligible for listing on the CRHR or a local register.

b) **Less than Significant Impact with Mitigation Incorporated:** Based on information available through the record searches at the SCCIC and the NAHC, and the existing condition and past disturbance of the project area, there is no information available that indicates there are significant tribal resources within the site that would be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. However, consistent with requirements of Assembly Bill (AB) 52, the City of Palmdale has sent letters to tribes that have expressed an interest in being consulted regarding Native American resources for the projects being undertaken in the City of Palmdale. The City has not received responses to the requests for consultation.

Nevertheless, although no archaeological resources important to Native Americans Tribes have been identified within the project area as a result of the SCCIC record search, NAHC SLF search, and attempts at consultation, there is always the possibility that undiscovered intact cultural resources, including tribal cultural resources may be present below the surface in native sediments. To avoid any potential impacts, CULT-2 and CULT-1 would be implemented.

Mitigation Measure

CULT-2 and CULT-1 would apply. Compliance with CULT-2 and CULT-1, which describe procedures for monitoring and protocols to be followed in the event that cultural resources and/or human remains are discovered during grading would reduce potential impacts to historic and archaeological as well as tribal cultural resources, to less than significant levels.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX	UTILITIES AND SERVICE SYSTEMS. Would the project:				
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d)	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e)	Comply with federal, state and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

a) **Less than Significant Impact:** Project development would not require construction of new or expanded facilities for water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications. Project operations would continue the existing personal storage use onsite and add proposed heavy processing facility for recycling purposes. The project proposes only a small amount of construction work that would not require new or expanded utility facilities. The following utility providers serve the project site:

- **Water:** Palmdale Water District
- **Wastewater Treatment:** Los Angeles County Sanitation Districts at its Palmdale Water Reclamation Plant in the City of Palmdale.
- **Storm Drainage:** City of Palmdale

- **Electric Power:** Southern California Edison
- **Natural Gas:** Southern California Gas Company
- **Telecommunications:** AT&T

b) **Less than Significant Impact:** The Palmdale Water District (PWD) provides water to a 140-square-mile area consisting of part of the City of Palmdale and some surrounding area in unincorporated Los Angeles County. PWD water supplies consist of water imported from northern California via the State Water Project and purchased from the California Department of Water Resources; local surface water from Littlerock Reservoir on Littlerock Creek at the northern foot of the San Gabriel Mountains; groundwater from the Antelope Valley Groundwater Basin; and recycled water. Forecast 2020 PWD supplies consist of about 30 percent groundwater; 11 percent local surface water; 52 percent imported water; and 7 percent recycled water (PWD 2016). PWD forecasts that it will have sufficient water supplies to meet demands in its service area over the 2020-2040 period, with an estimated surplus of nearly 14,000 acre-feet per year in 2020, as shown in TABLE 11 below.

Operation of the proposed heavy processing use would generate a slight increase in water demands onsite. The personal storage use, which would continue, does not generate water demands. Project construction would use a small amount of water during the brief construction period; PWD has sufficient water supplies for water demand during construction. Impacts would be less than significant, and no mitigation is required.

TABLE 11
PALMDALE WATER DISTRICT WATER SUPPLY RELIABILITY, NORMAL YEAR ACRE-FEET PER YEAR (AFY)

	2020	2025	2030	2035	2040
Supplies					
Groundwater	11,280	9,140	7,770	7,770	7,770
Local Surface Water	4,000	4,000	4,000	4,000	4,000
Imported Water	19,400	19,100	19,100	19,100	19,100
Recycled Water	2,500	5,000	5,500	6,000	6,000
Total Supplies	**37,180**	**37,240**	**36,370**	**36,870**	**36,870**
Total Demands	**23,300**	**26,900**	**28,400**	**29,900**	**31,000**
Difference, Supply - Demand	**13,880**	**10,340**	**7,970**	**6,970**	**5,870**

Source: PWD 2016

c) **Less than Significant Impact:** Los Angeles County Sanitation Districts (LACSD) No. 20 (District 20) serves about 41 square miles in the southern Antelope Valley, including the project site. Wastewater from District 20 is treated at LACSD's Palmdale Water Reclamation Plant (Palmdale WRP), which has capacity of 12 million gallons per day (mgd) and had average flows in 2018 of 8.03 mgd, for remaining capacity of approximately 3.97 mgd (LACSD 2019). The proposed heavy processing use would slightly increase wastewater generation onsite; the personal storage use, which would continue, does not generate wastewater. Project construction would generate a slight increase in wastewater generation onsite; the Palmdale WRP has sufficient residual capacity for project wastewater generation. Impacts would be less than significant, and no mitigation is needed.

d) **Less than Significant Impact:** The proposed heavy processing use would slightly increase solid waste generation onsite. The personal storage use is an existing condition; continuation of the storage use would not change solid waste generation. Project construction would generate some construction debris, and a small amount of demolition debris, during the brief construction period. In 2018 about 99 percent of the solid waste landfilled from Palmdale was disposed of at two facilities, the Antelope Valley Public Landfill in Palmdale and the Lancaster Landfill and Recycling Center in Lancaster. The two facilities combined have remaining capacity of over 32 million tons and residual daily disposal capacity of over 8,500 tons, as shown below in TABLE 12. There is sufficient solid waste disposal capacity in the region. Impacts would be less than significant, and no mitigation is required.

e) **No Impact:** Section 5.408 (Construction Waste Reduction, Disposal, and Recycling) of the 2016 California Green Building Standards Code (CALGreen; Title 24, California Code of Regulations, Part 11) requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse. At least 65 percent of construction and demolition waste from the proposed project would be recycled and/or salvaged in accordance with CALGreen Section 5.408. No impact would occur, and no mitigation is required.

TABLE 12
LANDFILL CAPACITY

Facility, Nearest City	Remaining Capacity, cubic yards	Maximum Permitted Daily Disposal, tons	Average Daily Disposal, tons	Residual Daily Disposal Capacity, tons	Estimated Closing Date
Antelope Valley Public Landfill, Palmdale	17,911,225	5,548	1,653	3,895	2044
Lancaster Landfill and Recycling Center, Lancaster	14,514,648	5,100	461	4,639	2044
Total	32,425,873	10,648	2,114	8,534	Not applicable
Sources: CalRecylce 2019a; CalRecycle 2019b; CalRecycle 2019c; CalRecycle 2019d					

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XX	WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

a) **Less than Significant Impact:** Project development would not impair an adopted emergency response plan. The City of Palmdale Emergency Operations Plan was approved by the City in 2012. Project implementation would not block 15th Street East. The nearest evacuation route to the project site mapped in the City of Palmdale General Plan Safety Element is Palmdale Boulevard, SR-138, about 0.7 mile to the south (Palmdale 1993). No impact would occur.

b) **Less than Significant Impact:** The project site is not in a fire hazard severity zone mapped by the California Department of Forestry and Fire Protection (CAL FIRE 2019). Project development would not change slope or winds onsite. Flammable materials, such as motor fuels, would be removed from vehicles before the vehicles were disassembled for recycling, limiting the potential wildfire fuel that would be added to the site by the heavy processing use. Project development would not exacerbate wildfire risks. Impacts would be less than significant, and no mitigation is required.

c) **No Impact:** The project site is not in or near a state responsibility area or very high fire hazard severity zone. Project development would not involve installation of off-site infrastructure that could exacerbate wildfire risks. No impact would occur, and no mitigation is required.

d) **Less than Significant Impact:** Project development would not exacerbate wildfire risks on or near the site, as explained above in the two previous impact analyses, and thus would not expose people or structures to downstream flooding or landslides due to a wildfire. Impacts would be less than significant, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI	MANDATORY FINDINGS OF SIGNIFICANCE				
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☒
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Project Impacts and Mitigation Measures

The following are Mandatory Findings of Significance in accordance with Section 15065 of the CEQA Guidelines.

a) **Less than Significant Impact with Mitigation Incorporated:** Portions of the project site are used for outdoor personal storage. Other parts of the site are developed with a house, a metal building, concrete pavement, and an asphalt parking lot. Project development would disturb a small amount of vegetation that could be used by nesting birds. Impacts to nesting birds would be less than significant after implementation of BIO-1. Project development would not substantially reduce the population, habitat, or range of a sensitive species or fish or wildlife species, as none exists on the project site. Project development would involve some ground disturbance. Archaeological resources could be buried in site soils and could be damaged by ground disturbance. Impacts to archaeological resources would be less than significant after implementation of CULT-1.

b) **Less than Significant Impact:** The Palmdale Development Summary (June 2018 – June 2019) does not list approved projects, or projects that have submitted applications to the City, on 15th Street East, 12th Street East, 10th Street East, 20th Street East, Avenue Q, or Avenue P-8, within 0.5 mile of the project site (City of Palmdale 2019). Project impacts would not combine with impacts of related projects to cause significant cumulative traffic impacts, as the City Development Summary does not identify related projects that would add trips to 15th Street East, Avenue Q, or Avenue P-8. Impacts would be less than significant, and no mitigation is required.

c) **Less than Significant Impact with Mitigation Incorporated:** As shown in the analyses in Sections I through XX, above, potential impacts related to Biological Resources and Cultural Resources would be avoided or reduced to less than significant levels with implementation of BIO-1 and CULT-2 in addition to compliance with applicable regulations (CULT-1). Therefore, the project, with mitigation, would not cause substantial adverse effects, directly or indirectly, to human beings. Potential direct and indirect impacts on human beings that result from the proposed project would be less than significant after mitigation.

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APPENDIX A-1

AIR QUALITY MODEL RUNS – PSOMAS

Construction Emissions - Palmdale Recycling Facility

Antelope Valley APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.65	1000sqft	4.70	3,650.00	0
Parking Lot	11.00	Space	0.10	4,356.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
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

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Annual

Project Characteristics -

Land Use - Based on AQ study

Construction Phase -

Off-road Equipment - Concrete pavement

Off-road Equipment - Estimated construction equipment usage

Trips and VMT - Calculated

Vehicle Trips - Construction only

Area Coating -

Landscape Equipment - Construction only

Energy Use - Construction only

Water And Wastewater - Construction only

Solid Waste - Construction only

Construction Off-road Equipment Mitigation -

Consumer Products - Construction only

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.25	0.00
tblEnergyUse	T24NG	13.65	0.00
tblLandUse	LandUseSquareFeet	4,400.00	4,356.00
tblLandUse	LotAcreage	0.08	4.70

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblSolidWaste	SolidWasteGenerationRate	4.53	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	44.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	844,062.50	0.00

2.0 Emissions Summary

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Annual

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					
2019	4.8200e-003	0.0455	0.0428	9.0000e-005	1.9500e-003	2.4500e-003	4.3900e-003	5.2000e-004	2.2500e-003	2.7700e-003	0.0000	7.7783	7.7783	1.4500e-003	0.0000	7.8145
Maximum	**4.8200e-003**	**0.0455**	**0.0428**	**9.0000e-005**	**1.9500e-003**	**2.4500e-003**	**4.3900e-003**	**5.2000e-004**	**2.2500e-003**	**2.7700e-003**	**0.0000**	**7.7783**	**7.7783**	**1.4500e-003**	**0.0000**	**7.8145**

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					
2019	4.8200e-003	0.0455	0.0428	9.0000e-005	1.9500e-003	2.4500e-003	4.3900e-003	5.2000e-004	2.2500e-003	2.7700e-003	0.0000	7.7783	7.7783	1.4500e-003	0.0000	7.8145
Maximum	**4.8200e-003**	**0.0455**	**0.0428**	**9.0000e-005**	**1.9500e-003**	**2.4500e-003**	**4.3900e-003**	**5.2000e-004**	**2.2500e-003**	**2.7700e-003**	**0.0000**	**7.7783**	**7.7783**	**1.4500e-003**	**0.0000**	**7.8145**

	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**

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-8-2019	9-30-2019	0.0458	0.0458
		Highest	0.0458	0.0458

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	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Energy	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
Mobile	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
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0000e-005**	**0.0000**	**1.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.6000e-004**	**2.6000e-004**	**0.0000**	**0.0000**	**2.8000e-004**

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	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Energy	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
Mobile	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
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0000e-005**	**0.0000**	**1.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.6000e-004**	**2.6000e-004**	**0.0000**	**0.0000**	**2.8000e-004**

	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	Paving	Paving	9/8/2019	10/2/2019	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	6.00	132	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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
Paving	2	20.00	2.00	44.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Annual

3.2 Paving - 2019

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	3.6200e-003	0.0362	0.0336	5.0000e-005		2.4000e-003	2.4000e-003		2.2100e-003	2.2100e-003	0.0000	4.1012	4.1012	1.3000e-003	0.0000	4.1336
Paving	1.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.7500e-003**	**0.0362**	**0.0336**	**5.0000e-005**		**2.4000e-003**	**2.4000e-003**		**2.2100e-003**	**2.2100e-003**	**0.0000**	**4.1012**	**4.1012**	**1.3000e-003**	**0.0000**	**4.1336**

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	1.9000e-004	6.3400e-003	1.3200e-003	2.0000e-005	3.8000e-004	2.0000e-005	4.0000e-004	1.0000e-004	2.0000e-005	1.2000e-004	0.0000	1.7720	1.7720	7.0000e-005	0.0000	1.7737
Vendor	8.0000e-005	2.3300e-003	5.4000e-004	1.0000e-005	1.2000e-004	1.0000e-005	1.3000e-004	3.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.5175	0.5175	2.0000e-005	0.0000	0.5181
Worker	8.0000e-004	6.9000e-004	7.3700e-003	2.0000e-005	1.4500e-003	1.0000e-005	1.4600e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.3877	1.3877	6.0000e-005	0.0000	1.3891
Total	**1.0700e-003**	**9.3600e-003**	**9.2300e-003**	**5.0000e-005**	**1.9500e-003**	**4.0000e-005**	**1.9900e-003**	**5.2000e-004**	**4.0000e-005**	**5.7000e-004**	**0.0000**	**3.6772**	**3.6772**	**1.5000e-004**	**0.0000**	**3.6809**

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Annual

3.2 Paving - 2019

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	3.6200e-003	0.0362	0.0336	5.0000e-005		2.4000e-003	2.4000e-003		2.2100e-003	2.2100e-003	0.0000	4.1011	4.1011	1.3000e-003	0.0000	4.1336
Paving	1.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.7500e-003**	**0.0362**	**0.0336**	**5.0000e-005**		**2.4000e-003**	**2.4000e-003**		**2.2100e-003**	**2.2100e-003**	**0.0000**	**4.1011**	**4.1011**	**1.3000e-003**	**0.0000**	**4.1336**

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	1.9000e-004	6.3400e-003	1.3200e-003	2.0000e-005	3.8000e-004	2.0000e-005	4.0000e-004	1.0000e-004	2.0000e-005	1.2000e-004	0.0000	1.7720	1.7720	7.0000e-005	0.0000	1.7737
Vendor	8.0000e-005	2.3300e-003	5.4000e-004	1.0000e-005	1.2000e-004	1.0000e-005	1.3000e-004	3.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.5175	0.5175	2.0000e-005	0.0000	0.5181
Worker	8.0000e-004	6.9000e-004	7.3700e-003	2.0000e-005	1.4500e-003	1.0000e-005	1.4600e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.3877	1.3877	6.0000e-005	0.0000	1.3891
Total	**1.0700e-003**	**9.3600e-003**	**9.2300e-003**	**5.0000e-005**	**1.9500e-003**	**4.0000e-005**	**1.9900e-003**	**5.2000e-004**	**4.0000e-005**	**5.7000e-004**	**0.0000**	**3.6772**	**3.6772**	**1.5000e-004**	**0.0000**	**3.6809**

