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GE POWER

Inland Empire Energy Center

Decommissioning and Demolition Plan

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Inland Empire Energy Center

Decommissioning and Demolition Plan

Submitted to the

California Energy Commission

Prepared by

Inland Empire Energy Center, LLC

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1.0 EXECUTIVE SUMMARY

1.1 Project Overview and Decommissioning Requirement

The Inland Empire Energy Center (Project) is an existing natural gas-fired, combined-cycle generating facility located in Riverside County, California. The Project is owned and operated by Inland Empire Energy Center, LLC (IEEC), which is an indirectly wholly-owned subsidiary of General Electric Company. At the time the Application for Certification was filed, the project site was located in an unincorporated area of Riverside County near the town of Romoland[1]. The project site has since been annexed into the City of Menifee, which is located approximately 30 miles southeast of the City of Riverside (Project Site).

The Project was permitted by the California Energy Commission (CEC) on December 17, 2003.[2] Commercial operation began in June of 2009 with Unit 1. Operation of Unit 2 followed in May 2010. In addition to the CEC license, IEEC also holds the following permits and agreements for operation of the Project:

- Non-Reclaimable Wastewater Service Agreement by and between Eastern Municipal Water District (EMWD) and IEEC, effective August 22, 2005.
- Recycled Water and Supplemental Raw Water Service Agreement No. 05-07 by and between EMWD and IEEC, effective June 14, 2005.
- South Coast Air Quality Management District (SCAQMD) Title V Permit to Operate, Facility ID No. 129816, effective July 1, 2018.
- United States Environmental Protection Agency (USEPA) Hazardous Waste Generator Identification Number, Facility ID: 1000-0019-9741.

The Project supplies electricity to the California Independent System Operator (CAISO) on a merchant basis. The Project sells both Local and System Resource Adequacy (RA) and bids daily into the merchant energy markets. The Project has RA commitments through December 31, 2019, which are served by Unit 1. Unit 2 at the Project has been mothballed since March 2017, based on economic considerations. IEEC has decided to cease operation of the entire Project as of December 31, 2019. The decision to retire the IEEC was based on the following primary commercial conditions:

- The plant was designed with the intent of base-load operations, hence the single-shaft design. The plant is highly efficient but is not designed for the needs of the evolving California market, which requires fast start capabilities to satisfy peak demand periods.

[1] Application for Certification for Inland Empire Energy Center, Docket No. 01-AFC-17, August 17, 2001 (AFC).

[2] CEC, Commission Decision, Application for Certification for Inland Empire Energy Center, Docket No. 01-AFC-17, December 17, 2003 (Commission Decision).

- When designed, the 7H was expected to have a similar installed base as its predecessor the 7FA, which numbers in the hundreds of units. This market condition did not develop and has resulted in an orphan technology installation at IEEC. Due to this condition, support costs (e.g. parts, engineering, etc.) of the unit have increased rapidly due to loss of scale economics. Due to its orphan nature, O&M costs for the 7H are 2-2.5x the O&M costs of a 7FA. . GE Power will no longer support the 7H units, including the manufacture of replacement parts.

- Retrofit of the IEEC to enhance flexibility is not economically feasible owing to a variety of market and regulatory factors that may preclude California utilities or CCAs from purchasing energy from fossil fuel plants. Despite an improving Capacity market, without a guaranteed energy revenue stream, the retrofit of IEEC could not be funded.

- The current Title V operating permit limits the start/shut-down hours to 31 hours/unit/month. In order to support the current market need for fast start and/or peaking operations that air permit condition would have required significant modification. Modifications to allow for daily or multiple daily starts in the SCAQMD would have resulted in a significant increase in total emissions.

Upon approval of the activities described in this Decommissioning and Demolition Plan (Plan), the power plant and other facilities will be decommissioned, demolished and removed and the CEC license terminated.

Effective February 1, 2019, IEEC entered into an agreement to sell the Project Site and certain assets associated therewith, to Nova Power, LLC (Nova), for the purpose of developing a battery energy storage system (BESS) on the Project Site. IEEC will continue to hold the CEC license and be responsible for compliance with the CEC's Conditions of Certification (COC) until decommissioning is completed and the CEC has released jurisdiction over the Project Site. IEEC will be responsible for implementing this Plan. IEEC has retained ATC Group Services, LLC (ATC) as its contractor to assist with implementing this Plan. Nova will not take possession of the site or associated equipment until decommissioning is complete and the CEC license is terminated. Nova will obtain any required land use and environmental permits from the appropriate local or state agencies for development and operation of the BESS.

The Commission Decision granting the CEC license requires IEEC to prepare and submit a plan for review and approval prior to undertaking facility closure. The objectives of the plan are to:

- Identify and discuss any impacts and mitigation to address significant adverse impacts associated with proposed closure activities and to address facilities, equipment, or other project related remnants that will remain at the site.

- Identify a schedule of activities for closure of the power plant site, transmission line corridor, and all other appurtenant facilities constructed as part of the project.
- Identify any facilities or equipment intended to remain on site after closure, the reason, and any future use.
- Address conformance of the plan with all applicable laws, ordinances, regulations, standards, local/regional plans in existence at the time of facility closure, and applicable conditions of certification.[3]

CEC regulations do not establish a specific process for review and approval of decommissioning plans; instead, the CEC processes a proposed decommissioning plan as a Post-Certification Amendment to the Commission Decision in accordance with Title 20, California Code of Regulations, Section 1769. The contents of this Plan address the requirements set forth in both the Commission Decision on the Project, and the content requirements for a Petition to Amend set forth in Section 1769(a)(1).

1.2 Decommissioning and Demolition Proposal

Decommissioning and demolition of the Project involves liquidation of equipment of no interest to Nova, removing regulated materials, disconnecting utilities and electric supply, dismantling/demolishing the power plant and associated facilities not retained by Nova, recycling components and materials to the extent possible, hauling off and disposing of the remaining waste, and establishing final grade at the Project Site. It is anticipated that these activities will take approximately twelve (12) months to complete, with certain planning, valuation and equipment marketing activities scheduled prior to Plan approval and Unit 1 retirement. Once decommissioning and demolition are complete, the Project Site, and certain related assets, will be transferred to Nova for future industrial use.

1.3 Environmental Considerations

Prior to construction of the Project, the Project Site was highly disturbed cultivated agricultural land used for growing wheat. Currently, the Project Site and its surroundings are heavily disturbed and have been used for industrial purposes for power generation. The decommissioning and demolition consists of the retirement and removal of an operating power generation facility previously approved by CEC for construction and operation. Analysis of the decommissioning and demolition proposal shows that the planned activities will comply with all applicable laws, ordinances, regulations and standards (LORS) and will not result in any significant adverse environmental impacts.

Table ES-1 provides a summary of the environmental considerations associated with decommissioning and demolition and recommended conditions.

[3] Commission Decision, pp. 39-40.

Table ES-1 Summary of Environmental Considerations

TECHNICAL AREA	COMPLIES WITH EXISTING APPLICABLE LORS?	POTENTIAL FOR SIGNIFICANT ADVERSE IMPACTS?	PROPOSED CONDITIONS
Air Quality and Greenhouse Gases	Complies with all applicable air quality LORS. There are no applicable greenhouse gas emission LORS specific to demolition. No new permits are required	There are no significant potential impacts. Emissions during decommissioning and demolition are significantly lower than during construction or operation for criteria air pollutants and lower than during operation for greenhouse gases.	COC pertaining to construction emissions will be implemented. Additional conditions proposed for portable equipment registrations, control of visible emissions, and preparation of a dust control plan.
Public Health	Complies will all applicable public health LORS.	There are no significant potential impacts. Emissions during decommissioning and demolition are significantly lower than during construction or operation for criteria air pollutants and toxic air contaminants.	No conditions are proposed.
Hazardous Materials Management	Complies with all applicable LORS, no new permits are required.	Implementation of the proposed conditions and compliance with LORS will ensure there are no significant impacts.	COC pertaining to storage and transport of hazardous materials will be implemented. New conditions proposed to update Hazardous Materials Business Plan.

TECHNICAL AREA	COMPLIES WITH EXISTING APPLICABLE LORS?	POTENTIAL FOR SIGNIFICANT ADVERSE IMPACTS?	PROPOSED CONDITIONS
Waste Management	Complies with all applicable LORS, no new permits are required but existing permits will remain active until demolition activities are complete, including the existing USEPA identification number and Hazardous Materials Handler and Hazardous Waste Generator permit from Riverside County Department of Environmental Health, which is the Certified Unified Permitting Agency (CUPA).	There will be no significant impacts. There is sufficient capacity in existing landfills to accommodate demolition waste.	COC pertaining to the handling of wastes will be implemented. A condition is proposed to ensure hazardous wastes are sent to a Class I landfill and records are submitted to the Compliance Project Manager (CPM).
Worker Safety and Fire Protection	LORS applicable to construction and operation of the facility also apply to decommissioning and demolition and will be complied with through implementing the worker safety programs and plans prepared by the decommissioning and demolition contractor. A Construction Activity Permit (includes demolition) and an Erection of a Fixed Tower Crane Permit will be obtained from Cal/OSHA.	Implementation of the conditions and compliance with LORS will ensure there are no significant impacts.	New conditions proposed for Health & Safety Plans, Fire Protection & Prevention Program, and worker training.

TECHNICAL AREA	COMPLIES WITH EXISTING APPLICABLE LORS?	POTENTIAL FOR SIGNIFICANT ADVERSE IMPACTS?	PROPOSED CONDITIONS
Cultural Resources	Complies with all applicable LORS. No new permits are required.	There will be no significant impacts. No subsurface work will occur outside areas where subsurface work occurred during construction.	No conditions are proposed.
Biological Resources	Complies with all applicable LORS. No new permits are required.	There will be no significant impacts. No sensitive biological resources exist within the areas where decommissioning and demolition will occur.	IEEC will submit for CEC review and approval a revised Biological Resource Mitigation Implementation and Monitoring Plan (BRMIMP) that includes relevant measures contained in COC BIO-1 through BIO-5 and BIO-10, modified as appropriate for decommissioning and demolition.
Paleontology	Complies with all applicable LORS. No new permits are required.	There will be no significant impacts. No subsurface work will occur outside areas where subsurface work occurred during construction.	None of the COC nor any additional conditions are necessary. Excavation activities will be covered under a Construction SWPPP.
Geologic Hazards and Soil Resources	Complies with all applicable LORS. No new permits are required.	There will be minimal movement of soil on-site; therefore, there will be no significant impacts on soil and geologic resources.	No conditions are proposed.

TECHNICAL AREA	COMPLIES WITH EXISTING APPLICABLE LORS?	POTENTIAL FOR SIGNIFICANT ADVERSE IMPACTS?	PROPOSED CONDITIONS
Soil and Water Resources	Complies with all applicable LORS. No new permits are required.	Compliance with General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Storm Water Associated with Construction Activity will be sufficient to protect water resources during decommissioning and demolition.	Notice of intent for construction under the General NPDES Permit for Discharges of Storm Water Associated with Construction Activity will be submitted to the State Water Resources Control Board.
Land Use	The decommissioning and demolition activities are consistent with current land use designations, plans, and goals except for Policy ED-1.1, ED-1.2, and ED-1.3, which encourage business development and retention.	There are no land use impacts other than the loss of business and job opportunities.	No conditions are proposed.
Noise	Decommissioning and demolition will comply with applicable noise LORS. No new permits are required.	There will not be a substantial increase in ambient noise levels during decommissioning and demolition relative to current conditions and no significant impacts from noise.	Existing programs related to worker safety will remain in place during decommissioning and demolition. No new conditions are proposed.
Socioeconomics	Decommissioning and demolition will comply with applicable socioeconomic LORS.	The socioeconomic impact from closure of the Project will be minor since continued industrial use at the site will retain jobs and create new jobs.	No conditions are proposed.

TECHNICAL AREA	COMPLIES WITH EXISTING APPLICABLE LORS?	POTENTIAL FOR SIGNIFICANT ADVERSE IMPACTS?	PROPOSED CONDITIONS
Traffic and Transportation	Decommissioning and demolition will comply with applicable traffic and transportation LORS.	Decommissioning and demolition activities will not result in significant, additional traffic impacts and will not cause a significant impact on traffic and transportation.	A traffic management plan will be developed to ensure compliance with the Riverside County Congestion Management Program (CMP) for truck intensive operations.
Visual Resources	Decommissioning and demolition will comply with all applicable LORS. Some night-time lighting will be used for site security during the decommissioning and demolition and will be in accordance with local lighting and shielding requirements.	There will be no visual impact from decommissioning and demolition. Since other industrial facilities dominate the project area landscape, the visual character of the project area will remain substantially unchanged.	No conditions are proposed.

2.0 DECOMMISSIONING AND DEMOLITION PLAN ORGANIZATION AND CONTENTS

This Plan responds to the requirements identified in the Commission Decision for the Project, and Title 20 California Code of Regulations, Section 1769, pertaining to post-certification amendments to a license granted by the CEC. It recognizes that decommissioning and demolition are temporary activities resulting in the removal, rather than the creation, of long-term impacts.

This Plan presents:

- The existing conditions (Chapter 3).
- The proposed decommissioning and demolition activities (Chapter 4).
- Key staffing for decommissioning and demolition (Chapter 5).
- An assessment of conformance with applicable LORS, the potential for any significant adverse impacts, and any proposed conditions to mitigate impacts (Chapter 6).

Although the California Environmental Quality Act (CEQA) is one of the applicable LORS, the environmental analysis presented in this document is not a CEQA impact assessment. The CEQA analysis was performed during the Application for Certification (AFC) process when the CEC made its discretionary approval of the whole of the project – construction, operation, and closure. This environmental analysis specifically addresses whether the activities associated with decommissioning and demolition will result in unanticipated significant adverse impacts not contemplated by the Commission Decision.

3.0 EXISTING CONDITIONS

3.1 Introduction

The Project is an existing natural gas-fired, combined-cycle generating facility located in Riverside County, California. The Project is owned and operated by IEEC, which is an indirectly wholly-owned subsidiary of General Electric Company.

3.2 Location of Facilities

The Project is located at 26226 Antelope Road in the City of Menifee, Riverside County, California 92585 on approximately 45.8 acres. The Project Site is located approximately six miles west of the City of Hemet, four miles east of the City of Perris, and 30 miles southeast of the City of Riverside. Figure 3-1 provides a regional location plan.

3.3 Site Description

The Project occupies approximately 35 acres within the 45.8-acre Project Site. Approximately 24 fenced acres accommodate the power generation facility, a switchyard, a water treatment facility, storage tank areas, a parking area, a control room building, and two storm water retention basins. The remaining 11 acres of the 35 disturbed acres are comprised of landscaped areas and access roads. Decommissioning and demolition laydown and parking areas will be located within the 45.8-acre Project Site, or on near-by leased parcels, as was the case during construction. Figure 3-2 provides a detailed site plan.

Prior to construction of the Project, the Project Site was disturbed cultivated agricultural land used for growing wheat. The areas surrounding the Project Site are also heavily disturbed and used primarily for industrial purposes.

Primary access to the Project Site is by way of Ethanac Road to Antelope Road.

3.4 Power Generating Facility

The Project consists of two GE MS7001(H) in a two gas combustion turbines (CTs) and one steam turbine configuration; with each CT equipped with dry, low oxides of nitrogen (NOx) combustors, a heat recovery steam generator (HRSG), a single condensing steam turbine (ST), a deaerating surface condenser, and an eight-cell mechanical draft cooling tower. Each HRSG unit has a single 195-foot exhaust stack.

Each CT is rated at approximately 240 megawatts (MWs). The steam produced by each HRSG drives the single ST, which is rated at approximately 130 MWs. At base load, under average ambient conditions, the Project's net output is approximately 730 MWs. The peak net output when both turbines were operating was 730 to 750 MWs. One of the two turbines (Unit 2) at the Project has been mothballed since March 2017 due to economic considerations.

Additional Project equipment includes a nominal 100,000 pound per hour auxiliary boiler, two 2,000 kilowatt (kW) diesel emergency generators, and a 370 horsepower (hp) diesel fire pump.

3.5 Fuel Supply System

Natural gas is supplied through a 0.9-mile, 20-inch diameter pipeline that was constructed to deliver fuel from a pre-existing Sempra Energy gas pipeline running along Menifee Road, located approximately one mile southeast of the Project Site. Fuel gas is delivered to the Project Site through the Southern California Gas Company (SoCal Gas) Fuel Gas metering station located in the southeast corner of the Project Site.