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	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
Unmitigated	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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Annual

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.600819	0.039944	0.152792	0.114199	0.019665	0.005435	0.017326	0.034891	0.002097	0.001901	0.007823	0.001574	0.001535
Parking Lot	0.600819	0.039944	0.152792	0.114199	0.019665	0.005435	0.017326	0.034891	0.002097	0.001901	0.007823	0.001574	0.001535

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	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
NaturalGas Unmitigated	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

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					
General Light Industry	0	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
Parking Lot	0	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
Total		**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**

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					
General Light Industry	0	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
Parking Lot	0	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
Total		**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**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, 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					
Mitigated	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Unmitigated	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Total	**1.0000e-005**	**0.0000**	**1.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.6000e-004**	**2.6000e-004**	**0.0000**	**0.0000**	**2.8000e-004**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Total	**1.0000e-005**	**0.0000**	**1.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.6000e-004**	**2.6000e-004**	**0.0000**	**0.0000**	**2.8000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Construction Emissions - Palmdale Recycling Facility

Antelope Valley APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.65	1000sqft	4.70	3,650.00	0
Parking Lot	11.00	Space	0.10	4,356.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
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

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Summer

Project Characteristics -

Land Use - Based on AQ study

Construction Phase -

Off-road Equipment - Concrete pavement

Off-road Equipment - Estimated construction equipment usage

Trips and VMT - Calculated

Vehicle Trips - Construction only

Area Coating -

Landscape Equipment - Construction only

Energy Use - Construction only

Water And Wastewater - Construction only

Solid Waste - Construction only

Construction Off-road Equipment Mitigation -

Consumer Products - Construction only

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.25	0.00
tblEnergyUse	T24NG	13.65	0.00
tblLandUse	LandUseSquareFeet	4,400.00	4,356.00
tblLandUse	LotAcreage	0.08	4.70

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Summer

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblSolidWaste	SolidWasteGenerationRate	4.53	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	44.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	844,062.50	0.00

2.0 Emissions Summary

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Summer

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					
2019	0.5506	5.0268	4.8790	9.6600e-003	0.2206	0.2717	0.4923	0.0592	0.2501	0.3093	0.0000	973.2640	973.2640	0.1774	0.0000	977.6996
Maximum	**0.5506**	**5.0268**	**4.8790**	**9.6600e-003**	**0.2206**	**0.2717**	**0.4923**	**0.0592**	**0.2501**	**0.3093**	**0.0000**	**973.2640**	**973.2640**	**0.1774**	**0.0000**	**977.6996**

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					
2019	0.5506	5.0268	4.8790	9.6600e-003	0.2206	0.2717	0.4923	0.0592	0.2501	0.3093	0.0000	973.2640	973.2640	0.1774	0.0000	977.6996
Maximum	**0.5506**	**5.0268**	**4.8790**	**9.6600e-003**	**0.2206**	**0.2717**	**0.4923**	**0.0592**	**0.2501**	**0.3093**	**0.0000**	**973.2640**	**973.2640**	**0.1774**	**0.0000**	**977.6996**

	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	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Energy	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
Mobile	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
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**	**0.0000**	**3.4200e-003**

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	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Energy	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
Mobile	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
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**	**0.0000**	**3.4200e-003**

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Summer

	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	Paving	Paving	9/8/2019	10/2/2019	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	6.00	132	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Summer

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
Paving	2	20.00	2.00	44.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Paving - 2019

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	lb/day										lb/day					
Off-Road	0.4027	4.0180	3.7331	5.0700e-003		0.2665	0.2665		0.2452	0.2452		502.3047	502.3047	0.1589		506.2778
Paving	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4173**	**4.0180**	**3.7331**	**5.0700e-003**		**0.2665**	**0.2665**		**0.2452**	**0.2452**		**502.3047**	**502.3047**	**0.1589**		**506.2778**

3.2 Paving - 2019

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	lb/day										lb/day					
Hauling	0.0209	0.6859	0.1405	2.0900e-003	0.0427	2.1700e-003	0.0449	0.0117	2.0800e-003	0.0138		219.5922	219.5922	8.0200e-003		219.7928
Vendor	8.3500e-003	0.2545	0.0555	6.2000e-004	0.0135	1.5800e-003	0.0151	3.9000e-003	1.5100e-003	5.4000e-003		64.4541	64.4541	2.9300e-003		64.5273
Worker	0.1041	0.0684	0.9498	1.8800e-003	0.1643	1.4300e-003	0.1657	0.0436	1.3200e-003	0.0449		186.9130	186.9130	7.5500e-003		187.1017
Total	**0.1333**	**1.0088**	**1.1459**	**4.5900e-003**	**0.2206**	**5.1800e-003**	**0.2257**	**0.0592**	**4.9100e-003**	**0.0641**		**470.9594**	**470.9594**	**0.0185**		**471.4218**

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	lb/day										lb/day					
Off-Road	0.4027	4.0180	3.7331	5.0700e-003		0.2665	0.2665		0.2452	0.2452	0.0000	502.3047	502.3047	0.1589		506.2778
Paving	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4173**	**4.0180**	**3.7331**	**5.0700e-003**		**0.2665**	**0.2665**		**0.2452**	**0.2452**	**0.0000**	**502.3047**	**502.3047**	**0.1589**		**506.2778**

3.2 Paving - 2019

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	lb/day										lb/day					
Hauling	0.0209	0.6859	0.1405	2.0900e-003	0.0427	2.1700e-003	0.0449	0.0117	2.0800e-003	0.0138		219.5922	219.5922	8.0200e-003		219.7928
Vendor	8.3500e-003	0.2545	0.0555	6.2000e-004	0.0135	1.5800e-003	0.0151	3.9000e-003	1.5100e-003	5.4000e-003		64.4541	64.4541	2.9300e-003		64.5273
Worker	0.1041	0.0684	0.9498	1.8800e-003	0.1643	1.4300e-003	0.1657	0.0436	1.3200e-003	0.0449		186.9130	186.9130	7.5500e-003		187.1017
Total	**0.1333**	**1.0088**	**1.1459**	**4.5900e-003**	**0.2206**	**5.1800e-003**	**0.2257**	**0.0592**	**4.9100e-003**	**0.0641**		**470.9594**	**470.9594**	**0.0185**		**471.4218**

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	lb/day										lb/day					
Mitigated	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
Unmitigated	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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.600819	0.039944	0.152792	0.114199	0.019665	0.005435	0.017326	0.034891	0.002097	0.001901	0.007823	0.001574	0.001535
Parking Lot	0.600819	0.039944	0.152792	0.114199	0.019665	0.005435	0.017326	0.034891	0.002097	0.001901	0.007823	0.001574	0.001535

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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					
NaturalGas Mitigated	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
NaturalGas Unmitigated	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

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	lb/day										lb/day					
General Light Industry	0	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
Parking Lot	0	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
Total		**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**

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	lb/day										lb/day					
General Light Industry	0	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
Parking Lot	0	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
Total		**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**

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	lb/day										lb/day					
Mitigated	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Unmitigated	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003

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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4200e-003**

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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Construction Emissions - Palmdale Recycling Facility

Antelope Valley APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.65	1000sqft	4.70	3,650.00	0
Parking Lot	11.00	Space	0.10	4,356.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
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

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

Project Characteristics -

Land Use - Based on AQ study

Construction Phase -

Off-road Equipment - Concrete pavement

Off-road Equipment - Estimated construction equipment usage

Trips and VMT - Calculated

Vehicle Trips - Construction only

Area Coating -

Landscape Equipment - Construction only

Energy Use - Construction only

Water And Wastewater - Construction only

Solid Waste - Construction only

Construction Off-road Equipment Mitigation -

Consumer Products - Construction only

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.25	0.00
tblEnergyUse	T24NG	13.65	0.00
tblLandUse	LandUseSquareFeet	4,400.00	4,356.00
tblLandUse	LotAcreage	0.08	4.70

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblSolidWaste	SolidWasteGenerationRate	4.53	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	44.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	844,062.50	0.00

2.0 Emissions Summary

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

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					
2019	0.5443	5.0351	4.7180	9.3500e-003	0.2206	0.2718	0.4923	0.0592	0.2502	0.3094	0.0000	942.5968	942.5968	0.1774	0.0000	947.0309
Maximum	**0.5443**	**5.0351**	**4.7180**	**9.3500e-003**	**0.2206**	**0.2718**	**0.4923**	**0.0592**	**0.2502**	**0.3094**	**0.0000**	**942.5968**	**942.5968**	**0.1774**	**0.0000**	**947.0309**

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					
2019	0.5443	5.0351	4.7180	9.3500e-003	0.2206	0.2718	0.4923	0.0592	0.2502	0.3094	0.0000	942.5968	942.5968	0.1774	0.0000	947.0309
Maximum	**0.5443**	**5.0351**	**4.7180**	**9.3500e-003**	**0.2206**	**0.2718**	**0.4923**	**0.0592**	**0.2502**	**0.3094**	**0.0000**	**942.5968**	**942.5968**	**0.1774**	**0.0000**	**947.0309**

	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**

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

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	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Energy	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
Mobile	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
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**	**0.0000**	**3.4200e-003**

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	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Energy	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
Mobile	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
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**	**0.0000**	**3.4200e-003**

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

	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	Paving	Paving	9/8/2019	10/2/2019	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	6.00	132	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

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
Paving	2	20.00	2.00	44.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Paving - 2019

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	lb/day										lb/day					
Off-Road	0.4027	4.0180	3.7331	5.0700e-003		0.2665	0.2665		0.2452	0.2452		502.3047	502.3047	0.1589		506.2778
Paving	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4173**	**4.0180**	**3.7331**	**5.0700e-003**		**0.2665**	**0.2665**		**0.2452**	**0.2452**		**502.3047**	**502.3047**	**0.1589**		**506.2778**

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

3.2 Paving - 2019

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	lb/day										lb/day					
Hauling	0.0217	0.6911	0.1551	2.0300e-003	0.0427	2.2100e-003	0.0449	0.0117	2.1200e-003	0.0138		213.4951	213.4951	8.6900e-003		213.7124
Vendor	8.7300e-003	0.2536	0.0631	5.9000e-004	0.0135	1.6000e-003	0.0151	3.9000e-003	1.5300e-003	5.4300e-003		61.9017	61.9017	3.2100e-003		61.9820
Worker	0.0966	0.0724	0.7667	1.6600e-003	0.1643	1.4300e-003	0.1657	0.0436	1.3200e-003	0.0449		164.8953	164.8953	6.5400e-003		165.0587
Total	**0.1271**	**1.0171**	**0.9849**	**4.2800e-003**	**0.2206**	**5.2400e-003**	**0.2258**	**0.0592**	**4.9700e-003**	**0.0642**		**440.2921**	**440.2921**	**0.0184**		**440.7531**

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	lb/day										lb/day					
Off-Road	0.4027	4.0180	3.7331	5.0700e-003		0.2665	0.2665		0.2452	0.2452	0.0000	502.3047	502.3047	0.1589		506.2778
Paving	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4173**	**4.0180**	**3.7331**	**5.0700e-003**		**0.2665**	**0.2665**		**0.2452**	**0.2452**	**0.0000**	**502.3047**	**502.3047**	**0.1589**		**506.2778**

3.2 Paving - 2019

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	lb/day										lb/day					
Hauling	0.0217	0.6911	0.1551	2.0300e-003	0.0427	2.2100e-003	0.0449	0.0117	2.1200e-003	0.0138		213.4951	213.4951	8.6900e-003		213.7124
Vendor	8.7300e-003	0.2536	0.0631	5.9000e-004	0.0135	1.6000e-003	0.0151	3.9000e-003	1.5300e-003	5.4300e-003		61.9017	61.9017	3.2100e-003		61.9820
Worker	0.0966	0.0724	0.7667	1.6600e-003	0.1643	1.4300e-003	0.1657	0.0436	1.3200e-003	0.0449		164.8953	164.8953	6.5400e-003		165.0587
Total	**0.1271**	**1.0171**	**0.9849**	**4.2800e-003**	**0.2206**	**5.2400e-003**	**0.2258**	**0.0592**	**4.9700e-003**	**0.0642**		**440.2921**	**440.2921**	**0.0184**		**440.7531**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

	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					
Mitigated	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
Unmitigated	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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.600819	0.039944	0.152792	0.114199	0.019665	0.005435	0.017326	0.034891	0.002097	0.001901	0.007823	0.001574	0.001535
Parking Lot	0.600819	0.039944	0.152792	0.114199	0.019665	0.005435	0.017326	0.034891	0.002097	0.001901	0.007823	0.001574	0.001535

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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					
NaturalGas Mitigated	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
NaturalGas Unmitigated	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

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	lb/day										lb/day					
General Light Industry	0	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
Parking Lot	0	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
Total		**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**

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	lb/day										lb/day					
General Light Industry	0	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
Parking Lot	0	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
Total		**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**

6.0 Area Detail

6.1 Mitigation Measures Area

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

	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					
Mitigated	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Unmitigated	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003

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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4200e-003**

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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Construction Emissions - Palmdale Recycling Facility

Antelope Valley APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.65	1000sqft	4.70	3,650.00	0
Parking Lot	11.00	Space	0.10	4,356.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
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

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Summer

Project Characteristics -

Land Use - Based on AQ study

Construction Phase -

Off-road Equipment - Concrete pavement

Off-road Equipment - Estimated construction equipment usage

Trips and VMT - Calculated

Vehicle Trips - Construction only

Area Coating -

Landscape Equipment - Construction only

Energy Use - Construction only

Water And Wastewater - Construction only

Solid Waste - Construction only

Construction Off-road Equipment Mitigation -

Consumer Products - Construction only

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.25	0.00
tblEnergyUse	T24NG	13.65	0.00
tblLandUse	LandUseSquareFeet	4,400.00	4,356.00
tblLandUse	LotAcreage	0.08	4.70

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Summer

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblSolidWaste	SolidWasteGenerationRate	4.53	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	44.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	844,062.50	0.00

2.0 Emissions Summary

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Summer

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					
2019	0.5506	5.0268	4.8790	9.6600e-003	0.2206	0.2717	0.4923	0.0592	0.2501	0.3093	0.0000	973.2640	973.2640	0.1774	0.0000	977.6996
Maximum	**0.5506**	**5.0268**	**4.8790**	**9.6600e-003**	**0.2206**	**0.2717**	**0.4923**	**0.0592**	**0.2501**	**0.3093**	**0.0000**	**973.2640**	**973.2640**	**0.1774**	**0.0000**	**977.6996**

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					
2019	0.5506	5.0268	4.8790	9.6600e-003	0.2206	0.2717	0.4923	0.0592	0.2501	0.3093	0.0000	973.2640	973.2640	0.1774	0.0000	977.6996
Maximum	**0.5506**	**5.0268**	**4.8790**	**9.6600e-003**	**0.2206**	**0.2717**	**0.4923**	**0.0592**	**0.2501**	**0.3093**	**0.0000**	**973.2640**	**973.2640**	**0.1774**	**0.0000**	**977.6996**

	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**

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Summer

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	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Energy	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
Mobile	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
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**	**0.0000**	**3.4200e-003**

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	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Energy	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
Mobile	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
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**	**0.0000**	**3.4200e-003**

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Summer

	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	Paving	Paving	9/8/2019	10/2/2019	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	6.00	132	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Summer

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
Paving	2	20.00	2.00	44.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Paving - 2019

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	lb/day										lb/day					
Off-Road	0.4027	4.0180	3.7331	5.0700e-003		0.2665	0.2665		0.2452	0.2452		502.3047	502.3047	0.1589		506.2778
Paving	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4173**	**4.0180**	**3.7331**	**5.0700e-003**		**0.2665**	**0.2665**		**0.2452**	**0.2452**		**502.3047**	**502.3047**	**0.1589**		**506.2778**

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Summer

3.2 Paving - 2019

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	lb/day										lb/day					
Hauling	0.0209	0.6859	0.1405	2.0900e-003	0.0427	2.1700e-003	0.0449	0.0117	2.0800e-003	0.0138		219.5922	219.5922	8.0200e-003		219.7928
Vendor	8.3500e-003	0.2545	0.0555	6.2000e-004	0.0135	1.5800e-003	0.0151	3.9000e-003	1.5100e-003	5.4000e-003		64.4541	64.4541	2.9300e-003		64.5273
Worker	0.1041	0.0684	0.9498	1.8800e-003	0.1643	1.4300e-003	0.1657	0.0436	1.3200e-003	0.0449		186.9130	186.9130	7.5500e-003		187.1017
Total	**0.1333**	**1.0088**	**1.1459**	**4.5900e-003**	**0.2206**	**5.1800e-003**	**0.2257**	**0.0592**	**4.9100e-003**	**0.0641**		**470.9594**	**470.9594**	**0.0185**		**471.4218**

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	lb/day										lb/day					
Off-Road	0.4027	4.0180	3.7331	5.0700e-003		0.2665	0.2665		0.2452	0.2452	0.0000	502.3047	502.3047	0.1589		506.2778
Paving	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4173**	**4.0180**	**3.7331**	**5.0700e-003**		**0.2665**	**0.2665**		**0.2452**	**0.2452**	**0.0000**	**502.3047**	**502.3047**	**0.1589**		**506.2778**

3.2 Paving - 2019

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	lb/day										lb/day					
Hauling	0.0209	0.6859	0.1405	2.0900e-003	0.0427	2.1700e-003	0.0449	0.0117	2.0800e-003	0.0138		219.5922	219.5922	8.0200e-003		219.7928
Vendor	8.3500e-003	0.2545	0.0555	6.2000e-004	0.0135	1.5800e-003	0.0151	3.9000e-003	1.5100e-003	5.4000e-003		64.4541	64.4541	2.9300e-003		64.5273
Worker	0.1041	0.0684	0.9498	1.8800e-003	0.1643	1.4300e-003	0.1657	0.0436	1.3200e-003	0.0449		186.9130	186.9130	7.5500e-003		187.1017
Total	**0.1333**	**1.0088**	**1.1459**	**4.5900e-003**	**0.2206**	**5.1800e-003**	**0.2257**	**0.0592**	**4.9100e-003**	**0.0641**		**470.9594**	**470.9594**	**0.0185**		**471.4218**

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	lb/day										lb/day					
Mitigated	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
Unmitigated	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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.600819	0.039944	0.152792	0.114199	0.019665	0.005435	0.017326	0.034891	0.002097	0.001901	0.007823	0.001574	0.001535
Parking Lot	0.600819	0.039944	0.152792	0.114199	0.019665	0.005435	0.017326	0.034891	0.002097	0.001901	0.007823	0.001574	0.001535

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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					
NaturalGas Mitigated	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
NaturalGas Unmitigated	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

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	lb/day										lb/day					
General Light Industry	0	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
Parking Lot	0	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
Total		**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**

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	lb/day										lb/day					
General Light Industry	0	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
Parking Lot	0	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
Total		**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**

6.0 Area Detail

6.1 Mitigation Measures Area

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Summer

	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					
Mitigated	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Unmitigated	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003

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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4200e-003**

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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Construction Emissions - Palmdale Recycling Facility

Antelope Valley APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.65	1000sqft	4.70	3,650.00	0
Parking Lot	11.00	Space	0.10	4,356.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2019
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

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

Project Characteristics -

Land Use - Based on AQ study

Construction Phase -

Off-road Equipment - Concrete pavement

Off-road Equipment - Estimated construction equipment usage

Trips and VMT - Calculated

Vehicle Trips - Construction only

Area Coating -

Landscape Equipment - Construction only

Energy Use - Construction only

Water And Wastewater - Construction only

Solid Waste - Construction only

Construction Off-road Equipment Mitigation -

Consumer Products - Construction only

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.25	0.00
tblEnergyUse	T24NG	13.65	0.00
tblLandUse	LandUseSquareFeet	4,400.00	4,356.00
tblLandUse	LotAcreage	0.08	4.70

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblSolidWaste	SolidWasteGenerationRate	4.53	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	44.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	844,062.50	0.00

2.0 Emissions Summary

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

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					
2019	0.5443	5.0351	4.7180	9.3500e-003	0.2206	0.2718	0.4923	0.0592	0.2502	0.3094	0.0000	942.5968	942.5968	0.1774	0.0000	947.0309
Maximum	**0.5443**	**5.0351**	**4.7180**	**9.3500e-003**	**0.2206**	**0.2718**	**0.4923**	**0.0592**	**0.2502**	**0.3094**	**0.0000**	**942.5968**	**942.5968**	**0.1774**	**0.0000**	**947.0309**

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					
2019	0.5443	5.0351	4.7180	9.3500e-003	0.2206	0.2718	0.4923	0.0592	0.2502	0.3094	0.0000	942.5968	942.5968	0.1774	0.0000	947.0309
Maximum	**0.5443**	**5.0351**	**4.7180**	**9.3500e-003**	**0.2206**	**0.2718**	**0.4923**	**0.0592**	**0.2502**	**0.3094**	**0.0000**	**942.5968**	**942.5968**	**0.1774**	**0.0000**	**947.0309**

	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**

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

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	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Energy	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
Mobile	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
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**	**0.0000**	**3.4200e-003**

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	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Energy	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
Mobile	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
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**	**0.0000**	**3.4200e-003**

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

	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	Paving	Paving	9/8/2019	10/2/2019	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	6.00	132	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

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
Paving	2	20.00	2.00	44.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Paving - 2019

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	lb/day										lb/day					
Off-Road	0.4027	4.0180	3.7331	5.0700e-003		0.2665	0.2665		0.2452	0.2452		502.3047	502.3047	0.1589		506.2778
Paving	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4173**	**4.0180**	**3.7331**	**5.0700e-003**		**0.2665**	**0.2665**		**0.2452**	**0.2452**		**502.3047**	**502.3047**	**0.1589**		**506.2778**

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

3.2 Paving - 2019

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	lb/day										lb/day					
Hauling	0.0217	0.6911	0.1551	2.0300e-003	0.0427	2.2100e-003	0.0449	0.0117	2.1200e-003	0.0138		213.4951	213.4951	8.6900e-003		213.7124
Vendor	8.7300e-003	0.2536	0.0631	5.9000e-004	0.0135	1.6000e-003	0.0151	3.9000e-003	1.5300e-003	5.4300e-003		61.9017	61.9017	3.2100e-003		61.9820
Worker	0.0966	0.0724	0.7667	1.6600e-003	0.1643	1.4300e-003	0.1657	0.0436	1.3200e-003	0.0449		164.8953	164.8953	6.5400e-003		165.0587
Total	**0.1271**	**1.0171**	**0.9849**	**4.2800e-003**	**0.2206**	**5.2400e-003**	**0.2258**	**0.0592**	**4.9700e-003**	**0.0642**		**440.2921**	**440.2921**	**0.0184**		**440.7531**

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	lb/day										lb/day					
Off-Road	0.4027	4.0180	3.7331	5.0700e-003		0.2665	0.2665		0.2452	0.2452	0.0000	502.3047	502.3047	0.1589		506.2778
Paving	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4173**	**4.0180**	**3.7331**	**5.0700e-003**		**0.2665**	**0.2665**		**0.2452**	**0.2452**	**0.0000**	**502.3047**	**502.3047**	**0.1589**		**506.2778**

3.2 Paving - 2019

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	lb/day										lb/day					
Hauling	0.0217	0.6911	0.1551	2.0300e-003	0.0427	2.2100e-003	0.0449	0.0117	2.1200e-003	0.0138		213.4951	213.4951	8.6900e-003		213.7124
Vendor	8.7300e-003	0.2536	0.0631	5.9000e-004	0.0135	1.6000e-003	0.0151	3.9000e-003	1.5300e-003	5.4300e-003		61.9017	61.9017	3.2100e-003		61.9820
Worker	0.0966	0.0724	0.7667	1.6600e-003	0.1643	1.4300e-003	0.1657	0.0436	1.3200e-003	0.0449		164.8953	164.8953	6.5400e-003		165.0587
Total	**0.1271**	**1.0171**	**0.9849**	**4.2800e-003**	**0.2206**	**5.2400e-003**	**0.2258**	**0.0592**	**4.9700e-003**	**0.0642**		**440.2921**	**440.2921**	**0.0184**		**440.7531**

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	lb/day										lb/day					
Mitigated	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
Unmitigated	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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.600819	0.039944	0.152792	0.114199	0.019665	0.005435	0.017326	0.034891	0.002097	0.001901	0.007823	0.001574	0.001535
Parking Lot	0.600819	0.039944	0.152792	0.114199	0.019665	0.005435	0.017326	0.034891	0.002097	0.001901	0.007823	0.001574	0.001535

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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					
NaturalGas Mitigated	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
NaturalGas Unmitigated	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

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	lb/day										lb/day					
General Light Industry	0	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
Parking Lot	0	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
Total		**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**

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	lb/day										lb/day					
General Light Industry	0	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
Parking Lot	0	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
Total		**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**

6.0 Area Detail

6.1 Mitigation Measures Area

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

	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					
Mitigated	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Unmitigated	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003

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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4200e-003**

Construction Emissions - Palmdale Recycling Facility - Antelope Valley APCD Air District, Winter

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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Total	**1.4000e-004**	**1.0000e-005**	**1.5100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

APPENDIX A-2

AIR QUALITY STUDY – M.S. HATCH CONSULTING

Date: March 9, 2018
To: Attn: Carlene Saxton, Planning Department
City of Palmdale
From: M. S. Hatch Consulting, LLC
Subject: Air Quality Study – Palmdale Recycling Center – APN 3022-015-009

M. S. Hatch Consulting, LLC appreciates the opportunity to prepare the air quality study for the proposed operation of the Palmdale Recycling Center. The proposed recycling center will make use of the existing home and metal building located at 38939 15th St E, Palmdale, CA 93550. Based on input provided from J & E Design, the project will not require construction; as such, this air quality study only includes the operational criteria pollutant and greenhouse gas emissions for the proposed project.

Executive Summary

Table 1 and Table 2 compare the estimated annual and daily emissions summaries from the operation of the proposed Palmdale Recycling Center to the significant emission thresholds described in the Antelope Valley Air Quality Management District (AVAQMD) California Environmental Quality Act (CEQA) and Federal Conformity Guidelines, dated August 2016, included in Attachment A. The total operational criteria pollutant and greenhouse gas emissions from the project **are well below the applicable thresholds**. Greenhouse gas emissions are presented in units of carbon dioxide equivalent (CO_2e). Based on communication with the City of Palmdale Planning Department, the proposed project does not need to be evaluated for potentially exposing sensitive receptors to substantial pollutant concentrations.[1] As such, hazardous air pollutants (HAP) emissions were not calculated and the project was not evaluated for potential health risks to sensitive receptors.

Table 1. Annual Emissions Summary and Significance Thresholds

Emissions Source	Total Emissions (tons per year)						
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$	CO_2e
Total Operational Emissions	0.11	0.87	0.87	< 0.01	0.07	0.05	150
Significant Emissions Threshold	**25**	**25**	**100**	**25**	**15**	**12**	**100,000**

[1] Based on call with City of Palmdale Planning, Megan Taggert on 1/25/2018.

Table 2. Daily Emissions Summary and Significance Thresholds

Emissions Source	Total Emissions (pounds per day)						
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$	CO_2e
Total Operational Emissions	0.82	6.61	6.70	0.01	0.57	0.42	1,091
Significant Emissions Threshold	**137**	**137**	**548**	**137**	**82**	**65**	**548,000**

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NO_X: oxides of nitrogen; CO: Carbon monoxide; SO_X: Oxides of sulfur; $PM_{2.5}$: particulate matter less than 2.5 micrometers in diameter; PM_{10}: particulate matter less than 10 micrometers in diameter; CO_2e: Carbon dioxide equivalent

Project Description

The proposed project includes the operation of the Palmdale Recycling Center. The recycling center will use the existing home and metal building located at 38939 15th St E, Palmdale, CA 93550. The home will be used as the office and the metal building will be used for storage. The site location is included in Figure 1 and the proposed site plan is included in Figure 2.