3.6 Diesel Fuel

The Project includes one temporary 300-gallon aboveground diesel fuel storage tank of dual wall construction as well as two (2) emergency diesel generators (3,200 gallons each) and the diesel fire pump (350 gallons).

3.7 Electric Transmission Interconnection

The Project interconnects with the electrical transmission grid from an on-site switchyard through a transmission line constructed for the Project to the pre-existing Southern California Edison (SCE) Valley Substation. The transmission line is a 0.9-mile, 500-kilovolt (kV) overhead line, utilizing single and double-circuit steel lattice towers to connect to the substation.

3.8 Water Supply

The cooling and process water used by the Project consists primarily of recycled water supplied by EMWD, which was supplemented with raw water supplied by EMWD during the initial years of operation. Water is pumped from EMWD's Perris Valley Water Treatment Plant (PVWTP) south into a pre-existing 48-inch recycled water pipeline that runs along McLaughlin Road, and is delivered to the Project Site via a 0.1-mile long water pipeline constructed for the Project.

3.9 Wastewater and Waste Management

Disposal of process wastewater is via a 4.7 mile non-reclaimable wastewater pipeline that was constructed for the Project within pre-existing utility rights-of-way along McLaughlin Road and Murrieta Road, and connected with pre-existing EMWD facilities

located in the community of Sun City. Cooling tower blowdown is discharged into this pipeline. Other wastewater streams, including the reject stream from reverse osmosis, HRSG blowdown, and recovery from plant service water drains, is recycled for use as cooling tower makeup.

Sanitary wastewater is discharged via a 0.1-mile sewer line constructed for the Project and connected to a pre-existing sanitary sewer line under Antelope Road.

3.10 Workforce

The current Project workforce is relatively small with a normal staff of approximately 23 for plant operation and maintenance. The plant is staffed 24 hours per day, seven days per week. The work force is augmented by part-time workers and periodically increased during maintenance and repair events.

Figure 3-1 Project Regional Location

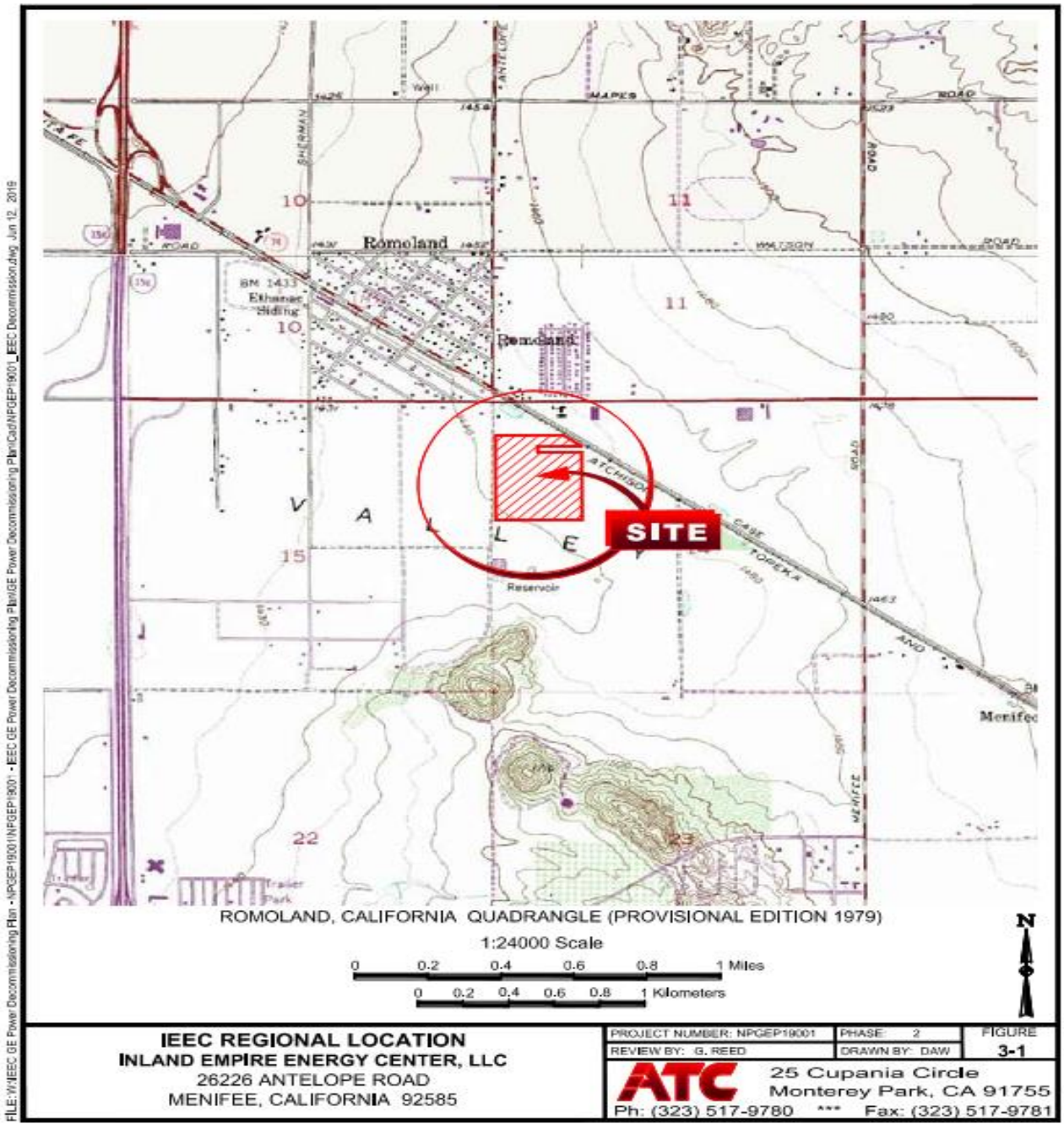
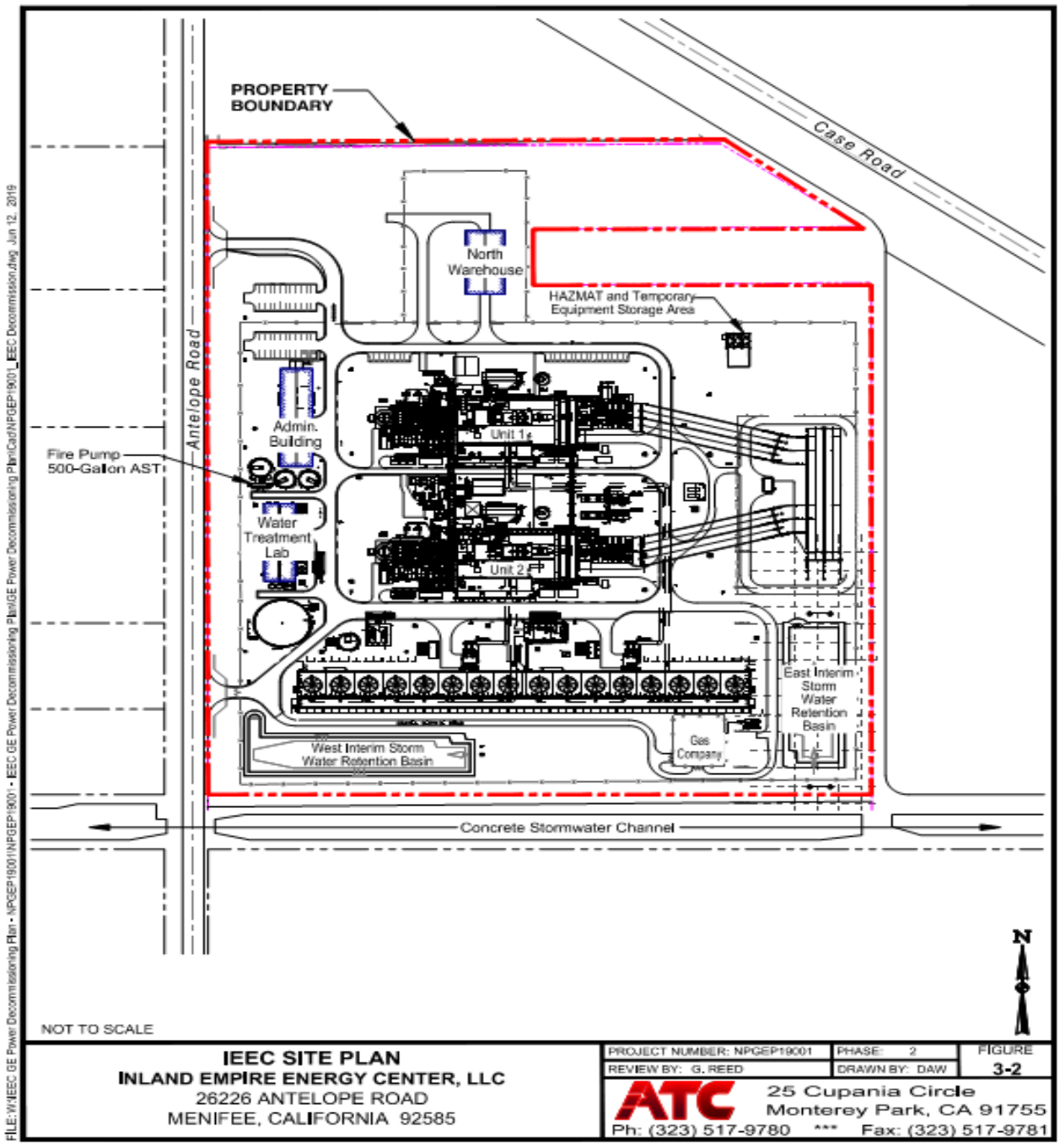


Figure 3-2 Project Site Plan



4.0 DECOMMISSIONING AND DEMOLITION PLAN

4.1 Overview

For the purposes of this Plan, decommissioning and demolition are considered two separate activities, as described below:

- Decommissioning – Activities completed to place the Project in a zero-energy and environmentally neutral state. To include all activities associated with preparation of the plant for demolition.
- Demolition – Physical removal through use of mechanical means of above and below grade structures, utilities, equipment and associated appurtenances.

Upon termination of power generation activities, the following initial decommissioning activities will occur to remove the Project from service:

- Drain all fluid systems and collect all contents to ensure public health and safety, and protection of the environment.
- Categorize all wastes including lubricating oils, fuels, water treatment chemicals, universal waste, etc. These materials will be managed for proper containerization, profiling, and shipment off-site for disposal or recycling.
- Identify utility systems required for continued operation of remaining BESS infrastructure.
- Design and install temporary facilities for support of IEEC and contractor personnel such as office trailers, temporary power, potable water and sanitary service.
- Equipment liquidation/sale activities.

Certain Project facilities and equipment will remain in place at the Project Site to support the proposed BESS. Certain other equipment acquired by Nova will be decommissioned and placed into temporary storage, at either the Project Site or elsewhere. Some of the stored equipment may be used in connection with the proposed BESS, and some may be used by Nova for other purposes unrelated to the Project Site and the proposed BESS. Facilities and equipment that neither remains in place nor is placed into temporary storage will be permanently removed from the Project Site. The planned disposition of the current Project facilities and equipment is as follows:

Facilities to Remain In Place

- Control Room Building and all contents (IT equipment/computers/displays, furniture, personal protective equipment, office equipment, etc.);
- Warehouse (existing contents removed and replaced with specified equipment to be placed in temporary storage);
- Water Treatment Building (de-energized) and all contents;

- Any lower voltage connections (below 500kV) to SCE for standby or station service and associated equipment needed to serve the Control Room Building and Warehouse; and
- Fire Water Storage Tank (empty).

Equipment to Remain in Place

- 500kV Generator Step-Up Transformers (de-energized and in a safe store condition per the manufacturer's recommendations);
- Unit Auxiliary Transformers (de-energized and in a safe store condition per the manufacturer's recommendations);
- 500kV switchyard and all associated equipment and spares within the fenced switchyard area (all maintained in their current status);
- Spare 500kV Generator Step-Up Transformer to remain at its current location adjacent to (at the north end of) the fenced switchyard area (de-energized and in a safe store condition per the manufacturer's recommendations);
- Diesel Fire Pump (Tag # 9FP-P-01A) – (stored in a safe store condition per the manufacturer's recommendations);
- Motor Driven Fire Pump (Tag # 9FP-P-02A);
- Jockey Pump (Tag # 9FP-P-03A);
- Site security equipment (cameras, fencing, controlled access gates, etc.); and
- Generator Circuit Breakers (de-energized and locked out). . These units will require disconnection and removal from the Unit 1 and 2 power blocks prior to facility demolition. These units will be staged on-site for future use.

Equipment to be Decommissioned and Stored for Possible Future Use

- 2 x Gas Compressors (Tag #'s 9FG-C-01A/02A);
- Cooling Tower motors (4 x Quantity);
- Emergency Generators (2 x Quantity);
- Fuel Gas Knockout Drum, Filter Separators, and Drain Tanks (Tag #'s 9FG-F-01A, 9FG-F-02A/02B, 9FG-T-01A/01B/02A);
- Air Compressors, Dryers, and Receivers (Tag #'s 1IA-C-01A/01B, 1IA-D-01A/01B, 1IA-D-02A/03A);
- Fin Fan Coolers (Tag #'s 9FG-A-01A/01B/01C); and
- CEMS HRSG PDC including calibration gases (2 x Quantity).

Some Project foundations and subsurface facilities will remain in place either because they may be utilized in connection with the proposed BESS, or because their removal is unnecessary given the continued use of the Project Site for industrial/power generation purposes, and / or removal would result in greater environmental impacts than retaining in place.

Foundations

- Foundations will be retained for facilities and equipment to remain in place;

- Power Block foundations will be removed to grade or existing finished pad surface depending on slab construction details and future use considerations;
- Turbine pedestals, platforms and other elevated concrete power block structures will be removed to final foundation elevation;
- Power Block sump structures will be filled to final foundation elevation;
- Foundations for facilities and equipment to be decommissioned and removed from the Project Site or placed in temporary storage will be removed entirely if feasible. Conditions making removal infeasible would include but not necessarily be limited to the following:

    - Impacts to surrounding structures; and
    - Structures located at significant depth (greater than 12 feet); and

- Pilings, if present beneath foundations scheduled for removal, will be cut immediately below the foundation and left in place.

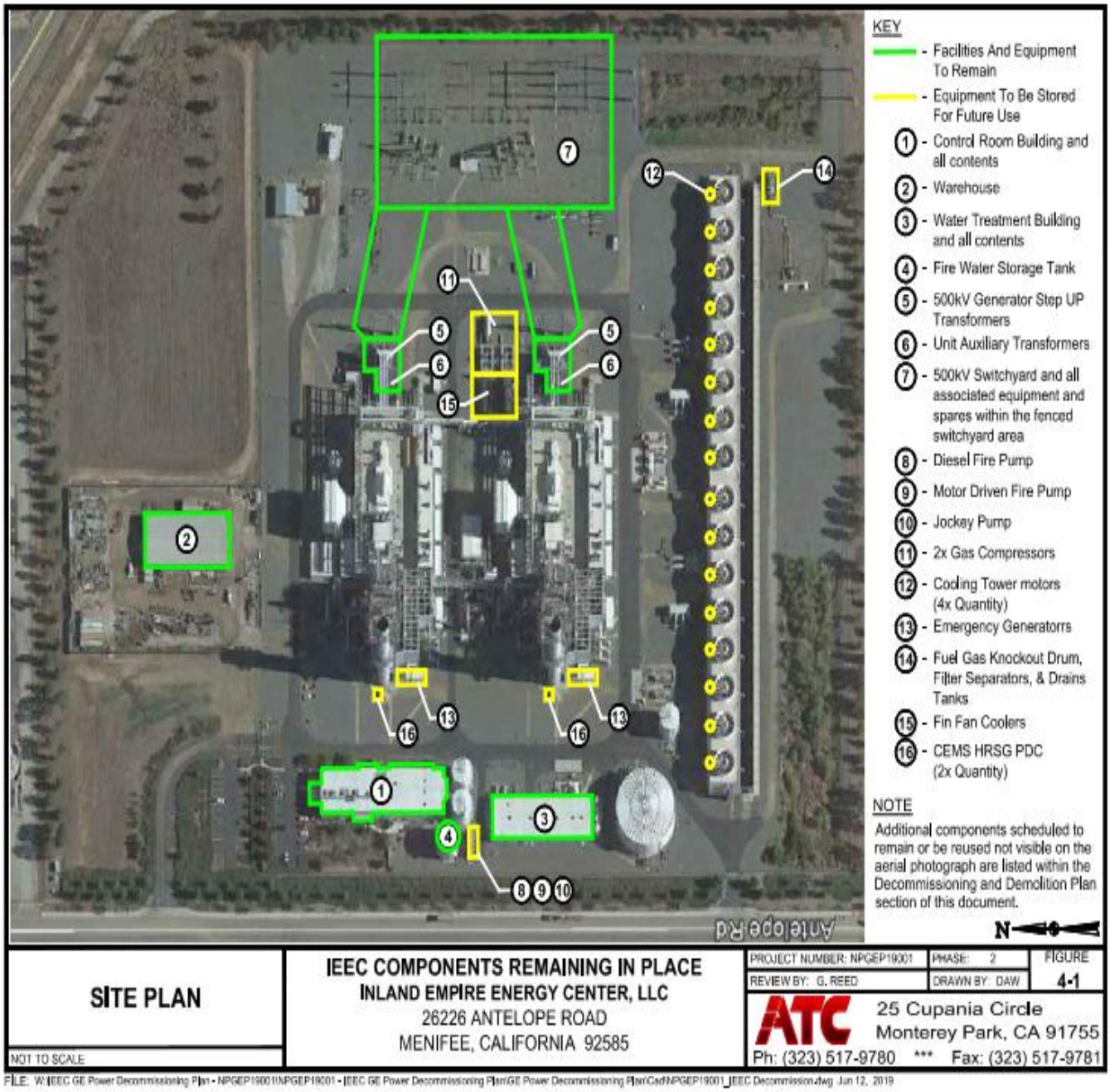
Subsurface Facilities and Utilities

- Cooling tower basin walls will be removed to six inches below grade and the remaining basin will be filled to grade level with recycled concrete and clean fill and compacted as described under Backfilling and Finished Site Grade specifications below;
- Any pipes that are 0-12 feet below surface and are accessible (i.e., not located below foundations that are not removed) will be removed;
- Circulating water pipe that is not below foundations but underneath existing duct banks will be filled with flowable fill and not excavated;
- With the possible exception of cabling that supports lower voltage station or standby service, all cabling from underground duct bank conduits will be removed and duct banks will be left in place with empty conduit;
- Piping for water (fire, potable, service) and sewer, that does not impact the operations of utilities within the control room building, control room and warehouse, will be removed back to the Project Site boundary or closest flanged connection and secured with a blanking plate as described below or an existing valve if near the Project Site boundary. For piping left in place, service will be blanked off with ASME type weld-end/weld-on caps or flanges; Gas Service will be terminated at the boundary of the Southern California Fuel Gas metering station;
- Drain lines located within the power block foundations will be capped in place;
- Electrical service that routes to the Project from the power block will be terminated once the power block is disconnected from the switchyard. This will de-energize the water treatment building and electric fire pump. Once electrical service is terminated temporary fire protection measures will be utilized during decommissioning and demolition;
- The stormwater drainage and retention system will be left in place and remain operable; and

- Other subsurface facilities that are located within 12 feet of the surface and not identified above will be removed.

Figure 4-1 presents an aerial view of the Project Site and identifies the Project components that are to remain in place.

Figure 4-1 Project Components to Remain in Place



At the completion of decommissioning and demolition, site grade will be returned to datum elevation as shown on existing drawings and sloped to existing stormwater

drains to prevent accumulation and ponding of rainwater. All areas excavated during demolition will be backfilled with existing site material, and imported clean engineered fill if necessary, to maintain the required site grade. The density of fill material will not be less than 93 percent of the maximum modified proctor density in accordance with American Society for Testing and Materials (ASTM) D1557, or not less than 95 percent of the maximum standard proctor density in accordance with ASTM D698. Fill in the upper twelve inches in the areas of the existing roads will be compacted to not less than 95 percent of the maximum modified proctor density in accordance with ASTM D1557, or not less than 98 percent of the maximum standard proctor density in accordance with ASTM D698.

4.2 Disposition of Major Project Components

The proposed disposition of the major Project components is summarized in Table 4.2-1 and discussed in greater detail in the sections that follow. For each major Project component, a “Primary Approach” has been identified, which is the intended approach for disposition of that component. In some cases, an “Alternative Approach” has been identified, which would be implemented should the Primary Approach be infeasible due to market conditions or component condition.

Table 4.2-1 Summary of Decommissioning Approach

PROJECT COMPONENT	PRIMARY APPROACH	ALTERNATIVE APPROACH
Combustion Turbines (CT)	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Steam Turbines (ST)	Disconnect, disassemble /remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Generators	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Heat Recovery Steam Generators (HRSG)	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
HRSG Stack Structure	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
CT Air lntake System Structure	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Step Up 500kV Transformers (2)	Remains in place	NA
Unit Auxiliary Transformers	Remains in place	NA
Generator Breakers	Remains in place	NA
Water Treatment Building	Remains in place	NA

PROJECT COMPONENT	PRIMARY APPROACH	ALTERNATIVE APPROACH
Maintenance Building and Control Room Building	Remains in place	NA
Medium Voltage Switchgear Building (4)	Remains in place	NA
Diesel Fire Pump (Tag # 9FP-P-01A)	Decommissioned and Stored for Possible Future Use	NA
Motor Driven Fire Pump (Tag # 9FP-P-02A)	Decommissioned and Stored for Possible Future Use	NA
Jockey Pump (Tag # 9FP-P-03A)	Decommissioned and Stored for Possible Future Use	NA
Gas Compressors (2) – (Tag #'s 9FG-C-01A / 02A)	Decommissioned and Stored for Possible Future Use	NA
Cooling Tower Motors	Decommissioned and Stored for Possible Future Use	NA
Emergency Generators (2)	Decommissioned and Stored for Possible Future Use	NA
FG Knockout Drum, Filter Separators, Drain Tanks (Tag #'s 9FG-F-01A, 9FG-F-02A/02B, 9FG-T-01A/01B/ 02A	Decommissioned and Stored for Possible Future Use	NA
Air Compressors, Dryers, Receivers (Tag #'s 1IA-C-01A/01B, 1IA-D-01A/01B, 1IA-D-02A/03A	Decommissioned and Stored for Possible Future Use	NA
Fin Fan Coolers (Tag #'s 9FG-A-01A / 01B / 01C	Decommissioned and Stored for Possible Future Use	NA
CEMS HRSG PDC (2)	Decommissioned and Stored for Possible Future Use	NA
Auxiliary Cooling Water Pump	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Circulating Water Pumps	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Boiler Feed Pumps	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Cooling Tower Structure	Demolish above grade structure and walls to 6" below grade, sell any ferrous material, dispose of remaining material as C&D debris	NA

PROJECT COMPONENT	PRIMARY APPROACH	ALTERNATIVE APPROACH
Cooling Tower Electrical Building	Disconnect, disassemble / remove, and sell to a new user	Demolish building and components and dispose of as C&D debris, ferrous, and non-ferrous material
Cooling Tower Chemical Feed Foundation and Connections	Demolish, size, and retain on site foundation concrete and size and sell connections as recycled ferrous material	NA
Fire Water Tank	Remains in place	NA
Demineralized Water Storage Tank	Demolish, size, and sell as recycled ferrous metal	NA
Condensate Surge Tank	Demolish, size, and sell as recycled ferrous metal	NA
Ammonia Storage Tank	Demolish, size, and sell as recycled ferrous metal	NA
Switchyard Control Building	Remains in Place	NA
HRSG Blowdown Tank	Demolish, size, and sell as recycled ferrous metal	NA
Ammonia Injection Skid	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Condenser and Auxiliaries	Demolish, size, and sell as recycled ferrous metal	NA
Auxiliary Transformer	Remain in Place	NA
Recycled Water Tank	Demolish, size, and sell as recycled ferrous metal	NA
Condensate Pumps	Demolish, size, and sell as recycled ferrous metal	NA
Non-Reclaimable Wastewater Tank	Demolish, size, and sell as recycled ferrous metal	NA
Fire Protection System	Demolish, size, and sell as recycled ferrous metal	NA
Auxiliary Boiler	Disconnect, disassemble/remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
Standby Generators	Disconnect, disassemble / remove, and sell to a new user	Demolish, size, and sell as recycled ferrous metal
High Pressure and Large Diameter Piping	Demolish, size, and sell as recycled ferrous metal.	NA

PROJECT COMPONENT	PRIMARY APPROACH	ALTERNATIVE APPROACH
Switchyard, Buses and Towers	Remain in place (up to limits of power block demolition). Buses within limits will be removed and recycled.	NA

4.3 Natural Gas Interconnection

IEEC will coordinate with SoCalGas to ensure a safe and coordinated disconnect of the Project from its natural gas supply system. The natural gas service will be terminated and the isolation valves at the meter station closed and locked. The underground natural gas pipeline from the meter station to the Project will be purged, air-gapped, capped and abandoned in place.

4.4 Electric Transmission Interconnection

IEEC will work closely with SCE to ensure a safe and coordinated disconnection of the Project from the SCE transmission system. Electric transmission interconnection facilities will remain in place to serve the proposed BESS.

4.5 Water Supply

Certain water supply components will be left in place to serve the proposed BESS,while others will be removed as detailed in Table 4.1-1.

4.6 Wastewater

Wastewater pipelines from the power block foundations will be permanently plugged from the inlets to the external edges of the Power Block foundations. All wastewater pipelines that are 0-12 feet below the existing ground surface and not below foundations will be removed except for those lines that are associated with Water Treatment Building, Control Room Building and Warehouse operations. The water treatment and processing equipment, tanks, and facilities contained within the Water Treatment Building will be retained. All associated ancillary external components to wastewater treatment will be dismantled.

4.7 Other Waste

To the extent possible all materials generated during decommissioning and demolition activities will be assessed for recycling, salvage, reuse or use as on-site fill (limited to processed concrete) in order to minimize waste generation.

All non-hazardous wastes including construction and demolition (C&D) debris will be collected and disposed of in appropriate landfills or waste collection facilities.

All hazardous wastes and universal wastes will be disposed of in accordance with applicable LORS.

Any unknown hazardous or toxic materials encountered during decommissioning and demolition activities will be properly sampled and submitted to an approved analytical laboratory for analysis, characterization and profiling. All hazardous and/or toxic materials will be managed to ensure protection of the environment, as well as human health and safety. Associated activities including characterization, containerization, and off-site transport and disposal will be completed in accordance with applicable LORS.

4.8 Workforce

Decommissioning, demolition, asset and materials removal, and final grading activities will be performed by IEEC personnel and external contractors with the appropriate expertise and licensing. The on-site workforce including both IEEC employees and external contractors, is projected to be approximately 30 workers per day.

4.9 Equipment Requirements

Equipment types likely to be used for the demolition and removal activities are listed in Table 4.9-1. The equipment is anticipated to operate up to 10 hours per day, five days per week.

Table 4.9-1 Demolition and Removal Equipment Use

EQUIPMENT TYPE	HORSEPOWER	NUMBER
Skid-Steer Loader	85	2
Excavator with Shear	433	1
Excavator with Shear	359	1
Excavator with Shear	359	1
Excavator with Shear / Concrete Processor	355	1
Excavator with Thumb / Magnet	288	1
Compactor	156	1
Wheel Loader	225	1
160 Ton Rough Terrain Crane (short term rental as needed)	333	1

All equipment, as well as scrap and recycled materials to be removed from the Project Site, will be transported using 18-wheel tractor-trailer trucks. There will be approximately 20,000 tons of ferrous and non-ferrous material to be removed from the Project Site requiring an estimated 1,540 truck-loads. In addition to this material, approximately 100 loads of C&D debris, mainly generated by the demolition of the Cooling Tower, will require off-site transport and disposal. Mobilization and demobilization of demolition equipment will add an additional 20 truck trips to and from the Project Site. A total of 10 two-axle box truck round trips is estimated to be sufficient to occasionally haul hazardous or universal waste off the Project Site.

The import of approximately 4,000 tons of engineered fill will result in an additional 160 trips, and the import of diesel fuel being supplied to the Project Site to refuel mobile off-road equipment will account for an additional 100 trips during the year.

Consequently, there will be an estimated 1,930 truck round trips to and from the Project Site during the twelve-month decommissioning and demolition period.

4.10 Roads

The on-site paved roads, as well as paved parking and graveled surfaces, will be left in place.

4.11 Security

IEEC and its contractors will maintain 24-hour per day manned security during decommission and demolition. This will include perimeter fencing with Project Site entry monitored by on-site security personnel, and maintenance of a site security network.

4.12 Schedule

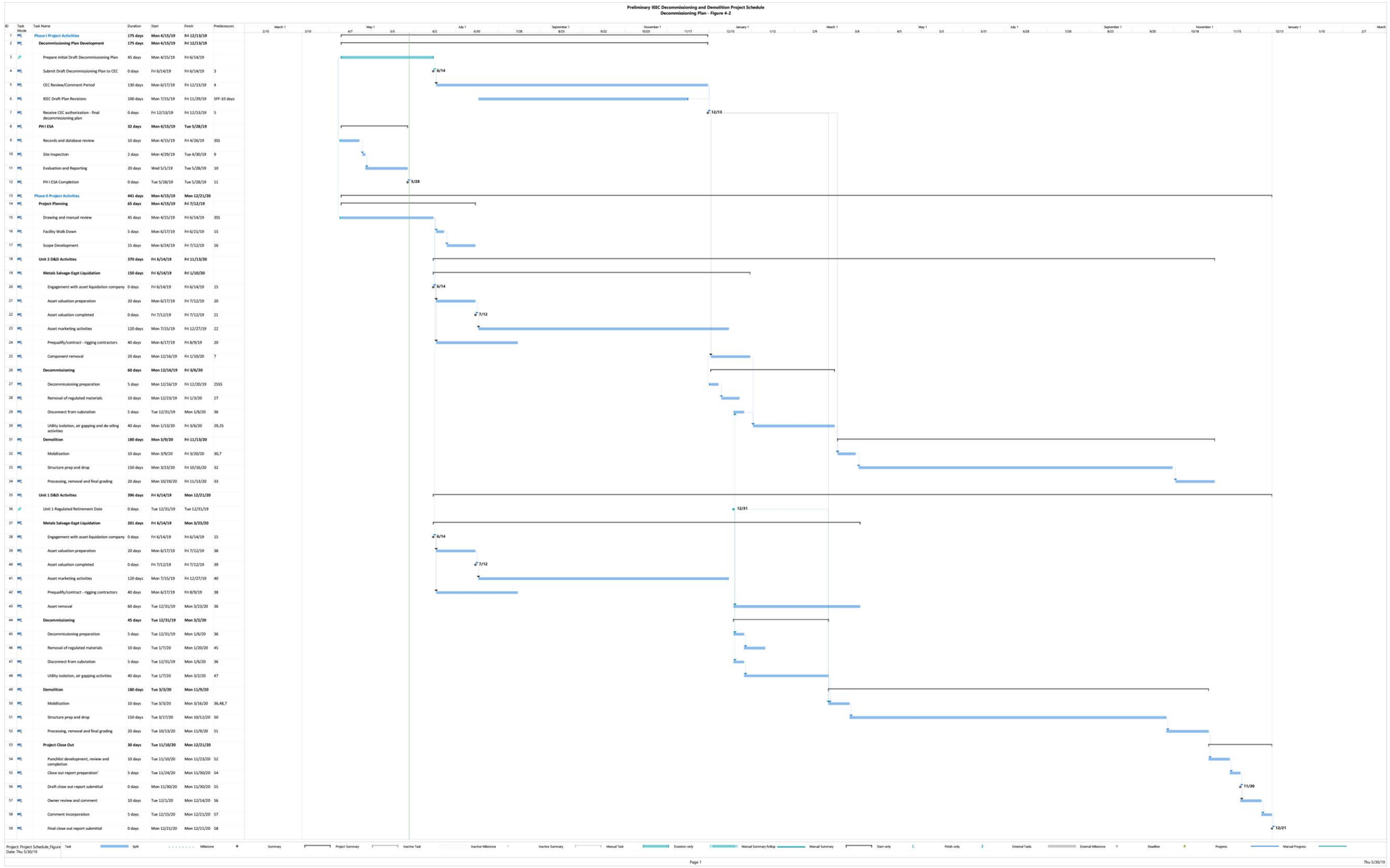
Planning and preparation activities are currently in progress and include preparation of planning documentation, detailed Project and asset characterization activities, and equipment marketing activities.

It should also be noted that certain actions that were taken with respect to Unit 2 when it was placed into cold lay-up status, consistent with the 2016 “COM13-14: Unplanned Temporary/Permanent Closure And On-Site Contingency Plan” previously filed with the CEC, are the same or similar to actions taken to permanently decommission a unit. Therefore, some of the decommissioning activities described in this Plan have already occurred with respect to Unit 2. With the exception of planning and preparation, IEEC will not undertake any decommissioning or demolition activities beyond those authorized by the 2016 plan referred to above until this Plan has been approved by the CEC.