Figure 1. Regional Vicinity

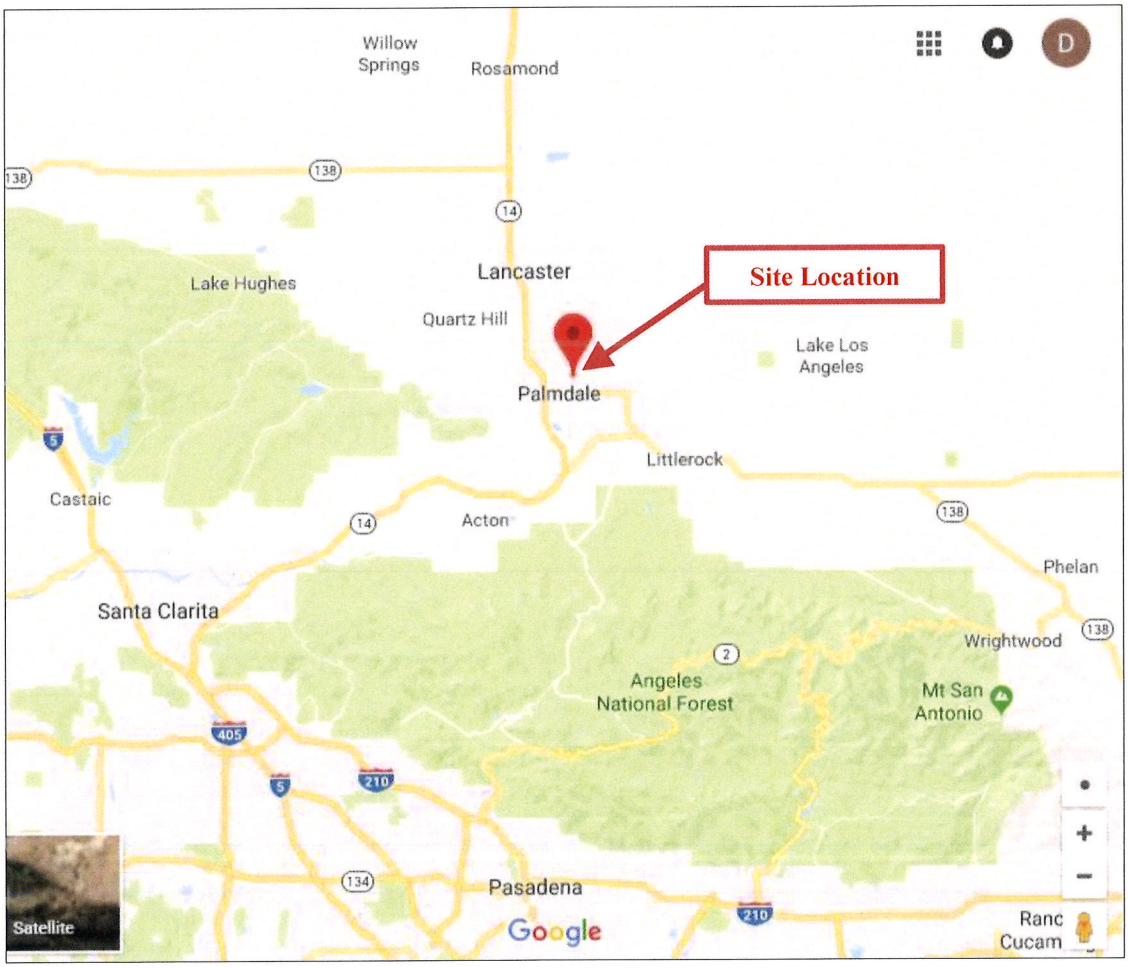
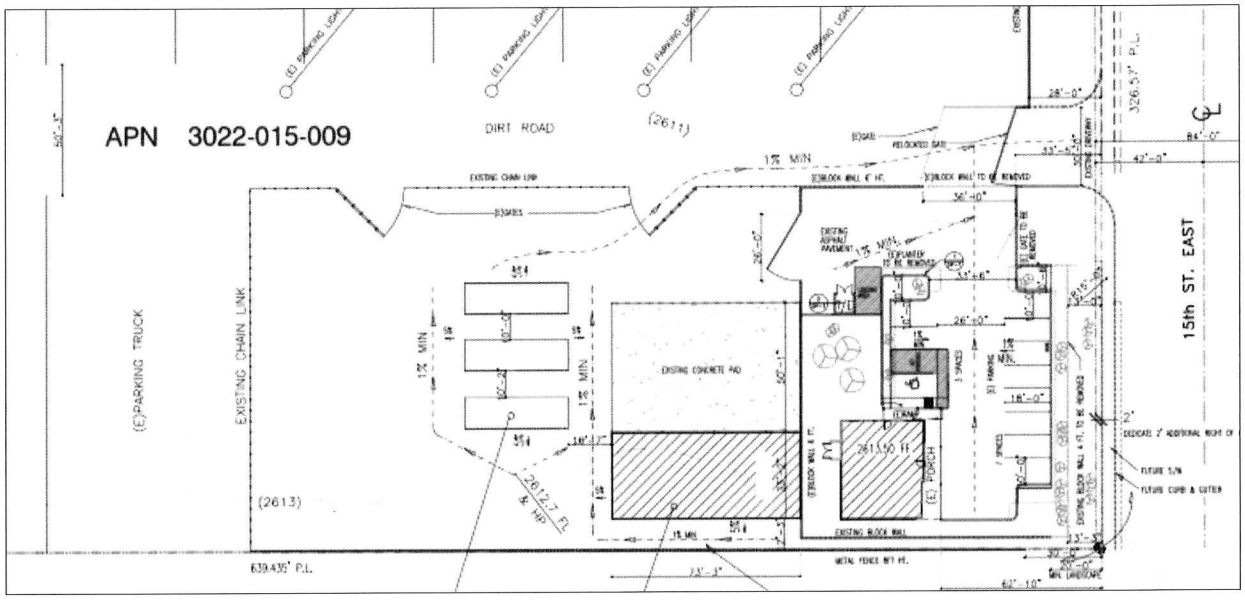


Figure 2. Site Plan – Proposed Palmdale Recycling Center



Sources of Emissions

The emissions associated with the proposed project consist of operational emissions from the Palmdale Recycling Center. Based on input from J & E Design, the recycling center will not require construction; as such, there are no construction emissions included in this study. Operational emissions consist of area sources (e.g., re-applying architectural, consumer products, and landscaping equipment), energy use (i.e., electricity and natural gas), mobile sources (e.g., commuting), and off-road equipment (e.g., forklift, excavator).

Emissions Estimates

Table 3 and 4 present the annual and daily emissions summaries from the operation of the proposed project, respectively. Emissions were estimated using CalEEMod Version 2016.3.2. The detailed emissions model outputs are included in Attachment B.

The AVAQMD CEQA Guidelines require certain projects to be evaluated for potentially exposing sensitive receptors to substantial pollutant concentrations.[2] This project is considered an industrial project. Based on satellite images of the location, it appears that there are abandoned homes on the adjacent lot (approximately

[2] Residences, schools, daycare centers, playgrounds and medical facilities are considered sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated using significance threshold criteria number 4 (refer to the significance threshold discussion): any industrial project within 1000 feet; a distribution center (40 or more trucks per day) within 1000 feet; a major transportation project (50,000 or more vehicles per day) within 1000 feet; a dry cleaner using perchloroethylene within 500 feet; or a gasoline dispensing facility within 300 feet.

500 feet from the northwest corner of the lot). Based on the Palmdale Zoning Map, both lots are zoned for Light Industrial (M-1) use.[3] Since the adjacent lot is not zoned for residential use, the abandoned homes were likely used for an industrial purpose, such as the proposed office (i.e., house) that the Palmdale Recycling Center plans to utilize. Housing structures used in this manner would not be considered permanent residences.

This topic was discussed with the City of Palmdale Planning Department.[4] Based on this communication, it was determined that a Health Risk Assessment would not be required for this project. As such, HAP emissions were not calculated, and the project was not evaluated for potential health risks to sensitive receptors.

Table 3. Annual Construction and Operational Emissions Summary

Emissions Source	Total Emissions (tons per year)						
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$	CO_2e
Construction Emissions	Construction is not required for this project						
Operational Emissions							
Area Sources	0.02	0.00	< 0.01	0.00	0.00	0.00	< 1
Energy	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	17
Mobile	0.01	0.05	0.12	< 0.01	0.02	0.01	27
Off-road Equipment	0.08	0.82	0.74	< 0.01	0.05	0.05	99
Waste	N/A	N/A	N/A	N/A	0.00	0.00	2
Water	N/A	N/A	N/A	N/A	0.00	0.00	5
Total Operational Emissions	**0.11**	**0.87**	**0.87**	**< 0.01**	**0.07**	**0.05**	**150**
Significant Emissions Threshold	**25**	**25**	**100**	**25**	**15**	**12**	**100,000**

Table 4. Daily Construction and Operational Emissions Summary

Emissions Source	Total Emissions (pounds per day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2e
Construction Emissions	Construction is not required for this project						
Operational Emissions							
Area Sources	0.09	< 0.01	< 0.01	0.00	< 0.01	< 0.01	< 1
Energy	< 0.01	0.02	0.01	< 0.01	< 0.01	< 0.01	21
Mobile	0.08	0.32	0.96	< 0.01	0.16	0.04	232
Off-road Equipment	0.65	6.28	5.73	0.01	0.40	0.37	838
Waste	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Water	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Operational Emissions	**0.82**	**6.61**	**6.70**	**0.01**	**0.57**	**0.42**	**1,091**
Significant Emissions Threshold	**137**	**137**	**548**	**137**	**82**	**65**	**548,000**

[3] https://www.cityofpalmdale.org/Portals/0/Documents/Maps/10-06-2014_GIS_00041-01_Zoning.pdf
[4] Call with City of Palmdale Planning Department, Megan Taggert on 1/25/2018

Emissions Calculation Methodology

The operational emissions for this project were based two CalEEMod land use types: *General Light Industry* and *Parking Lot*. A discussion on the land use types that were used for the emissions modeling is included below.

CalEEMod Land Use Type: General Light Industry

The *General Light Industry* land use type was selected as the best option to model the emissions associated with the Palmdale Recycling Center. Based on the Palmdale Zoning Map, the lot is zoned as Light Industrial (M-1). The total building square footage of 3,652 square feet was provided by the J & E Design.[5] The acreage is based on the total lot acreage (4.8 acres) minus the parking area (0.1 acres).

CalEEMod Land Use Type: Parking Lot

The *Parking Lot* land use type was used to model the emissions associated with the parking lot. The number of parking spaces and the square footage (4,356 square feet) of the parking lot was provided by J & E Design.

Operational Emissions

Operational emissions consist of area sources (e.g., re-applying architectural coatings, consumer products, and landscaping equipment), energy use (i.e., electricity and natural gas), mobile sources (e.g., commuting), and off-road equipment (e.g., forklifts, excavator) used during the operation of the project. Mobile source emissions and energy use emissions were calculated using CalEEMod default factors.

For area-source architectural coating operations (i.e., re-applying coatings), VOC emissions were calculated based on the assumption that the coatings would be compliant with the VOC content limits of AVAQMD Rule 1113.[6] All other area source emissions were calculated using CalEEMod default factors.

Table 5 provides the anticipated number of operational off-road equipment that will be used at the recycling center. Based on input from the J & E Design, two propane forklifts and one small diesel excavator will be used at the recycling center.[7] Since CalEEMod does not have the option to select propane as the fuel type, compressed natural gas (CNG) was selected as the best option to estimate the forklift emissions.[8] Diesel

[5] Based on J & E Design input on data request form, provided on 2/21/2018.
[6] For building coatings, assumed to be 90% flat paints (50 g/L) and 10% non-flat paints (100 g/L). For the parking lot coatings, assumed to be compliant with the Traffic Marking Coating category (100 g/L). VOC limits based on AVAQMD Rule 1113.
[7] Based on J & E Design email on 3/5/2018
[8] CalEEMod fuel options: diesel (default), bio-diesel, compressed natural gas (CNG), and electric

was selected as the fuel type for the excavator. The hours per day, days per year, and horsepower in Table 5 were based on CalEEMod default values.

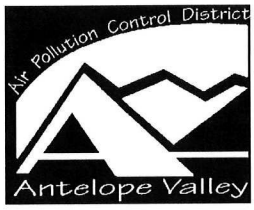
Table 5. Operational Off-road Equipment

Equipment Type	Number of Equipment	Hours per day	Days per year	Horsepower
Forklifts	2	8	260	89
Excavator	1	8	260	158

Findings

The estimated operational emissions of criteria pollutants and greenhouse gases from the Palmdale Recycling Center **are well below the applicable AVAQMD Significant Emissions Thresholds**; therefore, this project does not have a significant air quality impact on the environment. Since the operational emissions are below the significance thresholds, emissions mitigation measures are not required.

ATTACHMENT A – Antelope Valley AQMD California Environmental Quality Act (CEQA) and Federal Conformity Guidelines



Antelope Valley AQMD

California Environmental Quality Act (CEQA)

and

Federal Conformity

Guidelines

August 2016

AVAQMD Planning, Rule-making and Grants Section
AVAQMD Air Monitoring Section

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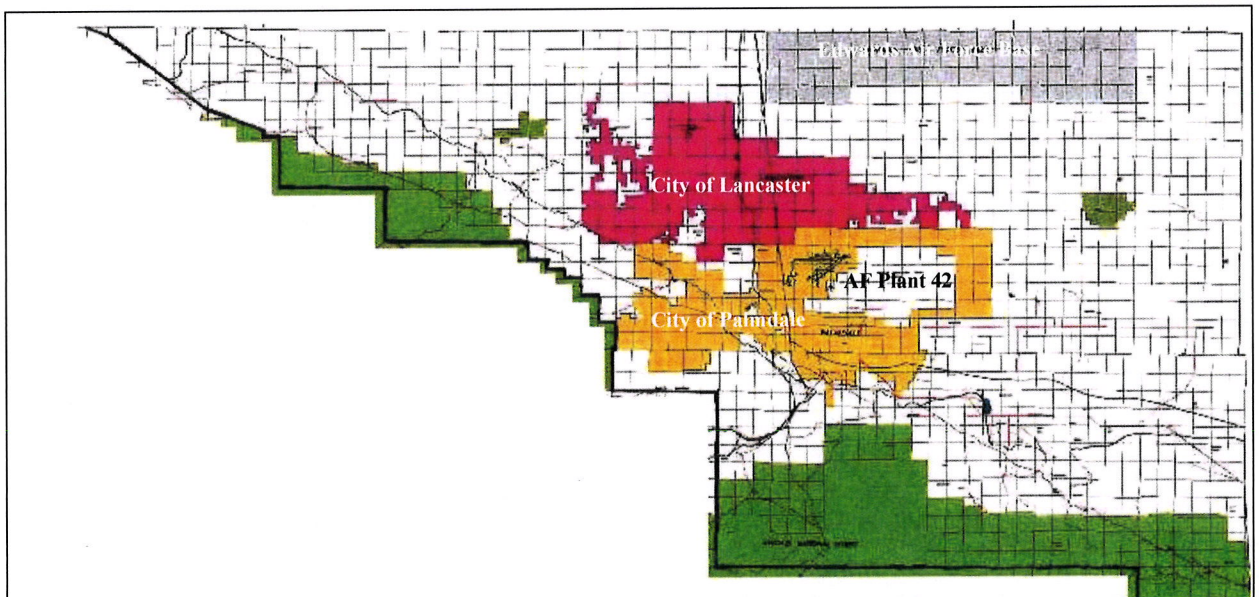
Background

Under the California Environmental Quality Act (CEQA), the AVAQMD (District) is an expert commenting agency on air quality and related matters within its jurisdiction (or impacting on its jurisdiction). The District has dedicated resources to reviewing projects to ensure that they will not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any federal attainment plan. The District has adopted a federal attainment plan for ozone pursuant to the Federal Clean Air Act.

Purpose

These Guidelines are intended to assist persons preparing environmental analysis or review documents for any project within the jurisdiction of the District by providing background information and guidance on the preferred analysis approach.



Map 1 - Antelope Valley Air Quality Management District Jurisdiction

Jurisdiction

The District has jurisdiction over the northern, desert portion of Los Angeles County (please refer to Map 1). This region includes the incorporated cities of Lancaster and Palmdale, Air Force Plant 42, and the southern portion of Edwards Air Force Base. The Kern County-Los Angeles County boundary forms the northern boundary of the District; the San Bernardino-Los Angeles County boundary forms the eastern boundary of the District.

Non-attainment Designations and Classification Status

The United States Environmental Protection Agency and the California Air Resources Board have designated portions of the District non-attainment for a variety of pollutants, and some of those designations have an associated classification. Please refer to Table 1 for a chart of these designations and classifications.