Decommissioning and demolition will begin once this Plan is approved by the CEC, on or about December 15, 2019. Power Block demolition activities will begin once the Project ceases power production, which is expected to be January 1, 2020. Decommissioning, demolition, removal, and final grading is expected to last approximately twelve months. The majority of the work will occur Monday through Friday during normal work hours (7:00 AM through 5:00 PM PS/DT).

The current decommissioning and demolition schedule is shown in Figure 4-2.

Figure 4-2 Project Decommissioning and Demolition Schedule



ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
1		**Phase I Project Activities**	**175 days**	**Mon 4/15/19**	**Fri 12/13/19**	
2		**Decommissioning Plan Development**	**175 days**	**Mon 4/15/19**	**Fri 12/13/19**	
3		Prepare Initial Draft Decommissioning Plan	45 days	Mon 4/15/19	Fri 6/14/19	
4		Submit Draft Decommissioning Plan to CEC	0 days	Fri 6/14/19	Fri 6/14/19	3
5		CEC Review/Comment Period	130 days	Mon 6/17/19	Fri 12/13/19	4
6		IEEC Draft Plan Revisions	100 days	Mon 7/15/19	Fri 11/29/19	SFF-10 days
7		Receive CEC authorization - final decommissioning plan	0 days	Fri 12/13/19	Fri 12/13/19	5
8		**PH I ESA**	**32 days**	**Mon 4/15/19**	**Tue 5/28/19**	
9		Records and database review	10 days	Mon 4/15/19	Fri 4/26/19	355
10		Site Inspection	2 days	Mon 4/29/19	Tue 4/30/19	9
11		Evaluation and Reporting	20 days	Wed 5/1/19	Tue 5/28/19	10
12		PH I ESA Completion	0 days	Tue 5/28/19	Tue 5/28/19	11
13		**Phase II Project Activities**	**441 days**	**Mon 4/15/19**	**Mon 12/21/20**	
14		**Project Planning**	**65 days**	**Mon 4/15/19**	**Fri 7/12/19**	
15		Drawing and manual review	45 days	Mon 4/15/19	Fri 6/14/19	355
16		Facility Walk Down	5 days	Mon 6/17/19	Fri 6/21/19	15
17		Scope Development	15 days	Mon 6/24/19	Fri 7/12/19	16
18		**Unit 2 D&D Activities**	**370 days**	**Fri 6/14/19**	**Fri 11/13/20**	
19		**Metals Salvage-Eqpt Liquidation**	**150 days**	**Fri 6/14/19**	**Fri 1/10/20**	
20		Engagement with asset liquidation company	0 days	Fri 6/14/19	Fri 6/14/19	15
21		Asset valuation preparation	20 days	Mon 6/17/19	Fri 7/12/19	20
22		Asset valuation completed	0 days	Fri 7/12/19	Fri 7/12/19	21
23		Asset marketing activities	120 days	Mon 7/15/19	Fri 12/27/19	22
24		Prequalify/contract - rigging contractors	40 days	Mon 6/17/19	Fri 8/9/19	20
25		Component removal	20 days	Mon 12/16/19	Fri 1/10/20	7
26		**Decommissioning**	**60 days**	**Mon 12/16/19**	**Fri 3/6/20**	
27		Decommissioning preparation	5 days	Mon 12/16/19	Fri 12/20/19	2555
28		Removal of regulated materials	10 days	Mon 12/23/19	Fri 1/3/20	27
29		Disconnect from substation	5 days	Tue 12/31/19	Mon 1/6/20	36
30		Utility isolation, air gapping and de-oiling activities	40 days	Mon 1/13/20	Fri 3/6/20	29,25
31		**Demolition**	**180 days**	**Mon 3/9/20**	**Fri 11/13/20**	
32		Mobilization	10 days	Mon 3/9/20	Fri 3/20/20	30,7
33		Structure prep and drop	150 days	Mon 3/23/20	Fri 10/16/20	32
34		Processing, removal and final grading	20 days	Mon 10/19/20	Fri 11/13/20	33
35		**Unit 1 D&D Activities**	**396 days**	**Fri 6/14/19**	**Mon 12/21/20**	
36		Unit 1 Regulated Retirement Date	0 days	Tue 12/31/19	Tue 12/31/19	
37		**Metals Salvage-Eqpt Liquidation**	**201 days**	**Fri 6/14/19**	**Mon 3/23/20**	
38		Engagement with asset liquidation company	0 days	Fri 6/14/19	Fri 6/14/19	15
39		Asset valuation preparation	20 days	Mon 6/17/19	Fri 7/12/19	38
40		Asset valuation completed	0 days	Fri 7/12/19	Fri 7/12/19	39
41		Asset marketing activities	120 days	Mon 7/15/19	Fri 12/27/19	40
42		Prequalify/contract - rigging contractors	40 days	Mon 6/17/19	Fri 8/9/19	38
43		Asset removal	60 days	Tue 12/31/19	Mon 3/23/20	36
44		**Decommissioning**	**45 days**	**Tue 12/31/19**	**Mon 3/2/20**	
45		Decommissioning preparation	5 days	Tue 12/31/19	Mon 1/6/20	36
46		Removal of regulated materials	10 days	Tue 1/7/20	Mon 1/20/20	45
47		Disconnect from substation	5 days	Tue 12/31/19	Mon 1/6/20	36
48		Utility isolation, air gapping activities	40 days	Tue 1/7/20	Mon 3/2/20	47
49		**Demolition**	**180 days**	**Tue 3/3/20**	**Mon 11/9/20**	
50		Mobilization	10 days	Tue 3/3/20	Mon 3/16/20	36,48,7
51		Structure prep and drop	150 days	Tue 3/17/20	Mon 10/12/20	50
52		Processing, removal and final grading	20 days	Tue 10/13/20	Mon 11/9/20	51
53		**Project Close Out**	**30 days**	**Tue 11/10/20**	**Mon 12/21/20**	
54		Punchlist development, review and completion	10 days	Tue 11/10/20	Mon 11/23/20	52
55		Close out report preparation	5 days	Tue 11/24/20	Mon 11/30/20	54
56		Draft close out report submittal	0 days	Mon 11/30/20	Mon 11/30/20	55
57		Owner review and comment	10 days	Tue 12/1/20	Mon 12/14/20	56
58		Comment incorporation	5 days	Tue 12/15/20	Mon 12/21/20	57
59		Final close out report submittal	0 days	Mon 12/21/20	Mon 12/21/20	58

4.13 Implementation of Decommissioning and Demolition Activities

The decommissioning and demolition of the Project will be completed in three consecutive phases. The work in each phase is described below:

Phase 1 (3 Month Estimated Duration)

The initial activities under Phase 1 will include disconnection of the Project from primary utilities including gas supply and electrical supply from the switchyard. Once on-site systems and piping scheduled for demolition are confirmed purged and free of natural gas and high voltage electricity, additional Phase 1 activities will proceed as follows:

- Removal of regulated materials including hazardous materials/waste and universal waste. This includes removal, containerization, profiling, manifesting and transport for off-site disposal of the following items:
    - Lubricating and cooling oils removal/recovery from equipment scheduled for demolition/salvage;
    - Universal waste removal including fluorescent lights, ballasts, batteries, mercury switches, etc.;
    - Tank cleaning including removal of free liquids, sludges and tank bottoms; and
    - Decommission and store onsite – equipment components listed for possible future reuse.

- Demolition of the Balance of Plant (BOP) structures (outside of the main Power Block), including foundations and subsurface utilities.

Phase 1 BOP demolition work will require the following types of equipment and may not include all specialty types of equipment:

- Excavators with Concrete Processors (breaking / sizing of concrete foundations / pedestals and complete rebar removal);
- Excavators with Hydraulic Metal Shears (demolition and sizing of metal structural components, tanks, and any unsold equipment);
- Excavators with Thumbs / Magnets (loading trucks, containers, and rail cars with sized ferrous and non-ferrous material);
- Water Truck (site dust control (12,000 gallons per day estimated – as required to maintain compliance with applicable requirements);
- Roll-off Container Drop Truck (stockpile / segregate ferrous and non-ferrous material);
- Skid-steer Loaders (stockpile / segregate ferrous and non-ferrous material);
- Wheel Loader (stockpile/segregate ferrous, non-ferrous, and pulverized concrete;
- Fuel / Lube / Mechanic Truck (equipment support);
- 4WD Project Pickups (personnel transport); and
- 160 Ton All Terrain Crane as needed.

All C&D waste and recyclable material generated during Phase 1 will be loaded in approved and properly labelled containers and transferred from the Project Site to a California licensed and approved waste disposal facility in properly placarded transport vehicles.

Phase 2 (8 Month Estimated Duration)

Phase 2 consists of the demolition of the main Power Block structures and all remaining ancillary structures to existing grade. The main Power Block structures, equipment, and ancillary structures include:

- Units 1 & 2 Steel Support Structures;
- Units 1 & 2 Combustion Turbine and Concrete Foundations;
- Units 1 & 2 Generators;
- Units 1 & 2 Steam Turbines and Concrete Foundations;
- Units 1 & 2 Natural Gas Conditioning Structures;
- Units 1 & 2 Heat Recovery Steam Generators (HRSG) & Concrete Foundations;
- Units 1 & 2 HRSG Stack Structures and Concrete Foundations;
- Units 1 & 2 Combustion Turbine Air Inlet System Structures and Foundations;
- Units 1 & 2 Power Block Transformers;
- Units 1 & 2 Power Block Power Distribution Control Modules;
- Units 1 & 2 Power Block Pumps and Related Valves / Piping; and
- Units 1 & 2 Power Block Electrical, buses, and Control Cabling / Cable Trays.

This demolition work will be completed utilizing the same equipment used in Phase 1, all performing the same functions. C&D waste and recyclable material generated during Phase 2 will be loaded in approved and properly labelled containers and transferred from the Project Site to a California licensed and approved waste disposal facility in properly placarded transport vehicles.

The Phase 1 and Phase 2 estimate of the ferrous and non-ferrous salvage material is 20,000 tons, which will leave the Project Site in highway tractor trailer trucks transporting 13 tons net salvage material per load. Consequently, 1,539 truckloads will leave the Project Site to a predetermined metal recycling destination. Rail cars may be used if a railroad siding exists nearby that can be used to stage railroad scrap metal cars. Typical scrap cars can haul 90 net tons, but the net will be reduced to 60 net tons due to void spaces inherent when loading salvage metal. Considering this, if railroad cars can be used, 334 rail cars would move the material to the final recycling destination with 1,540 truckloads still being involved to transport the material from the Project Site to the rail car siding loading area.

Phase 3 (1 Month Estimated Duration)

Phase 3 consists of the placement and compaction to project specifications of existing site backfill material (processed concrete) and imported engineered backfill material in the Cooling Tower Basin and any areas excavated during the demolition phases. Final

grading of disturbed areas per the final grading design and project specifications of the disturbed areas will be completed and any required permanent erosion control measures installed. This work will be completed utilizing the following types of equipment:

- Water Truck (site dust control and backfill moisture control per compaction specifications);
- Excavators with Buckets (loading processed concrete in the container truck during the demolition phases);
- Roll-off Container Drop Truck (dumping processed concrete in the Cooling Tower Basin and areas requiring backfill following demolition);
- Skid-steer Loaders (spreading processed concrete in eight-foot lifts in the Cooling Tower Basin and areas requiring backfill and spreading imported backfill between the processed concrete lifts to fill void spaces and achieve compaction specifications);
- Sheepsfoot Vibratory Compactor (achieve compaction specifications);
- Fuel / Lube / Maintenance Truck (equipment support); and
- 4WD Project Pickups (personnel transport).

Waste material generated during Phase 3 will be loaded in approved and properly labelled containers and transferred from the Project Site to a California licensed and approved waste disposal facility in properly placarded transport vehicles.

4.14 Implementation of the Compaction Plan

Phase 3 includes purchasing approved backfill and hauling / placing / compacting the fill between all processed concrete lifts. The work consists of the following tasks:

- Approved fill will be loaded and transported to the Project Site and placed in eight inch lifts over each processed concrete lift;
- Compaction will be gained by utilizing a vibratory compactor to achieve project compaction specifications with moisture requirements being within specified percentage points of optimum moisture.
- Confirmation testing will be completed by a local and approved geotechnical company, and.
- The final survey will be completed to ensure final design for fill elevations in all site areas was achieved.

4.15 Implementation of the Final Grading Plan

The final grading involves the following:

- Importing approved backfill and spreading / compacting to gain final specified elevations and grading / contouring of the backfill to maintain positive slope to storm water drains, and

- Installation of all permanent erosion control measures (rip rap, erosion control mats, silt fence, etc.) per the final design will be completed by the demolition contractor.

4.16 Implementation of the Demobilization and Post-Construction Plan

Phase 3 also includes demobilization of all equipment, removal of any temporary safety or silt fences, complete demobilization of all demolition personnel, and any subcontractor equipment and personnel. The work generally consists of the following:

- Temporary safety fence removal;
- Sanitary facilities demobilization;
- Complete equipment demobilization; and
- Demolition contractor and any subcontractor personnel demobilization.

5.0 PROJECT STAFFING – KEY POSITIONS

5.1 Minimum Functional Requirements / Responsibilities

In the context of decommissioning and demolition execution and site safety, minimum requirements shall be met and minimal responsibilities performed by the functional equivalent of the positions described in the following sections. Please note that specific decommissioning and demolition work activities will be detailed in a set of project specific plans and specifications. Preparation and implementation of these project specific plans, as well as compliance with the CEC approved Plan, is the responsibility of the individual project positions listed below, as noted.

5.1.1 Project Manager

The Project Manager (PM) is an experienced demolition professional who ensures that constructability input and appropriate Health, Safety and Environmental (HSE) requirements are integrated into the decommissioning and demolition project and is ultimately responsible and accountable for specified metrics performance for all phases of work.

The PM oversees and ensures that the execution of the various stages of the work are being performed satisfactorily by the applicable "owner" of each stage. Specific assignments / activities include:

- Ensures compliance with the CEC approved Plan;
- Develops compliance reporting for CEC to document Plan compliance;
- Generates the monthly Contract Status Report;
- Initiates, develops, prepares / issues, and enforces adherence to the approved plans and procedures;
- Supports, provides input into, and generates / approves the following documents:

  - Baseline demolition schedule and updates to ensure adherence to critical path activity dates and other project constraints; and
  - Daily construction reports, sharing significant deviations / concerns (and proposed solutions) with IEEC;

- Prepares Substantial and Final Completion Certificates – with regard to demolition work in the field for IEEC review; and
- Leads all constructability reviews relating to the decommissioning and demolition of the Project.

5.1.2 Site Supervisor

The Demolition Site Supervisor has oversight and overall responsibility for the demolition activities. Specific assignments / activities include:

- Supervises and directs the demolition team;
- Approves the monthly Contract Status Report prior to formal issuance;
- Initiates, develops, prepares / issues, and enforces project / site-wide adherence to the site plans and procedures;
- Supports, provides input into, and approves the following documents:

  - Baseline demolition schedule and updates to ensure adherence to critical path activity dates and other project constraints; and
  - Daily construction reports, sharing significant deviations / concerns (and proposed solutions) with the IEEC and the PM;

- Approves Substantial and Final Completion Certificates with regard to demolition / construction work in the field; and
- Inputs / attends all constructability reviews relating to the demolition portion of the project.

5.1.3 Site HSE Manager

The Demolition HSE Manager ensures that all personnel supporting the project are educated in the applicable HSE processes.

At the Project Site the Demolition HSE Manager shall be the key point of contact in terms of implementing the Demolition HSE Plan by reviewing the decommissioning and demolition safety programs against the Demolition HSE Plan, as well as observing subcontractor’s safety practices to ensure overall compliance with the Demolition HSE Plan.

5.1.4 Site Quality Assurance Officer

The responsibility of the Site Quality Assurance (QA) Officer is to ensure the expectations and requirements regarding the quality of contractor’s and subcontractors’ work processes and end products meet or exceed applicable IEEC requirements and

specifications, as well as industry code requirements. The focus of the Site QA Officer will be to ensure consistency in the quality of work across all decommissioning and demolition entities involved with the work.