Table 1 – AVAQMD Designations and Classifications

Ambient Air Quality Standard	AVAQMD
One-hour Ozone (Federal) – standard has been revoked, this is historical information only	Proposed attainment in 2014; historical classification Severe-17
Eight-hour Ozone (Federal 84 ppb (1997))	Subpart 2 Nonattainment; classified Severe-15
Eight-hour Ozone (Federal 75 ppb (2008))	Nonattainment, classified Severe-15
Eight-hour Ozone (Federal 70 ppb (2015))	Expected nonattainment; classification to be determined
Ozone (State)	Nonattainment; classified Extreme
PM_{10} 24-hour (Federal)	Unclassifiable/attainment
$PM_{2.5}$ Annual (Federal)	Unclassified/attainment
$PM_{2.5}$ 24-hour (Federal)	Unclassified/attainment
$PM_{2.5}$ (State)	Unclassified
PM_{10} (State)	Nonattainment
Carbon Monoxide (State and Federal)	Attainment
Nitrogen Dioxide (State and Federal)	Attainment/unclassified
Sulfur Dioxide (State and Federal)	Attainment/unclassified
Lead (State and Federal)	Attainment
Particulate Sulfate (State)	Unclassified
Hydrogen Sulfide (State)	Unclassified
Visibility Reducing Particles (State)	Unclassified

Attainment Plans

The District has adopted a single attainment plan for ozone. Please refer to Table 2 for information regarding this attainment plan.

Table 2 – AVAQMD Attainment Plans

Name of Plan	Date of Adoption	Standard(s) Targeted	Applicable Area	Pollutant(s) Targeted	Attainment Date*
AVAQMD 2004 Ozone Attainment Plan (State and Federal)	4/2004	Federal one hour ozone	Entire District	NO_x and VOC	2007
AVAQMD Federal 8-Hour Ozone Attainment Plan	5/20/2008	Federal eight hour ozone (84 ppb)	Entire District	NO_x and VOC	2019 (revised from 2021)

*Note: A historical attainment date given in an attainment plan does not necessarily mean that the affected area has been re-designated to attainment; please refer to Table 1.

Rules and Regulations

The District maintains a set of Rules and Regulations to improve air quality and maintain good air quality. Please contact the District to obtain a copy of the District rulebook, or visit www.avaqmd.ca.gov.

Recommended Environmental Setting Elements

Air Quality Data

The District gathers a variety of air quality data at the Lancaster monitoring site. Table 3 details the data available from the District for this site.

Table 3 - Available Air Quality Data

Site	Address	Pollutants	Dates
Lancaster	W. Ponderosa	O_3, NO_x, CO, PM_{10} (Hi-Vol and TEOM)	7/1/97 to 11/01
Lancaster	W. Ponderosa	$PM_{2.5}$	1/1/99 to 11/01
Lancaster	43301 Division St.	O_3, NO_x, CO, PM_{10} (hourly), $PM_{2.5}$	11/01 to present

Meteorological Data

A variety of meteorological data is available from the District for the Lancaster site. Table 4 contains a list of the data available for the Lancaster site.

Table 4 - Available Meteorological Data

Site	Address	Data	Dates
Lancaster	W. Ponderosa	Wind speed/direction, pressure, temperature, humidity	7/1/97 to 11/01
Lancaster	43301 Division St.	Wind speed/direction, pressure, temperature, humidity	11/01 to present

Topography and Climate Discussion

The District covers a western portion of the Mojave Desert Air Basin (MDAB). The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains which dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada mountains to the north; air masses pushed onshore in southern California by differential heating are channeled through the MDAB. The MDAB is separated from the southern California coastal and central California valley regions by mountains (highest elevation approximately 10,000 feet), whose passes form the main channels for these air masses. The Antelope Valley is bordered in the northwest by the Tehachapi Mountains, separated from the Sierra Nevadas in the north by the Tehachapi Pass (3,800 ft elevation). The Antelope Valley is bordered in the south by the San Gabriel Mountains, bisected by Soledad Canyon (3,300 ft).

During the summer the MDAB is generally influenced by a Pacific Subtropical High cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time the reach the desert. Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south. MDAB annual average precipitation is presented in Table 5; the data displayed is 1981-2010 averages from the NOAA National Climate Data Center. The MDAB is classified as a dry-hot desert climate (BWh), with portions classified as dry-very hot desert (BWhh), to indicate at least three months have maximum average temperatures over 100.4° F.

Table 5 - MDAB Average Annual Precipitation

Site	County	District	Precipitation (inches)
Baker	San Bernardino	MDAQMD	4.48
Barstow Daggett Airport	San Bernardino	MDAQMD	4.06
Barstow	San Bernardino	MDAQMD	5.30
Blythe Airport	Riverside	MDAQMD	3.77
Desert Center 2 NNE	Riverside	SCAQMD	3.92
Eagle Mountain	Riverside	SCAQMD	4.10
Goldstone Echo Number 2	San Bernardino	MDAQMD	5.88
Joshua Tree	San Bernardino	MDAQMD	5.11
Lancaster Wm J Fox Field	Los Angeles	AVAQMD	7.38
Mitchell Caverns	San Bernardino	MDAQMD	11.50
Mojave	Kern	EKAPCD	6.67
Mountain Pass 1 SE	San Bernardino	MDAQMD	9.94
Needles Airport	San Bernardino	MDAQMD	4.62
Palmdale Airport	Los Angeles	AVAQMD	8.30
Palmdale	Los Angeles	AVAQMD	7.40

Site	County	District	Precipitation (inches)
Parker Reservoir	San Bernardino	MDAQMD	6.16
Pearblossom	Los Angeles	AVAQMD	6.73
Randsburg	Kern	EKAPCD	7.26
Trona	San Bernardino	MDAQMD	3.88
Twentynine Palms	San Bernardino	MDAQMD	4.46
Victorville Pump Plant	San Bernardino	MDAQMD	6.15
Wrightwood	Los Angeles	AVAQMD	22.61

Recommended Impacts Discussion Elements

Direct Impacts

Direct impacts are the result of the project itself (from its construction and operation), in the form of project activity and trips generated by the project. For example, in the case of a subdivision project, construction emissions (equipment exhaust, wind erosion, vehicle exhaust), housing use activity (natural gas consumption) and trips to and from the housing (vehicle exhaust, tire wear) represent direct impacts. In the case of a new mine project, construction emissions (equipment exhaust, wind erosion, vehicle exhaust), material handling (drilling, blasting, transfers, crushing, screening, bagging), operational emissions (wind erosion, vehicle travel, vehicle exhaust, tire wear), and employee/customer/delivery travel (vehicle exhaust, tire wear) represent direct impacts.

Indirect Impacts

Indirect impacts are the result of changes that would not occur without the project. In the case of a subdivision project, indirect impacts on the surrounding community can be generated in many ways: nearby construction of roadways (or roadway modifications) and other infrastructure to support the subdivision, construction and operation of new commercial/retail establishments, changes in traffic/circulation patterns that result in increased congestion/delays, etc. In the case of a new mine project, indirect impacts can be generated by nearby construction of infrastructure to support the mine, housing constructed and/or occupied by mine employees, changes in traffic/circulation patterns that result in increased congestion/delays, etc.

Cumulative Impacts

Cumulative impacts are similar to direct and indirect impacts of the project, which the project contributes to. In the case of a subdivision project, a given project has a cumulative impact with all other subdivision projects, from the standpoint of each type of impact (cumulative construction emissions, residential natural gas consumption, solvent use, transportation emissions, congestion, etc.). Similarly, a new mine project has a cumulative impact with all other mining projects, from the standpoint of each type of impact (cumulative construction emissions, diesel equipment emissions, blasting emissions, fugitive emissions, transportation, congestion, etc.).

Conformity Impacts

A project is non-conforming if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable District rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Conformity with growth forecasts can be established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast. An example of a non-conforming project would be one that increases the gross number of dwelling units, increases the number of trips, and/or increases the overall vehicle miles traveled in an affected area (relative to the applicable land use plan).

Sensitive Receptor Land Uses

Residences, schools, daycare centers, playgrounds and medical facilities are considered sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated using significance threshold criteria number 4 (refer to the significance threshold discussion):

- Any industrial project within 1000 feet;
- A distribution center (40 or more trucks per day) within 1000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1000 feet;
- A dry cleaner using perchloroethylene within 500 feet;
- A gasoline dispensing facility within 300 feet.

Recommended Substantiation Discussion Elements

For projects applying the emissions-based significance thresholds, project emissions quantification is required. In addition the environmental documentation must include support for the quantification methodology used, including emission factors, emission factors source, assumptions, and sample calculations where necessary. For projects using a calculation tool such as CalEEMod or URBEMIS, the support section must specify the inputs and settings used for the evaluation.

Significance Thresholds

Any project is significant if it triggers or exceeds the most appropriate evaluation criteria. The District will clarify upon request which threshold is most appropriate for a given project; in general, the emissions comparison (criteria number 1) is sufficient:

1. Generates total emissions (direct and indirect) in excess of the thresholds given in Table 6;
2. Generates a violation of any ambient air quality standard when added to the local background;
3. Does not conform with the applicable attainment or maintenance plan(s) [1];

[1] A project is deemed to not exceed this threshold, and hence not be significant, if it is consistent with the existing land use plan. Zoning changes, specific plans, general plan amendments and similar land use plan changes which do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to not exceed this threshold.

4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1.*

**Refer to the Sensitive Receptor Land Use discussion above*

A significant project must incorporate mitigation sufficient to reduce its impact to a level that is not significant. A project that cannot be mitigated to a level that is not significant must incorporate all feasible mitigation. Note that the emission thresholds are given as a daily value and an annual value, so that a multi-phased project (such as a project with a construction phase and a separate operational phase) with phases shorter than one year can be compared to the daily value.

Table 6 – Significant Emissions Thresholds

Criteria Pollutant	Annual Threshold (tons)	Daily Threshold (pounds)
Greenhouse Gases (CO2e)	100,000	548,000
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NO_x)	25	137
Volatile Organic Compounds (VOC)	25	137
Oxides of Sulfur (SO_x)	25	137
Particulate Matter (PM_{10})	15	82
Particulate Matter ($PM_{2.5}$)	12	65
Hydrogen Sulfide (H_2S)	10	54
Lead (Pb)	0.6	3

District Contacts

If an address is not listed, please use the general address, to the attention of the listed individual.

AVAQMD General and Rulebook	Crystal Goree (661) 723-8070 x1 Mailing and Physical Address: 43301 Division St., Suite 206 Lancaster, CA 93535-4649
Planning and Rules	Tracy Walters (760) 245-1661 x6122
Air Quality and Meteorological Data	Orlando Salinas (760) 245-1661 x1810
CEQA and Conformity	Alan De Salvio (760) 245-1661 x6726
Permitting	Bret Banks (661) 723-8070 x2

Appendix A – Basic Definitions of Major Air Pollutants

Technical and/or legal definitions exist for many of these pollutants, depending on context. The following definitions are for general, introductory purposes only:

Carbon Dioxide (CO_2) – Common product of combustion. Not a criteria pollutant, but considered an important "greenhouse gas." Important on a national or global scale.

Carbon Monoxide (CO) – Common product of incomplete combustion. A criteria pollutant with state and federal standards. Not a primary photochemical reaction compound, but involved in photochemical reactions. Dissipates rapidly, and is therefore only important on a local scale near sources.

Criteria Pollutants – Those air pollutants specifically identified for control under the Federal Clean Air Act (currently six: carbon monoxide, nitrogen oxides, lead, sulfur oxides, ozone and particulates).

Lead (Pb) – A heavy metal, present in the environment mainly due to historical use in motor vehicle fuel. Primarily associated with lead smelting operations. A criteria pollutant with state and federal standards. Primarily of concern near sources.

Oxides of Nitrogen (NO_x) – Common product of combustion in the presence of nitrogen. Includes NO_2, which is a criteria pollutant with state and federal standards. Locally and regionally important due to its involvement in the photochemical formation of ozone.

Oxides of Sulfur (SO_x) – Common product of combustion in the presence of sulfur. Associated primarily with diesel and coal burning. Includes SO_2, a criteria pollutant with state and federal standards. Primarily of concern near sources.

Ozone (O_3) – A gas mainly produced by a photochemical reaction between reactive organic gases and oxides of nitrogen in the presence of sunlight (also produced by molecular oxygen in the presence of ultraviolet light or electrical discharge). A strong oxidant that is damaging at ground level but necessary at high altitude (in the stratosphere, where it absorbs dangerous ultraviolet light). Also considered an important greenhouse gas. A criteria pollutant with state and federal standards.

Particulate Matter (TSP or PM_{30}) – Solid or liquid matter suspended in the atmosphere, excluding water. Includes aerosols and droplets that form in the atmosphere. Locally and regionally important.

Reactive/Volatile Organic Compounds/Gases (ROG, VOC, NMOG, NMOC) – A portion of total organic compounds or gases, excludes methane, ethane and acetone (due to low photochemical reactivity). "ROG" is generally used by the California Air Resources Board, "VOC" is generally used by the United States Environmental Protection Agency, but all four terms are interchangeable for most uses. Regionally important due to its involvement in the photochemical reaction that produces ozone.

Respirable Particulate Matter (coarse or PM_{10}, and fine or $PM_{2.5}$) – That portion of particulate matter that tends to penetrate into the human lung. The subscript refers to aerodynamic diameter. Criteria pollutants with state and federal standards. Locally and regionally important.

Total Organic Compounds/Gases (TOC or TOG) – Compounds containing at least one atom of carbon, except carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and metallic carbonates. Primarily methane in the atmosphere, a "greenhouse gas."

ATTACHMENT B – CalEEMod Emissions Model Output

Air Quality Study - Palmdale Recycling Center - APN 3022-015-009

Antelope Valley APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.65	1000sqft	4.70	3,652.00	0
Parking Lot	11.00	Space	0.10	4,356.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2018
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

Project Characteristics -

Land Use - Provided by client on data request form. Based on call with client, entire lot is 4.8 acres.

Construction Phase - Based on client input, the project will require no construction. The recycling center will use the existing buildings on site to operate.

Off-road Equipment -

Area Coating - VOC limits from AVAQMD Rule 1113. For the building, assumes 90% flat paint (50 g/L) and 10% non-flat (100 g/L). For parking lot coatings, assumed to be compliant with the Traffic Marking Coating category VOC limit of 100 g/L.

Operational Off-Road Equipment - Based on client's discussion with owner, 2 propane forklifts and 1 small diesel excavator will be used.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	55
tblAreaCoating	Area_EF_Nonresidential_Interior	250	55
tblAreaCoating	Area_EF_Parking	250	100
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	PhaseEndDate	5/7/2018	4/30/2018
tblLandUse	LandUseSquareFeet	4,400.00	4,356.00
tblLandUse	LotAcreage	0.08	4.70
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperLoadFactor	0.20	0.20
tblOperationalOffRoadEquipment	OperLoadFactor	0.38	0.38
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00

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					
2018	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
Maximum	**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**

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					
2018	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
Maximum	**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**

	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)
		Highest		

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	0.0156	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Energy	3.6000e-004	3.2400e-003	2.7200e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	16.9292	16.9292	6.2000e-004	1.8000e-004	16.9981
Mobile	9.3300e-003	0.0460	0.1189	2.9000e-004	0.0213	3.5000e-004	0.0217	5.7200e-003	3.3000e-004	6.0500e-003	0.0000	26.8680	26.8680	1.3300e-003	0.0000	26.9011
Offroad	0.0843	0.8159	0.7445	1.0700e-003		0.0525	0.0525		0.0483	0.0483	0.0000	98.0381	98.0381	0.0305	0.0000	98.8011
Waste						0.0000	0.0000		0.0000	0.0000	0.9196	0.0000	0.9196	0.0543	0.0000	2.2781
Water						0.0000	0.0000		0.0000	0.0000	0.2678	3.5018	3.7696	0.0277	6.8000e-004	4.6633
Total	**0.1096**	**0.8651**	**0.8663**	**1.3800e-003**	**0.0213**	**0.0531**	**0.0744**	**5.7200e-003**	**0.0488**	**0.0546**	**1.1873**	**145.3374**	**146.5247**	**0.1145**	**8.6000e-004**	**149.6420**

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	0.0156	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Energy	3.6000e-004	3.2400e-003	2.7200e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	16.9292	16.9292	6.2000e-004	1.8000e-004	16.9981
Mobile	9.3300e-003	0.0460	0.1189	2.9000e-004	0.0213	3.5000e-004	0.0217	5.7200e-003	3.3000e-004	6.0500e-003	0.0000	26.8680	26.8680	1.3300e-003	0.0000	26.9011
Offroad	0.0843	0.8159	0.7445	1.0700e-003		0.0525	0.0525		0.0483	0.0483	0.0000	98.0381	98.0381	0.0305	0.0000	98.8011
Waste						0.0000	0.0000		0.0000	0.0000	0.9196	0.0000	0.9196	0.0543	0.0000	2.2781
Water						0.0000	0.0000		0.0000	0.0000	0.2678	3.5018	3.7696	0.0277	6.8000e-004	4.6633
Total	**0.1096**	**0.8651**	**0.8663**	**1.3800e-003**	**0.0213**	**0.0531**	**0.0744**	**5.7200e-003**	**0.0488**	**0.0546**	**1.1873**	**145.3374**	**146.5247**	**0.1145**	**8.6000e-004**	**149.6420**

	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	Site Preparation	Site Preparation	5/1/2018	4/30/2018	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2018

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	0.0000	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
Off-Road	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
Total	**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**

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	0.0000	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
Total	**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**

3.2 Site Preparation - 2018

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	0.0000	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
Off-Road	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
Total	**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**

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	0.0000	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
Total	**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**

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	9.3300e-003	0.0460	0.1189	2.9000e-004	0.0213	3.5000e-004	0.0217	5.7200e-003	3.3000e-004	6.0500e-003	0.0000	26.8680	26.8680	1.3300e-003	0.0000	26.9011
Unmitigated	9.3300e-003	0.0460	0.1189	2.9000e-004	0.0213	3.5000e-004	0.0217	5.7200e-003	3.3000e-004	6.0500e-003	0.0000	26.8680	26.8680	1.3300e-003	0.0000	26.9011

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	25.45	4.82	2.48	56,128	56,128
Parking Lot	0.00	0.00	0.00		
Total	25.45	4.82	2.48	56,128	56,128

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.591922	0.041291	0.154799	0.119251	0.021047	0.005625	0.016923	0.033921	0.002047	0.001892	0.008041	0.001585	0.001656
Parking Lot	0.591922	0.041291	0.154799	0.119251	0.021047	0.005625	0.016923	0.033921	0.002047	0.001892	0.008041	0.001585	0.001656

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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	13.4018	13.4018	5.5000e-004	1.1000e-004	13.4497
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	13.4018	13.4018	5.5000e-004	1.1000e-004	13.4497
NaturalGas Mitigated	3.6000e-004	3.2400e-003	2.7200e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	3.5274	3.5274	7.0000e-005	6.0000e-005	3.5484
NaturalGas Unmitigated	3.6000e-004	3.2400e-003	2.7200e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	3.5274	3.5274	7.0000e-005	6.0000e-005	3.5484

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					
General Light Industry	66101.2	3.6000e-004	3.2400e-003	2.7200e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	3.5274	3.5274	7.0000e-005	6.0000e-005	3.5484
Parking Lot	0	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
Total		**3.6000e-004**	**3.2400e-003**	**2.7200e-003**	**2.0000e-005**		**2.5000e-004**	**2.5000e-004**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**3.5274**	**3.5274**	**7.0000e-005**	**6.0000e-005**	**3.5484**

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					
General Light Industry	66101.2	3.6000e-004	3.2400e-003	2.7200e-003	2.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	3.5274	3.5274	7.0000e-005	6.0000e-005	3.5484
Parking Lot	0	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
Total		**3.6000e-004**	**3.2400e-003**	**2.7200e-003**	**2.0000e-005**		**2.5000e-004**	**2.5000e-004**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**3.5274**	**3.5274**	**7.0000e-005**	**6.0000e-005**	**3.5484**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	40537.2	12.9160	5.3000e-004	1.1000e-004	12.9622
Parking Lot	1524.6	0.4858	2.0000e-005	0.0000	0.4875
Total		**13.4018**	**5.5000e-004**	**1.1000e-004**	**13.4497**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	40537.2	12.9160	5.3000e-004	1.1000e-004	12.9622
Parking Lot	1524.6	0.4858	2.0000e-005	0.0000	0.4875
Total		**13.4018**	**5.5000e-004**	**1.1000e-004**	**13.4497**

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	0.0156	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Unmitigated	0.0156	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004

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	9.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Total	**0.0155**	**0.0000**	**1.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.6000e-004**	**2.6000e-004**	**0.0000**	**0.0000**	**2.8000e-004**

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	9.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.6000e-004	2.6000e-004	0.0000	0.0000	2.8000e-004
Total	**0.0155**	**0.0000**	**1.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.6000e-004**	**2.6000e-004**	**0.0000**	**0.0000**	**2.8000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.7696	0.0277	6.8000e-004	4.6633
Unmitigated	3.7696	0.0277	6.8000e-004	4.6633

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.844063 / 0	3.7696	0.0277	6.8000e-004	4.6633
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**3.7696**	**0.0277**	**6.8000e-004**	**4.6633**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.844063 / 0	3.7696	0.0277	6.8000e-004	4.6633
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**3.7696**	**0.0277**	**6.8000e-004**	**4.6633**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.9196	0.0543	0.0000	2.2781
Unmitigated	0.9196	0.0543	0.0000	2.2781

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	4.53	0.9196	0.0543	0.0000	2.2781
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.9196**	**0.0543**	**0.0000**	**2.2781**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	4.53	0.9196	0.0543	0.0000	2.2781
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.9196**	**0.0543**	**0.0000**	**2.2781**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	8.00	260	89	0.20	CNG
Excavators	1	8.00	260	158	0.38	Diesel

UnMitigated/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
Equipment Type	tons/yr										MT/yr					
Excavators	0.0378	0.4045	0.4280	6.7000e-004		0.0196	0.0196		0.0181	0.0181	0.0000	61.5831	61.5831	0.0192	0.0000	62.0624
Forklifts	0.0466	0.4114	0.3165	4.0000e-004		0.0328	0.0328		0.0302	0.0302	0.0000	36.4549	36.4549	0.0114	0.0000	36.7387
Total	**0.0843**	**0.8159**	**0.7445**	**1.0700e-003**		**0.0525**	**0.0525**		**0.0483**	**0.0483**	**0.0000**	**98.0381**	**98.0381**	**0.0305**	**0.0000**	**98.8011**

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

Air Quality Study - Palmdale Recycling Center - APN 3022-015-009

Antelope Valley APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.65	1000sqft	4.70	3,652.00	0
Parking Lot	11.00	Space	0.10	4,356.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2018
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

Project Characteristics -

Land Use - Provided by client on data request form. Based on call with client, entire lot is 4.8 acres.

Construction Phase - Based on client input, the project will require no construction. The recycling center will use the existing buildings on site to operate.

Off-road Equipment -

Area Coating - VOC limits from AVAQMD Rule 1113. For the building, assumes 90% flat paint (50 g/L) and 10% non-flat (100 g/L). For parking lot coatings, assumed to be compliant with the Traffic Marking Coating category VOC limit of 100 g/L.

Operational Off-Road Equipment - Based on client's discussion with owner, 2 propane forklifts and 1 small diesel excavator will be used.

Air Quality Study - Palmdale Recycling Center - APN 3022-015-009 - Antelope Valley APCD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	55
tblAreaCoating	Area_EF_Nonresidential_Interior	250	55
tblAreaCoating	Area_EF_Parking	250	100
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	PhaseEndDate	5/7/2018	4/30/2018
tblLandUse	LandUseSquareFeet	4,400.00	4,356.00
tblLandUse	LotAcreage	0.08	4.70
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperLoadFactor	0.20	0.20
tblOperationalOffRoadEquipment	OperLoadFactor	0.38	0.38
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	2.5782	0.0000	0.0000	2.3720	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5782**	**0.0000**	**0.0000**	**2.3720**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	2.5782	0.0000	0.0000	2.3720	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5782**	**0.0000**	**0.0000**	**2.3720**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	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	0.0853	1.0000e-005	1.5200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4300e-003
Energy	1.9500e-003	0.0178	0.0149	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003		21.3058	21.3058	4.1000e-004	3.9000e-004	21.4324
Mobile	0.0827	0.3206	0.9586	2.3000e-003	0.1582	2.5400e-003	0.1607	0.0424	2.3900e-003	0.0448		231.9681	231.9681	0.0110		232.2434
Offroad	0.6487	6.2761	5.7266	8.2600e-003		0.4035	0.4035		0.3712	0.3712		831.2960	831.2960	0.2588		837.7659
Total	**0.8185**	**6.6145**	**6.7016**	**0.0107**	**0.1582**	**0.4074**	**0.5656**	**0.0424**	**0.3749**	**0.4173**		**1,084.5731**	**1,084.5731**	**0.2702**	**3.9000e-004**	**1,091.4451**

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	lb/day										lb/day					
Area	0.0853	1.0000e-005	1.5200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4300e-003
Energy	1.9500e-003	0.0178	0.0149	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003		21.3058	21.3058	4.1000e-004	3.9000e-004	21.4324
Mobile	0.0827	0.3206	0.9586	2.3000e-003	0.1582	2.5400e-003	0.1607	0.0424	2.3900e-003	0.0448		231.9681	231.9681	0.0110		232.2434
Offroad	0.6487	6.2761	5.7266	8.2600e-003		0.4035	0.4035		0.3712	0.3712		831.2960	831.2960	0.2588		837.7659
Total	**0.8185**	**6.6145**	**6.7016**	**0.0107**	**0.1582**	**0.4074**	**0.5656**	**0.0424**	**0.3749**	**0.4173**		**1,084.5731**	**1,084.5731**	**0.2702**	**3.9000e-004**	**1,091.4451**

	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	Site Preparation	Site Preparation	5/1/2018	4/30/2018	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2018

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	lb/day										lb/day					
Fugitive Dust	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
Off-Road	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
Total	**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**

3.2 Site Preparation - 2018

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	lb/day										lb/day					
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	0.0000	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
Total	**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**

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	lb/day										lb/day					
Fugitive Dust	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
Off-Road	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
Total	**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**

3.2 Site Preparation - 2018

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	lb/day										lb/day					
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	0.0000	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
Total	**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**

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	lb/day										lb/day					
Mitigated	0.0827	0.3206	0.9586	2.3000e-003	0.1582	2.5400e-003	0.1607	0.0424	2.3900e-003	0.0448		231.9681	231.9681	0.0110		232.2434
Unmitigated	0.0827	0.3206	0.9586	2.3000e-003	0.1582	2.5400e-003	0.1607	0.0424	2.3900e-003	0.0448		231.9681	231.9681	0.0110		232.2434

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	25.45	4.82	2.48	56,128	56,128
Parking Lot	0.00	0.00	0.00		
Total	25.45	4.82	2.48	56,128	56,128

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.591922	0.041291	0.154799	0.119251	0.021047	0.005625	0.016923	0.033921	0.002047	0.001892	0.008041	0.001585	0.001656
Parking Lot	0.591922	0.041291	0.154799	0.119251	0.021047	0.005625	0.016923	0.033921	0.002047	0.001892	0.008041	0.001585	0.001656

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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					
NaturalGas Mitigated	1.9500e-003	0.0178	0.0149	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003		21.3058	21.3058	4.1000e-004	3.9000e-004	21.4324
NaturalGas Unmitigated	1.9500e-003	0.0178	0.0149	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003		21.3058	21.3058	4.1000e-004	3.9000e-004	21.4324

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	lb/day										lb/day					
General Light Industry	181.099	1.9500e-003	0.0178	0.0149	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003		21.3058	21.3058	4.1000e-004	3.9000e-004	21.4324
Parking Lot	0	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
Total		**1.9500e-003**	**0.0178**	**0.0149**	**1.1000e-004**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**		**21.3058**	**21.3058**	**4.1000e-004**	**3.9000e-004**	**21.4324**

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	lb/day										lb/day					
General Light Industry	0.181099	1.9500e-003	0.0178	0.0149	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003		21.3058	21.3058	4.1000e-004	3.9000e-004	21.4324
Parking Lot	0	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
Total		**1.9500e-003**	**0.0178**	**0.0149**	**1.1000e-004**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**		**21.3058**	**21.3058**	**4.1000e-004**	**3.9000e-004**	**21.4324**

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	lb/day										lb/day					
Mitigated	0.0853	1.0000e-005	1.5200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4300e-003
Unmitigated	0.0853	1.0000e-005	1.5200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4300e-003

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	lb/day										lb/day					
Architectural Coating	5.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0797					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4300e-003
Total	**0.0853**	**1.0000e-005**	**1.5200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4300e-003**

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	lb/day										lb/day					
Architectural Coating	5.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0797					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.5200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4300e-003
Total	**0.0853**	**1.0000e-005**	**1.5200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	8.00	260	89	0.20	CNG
Excavators	1	8.00	260	158	0.38	Diesel

UnMitigated/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
Equipment Type	lb/day										lb/day					
Excavators	0.2906	3.1114	3.2920	5.1900e-003		0.1509	0.1509		0.1388	0.1388		522.1830	522.1830	0.1626		526.2471
Forklifts	0.3581	3.1647	2.4346	3.0700e-003		0.2526	0.2526		0.2324	0.2324		309.1131	309.1131	0.0962		311.5188
Total	**0.6487**	**6.2761**	**5.7266**	**8.2600e-003**		**0.4035**	**0.4035**		**0.3712**	**0.3712**		**831.2960**	**831.2960**	**0.2588**		**837.7659**