On the Project Site, the QA Officer will be the key point of contact in terms of implementing the CEC approved Plan and IEEC Decommissioning Project's Site Demolition / Construction Quality Assurance Plan, reviewing Contractor's quality control programs and work practices against the Site Demolition / Construction Quality Assurance Plan, as well as observing the contractor's jobsite quality control procedures and practices.

5.1.5 Air Quality Supervisor

An Air Quality Supervisor (AQS) shall be designated who will be certified by the California Air Resources Board (CARB) for Visible Emissions Evaluation (VEE) before any demolition activities commence at the Project Site. The AQS will also serve as the Dust Control Supervisor, if required by SCAQMD Rule 403 – Fugitive Dust. The AQS shall be responsible for assuring that:

- No dust from demolition activities remains visible beyond the property line;
- No dust emissions exceed 20 percent opacity from vehicle traffic;
- All active operations at the Project Site utilize applicable Best Available Control Measures as specified in SCAQMD Rule 403, including all appropriate measures found in Table 1 of Rule 403;
- All mobile off-road diesel-fueled vehicles operating at the Project Site are:
    - Properly labeled with an Equipment Identification Number (EIN) issued by the CARB;
    - Properly registered in the CARB Diesel Off-road Online Reporting System (DOORS); and
    - Are part of a vehicle fleet that has a current CARB Certificate of Reported Compliance;
- All mobile on-road diesel fueled vehicles operating at the Project Site are:
    - In compliance with CARB requirements for on-road vehicles for the current compliance year; and
    - Part of a fleet that has properly reported, as necessary, in the CARB Truck Regulation Upload, Compliance and Reporting System (TRUCRS) for which the fleet has a current Certificate of Reported Compliance; and
- Daily records are kept regarding the extent of active operations at the Project Site, including:
    - The nature of daily on-site demolition activities, including an estimate of the tons of various materials handled;
    - The amounts of diesel fuel consumed in each mobile off-road vehicle; and

- The amounts of materials imported/exported to the Project Site.

6.0 LORS CONFORMANCE AND IMPACT ASSESSMENT

6.1 Introduction to the Environmental Resource Sections

The following Sections in Chapter 6 analyze each environmental resource that could be affected by decommissioning and demolition of the Project. Each Section is divided into four subsections that provide:

1. A summary of the conclusions from the Commission's Decision related to the specific resource including any specific decommissioning or demolition requirements.
2. A response to the questions of whether there are any applicable LORS for decommissioning and demolition of the Project and any additional permits required for decommissioning and demolition.[4]
3. A discussion of how decommissioning and demolition will conform with all applicable LORS and an assessment of the impacts of the decommissioning and demolition on the resource area in question, and
4. Conditions, if any, required for mitigation of impacts associated with decommissioning and demolition activities.

Proposed conditions included in this Plan include existing COC (with appropriate modifications in some cases), and new conditions developed specifically for decommissioning and demolition. Proposed conditions included in this Plan are designated with a "D" to indicate that they are applicable to decommissioning and/or demolition. Existing COC that are not specifically incorporated into this Plan have been deemed not applicable to decommissioning and demolition, and IEEC requests that the CEC approval of this Plan indicate that all such COC cease to be effective upon cessation of production of electricity from the Project. At that point, only those COC and new conditions specifically included in this Plan would continue in effect. The COC and new conditions specifically included in this Plan would cease to be effective upon full implementation of this Plan and release of CEC jurisdiction over the Project Site.

6.2 Air Quality and Greenhouse Gases

This section presents an analysis of LORS compliance and potential environmental impacts and benefits related to air quality and greenhouse gas emissions that may result from the decommissioning and demolition of the Project. With the cessation of Project operations, there is a substantial reduction in emissions which are being temporarily replaced with short-term emissions of a lesser magnitude related to decommissioning and demolition.

[4] Where no applicable LORS have been identified, a LORS table is not provided or a table is provided with a comment column to provide the reasoning for the determination.

6.2.1 Background

The Commission Decision concluded:

> *"The Commission therefore conclude [sic] the implementation of the Conditions of Certification, below, and the mitigation measures described in the evidentiary record, ensures the Inland Empire Energy Center will conform with all applicable laws, ordinances, regulations, and standards relating to air quality as set forth in the pertinent portions of Appendix A of this Decision."*[5]

The Commission Decision did not identify any decommissioning and demolition conditions specifically related to air quality or greenhouse gases.

6.2.2 Applicable LORS and Required Permits

As indicated in Table 6.2-1, most of the LORS applicable to air quality during decommissioning and demolition are SCAQMD rules. There are no specific LORS applicable to greenhouse gases during decommissioning and demolition.

No SCAQMD permits related to air quality or greenhouse gases will be required for the decommissioning or demolition activities. If portable equipment requiring permits is used for the decommissioning and demolition activities, that equipment will be registered through the CARB Portable Equipment Registration Program (PERP).

6.2.3 LORS Conformance and Impact Assessment

Table 6.2-1 shows how the decommissioning and demolition activities will conform with LORS applicable to air quality.

Table 6.2-1 LORS Applicable to Air Quality

LORS	DESCRIPTION	COMMENTS
Federal		
40 Code of Federal Regulations (CFR) Part 60 – NSPS, Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Establishes emission standards for stationary compression ignition internal combustion engines, including emergency fire water pump and generator engines over a specific size.	All the stationary engines operated as part of the power plant will be shut down, drained of fluids (fuel and lube), and potentially sold off, before the start of demolition. No SCAQMD permits will be required for the decommissioning and demolition activities. If

[5] Commission Decision, p. 122.

LORS	DESCRIPTION	COMMENTS
		portable equipment requiring permits is used, that equipment will be registered through the CARB PERP.
State		
Title 17 California Code of Regulations (CCR), Section 93115, Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines	Establishes emission limits, operating limits, fuel use restrictions, monitoring and recordkeeping requirements for large (>50 hp) stationary compression ignition engines, including emergency fire water pump and generator engines.	No SCAQMD permits will be required for the decommissioning and demolition activities. If portable equipment requiring permits is used, that equipment will be registered through the CARB PERP.
Title 17, CCR., Section 93116, ATCM for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower or Greater	Establishes requirements for diesel fuel, use of only certified engines, weighted particulate matter (PM) emission fleet averages, record keeping and reporting for >50 hp compression engines, powering portable equipment such as generators and air compressors.	No SCAQMD permits will be required for the decommissioning and demolition activities. If portable engines are required, the Air Quality Supervisor (AQS) will be responsible for verifying compliance with the ATCM for each portable engine that is operated at the Project.
California Health & Safety Code (H&SC) §41700 (Nuisance Regulation)	Prohibits discharge of such quantities of air contaminants that cause injury, detriment, nuisance, or annoyance.	The project owner will ensure the contractor will ensure compliance with this requirement
California H&SC §2451, et seq. (Portable Equipment Registration Program – PERP)	Allows the permitting of portable equipment under a statewide registration program	If portable equipment requiring permits is used for the decommissioning and demolition activities, that equipment will be registered through the CARB PERP.
Title 13, CCR, Article 4.8, Chapter 9, Section 2449, Regulation for In-Use Off-Road Diesel-Fueled Fleets	Establishes requirements for diesel-fueled mobile off-road vehicle fleets in order to reduce criteria pollutant emissions from engines greater than 25 hp, including requirements on excess idling, CARB assigned equipment identification numbers (EINs), and year-by-year fleet	The AQS shall be responsible for determining the compliance status of all mobile off-road equipment that will be operated during decommissioning at the Project Site,

LORS	DESCRIPTION	COMMENTS
	average requirements, as well as recordkeeping and reporting.	including verifying that all equipment is properly identified and that equipment fleets meet the appropriate annual reporting and compliance schedules.
Title 13, CCR, Division 3, Chapter 1, Section 2025, Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants for In-Use Heavy Duty Diesel-Fueled Vehicles.	Regulates diesel –fueled on-highway vehicles over 14,000 pounds Gross Vehicle Weight Rating (GVWR) by establishing dates by which certain model year engines can no longer be operated in California, with separate requirements for medium-duty (14000-26,000 GVWR) and heavy-duty (over 26,000 GVWR) vehicles, including recordkeeping and reporting for some vehicles.	The AQS shall be responsible for determining the compliance status of all mobile on-road vehicles over 14,000 GWVR that are used in any capacity during the decommissioning and demolition of the Project.
Local (SCAQMD)		
Rule 201 – Permit to Construct, Rule 202 - Temporary Permit to Operate, Rule 203 – Permit to Operate	Rules 201, 202 and 203 require that permits be obtained for any equipment that emits air contaminants.	No SCAQMD permits will be required for the decommissioning and demolition activities. If portable equipment requiring permits is used, that equipment will be registered through the CARB PERP.
Rule 401 – Visible Emissions	Limits visible emissions from applicable equipment or processes to values no darker than Ringelmann #1 for periods greater than three minutes in any hour.	The Project Owner will ensure that the demolition contractor complies with this requirement.
Rule 402 – Nuisance	Prohibits emissions in quantities that would adversely affect public health, other businesses, or property.	The Project Owner will ensure that the demolition contractor complies with this requirement.
Rule 403 – Fugitive Dust	Limits fugitive PM emissions from transport, construction, handling and storage activities	The Project Owner will ensure the contractor will use appropriate dust suppression mitigation to limit fugitive PM emissions.

LORS	DESCRIPTION	COMMENTS
Rule 404 – Particulate Matter Concentration	Limits PM emissions concentration from sources	No SCAQMD permits will be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment.
Rule 405 – Solid Particulate Matter Weight	Limits PM emissions based on process weight	No SCAQMD permits will be required for the decommissioning and demolition activities. I This requirement would not apply to PERP registered equipment.
Rule 407 – Liquid and Gaseous Contaminants	Limits CO emissions from combustion sources.	No SCAQMD permits will be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment.
Rule 409 – Combustion Contaminants	Limits emissions of combustion contaminants	No SCAQMD permits will be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment.
Rule 431 – Sulfur Content of Fuels, Rule 431.2 Sulfur Content of Liquid Fuels	Limits sulfur content of liquid and solid fuels	No SCAQMD permits will be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment.
Rule 1166 – Volatile Organic Compound (VOC) Emissions from Decontamination of Soil	Sets requirements to control the emission of VOC from excavating, grading, handling and treating VOC contaminated soil	If VOC contaminated soil is encountered during demolition, IEEC will ensure the demolition contractor is in compliance with this rule.

LORS	DESCRIPTION	COMMENTS
Regulation XIII – New Source Review	Sets forth the pre-construction review requirements for new, modified or relocated facilities	No SCAQMD permits will be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment.
Regulation XIV – Toxics and Other Non-Criteria Pollutants	Sets limits on toxic air contaminants from stationary sources	No SCAQMD permits will be required for the decommissioning and demolition activities. If portable equipment requiring permits is used for the decommissioning activities, that equipment will be registered through the CARB PERP.
Regulation XVII- Prevention of Significant Deterioration	Sets forth the pre-construction requirement for stationary sources	No SCAQMD permits will be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment.
Regulation XX – RECLAIM	Imposes facility emission caps on nitrogen oxides (NOx) and sulfur oxides (SOx) emissions from large stationary sources	No SCAQMD permits will be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment.
Regulation XXX – Title V Permits	Sets forth permitting requirements for large stationary sources	No SCAQMD permits will be required for the decommissioning and demolition activities. This requirement would not apply to PERP registered equipment. Once operations cease the Title V permit will be retired.

6.2.3.2 Criteria Pollutant Emissions

Demolition activities will generate emissions of criteria pollutants (VOC, carbon monoxide [CO], NOx, SOx, respirable particulate matter [PM10] and fine particulate matter [PM2.5]). These pollutants were also generated during construction and operation of the Project. Criteria pollutant emissions anticipated to occur during demolition activities were estimated and compared with actual and calculated emissions during construction and operation of the Project to evaluate the potential for the demolition activities to result in impacts from criteria pollutant emissions greater than those previously analyzed for construction and operation of the Project.

Criteria pollutant emissions from the following sources during demolition were calculated:

- Fugitive PM emissions from earth moving activities;
- Off-road equipment exhaust;
- On-site portable equipment exhaust;
- On-site motor vehicle exhaust;
- On-site motor vehicle fugitive (PM) emissions from entrained dust;
- Off-site motor vehicle exhaust; and
- Off-site motor vehicle fugitive PM emissions from entrained dust.

Off-road equipment exhaust emissions were estimated by multiplying total operating hours for each piece of equipment by equipment-specific emission factors. IEEC's demolition contractor provided estimates of the types, number, horsepower rating, usage factors and operating hours for the equipment that is anticipated to be used. Emission factors were taken from the CARB Executive Order for each individual engine present in each piece of mobile off-road equipment, as found in Appendix A

CARB Executive Orders are written documentation of compliance with CARB Regulations, for example – vehicle engines certified to specific emission standards, issued pursuant to Title 13 CCR, Chapter 9, Article 4, Sections 2420-2427.

On-site and off-site motor vehicle exhaust emissions were estimated by multiplying total on-site and off-site vehicle miles traveled for each type of motor vehicle used by vehicle-specific emission factors. IEEC's demolition contractor provided estimates of the types, number and vehicle miles traveled for the motor vehicles that are anticipated to be used. Emission factors were from either the California Air Pollution Control Officers Association (CAPCOA) CalEEMod emissions model or the CARB EMFAC2017 web-site.

Motor vehicle fugitive PM emissions were estimated by multiplying total on-site and off-site vehicle miles traveled for each type of motor vehicle used by vehicle-specific emission factors. Emission factors were calculated using equations from the U.S. Environmental Protection Agency (EPA) Compilation of Air Pollutant Emission Factors (AP-42).

6.2.3.3 Comparison to Project Construction Emissions

Estimated construction emissions were taken from FSA Air Quality Table 5, IEEC Project, Estimated Construction Emissions (Daily and Annual). Total estimated criteria pollutant emissions during demolition and during construction are summarized in Table 6.2-2. Estimated emission calculations are provided in Appendix A. As indicated, criteria pollutant emissions during demolition are estimated to be substantially lower than emissions during Project construction. Therefore, impacts from criteria pollutant emissions during demolition will be substantially less than impacts during Project construction, which were found to be less than significant in the Commission Decision.

Table 6.2-2 Comparison of Demolition Emissions with Construction Emissions

SOURCE	VOC	CO	NOx	SOx	PM10	PM2.5
Total Demolition Activities	0.21	0.78	4.04	0.01	0.09	0.01
Total Construction Activities	5.10	56.3	17.3	0.10	0.90	1.00
Demolition Emissions Less Than Construction Emissions?	Yes	Yes	Yes	Yes	Yes	Yes

Note: Emissions are in Tons per Year

6.2.3.4 Comparison to Project Operation Emissions

Operational criteria pollutant emissions were obtained from measurements, fuel use, or calculations for the following sources that generated emissions during operation of the Project:

- On-site stationary sources;
- Off-site motor vehicle exhaust (primarily delivery trucks); and
- Off-site motor vehicle fugitive PM emissions from entrained dust.

The maximum annual operating emissions were taken from FSA Air Quality Table 7, IECC Project, Estimated Maximum Emissions during Operation.

Emissions from on-site stationary sources during 2018 are based on the annual emission report submitted to the SCAQMD. Exhaust and fugitive PM emissions from off-site motor vehicles were calculated using the same approaches that were used to estimate emissions from these sources during the demolition activities.

Comparison of demolition emissions to maximum annual operating emissions and comparison of demolition emissions to 2018 operational emissions are summarized in Tables 6.2-3 and 6.2-4. Estimated emission calculations are provided in Appendix A. As indicated, criteria pollutant emissions during demolition are estimated to be lower than operational emissions during 2018. Therefore, impacts from criteria pollutant emissions during demolition will be less than impacts during Project operation in 2018, which were themselves significantly less than the maximum annual operational emissions found to be less than significant in the Commission Decision.

Table 6.2-3 Comparison of Demolition Criteria Pollutant Emissions with Maximum Annual Operating Emissions

SOURCE	VOC	CO	NOx	SOx	PM10	PM2.5
Total Demolition Emissions	0.21	0.78	4.04	0.01	0.09	0.01
Maximum Yearly Operating Emissions	48.1	418.2	169.4	14.0	105.1	N/A
Demolition Emissions Less Than Maximum Operating Emissions?	Yes	Yes	Yes	Yes	Yes	N/A

N/A – Not Available
Emissions are in Tons per Year

Table 6.2-4 Comparison of Demolition Emissions with 2018 Operational Emissions

SOURCE	VOC	CO	NOx	SOx	PM10	PM2.5
Total Demolition Emissions	0.21	0.78	4.04	0.01	0.09	0.01
2018 Operating Emissions	1.471	2.13	5.27	0.51	2.74	N/A
Demolition Emissions Less Than 2018 Operating Emissions?	Yes	Yes	Yes	Yes	Yes	N/A

N/A – Not Available
Emissions are in Tons per Year

6.2.3.5 Greenhouse Gas Emissions

Fuel combustion during demolition activities will also generate emissions of greenhouse gases (GHG) (carbon dioxide [CO2], methane [CH4] and nitrous oxide [N2O]). Fuel combustion during operation of the Project to generate electricity also generated emissions of these pollutants. GHG emissions anticipated to occur during demolition activities were estimated and compared with estimated emissions during operation of the Project to evaluate the potential for the demolition activities to increase potential impacts from GHG emissions.