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

APPENDIX B

HYDROLOGY STUDY – HANBALI & ASSOCIATES

HANBALI & ASSOCIATES
CONSULTING ENGINEERS
514 W. COMMERCE AVE., SUITE C
PALMDALE, CALIFORNIA 93551

OFFICE(661) 266-0421 FAX(661) 266-0450

HYDROLOGY STUDY

Palmdale Recycling Center

38939 15Th St. East

Palmdale, CA. 93550

6-12-18

DESIGNED FOR

Antonio Valles

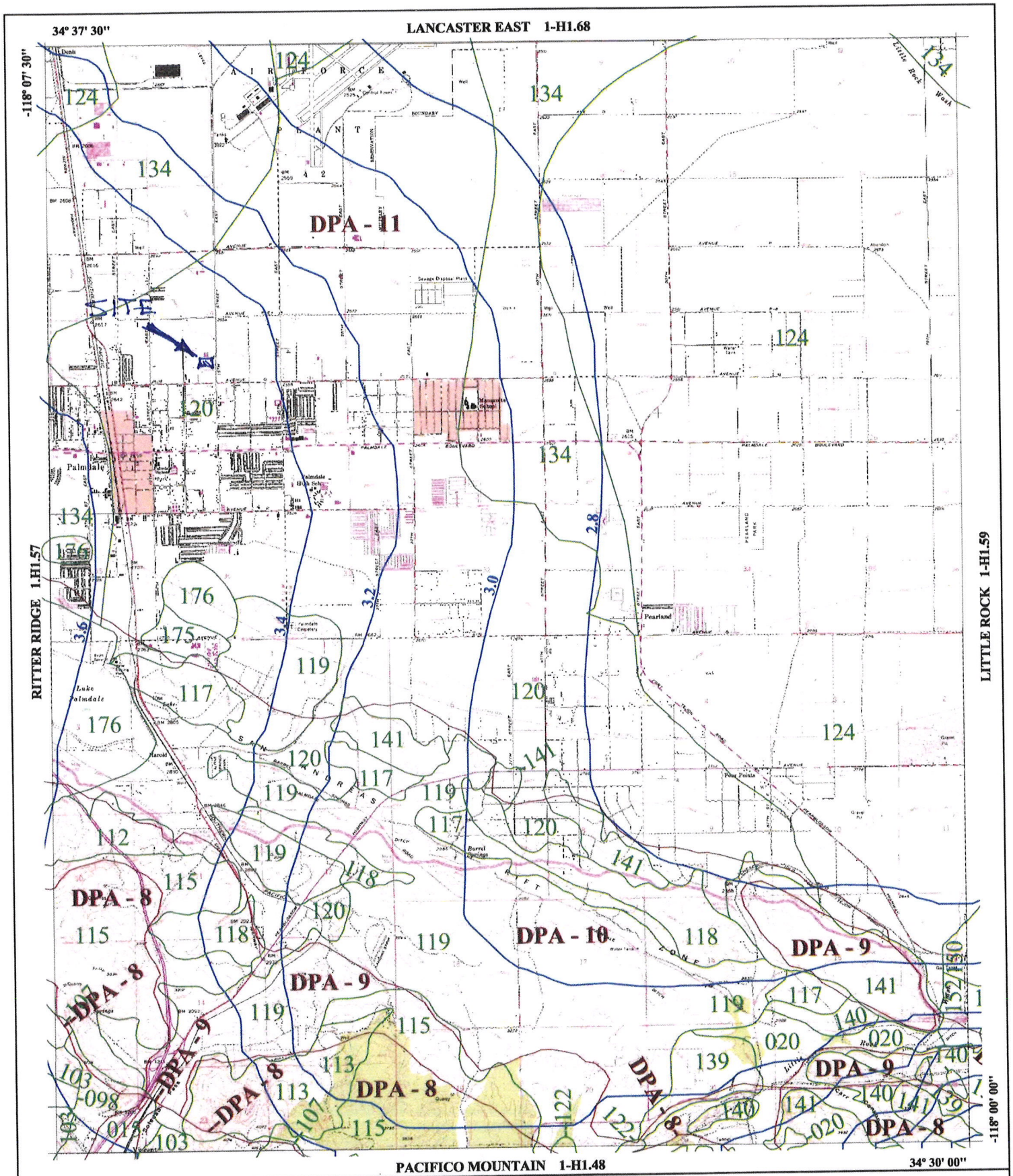
TEL.(323) 320-1779

PREPARED BY

AMJAD M. HANBALI, P.E.

June 8, 2018

CIVIL - STRUCTURAL - PLANNING



016 SOIL CLASSIFICATION AREA

7.2 INCHES OF RAINFALL

DPA - 6 DEBRIS POTENTIAL AREA

N W E S

1 0 1 2 Miles

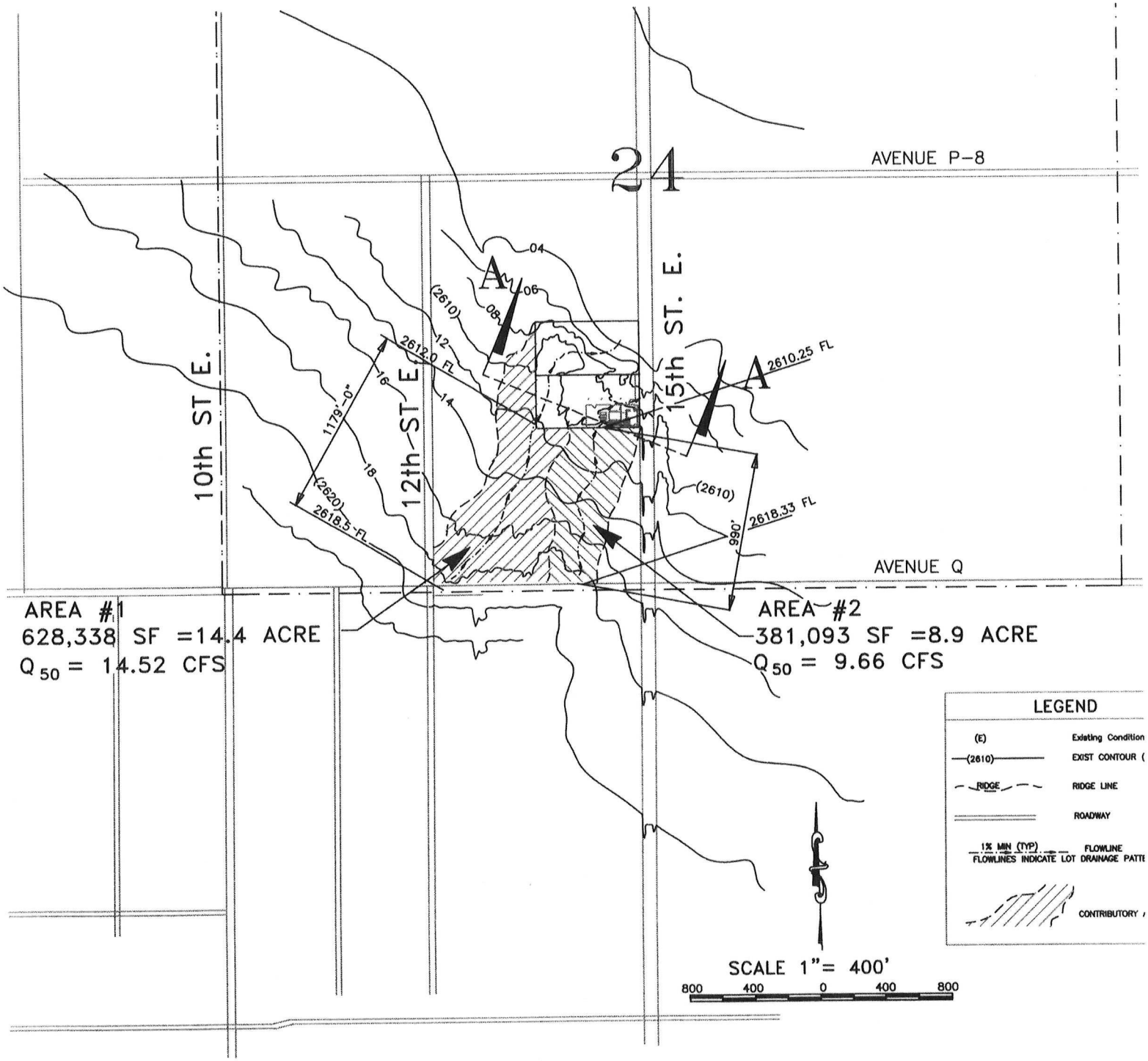
25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878

10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714

PALMDALE
50-YEAR 24-HOUR ISOHYET

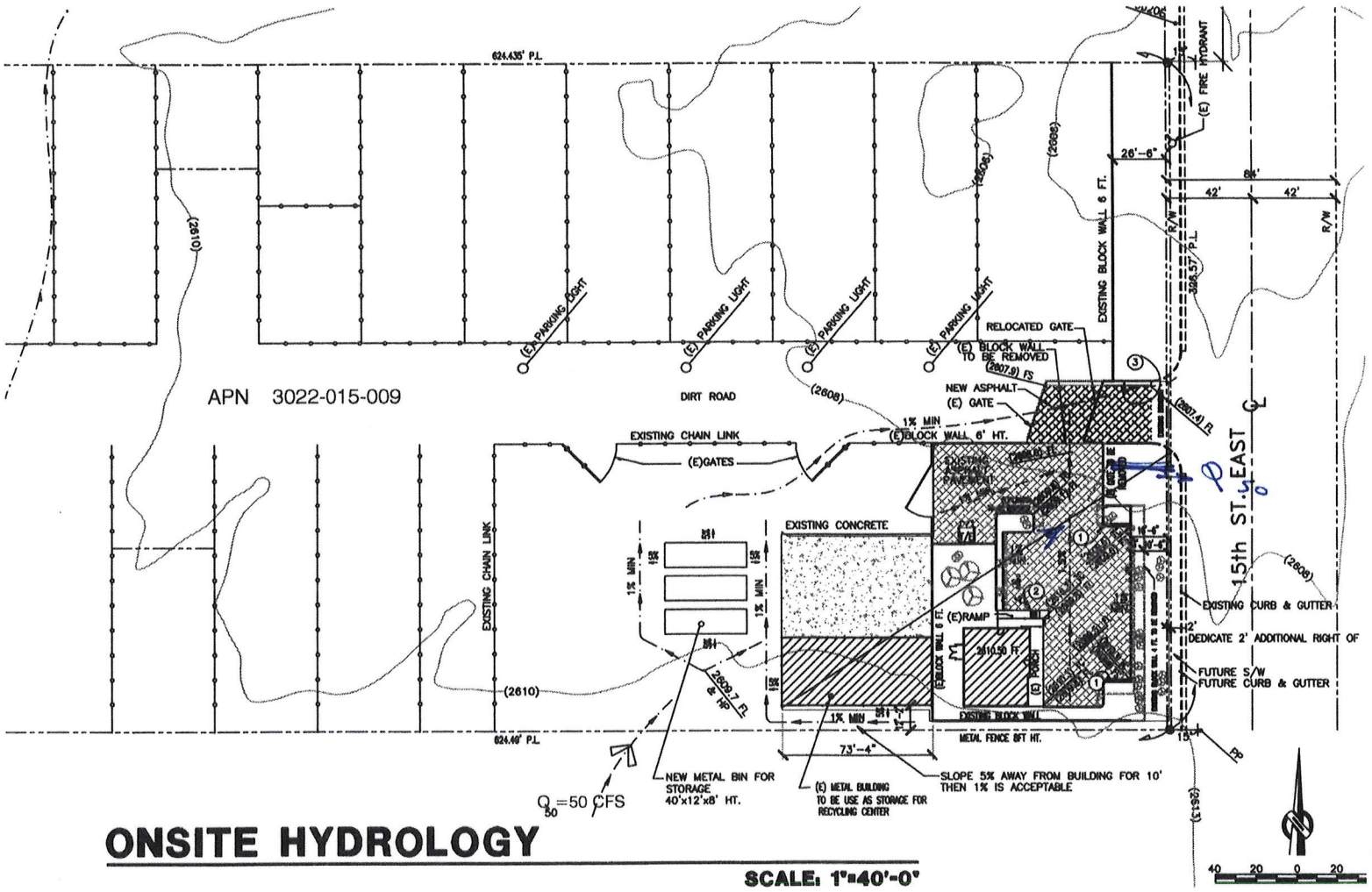
1-H1.58

LOS ANGELES COUNTY PUBLIC WORKS Public Service That Works



OFFSITE HYDROLOGY AREA STUDY

SCALE: 1"=400'-0"



ONSITE HYDROLOGY

SCALE: 1"=40'-0"

Q = 0.83 cfs

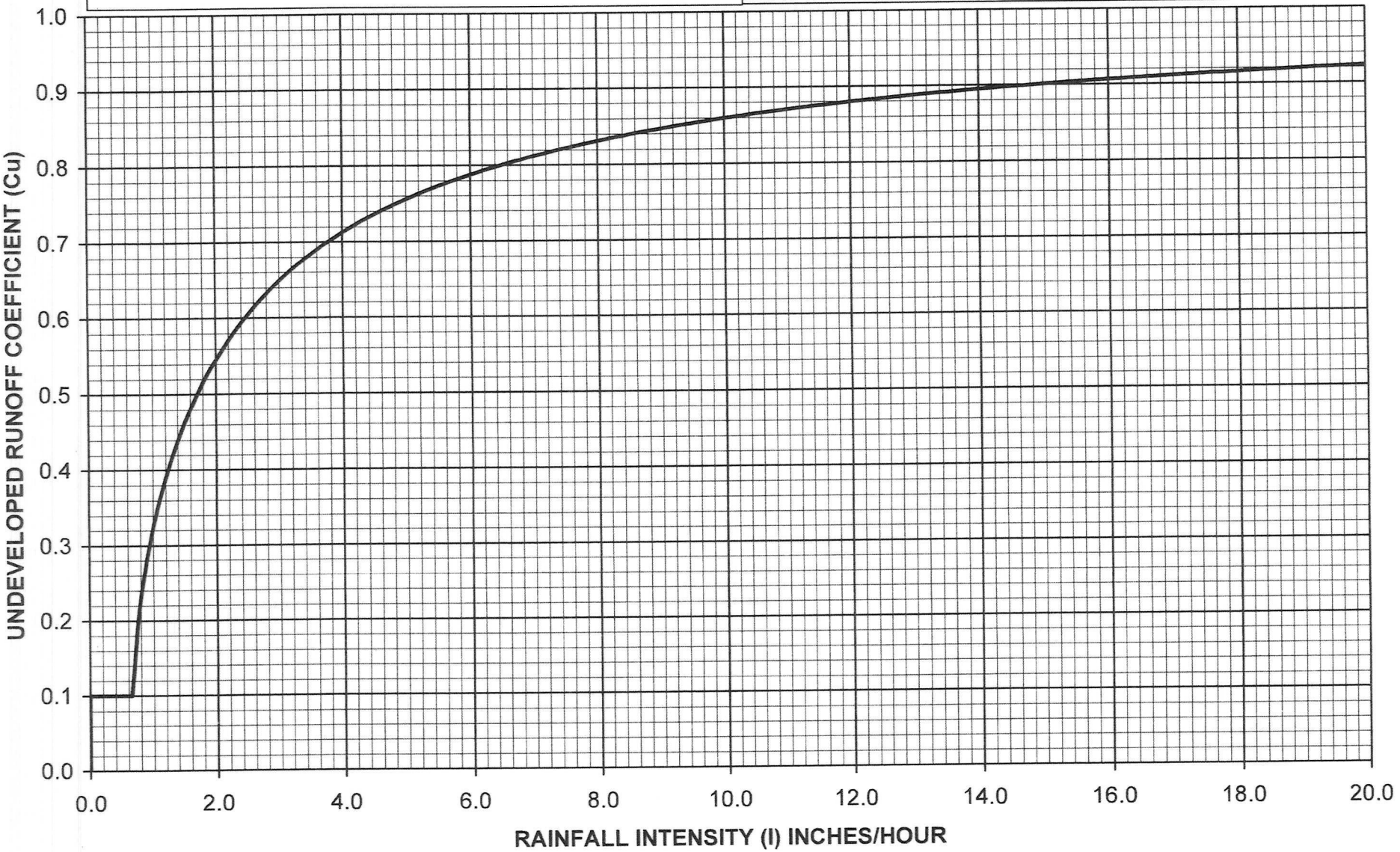
Number	Name	Original Name
115	ANTELOPE VALLEY	AV-4
116	ANTELOPE VALLEY	AV-5
117	ANTELOPE VALLEY	AV-6
118	ANTELOPE VALLEY	AV-7
119	ANTELOPE VALLEY	AV-8
120	ANTELOPE VALLEY	AV-9
121	ANTELOPE VALLEY	AV-10
122	ANTELOPE VALLEY	AV-12
123	ANTELOPE VALLEY	AV-12
124	ANTELOPE VALLEY	AV-13
125	ANTELOPE VALLEY	AV-14
126	ANTELOPE VALLEY	AV-15
127	ANTELOPE VALLEY	AV-16
128	ANTELOPE VALLEY	AV-17
129	ANTELOPE VALLEY	AV-18
130	ANTELOPE VALLEY	AV-19
131	ANTELOPE VALLEY	AV-20
132	ANTELOPE VALLEY	AV-21
133	ANTELOPE VALLEY	AV-22
134	ANTELOPE VALLEY	AV-23
135	LITTLE ROCK CREEK	LR-1
136	LITTLE ROCK CREEK	LR-2
137	LITTLE ROCK CREEK	LR-3-7
138	LITTLE ROCK CREEK	LR-4
139	LITTLE ROCK CREEK	LR-5
140	LITTLE ROCK CREEK	LR-6
141	LITTLE ROCK CREEK	LR-8-9
142	LITTLE ROCK CREEK	LR-10
143	LITTLE ROCK CREEK	LR-11
144	LITTLE ROCK CREEK	LR-12
145	LITTLE ROCK CREEK	LR-13
146	LITTLE ROCK CREEK	LR-14
147	LITTLE ROCK CREEK	LR-15
148	LITTLE ROCK CREEK	LR-16
149	LITTLE ROCK CREEK	LR-17
150	LITTLE ROCK CREEK	LR-18
151	LITTLE ROCK CREEK	LR-19
152	LITTLE ROCK CREEK	LR-20