GHG emissions were estimated from the following sources during demolition:

- Off-road equipment exhaust;
- Portable equipment exhaust;
- On-site motor vehicle exhaust; and
- Off-site motor vehicle exhaust.

Off-road equipment exhaust emissions were calculated by multiplying total fuel use for each piece of equipment by equipment-specific emission factors, as found on the CARB

EMFAC2017 web-site. Total fuel use for each type of equipment was estimated by IEEC's demolition contractor and as found in the CARB Executive Order for each vehicle's engine as presented in Appendix A.

On-site and off-site motor vehicle exhaust GHG emissions were calculated in a similar fashion utilizing CARB EMFAC2017 emission factors.

Total GHG emissions over the twelve-month decommissioning and demolition period are summarized in Table 6.2-5. Estimated GHG emissions calculations are provided in Appendix A.

GHG emissions from the following sources that generated emissions during operation of the Project were estimated from:

- On-site stationary sources; and
- Off-site motor vehicle exhaust (primarily five-axle trucks).

Operating emissions were taken from the CARB GHG Report for calendar year 2017, as the 2018 report is not yet verified.

IEEC provided estimates of emissions from on-site stationary sources calculated from records of the amount of fuel combusted. Exhaust emissions from off-site motor vehicles were estimated using the same approaches that were used to estimate criteria pollutant emissions from these sources during the demolition activities.

Total estimated GHG emissions during demolition and during operations in 2017 are summarized in Table 6.2-5. Estimated emission calculations are provided in Appendix A. As indicated, GHG emissions during demolition are estimated to be substantially lower than operational GHG emissions during 2017. Therefore, impacts from GHG emissions during demolition will be substantially less than impacts during Project operation in 2017, which were themselves less than the maximum annual operational emissions found to be less than significant in the Commission Decision.

Table 6.2-5 Comparison of Demolition Greenhouse Gas Emissions with Operations during 2017

SOURCE	CO2e (Metric Tons per Year)
Demolition GHG Emissions	1,284
2017 Facility GHG Emissions	144,827
Demolition GHG Emissions Less Than 2017 Facility GHG Emissions?	Yes

6.2.4 Proposed Conditions

The following conditions are proposed during decommissioning and demolition to ensure that activities conform with applicable LORS:

D-AQ-1 The Project owner shall ensure that all applicable portable equipment used by the demolition contractor shall be registered through the CARB Portable Equipment Registration Program (PERP).

Verification: The Project owner or its contractor will maintain on-site records of equipment that is brought on-site. The Project owner will furnish the records to the CPM upon request.

D-AQ-2: The Project owner shall ensure that equipment used during decommissioning is maintained in proper operating condition to avoid visible emissions darker than Ringlemann #1 for periods greater than three minutes in any hour.

Verification: The Project owner or its contractor shall maintain records of equipment maintenance activities and furnished to the CPM upon request.

D-AQ-3: The Project owner shall ensure a Dust Control Plan for decommissioning and demolition is prepared and submitted to the SCAQMD for approval.

Verification: The Project owner or its contractor shall submit the Dust Control Plan to the SCAQMD at least 30 days prior to the commencement of demolition activities with a copy provided to the CPM. The Project owner or its contractor shall submit a copy of the SCAQMD's written approval of the Dust Control Plan to the CPM within seven days of receipt of the approval. Project owner is responsible for compliance with the plan.

D-AQ-4 The Project owner shall ensure that the Air Quality Supervisor performs the following:

a) No dust from demolition activities remains visible beyond the property line;
b) No dust emissions exceed 20 percent opacity from vehicle traffic;
c) All active operations at the Project Site utilize applicable Best Available Control Measures, as specified in SCAQMD Rule 403, including all appropriate measures found in Table 1 of Rule 403;
d) All mobile off-road diesel-fueled vehicles operating at the Project Site are:

1) Properly labeled with an Equipment Identification Number (EIN) issued by the CARB;
2) Properly registered in the CARB Diesel Off-road Online Reporting System (DOORS); and

3) Are part of a vehicle fleet that has a current CARB Certificate of Reported Compliance;

e) All mobile on-road diesel fueled vehicles operating at the Project Site are:

1) In compliance with CARB requirements for on-road vehicles for the current compliance year; and
2) Part of a fleet that has properly reported, as necessary, in the CARB Truck Regulation Upload, Compliance and Reporting System (TRUCRS) for which the fleet has a current Certificate of Reported Compliance;

f) Daily records are kept regarding the extent of active operations at the Project Site, including:

1) The nature of daily on-site demolition activities, including an estimate of the tons of various materials handled;
2) The amounts of diesel fuel consumed in each mobile off-road vehicle; and
3) The amounts of materials imported/exported to/from the Project Site.

Verification: The Project owner or its contractor shall submit monthly reports documenting compliance with the duties assigned to the Air Quality Supervisor.

6.3 Public Health

This section presents an analysis of LORS compliance and potential environmental impacts to public health that may result from the proposed decommissioning and demolition of the Project.

6.3.1 Background

The Commission Decision concluded:

> *"The Commission therefore concludes that with implementation of the Condition of Certification below, Project emissions of non-criteria pollutants will not pose a significant direct, indirect, or cumulative adverse public health risk."*[6]

The Commission Decision did not identify any decommissioning conditions specifically related to public health.[7]

[6] Commission Decision, p. 172.

[7] Commission Decision, pp 39-40.

6.3.2 Applicable LORS and Required Permits

LORS potentially applicable to public health during decommissioning and demolition are discussed in Section 6.2 Air Quality and Greenhouse Gases. No other LORS related to public health are applicable or are anticipated.

6.3.3 LORS Conformance and Impact Assessment

Diesel-fueled construction equipment and motor vehicles will emit diesel particulate matter (DPM) during demolition. DPM is a California carcinogenic toxic air contaminant (TAC) as listed in the CARB TAC Identification Program. However, cancer risks from exposure to TACs are generally only estimated for exposure periods of nine (9), thirty (30), and seventy (70) years. The demolition activities will only occur over a one (1) year period, which is much less than the exposure periods that are generally of concern. Furthermore, the emissions of DPM and other TACs will be much lower during demolition than during operation of the Project. Therefore, exposure to DPM emitted during demolition activities is not anticipated to cause a significant public health impact.

Risks to public health could also occur if toxic substances are contained in the structures to be demolished and are emitted during the demolition process. No toxic substances, such as asbestos or lead-based paint, were used during construction of the Project. Prior to initiation of demolition activities, a comprehensive regulated materials survey will be completed for both Units 1 and 2, as well as ancillary structures and systems scheduled for demolition. This survey will identify other materials of concern such as lubricating and cooling oils, process chemicals and universal waste items that will be removed and transported off-site for disposal or reclamation prior to initiation of demolition activities. Considering this, toxic substances will not be emitted during demolition of the Project structures and no impacts to public health are anticipated to occur.

6.3.4 Proposed Conditions

No conditions related to public health are required for decommissioning or demolition.

6.4 Hazardous Materials Management

This section describes the systems and procedures that will be implemented to minimize the potential impacts from storage and use of hazardous materials during decommissioning and demolition activities. Waste management procedures and LORS compliance are discussed in Section 6.5, Waste Management.

6.4.1 Background

The Project has established hazardous materials programs designed to minimize the impact on workers, the community, and the environment.

The Commission Decision concluded:

> *"The Commission therefore concludes that the use of hazardous materials by the Inland Empire Energy Center will not result in any significant adverse public health and safety impacts."*[8]

The Commission Decision did not identify any decommissioning or demolition conditions specifically related to hazardous materials.[9]

6.4.2 Applicable LORS and Required Permits

The LORS applicable to decommissioning and demolition are briefly summarized in Table 6.4-1.

One acutely hazardous material is currently stored at the Project Site in quantities exceeding the reportable amounts defined in the California Health and Safety Code, Section 25532 (j), as summarized below:

- Aqueous ammonia (28 percent ammonia in aqueous solution).

Other hazardous materials stored in smaller quantities, such as mineral and lubricating oils, corrosion inhibitors and water conditioners, are present at the Project Site. Hazardous materials used during demolition will include gasoline, diesel fuel, oil and lubricants. None of these materials pose significant potential for off-site impacts as a result of the quantities on-site, their relative toxicity, and/or their environmental mobility. No acutely toxic hazardous materials will be used onsite during demolition.

Table 6.4-1 LORS Applicable to Hazardous Materials

LORS	DESCRIPTION	COMMENTS
Federal		
The Superfund Amendments and Reauthorization Act of 1986 (42 USC §9601 et seq.).	Contains the Emergency Planning and Community Right to Know Act (also known as SARA Title III).	All materials located on site during operation are being handled and will be removed according to approved plans during decommissioning. Hazardous materials used during demolition will include gasoline, diesel fuel, oil and lubricants.

[8] Commission Decision, p. 186.

[9] Commission Decision, pp.39-40.

LORS	DESCRIPTION	COMMENTS
The Clean Air Act (CAA) (42 USC 7401 et seq. as amended).	Established a nationwide emergency planning and response program and imposed reporting requirements for businesses which store, handle, or produce significant quantities of extremely hazardous materials.	All materials located on site during operation are being handled and will be removed according to approved plans during decommissioning. Hazardous materials used during demolition will include gasoline, diesel fuel, oil and lubricants.
State		
California H&SC §§ 25500 to §§ 25543; 19 CCR §§ 2720 – 2734.	Directs facility owners, storing or handling acutely hazardous materials in reportable quantities, to develop a Risk Management Plan (RMP) and submit it to appropriate local authorities, the USEPA, and the designated local Administering Agency for review and approval.	All materials located on site during operation are being handled and will be removed according to approved plans during decommissioning. Hazardous materials used during demolition will include gasoline, diesel fuel, oil and lubricants.
California Uniform Building Code	Requirements regarding the storage and handling of hazardous materials.	All materials located on site during operation are being handled and will be removed according to approved plans during decommissioning. Hazardous materials used during demolition include gasoline, diesel fuel, oil and lubricants.
Local		
The Certified Unified Program Authority (CUPA) with responsibility to review RMPs and Hazardous Materials Business Plans is the Riverside County of Environmental Health Department.	Requires Consolidated Hazardous Materials Permit (as per H&S Code chapter 6.95) from the County.	All materials located on site during operation are being handled and will be removed according to approved plans during decommissioning. Hazardous materials used during demolition include gasoline, diesel fuel, oil and lubricants.

LORS	DESCRIPTION	COMMENTS
Industry Codes and Standards		
California Fire Code, Chapters 27, 34, and others	Sets forth requirements for the storage and handling of hazardous materials.	All materials located on site during operation are being handled and will be removed according to approved plans during decommissioning. Hazardous materials used during demolition include gasoline, diesel fuel, oil and lubricants.

6.4.3 LORS Conformance and Impact Assessment

Operational hazardous materials, such as aqueous ammonia, will be removed once the Project ceases operation. A summary of hazardous materials used during operation that will be removed prior to the start of demolition is provided in Table 6.4-2.

Table 6.4-2 Operational Hazardous Materials to be Removed Prior to or During Decommissioning

CATEGORY	MATERIAL	CHEMICAL NAME	CONTAINER TYPE (QUANTITY)	ESTIMATED QUANTITY
CG	EPA Protocol Gases	Oxygen (24%) Nitrogen (99%)	Cylinder (16)	2,240 CF
CG	Methane/Ethane	Methane (90%) Ethane (5%)	Cylinder (2)	500 CF
CG	Acetylene	Acetylene (100%)	Cylinder (4)	920 CF
CG	Argon	Argon (100%)	Cylinder (2)	582 CF
CG	Carbon Dioxide	Carbon Dioxide (98%)	Tank (1) Cylinder (2)	453,000 CF
CG	Helium	Helium (100%)	Cylinder (4)	1,164 CF
CG	Hydrogen	Hydrogen (100%)	Tube Trailers (2)	104,000 CF
CG	Nitrogen	Nitrogen (100%)	Tanks (2) Cylinders (4)	112,200 CF
CG	Oxygen	Oxygen (100%)	Cylinder (4)	768 CF
CG	Sulfur Hexafluoride	Sulfur Hexafluoride (100%)	Cylinder (3)	8,950 CF
CG	Odorized Commercial Propane	Propane (100%)	Cylinder (20)	2,750 CF
L	Ammonium Hydroxide	Ammonium Hydroxide (30%)	Tank (2)	16,200 G

CATEGORY	MATERIAL	CHEMICAL NAME	CONTAINER TYPE (QUANTITY)	ESTIMATED QUANTITY
L	Biomate MBC2881	Amide (40%) Sodium Bromide (7%)	Tank/Tote (1)	550 G
L	Conntect 6000	Ethylene Glycol (20%) Ethoxylated Alcohols (40%)	Tank/Tote (1)	550 G
L	Corrshield MD4100	Sodium Molybdate (20%) Sodium Nitrate (13%)	Drum (2)	110 G
L	Corrtrol OS5607	Carbonic Dihydrazide (10%)	Tank/Tote (2)	1,100 G
L	Hydrochloric Acid	Hydrochloric Acid (20%)	Drum (2)	110 G
L	Hypersperse MS1310	Not Listed	Tank/Tote (1)	550 G
L	Kleen MCT 103	Phosphoric Acid (20%) Nitriloracetic Acid (1%)	Tote (3)	1,050 G
L	Optisperse HP3100	Sodium Hydroxide (7%)	Tank/Tote (2)	1,100 G
L	Paints	Various	Containers (60)	300 G
L	RO Membrane Cleaner	Various	Tank/Tote (1)	400 G
L	Sodium Hypochlorite	Sodium Hypochlorite (15%) Sodium Chloride (15%) Sodium Hydroxide (1%)	Tank (3)	25,500 G
L	Spectrus DT1404	Sodium Bisulfite (60%)	Tank (1)	550 G
L	Spectrus NX1100	2-Bromo-2-Nitropropane-1,3-Diol (10%) Magnesium Nitrate (5%)	Tank (1)	550 G
L	Steamate NA1321	Ammonium Hydroxide (40%)	Tote (6)	2,100 G
L	Sulfuric Acid	Sulfuric Acid (85%)	Tank (2)	12,000 G
L	Sodium Chloride	Sodium Chloride	Tank (2)	100,000 LB
L	Lube Oil (contained-in equipment)[1]	Lube Oil	Equipment (6)	32,356 G
L	Electric Oil	Electric Oil	Equipment (4)	4,285 G

CATEGORY	MATERIAL	CHEMICAL NAME	CONTAINER TYPE (QUANTITY)	ESTIMATED QUANTITY
	(contained-in equipment)[2]			
L	Diesel Fuel (contained-in equipment)[3]	Diesel Fuel	Equipment (4)	7,800 G
L	Freon-123 Refrigerant (contained-in equipment)[4]	2,2-Dichloro-1,1,1-trifluoroethane	Equipment (4)	12,800 G
S	Lead Acid Batteries	Lead (60%)	Batteries (100)	2,600 LB
HW	SCR Catalyst[5]	Heavy Metals	Equipment	70,000 LB
HW	Used Oil[6]	Used Oil	Tank (6) Oil-Water Separator (1)	4,420 G
UW	Batteries Fluorescent Lamps Electronic Wastes Mercury Wastes	NA	NA	Not Estimated

Notes:

Category Abbreviations

CG = Compressed Gas

HW = Hazardous Waste

UW = Universal Waste

L = Liquids

S = Solids

Quantity Unit Abbreviations

CF = Cubic Feet

G = Gallons

LB = Pounds

[1] – Lube oil contained in equipment to be removed, including Unit #1 and #2 Lube Oil and HPU Skids, and Boiler Feedwater Pumps (2 each)

[2] – Electric oil contained in equipment to be removed, including LCI Transformer, Water Treatment Substation A and B BUS Transformer, and Unit #1 and #2 Cooling Tower AUX Substation A and B BUS Transformers.