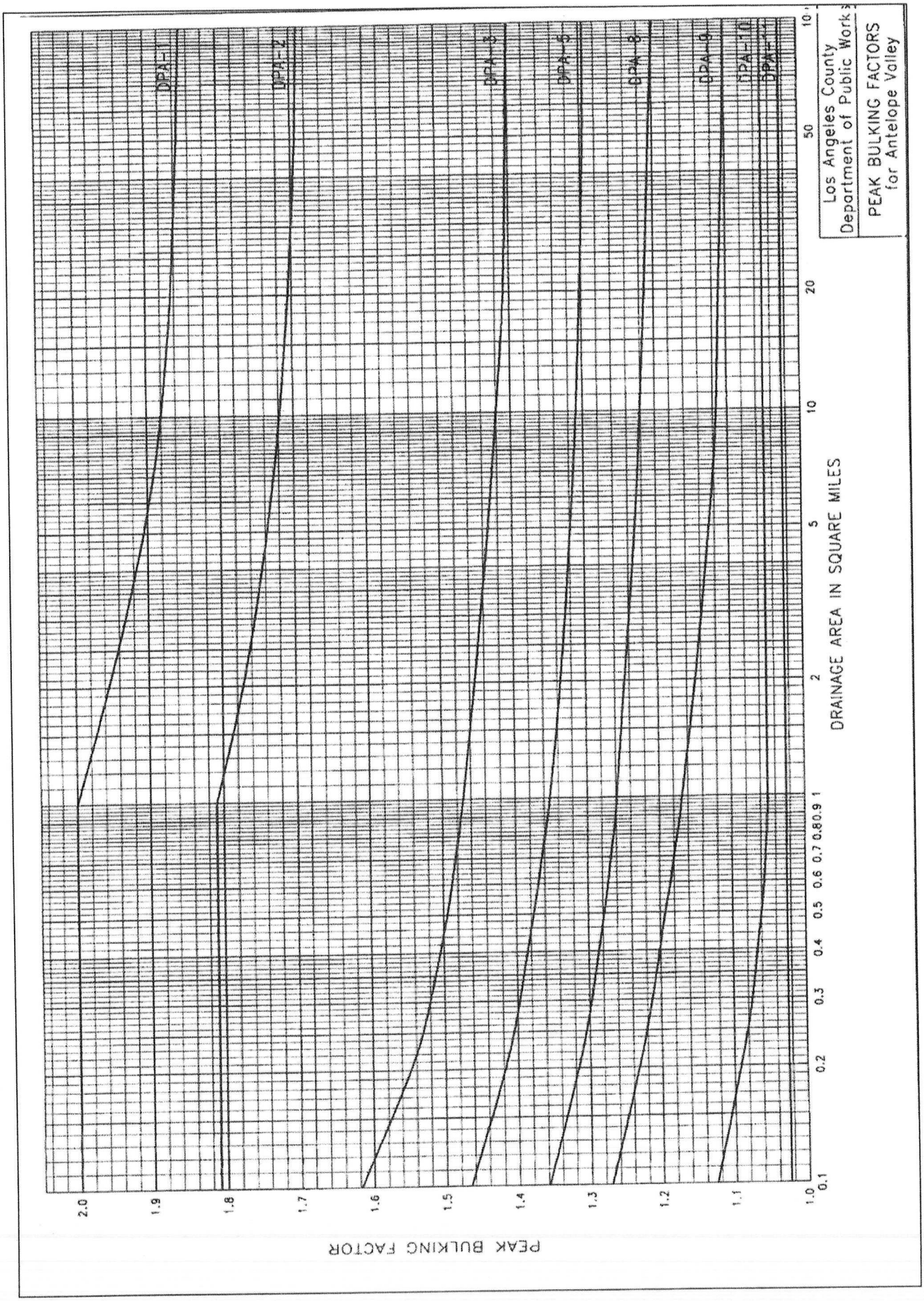
$C_D = (0.9 * IMP) + (1.0 - IMP) * C_U$

Where: C_D = Developed Runoff Coefficient
IMP = Proportion Impervious
C_U = Undeveloped runoff coefficient

Los Angeles County Department of Public Works

RUNOFF COEFFICIENT CURVE
SOIL TYPE NO. 120




DPA-1
DPA-2
DPA-3
DPA-5
DPA-8
DPA-9
DPA-10
DPA-11
PEAK BULKING FACTOR
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
2
5
10
20
50
100
DRAINAGE AREA IN SQUARE MILES
Los Angeles County
Department of Public Works
PEAK BULKING FACTORS
for Antelope Valley

HANBALI & ASSOCIATES
CONSULTING ENGINEERS
514 W. COMMERCE AVE., SUITE C
PALMDALE, CALIFORNIA 93551

OFFICE(661) 266-0421 FAX(661) 266-0450

HYDROLOGY STUDY

A. OFFSITE HYDROLOGY DESIGN;

I. SUBAREA: [A1];

DESIGN CRITERIA - 50 YEAR STORM - RATIONAL METHOD
ON-SITE

SOIL CLASSIFICATION - 120

RAINFALL DEPTH (50-YEAR, 24-HOUR): 3.6 INCHES

SUBAREAS SIZE; A1= 628,338 SQ.FT. = 14.4 ACRES

S SLOPE: (2618.5'-2612.0')/1179'= 0.0055 =0.55%

TIME OF CONCENTRATION - 19 MIN.

RAINFALL INTENSITY: = 1.15 IN./HR.(FROM Tc CALCULATOR)

LAND USE DESIGNATION= COMMERCIAL BUILDING.

IMPERVIOUSNESS = .90 (COMMERCIAL RECYCLING)

FIRE FACTOR: FF = 0.34 (ANTELOPE VALLEY)

Cu = 0.37

Cd = (0.9 x Imp.) + (1-Imp.) x Cu = 0.85

K= .677 x I^-.102 = 0.628

Cb= FF x [(1-K)x(1-Cu)]+Cu

Cb= 0.83 <= Cd=.89 USE Cd=.89

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PALMDALE, CALIFORNIA 93551

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PER RATIONAL RUNOFF METHOD; Q = Cd x I x A

Q50 FOR A1 = 0.85 x 1.15 x 14.4 Ac.= 14.1 CFS

DEBRIS PRODUCTION AREA = 14.4 AC/640 AC/MI^2= 0.0225 MI^2

PEAK BULKING FACTOR= 1.03 FOR DPA-11

DEBRIS PRODUCTION RATE = 1.03 x 14.1 = 14.52 CFS

II. SUBAREA: [A2];

DESIGN CRITERIA - 50 YEAR STORM - RATIONAL METHOD
ON-SITE

SOIL CLASSIFICATION - 120

RAINFALL DEPTH (50-YEAR, 24-HOUR): 3.6 INCHES

SUBAREAS SIZE; A1= 381,093 SQ.FT. = 8.9 ACRES

S SLOPE: (2618'-2610')/990'= 0.0081 =0.81%

TIME OF CONCENTRATION - 16 MIN.

RAINFALL INTENSITY: = 1.24 IN./HR.(FROM Tc CALCULATOR)

LAND USE DESIGNATION= COMMERCIAL BUILDING.

IMPERVIOUSNESS = .90 (COMMERCIAL RECYCLING)

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PALMDALE, CALIFORNIA 93551

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FIRE FACTOR: FF = 0.34 (ANTELOPE VALLEY)

Cu = 0.39

Cd = (0.9 x Imp.) + (1-Imp.) x Cu = 0.85

K= .677 x I^-.102 = 0.637

Cb= FF x [(1-K)x(1-Cu)]+Cu

Cb= 0.82 <= Cd=.85 USE Cd=.85

PER RATIONAL RUNOFF METHOD; Q = Cd x I x A

Q50 FOR A1 = 0.85 x 1.24 x 8.9 Ac.= 9.38 CFS

DEBRIS PRODUCTION AREA = 8.9 AC/640 AC/MI^2= 0.014 MI^2

PEAK BULKING FACTOR= 1.03 FOR DPA-11

DEBRIS PRODUCTION RATE = 1.03 x 9.38 = 9.66 CFS

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514 W. COMMERCE AVE., SUITE C
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OFFICE(661) 266-0421 FAX(661) 266-0450

HYDRAULIC CALCULATIONS:

I. SUBAREA: [A1];

1) Device no.1 ;

EXISTING 196′ WIDE x 24″ DEEP NATURAL DITCH;

A= 196′ x 2′/2 = 196 SQ. FT.

N= 0.06

R= A/WP = 196 SQ.FT./196 FT. = 1.0

S= 0.0055

Q= A x 1.486/N x R^(2/3) x S^(1/2)

Q= 196 SQ.FT. x 1.486/0.06 x 1.0^(2/3) x 0.0055^(1/2)

Q= 360.0 CFS => 14.52 CFS OK

V= Q/A = 14.52 CFS/196 SQ.FT. = 0.074 FT/SEC. <= 5.0 FT./SEC.

CONCRETE DEVICE IS NOT REQUIRED.

EXISTING NATURAL DITCH 196′ WIDE x 24″ DEEP IS SUFFICUANT FOR DRAINAGE AWAY FROM STRUCTURE TO NAUTURAL DRAINAGE COURSE, THIS DESIGN WILL BE INCORPORATED AS PART OF THE GRADING PLAN DESIGN.

II. SUBAREA: [A2];

2) Device no.2 ;

EXISTING 153′ WIDE x 36″ DEEP NATURAL DITCH;

A= 153′ x 3′/2 = 229 SQ. FT.

N= 0.06

R= A/WP = 229 SQ.FT./153.1 FT. = 1.496

S= 0.0081

Q= A x 1.486/N x R^(2/3) x S^(1/2)

Q= 229 SQ.FT. x 1.486/0.06 x 1.496^(2/3) x 0.0081^(1/2)

Q= 667.7 CFS => 9.66 CFS OK

V= Q/A = 9.66 CFS/229 SQ.FT. = 0.042 FT/SEC. <= 5.0 FT./SEC.

CONCRETE DEVICE IS NOT REQUIRED.

EXISTING NATURAL DITCH 153′ WIDE x 36″ DEEP IS SUFFICUANT FOR DRAINAGE AWAY FROM STRUCTURE TO NAUTURAL DRAINAGE COURSE, THIS DESIGN WILL BE INCORPORATED AS PART OF THE GRADING PLAN DESIGN.

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B. ON-SITE HYDROLOGY DESIGN;

AREA: [A];

DESIGN CRITERIA - 50 YEAR STORM - RATIONAL METHOD
ON-SITE

SOIL CLASSIFICATION - 120

RAINFALL DEPTH (50-YEAR, 24-HOUR): 3.6 INCHES

SUBAREAS SIZE; A= 23,913 SQ.FT. = 0.55 ACRES

S SLOPE: =0.21%

TIME OF CONCENTRATION - 8 MIN.

RAINFALL INTENSITY: = 1.72 IN./HR.(FROM Tc CALCULATOR)

LAND USE DESIGNATION= COMMERCIAL BUILDING.

IMPERVIOUSNESS = .90 (COMMERCIAL RECYCLING)

FIRE FACTOR: FF = 0.34 (ANTELOPE VALLEY)

Cu = 0.50

Cd = (0.9 x Imp.) + (1-Imp.) x Cu = 0.86

K= .677 x I^-.102 = 0.628

Cb= FF x [(1-K)x(1-Cu)]+Cu

Cb= 0.83 <= Cd=.86 USE Cd=.86

PER RATIONAL RUNOFF METHOD; Q = Cd x I x A

Q50 FOR A1 = 0.86 x 1.72 x 0.55 Ac.= 0.81 CFS

DEBRIS PRODUCTION AREA = 0.55 AC/640 AC/MI^2= 0.0009 MI^2

PEAK BULKING FACTOR= 1.03 FOR DPA-11

DEBRIS PRODUCTION RATE = 1.03 x 0.81 = 0.83 CFS

HYDRAULIC CALCULATIONS:

III. SUBAREA: [A];

1) Device no.3 ;

EXISTING 24" WIDE x 5" DEEP CONCRETE PARKWAY DRAIN CHANNEL;

A= 120 SQ.IN.= 0.833 SQ. FT.

N= 0.012

R= A/WP = 0.833 SQ.FT./2.83 FT. = 0.294

S= 0.02

Q= A x 1.486/N x R^(2/3) x S^(1/2)

Q= 0.83 SQ.FT. x 1.486/0.012 x 0.294^(2/3) x 0.02^(1/2)

Q= 6.4 CFS => 0.83 CFS OK

V= Q/A = 0.83 CFS/.833 SQ.FT. = 0.996 FT/SEC. <= 5.0 FT./SEC.

CONCRETE DEVICE IS REQUIRED.

USE EXISTING 24" WIDE x 5" DEEP CONCRETE PARKWAY STORM DRAIN CHANNEL, THIS DESIGN WILL BE INCORPORATED AS PART OF THE GRADING PLAN DESIGN.

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CONCLUSION AND RECOMMENDATIONS:

Based on the review of various hydrology studies within the area and both the off-site and on-site run-off analysis within this report, the proposed project has no significant impact on existing off-site storm drain facilities and once the proposed development is completed, and the proposed on-site grading storm drain facilities properly constructed, the project will be free of any potential flood hazard.

Also, the proposed drainage plan for the project will allow for the mitigation of any down stream impacts created by the development of the project site as proposed.