[3] – Diesel fuel contained in Unit #1 and #2 emergency generators, diesel firewater pump, and Hazmat Storage Area diesel tank. Note that some of remaining fuel will be used by onsite equipment utilized during demolition.

[4] – Freon 123 contained in chiller units (4 total). Refrigerant to be removed by a licensed refrigeration technician.

[5] – Material not considered a hazardous waste until removed from process and relinquished or intended for disposal.

[6] – Includes used oil, waste oil, and oily water contained in fuel gas drain tanks (2), compressor drain tanks (2), fuel gas reception drain tank (1), Hazmat Storage Area Used Oil Tank (1), and Oil Water Separator (1).

Several plans will be updated or closed as the Project transitions from operation through decommissioning and demolition. The facility Hazardous Materials Business Plan

(HMBP) outlines hazardous materials handling, storage, spill response, and reporting procedures that will be updated as materials are removed, and tanks are decommissioned. The existing Risk Management Plan will be closed after the aqueous ammonia is removed and the tanks containing this material are demolished. The existing Spill Prevention Control and Countermeasure (SPCC) Plan will be closed after decommissioning activities are complete and no potential for spillage remains.

Small quantities of spilled fuel oil, hydraulic fluid and grease drippings from equipment may occur during demolition. Such materials generally have a low relative risk to human health and the environment. If there is a large spill, the spill area will be bermed or controlled as quickly as is practical to minimize the footprint of the spill. Contaminated soil and materials produced during cleanup of a spill will be placed into DOT-approved drums or containers for off-site disposal as a hazardous waste at a permitted hazardous waste transfer, storage, and disposal facility (TSDF). If a spill or leak into the environment involves hazardous materials equal to or greater than the specific reportable quantity, federal, State, and local reporting requirements will be adhered to.

Hazardous materials that are anticipated to be supplied and used by the demolition contractor include gasoline, diesel fuel, oil, and lubricants. The contractor will be responsible for verifying that the use, storage, and handling of these materials are in compliance with applicable federal, state, and local requirements, including licensing, personnel training, accumulation limits, reporting requirements, and recordkeeping.

A summary of hazardous materials anticipated during decommissioning and demolition is provided in Table 6.4-3. No acutely hazardous substances will be used or stored during decommissioning and demolition.

Table 6.4-3 Hazardous Materials Present During Decommissioning and Demolition Activities

MATERIAL	CAS NO.	APPLICATION	HAZARDOUS CHARACTERISTICS	MAXIMUM QUANTITY ON SITE
Acetylene gas	74-86-2	Welding gas	Health: moderate toxicity Physical: combustible, flammable Hazard class: Toxic	600 cubic feet
Argon gas	7440-37-1	Welding gas	Health: low toxicity Physical: non-flammable gas	600 cubic feet
Oxygen	7782-44-7	Welding gas	Health: low toxicity Physical: oxidizer	600 cubic feet
Batteries (Lead Acid)	7439-92-1	Equipment	Health: N/A Physical: N/A	60 each

MATERIAL	CAS NO.	APPLICATION	HAZARDOUS CHARACTERISTICS	MAXIMUM QUANTITY ON SITE
Diesel fuel	68476-34-6	Equipment fuel	Health: low toxicity Physical: combustible liquid	2,500 gallons
Hydraulic fluid	64741-89-5	Equipment (e.g., drive units)	Health: low to moderate toxicity Physical: Class IIIB combustible liquid	20 gallons per tracker drive unit, maintenance inventory of 55 gallons
Lube Oil	64742-65-0	Lubricate rotating equipment	Health: low toxicity Physical: N/A	Maintenance inventory in 55-gallon drums

6.4.4 Proposed Conditions

IEEC personnel and the demolition contractor will implement the various hazardous materials management programs, plans, and procedures during decommissioning and demolition to comply with applicable regulatory requirements. Decommissioning and demolition will not have significant impacts due to hazardous materials; however, the following conditions are proposed to be implemented before the start of work.

D-HM-1 The project owner shall update the Hazardous Materials Business Plan as needed to reflect the use of hazardous materials during decommissioning that have not been previously used at the site.

Verification: If hazardous materials that have not previously been used at this site are needed, the project owner or their contractor shall prepare and submit a revised HMBP to the CPM and Fire Department within one week of determination.

D-HM-2 The project owner shall direct and require all vendors delivering any hazardous material to the Project Site to use only the route previously approved by the CPM (I-215 to Ethanac Road to Antelope Road and then into the Project Site) as required by Condition of Certification HAZ-10. The project owner shall obtain approval of the CPM if an alternate route is desired.

Verification: Not required, as this in an extension of an existing condition of certification.

D-HM-3 The project owner shall direct all vendors carrying any liquid hazardous materials greater than 500 gallons not to deliver during the time in the mornings and afternoons when children are going to and from school, as required by Condition of Certification HAZ-11.

Verification: Not required, as this in an extension of an existing condition of certification.

6.5 Waste Management

This section presents an analysis of the potential adverse environmental impacts and LORS compliance related to the wastes that will be generated during the Project decommissioning and demolition. Management and discharge of wastewater is addressed in Section 6.9. Additional information related to waste management is also provided in the Section 6.6, Worker Safety and Fire Protection, and Section 6.4, Hazardous Materials.

After cessation of operations, all remaining non-hazardous wastes will be collected and disposed of in appropriate recycling centers, landfills, or waste collection facilities. Hazardous wastes will be disposed of according to all applicable LORS. The site will be secured 24 hours per day during decommissioning and demolition activities.

Decommissioning activities include removal of products such as hydraulic, lubricating, and mineral oils and process-related chemicals to reduce the risk of worker exposure and the potential for release to the environment. All operational liquids and chemicals, including water treatment chemicals, calibration and other compressed gas cylinders, and any maintenance lubricants, solvents, and cleaners, are expected to be removed during the decommissioning phase and prior to demolition. To the extent possible, unused or partially used containers will be returned to the vendor for recycling.

Hazardous materials containers and pipelines will be rinsed clean when feasible and rinsate collected for off-site disposal. When possible, these materials will be placed directly into tanker trucks or other transport vessels and removed from the Project Site at the point of generation in order to minimize the need for on-site storage.

Demolition will entail breakdown and removal of applicable structures and facilities. Mechanized equipment and trained personnel will be used to safely dismantle and remove structures. Most major equipment is targeted for reuse or resale on the secondary markets. Debris and equipment that is not removed intact will be placed in temporary on-site storage areas pending transportation to selected recycling and/or disposal facilities.

6.5.1 Background

The Project has several existing waste management programs to minimize the impacts on the environment. These programs will be revised as necessary as the Project transitions from operation to closure.

The Commission Decision concluded:

> *“The Commission therefore concludes that the management of project wastes will comply with all applicable laws, ordinances, regulations, and*

standards related to waste management as identified in the pertinent portion of Appendix A of this Decision."[10]

The Commission Decision did not identify any decommissioning or demolition conditions specifically related waste management.[11]

6.5.2 Applicable LORS and Required Permits

The applicable LORS are briefly discussed and summarized in Table 6.5-1.

Table 6.5-1 LORS Applicable to Waste Management

LORS	DESCRIPTION	COMMENTS
Federal		
Resource Conservation and Recovery Act (42 U.S.C. § 6922)	Establishes requirements for the management of hazardous wastes from the time of generation to the point of ultimate treatment or disposal.	All hazardous wastes generated will be removed according to approved plans. Hazardous wastes generated during demolition may potentially include waste fuel, lubricants, oil, and sorbent media.
Title 40, Code of Federal Regulations, part 260	These sections contain regulations promulgated by the EPA to implement the requirements of RCRA.	All hazardous wastes generated will be removed according to approved plans. Hazardous wastes generated during demolition may potentially include waste fuel, lubricants, oil, and sorbent media.
Comprehensive Environmental Response, Compensation and Liability Act: (Superfund) Title 42, USC, §§ 9601, et seq.	Establishes mechanisms for the cleanup of accidental spills or releases of pollutants into the environment.	The facility HMBP outlines spill response and reporting procedures to be followed during decommissioning and demolition.

[10] Commission Decision, p. 206.

[11] Commission Decision, pp. 39-40.

LORS	DESCRIPTION	COMMENTS
State		
California Health and Safety Code, Section 25100 et seq. (Hazardous Waste Control Act of 1972, as amended).	Creates the framework under which hazardous wastes must be managed in California.	All hazardous wastes generated will be removed according to approved plans. Hazardous wastes generated during demolition may potentially include waste fuel, lubricants, oil, and sorbent media.
Title 14, California Code of Regulations, Section 17200 et seq. (Minimum Standards for Solid Waste Handling and Disposal)	Establish minimum standards for solid waste handling and disposal and guidelines to ensure conformance of solid waste facilities with county solid waste management plans; as well as enforcement and administrative provisions.	Applies to facilities receiving non-hazardous waste materials generated during facility decommissioning and demolition. No wastes will be disposed at the Project Site.
Title 22, California Code of Regulations, Section 66262.10 et seq. (Generator Standards)	Establish requirements for generators of hazardous waste.	All hazardous wastes generated will be removed according to approved plans. Hazardous wastes generated during demolition may potentially include waste fuel, lubricants, oil, and sorbent media.
Title 22, California Code of Regulations, Section 67100.1 et seq. (Hazardous Waste Source Reduction and Management Review)	Establish reporting requirements for generators of certain hazardous and extremely hazardous wastes in excess of specified limits.	The requirements of this section apply to routinely generated wastes from ongoing processes or operations. These requirements do not apply to facility decommissioning or demolition.

LORS	DESCRIPTION	COMMENTS
Title 24, California Code of Regulations, Part 11, Section 5.408 (California Green Building Standards Code)	Establishes standards for construction waste management and recycling or salvage of a minimum of 65% of nonhazardous construction and demolition waste.	IEEC expects to sell or recycle much of the Project equipment and waste, satisfying the 65% diversion requirements.
Local		
The Riverside County Department of Environmental Health.	Administers the California laws and regulations for both solid and hazardous wastes in the proposed project area. This agency has been designated as the local hazardous waste Certified Unified Program Agency (CUPA) by the state of California.	All hazardous wastes generated will be removed according to approved plans. Hazardous wastes generated during demolition may potentially include waste fuel, lubricants, oil, and sorbent media.

No new permits will be required during decommissioning or demolition regarding hazardous waste management; however, some existing permits will be required to remain open until decommissioning and demolition are completed. During decommissioning and demolition, IEEC will use the existing EPA identification number and Hazardous Materials Handler and Hazardous Waste Generator permit from Riverside County Department of Environmental Health, which is the CUPA.

To close out the AST permits, Hazardous Materials Business Plan (HMBP), hazardous waste generation, and hazardous materials management plans and inventory statements, the CUPA will be contacted to arrange for an exit inspection. The CUPA will then close the above permits.

Existing permits related to waste management are shown in Table 6.5-2.

Table 6.5.2 Required Permits for Waste Management

PERMIT	ISSUING AGENCY	REQUIREMENT	SCHEDULE
EPA ID number	EPA	Must have an EPA ID number to ship hazardous waste	N/A – will use existing facility EPA ID number (CAR000216952) through decommissioning and demolition

PERMIT	ISSUING AGENCY	REQUIREMENT	SCHEDULE
Hazardous Materials Handler and Hazardous Waste Generator permit	CUPA	Required to store hazardous materials and generate hazardous waste within the County	N/A – will use the existing permit through decommissioning and demolition
Aboveground Storage Tank permit	CUPA	Required to store hazardous materials in a storage tank	N/A – will use existing permits through decommissioning and demolition

6.5.3 LORS Conformance and Impact Assessment

Prior to decommissioning, facility personnel will use all hazardous and non-hazardous materials to the extent possible to minimize waste generation and truck trips. Any remaining fluids and gasses will be drained and either returned to the vendor, sold, or disposed of in a permitted waste disposal facility. Table 6.5-3 summarizes the anticipated waste streams generated during decommissioning and demolition activities, along with appropriate management methods for treatment, recycling, or disposal.

Table 6.5-3 Summary of Decommissioning and Demolition Waste Streams and Management Methods

WASTE STREAM AND CLASSIFICA-TION[1]	ORIGIN AND COM-POSITION	ESTIMATED AMOUNT	ESTIMATED FREQUENCY OF GENERATION	WASTE MANAGEMENT METHOD	
				ON-SITE	OFF-SITE
Compressed Gases[2]					
Acetylene	Hazmat Storage Area Compressed gas cylinder	920 cubic feet	One time	None	Return to vendor
Argon	Hazmat Storage Area Compressed gas cylinders	582 cubic feet	One time	None	Return to vendor
Carbon Dioxide	Various Locations Tank and Compressed gas cylinders	453,000 cubic feet	One time	None	Return to vendor

WASTE STREAM AND CLASSIFICATION[1]	ORIGIN AND COMPOSITION	ESTIMATED AMOUNT	ESTIMATED FREQUENCY OF GENERATION	WASTE MANAGEMENT METHOD	
				ON-SITE	OFF-SITE
Helium	Various Locations Compressed gas cylinders	1,164 cubic feet	One time	None	Return to vendor
Hydrogen	East of Units 1 and 2 Tube Trailers	104,000 cubic feet	One time	None	Return to vendor
Nitrogen	Units 1 and 2 Skids Tanks (2) Various Locations Compressed gas cylinders	112,200 cubic feet	One time	None	Return to vendor
Oxygen	Hazmat Storage and Maintenance Shop Compressed gas cylinders	768 cubic feet	One time	None	Return to vendor
Propane (Commercial)	Warehouse and Units 1 and 2 Compressed gas cylinders	2,750 cubic feet	One time	None	Return to vendor
Sulfur Hexafluoride	Various Locations Compressed gas cylinders	8,950 cubic feet	One time	None	Return to vendor

WASTE STREAM AND CLASSIFICATION[1]	ORIGIN AND COMPOSITION	ESTIMATED AMOUNT	ESTIMATED FREQUENCY OF GENERATION	WASTE MANAGEMENT METHOD	
				ON-SITE	OFF-SITE
Universal Wastes[3]					
Batteries	In Existing Equipment	Not Estimated	One time	None	Recycle
Electronic Wastes	In Existing Equipment	Not Estimated	One time	None	Recycle
Fluorescent Lamps/Signs	In Structures	Not Estimated	One time	None	Recycle
Mercury Waste	In Existing Equipment and Structures	Not Estimated	One time	None	Recycle
Liquids[3]					
Ammonium Hydroxide	Near Cooling Towers Tanks (2)	16,200 gallons	One time	None	Return to vendor
Biomate MBC2881	Water Treatment Building Tote	550 gallons	One time	None	Return to vendor
Conntect 6000	Between Units 1 and 2 Tote	550 gallons	One time	None	Return to vendor
Corrshield MD4100	Auxiliary Cooling System Drums	110 gallons	One time	None	Return to vendor
Corrtrol OS5607	Unit 1 and 2 Condenser Tank/Tote	1,100 gallons	One time	None	Return to vendor
Hydrochloric Acid	Water Treatment Building Drums	110 gallons	One time	None	Return to vendor
Hypersperse MS1310	Water Treatment Building Tank/Tote	550 gallons	One time	None	Return to vendor

WASTE STREAM AND CLASSIFICATION[1]	ORIGIN AND COMPOSITION	ESTIMATED AMOUNT	ESTIMATED FREQUENCY OF GENERATION	WASTE MANAGEMENT METHOD	
				ON-SITE	OFF-SITE
Kleen MCT 103	Water Treatment Building Totes	1,050 gallons	One time	None	Return to vendor
Optisperse HP3100	Units 1 and 2 Tank/Tote	1,100 gallons	One time	None	Return to vendor
Paints	Hazmat Storage Area 5-Gallon Containers	300 gallons	One time	None	Offsite Recycle
RO Membrane Cleaner	Water Treatment Building Tank/Tote	400 gallons	One time	None	Return to vendor
Sodium Chloride	Outside Water Treatment Building Tanks	100,000 pounds	One time	None	Return to vendor
Sodium Hypochlorite	Water Treatment Building Tank	25,500 gallons	One time	None	Return to vendor
Spectrus DT 1404	Water Treatment Building Tank	550 gallons	One time	None	Return to vendor
Spectrus NX1100	Water Treatment Building Tank	550 gallons	One time	None	Return to vendor
Steamate NA1321	Power Blocks Totes	2,100 gallons	One time	None	Return to vendor
Sulfuric Acid	Water Treatment and Cooling Tower Tanks	12,000 gallons	One time	None	Return to vendor

WASTE STREAM AND CLASSIFICATION[1]	ORIGIN AND COMPOSITION	ESTIMATED AMOUNT	ESTIMATED FREQUENCY OF GENERATION	WASTE MANAGEMENT METHOD	
				ON-SITE	OFF-SITE
Petroleum Hydrocarbons and Refrigerants (Contained in Equipment)[3]					
Diesel Fuel (excess)	Emergency Generators Firewater Pump Hazmat Diesel Tank	7,800 gallons	One time	None	Return to vendor or recycle offsite
Electric Oil	Transformer Substations	4,285 gallons	One time	None	Return to vendor or recycle offsite
Freon-123	Chiller Units	12,800 gallons	One time	None	Removal by Licensed Refrigerant Technician and Recycle offsite
Lube Oil	Lube Oil Skids HPU Skids Boiler Feedwater Pumps	32,400 gallons	One time	None	Return to vendor or recycle offsite
Used Oil	Fuel Gas Drain Tanks Compressor Drain Tanks Fuel Gas Reception Tank Hazmat Used Oil Tank Oil-Water Separator	4,420 gallons	One time	None	Recycle or use for energy recovery
Process-Related Solid Wastes[4]					
SCR Catalyst	SCR Catalyst Units	70,000 pounds	One time	None	Return to Manufacturer for recycling or Dispose in Class I landfill

WASTE STREAM AND CLASSIFICATION[1]	ORIGIN AND COMPOSITION	ESTIMATED AMOUNT	ESTIMATED FREQUENCY OF GENERATION	WASTE MANAGEMENT METHOD	
				ON-SITE	OFF-SITE
Demolition Wastes[5]					
Demolition Waste - Hazardous	Empty hazardous material containers	~ 1 cubic yard per week	Intermittent	None. Accumulate on-site for <90 days	Return to vendor or dispose in a permitted waste disposal facility
Demolition waste - Hazardous	Solvents, used oil and lubricants	~ 400 gallons	Intermittent	None. Accumulate on-site for <90 days	Recycle, treat, or dispose at a Class I Landfill
Demolition waste - Nonhazardous	Scrap wood, concrete, steel, glass, plastic, paper, insulation	~ 600 tons/week	Intermittent	None	Recycle wherever possible, otherwise dispose to Class III landfill
Sanitary waste– Non-hazardous	Portable chemical toilets – sanitary waste	~ 200 gallons / day	Periodically pumped to tanker truck by licensed contractors	None	Ship to sanitary wastewater treatment plant
Non-RCRA hazardous waste	Used Oily Rags, Pig Blankets, Adsorbent Material	500 pounds	Intermittent	None	Recycle or dispose off-site at a Class I Landfill

Notes:

[1]Classification under Title 22, CCR § 66261.20 et seq, where applicable

[2]Removal of compressed gas cylinders that are not required to support Project demolition activities will occur in Phase 1 of the decommissioning and demolition.

[3]Removal of residual liquids, decontamination fluids, and universal wastes will occur during Phase 1 of the decommissioning and demolition. These materials do not become wastes until they are removed and intended to be discarded during decommissioning.

[4]Category includes solid hazardous materials that become wastes when removed or intended to be discarded during decommissioning.

[5]Solid and/or recyclable wastes generated during Phase 2 of the decommissioning and demolition will include construction and demolition (C&D) wastes (e.g., steel support, structures, and concrete foundations) and incidental hazardous wastes associated with construction support activities. Hazardous wastes generated during decommissioning will be temporarily stored on site pending completion of profile

WASTE STREAM AND CLASSIFICATION[1]	ORIGIN AND COMPOSITION	ESTIMATED AMOUNT	ESTIMATED FREQUENCY OF GENERATION	WASTE MANAGEMENT METHOD	
				ON-SITE	OFF-SITE
documents, hazardous waste manifests, and arrangements for transport to a licensed Class I disposal facility. One time – Term relates to the intent to manage like wastes during a specific phase of project activities. Waste generation may occur on an intermittent basis, but would not occur during multiple phases of the project execution. Intermittent – Term applies to wastes that may be generated during more than one phase of project activities (i.e., decommissioning, demolition, and site restoration). Wastes that may be generated during abatement activities (e.g., asbestos containing materials) are not included in this summary. A detail hazardous materials assessment will be performed prior to commencing demolition activities to identify regulated materials that may be present in building structures or equipment (e.g., flange/valve gaskets). Any hazardous waste generated during asbestos abatement activities will be managed and disposed of in accordance with applicable standards.					

6.5.3.1 Environmental Site Assessment

A Phase I Environmental Site Assessment (ESA) of the Project Site was prepared in May 2019 in in accordance with American Society for Testing and Materials (ASTM) Standard Practice E1527-13 (“Phase I ESA”). A copy of the Phase I ESA Report is included as Appendix B of this Plan.

According to historical research conducted as part of the Phase I ESA, the Project Site was under cultivation from at least the late 1930s until the Project was constructed beginning in the mid-2000s. Although non-adjacent residential and commercial buildings were present a short distance to the north and northeast along Ethanac and Pinacate Roads in increasing density since at least 1938, adjacent properties were either vacant or under cultivation until power transmission towers were constructed on the south-adjacent parcel sometime between 1985 and 1989. The asphalt and cement production plants located on the north-adjacent parcel were constructed sometime between 1989 and 2002. Between 2002 and the present, various lots located across Antelope Road to the west, appear to have been in intermittent use as equipment yards. The west-adjacent RV yard first appears in a 2012 aerial photograph.

A search of environmental databases found that the Project Site is listed in a number of databases. None of the listings was judged an indicator of an unresolved release or threatened release of a petroleum product, and other material of concern, and therefore, is not considered to represent an environmental concern to the property.

The Phase I ESA did not identify any *recognized environmental conditions* (RECs) within the Project Site boundaries.

6.5.3.2 Non-Hazardous Solid Waste Generation and Disposal

During decommissioning and demolition, the following non-hazardous wastes will be generated:

- *Universal Waste:* Information on universal wastes anticipated to be generated is provided in Table 6.5-3. Universal wastes and unusable materials will be handled, stored, and managed per California Universal Waste requirements and will not be disposed of in Class II landfills.
- *Non-Hazardous Solid Waste:* Solid waste generated will include lumber, plastic, metal, glass, concrete, and empty non-hazardous containers. Management and disposal of these wastes will be the responsibility of the decommissioning contractor. Typical management practices for this material include mainly recycling and proper storage of waste to prevent wind dispersion. The majority of the non-hazardous solid wastes, including ferrous and non-ferrous metals, concrete, and wood waste, will be recycled. Consideration will also be given to recycling plastic, glass, and insulation if suitable recycling options are identified for these materials. Any remaining non-hazardous solid wastes that are not suitable for recycling will be transported to approved local Class III landfills for disposal, The quantity of solid wastes generated during decommissioning and demolition are not expected to significantly impact the capacity of the Class III landfills in Riverside County.
- *Wastewater*: Wastewater generated will include sanitary wastes, dust suppression drainage, and equipment wash water. Sanitary wastes, collected in portable self-contained chemical toilets, will be pumped periodically. Potentially contaminated equipment wash water will be contained at designated wash areas and transported to an authorized wastewater treatment facility via a licensed hauler.

There are three active Class III landfills located within approximately 30 miles of the Project Site, including the Lamb Canyon, El Sobrante, and Badlands landfills. In addition, the Robert A. Nelson Transfer Station and Materials Recovery Facility accepts mixed materials, construction and demolition debris, and wood waste for recycling. The three Class III disposal facilities possess a total of more than 150 million cubic yards of remaining capacity and are expected to remain operational through at least 2022 (Badlands) and 2051 (El Sobrante). The maximum landfill capacity, daily operating rate, and remaining capacity of the three Class III landfills that will accept nonhazardous solid wastes from the Project are summarized in Table 6.5-4.

Table 6.5-4 Non-Hazardous Solid Waste Disposal Facilities

Waste Disposal Site	Title 23 Class	Maximum Permitted Capacity[1] (tons/day)	Current Operating Rate[2] (tons/day)	Remaining Capacity[1] (cubic yards)	Estimated Closure Date
Lamb Canyon Sanitary Landfill 16411 Lamb Canyon Road Beaumont, CA 92223	Class III	5,000	1,600	19,242,950	2029
El Sobrante Landfill 10910 Dawson Canyon Road Corona, CA 91719	Class III	16,054	9,300	143,977,170	2051
Badlands Sanitary Landfill 31125 Ironwood Avenue Moreno Valley, CA 92555	Class III	4,800	2,400	15,748,799	2022
Robert A Nelson Transfer Station and MRF 1830 Agua Mansa Road Riverside, CA 92509	NA	4,000	2,000	NA	NA

Source: CalRecycle SWIS Facility Detail May, 2019

[1] Permitted and Remaining Capacity as of most recent date of calculation

[2] Current operating rate based on 2018 data

NA – Not Applicable or Not Available

A comparison of the potential waste generation in Table 6.5-3 to the landfill capacities shown in Table 6.5-4 demonstrates that there is sufficient off-site landfill capacity for Project wastes generated during decommissioning and demolition.

6.5.3.3 Hazardous Waste Generation and Disposal

A summary of the hazardous wastes generated during decommissioning and demolition is provided in Table 6.5-3. Most of the hazardous wastes generated during decommissioning (e.g., solvents and vehicle and equipment maintenance-related materials) will be recycled. Empty containers will be returned to the appropriate vendor, if possible. Any hazardous waste generated during decommissioning that cannot be recycled will be transported off-site by a licensed and permitted hazardous waste transporter to a permitted treatment, storage, and disposal facility (TSDF).

In the unlikely event that contaminated soil is encountered during excavation, the soil will be segregated, sampled, and subjected to laboratory analysis to determine appropriate waste classification and treatment and disposal options. If the soil is classified as hazardous, the CPM will be notified, and the soil will be transported to a Class I landfill or other appropriate soil treatment and recycling facility.

The two Class I landfills in California permitted to accept hazardous wastes are the Waste Management, Inc. Kettleman Hills and Clean Harbors Buttonwillow LLC facilities located in Kings and Kern County, respectively. The Kettleman Hills facility accepts Class I solid and Class II solid and liquid wastes, while the Buttonwillow facility accepts Class I solid wastes. While details regarding the remaining capacity of the Buttonwillow

facility are not known, the remaining capacity of the Kettleman Hills facility far exceeds the anticipated quantity of hazardous waste that may be subject to landfill disposal.

As was previously discussed, the majority of the liquid hazardous materials that are associated with facility operations is intended to be returned to the vendor or recycled. Similarly, oil and oily liquid wastes generated during decommissioning will be transported off-site for recycling and would not be subject to landfill disposal. For select liquid wastes, the World Oil Recycling facility located in Compton (Los Angeles County), is a RCRA-permitted Part B TSDF that recycles used oil, wastewater, and antifreeze.

The capacities of hazardous waste TSDF facilities that will accept hazardous liquid and/or solid wastes from the Project are summarized in Table 6.5-5.

Table 6.5-5 Hazardous Waste Treatment, Storage, and Disposal Facilities

TSDF Site	Title 23 Class	Maximum Permitted Capacity[1] (tons/day)	Current Operating Rate[2] (tons/day)	Remaining Capacity[1] (cubic yards)	Estimated Closure Date
Kettleman Hills Landfill 35251 Old Skyline Road Kettleman City, CA 93239	Class I Class II	8,000	480	6,000,000	NA
Clean Harbors Buttonwillow LLC 2500 West Lokern Road Buttonwillow, CA 93206	Class I	10,500	100	NA	2040
World Oil Recycling 2000 North Alameda Street Compton, A 90222[3]	NA	781,000	500,000	NA	NA

Source: CalRecycle SWIS Facility Detail May, 2019

[1] Permitted and Remaining Capacity as of most recent date of calculation

[2] Current operating rate based on 2018 data

[3] World Oil Recycling is a RCRA Part B permitted TSDF and accepts certain hazardous and non-hazardous liquid wastes (e.g., oil, oily water, antifreeze). Permitted capacities and operating rates are for waste oil only and expressed in gallons per day.

NA – Not Applicable or Not Available

The small quantities of hazardous waste that cannot be recycled are not expected to significantly impact the capacity of the Class I landfills located in California.

6.5.4 Proposed Conditions

During decommissioning, IEEC and its contractor will continue to implement the various operational waste management programs and procedures that are currently in effect and will comply with the applicable regulatory requirements. In order to ensure compliance with LORS and to demonstrate that waste generated during decommissioning and demolition will not have significant impacts, the following conditions are proposed:

D-WM-1 The project owner shall ensure its contractor ships all hazardous waste, as defined under the applicable regulations, resulting from decommissioning and demolition, to a Class I or II disposal facility or to a permitted TSDF authorized to treat specified waste streams.

Verification: The project owner or its contractor will submit records of the types, quantities, and disposition of hazardous waste generated during decommissioning and demolition to the CPM upon completion of decommissioning and demolition.

D-WM-2 The project owner shall require its contractor to prepare a Construction Waste Management Plan that identifies the non-hazardous demolition waste materials to be diverted from disposal by salvage, sale, recycling, or other form of disposal diversion.

Verification: The project owner or its contractor will prepare and submit the Construction Waste Management Plan to the CPM prior to commencing demolition. Subsequent updates or modifications to the Construction Waste Management Plan will be maintained onsite. Following completion of demolition, records and documentation of the types, quantities, and disposition of nonhazardous demolition wastes diverted will be submitted to the CPM.

D-WM-3 The project owner shall direct and require all hazardous waste transporters removing hazardous waste from the Project Site to use only the reverse of the route previously approved by the CPM as a Condition of Certification HAZ-10 (Project Site to Antelope Road, to Ethanac Road, to I-215). The project owner shall obtain approval of the CPM if an alternate route is desired.

Verification: Not required, as this in an extension of an existing condition of certification.

D-WM-4 If potentially contaminated soil is discovered during excavation, as evidenced by discoloration, odor, detection by handheld instruments, or other signs, a Registered Professional Engineer or Geologist shall inspect the site, determine the need for sampling to confirm the nature and extent of contamination, and submit a written report to the project owner and CPM stating the recommended course of action. Depending on the nature and extent of contamination, the Registered Professional Engineer or Geologist shall have the authority to temporarily suspect demolition activity at that location for the protection of workers or the public. If, in the opinion of the Registered Professional Engineer or Geologist, significant remediation may be required, the project owner shall contact representatives of the Santa Ana Regional Water Quality Control Board, the Riverside County Department of Environmental Health, and/or the Cypress Regional Office of the California Department of Toxic Substances Control for guidance and possible oversight.

Verification: The project owner or its contractor shall submit any reports filed by the Registered Professional Engineer or Geologist to the CPM with 5 days of their receipt. The project owner or its contractor shall notify the CPM within 24 hours of any orders issued to halt demolition.

6.6 Worker Safety and Fire Protection

This section describes the systems and procedures that will be implemented to provide occupational safety and health protection for IEEC personnel and decommissioning contractors in accordance with applicable requirements and includes descriptions of the health and safety programs that will be used during decommissioning and demolition. The section also provides information on the planned fire prevention and protection program.

6.6.1 Background

The Commission Decision concluded:

> *"The Commission therefore concludes that implementation of the Conditions of Certification below will reduce potential adverse impacts on the health and safety of industrial workers to levels of insignificance."*[12]

The Commission Decision did not identify any decommissioning or demolition conditions specifically related to worker safety.[13]

As the Project transitions from operation to decommissioning and demolition, the existing worker safety programs will be amended, as needed, to reflect this transition and the applicable requirements to protect human health and safety.

6.6.2 Applicable LORS and Required Permits

To ensure a safe and healthy workplace, decommissioning and demolition activities will be performed in accordance with the applicable LORS. The applicable LORS are summarized in Table 6.6-1.

[12] Commission Decision, p. 177.

[13] Commission Decision, pp. 39-40.

Table 6.6-1 LORS Applicable to Worker Safety and Fire Protection

LORS	DESCRIPTION	COMMENTS
Federal		
Federal Occupational Safety and Health Act of 1970, Title 29 of the United States Code, section 651 (29 U.S.C. §§ 651 through 678) and implementing regulations, Title 29 of the Code of Federal Regulations (CFR), General Industry Standards, sections 1910.1 - 1910.1500.	Mandates safety requirements in the workplace.	All applicable regulations will be followed during decommissioning and demolition activities.
Department of Labor, Safety and Health Regulations for Construction Promulgated Under Section 333 of the contract Work Hours and Safety Standards Act, 40 USC 327 et seq. and 29 CFR 1926	Meet employee health and safety standards for construction activities.	All applicable regulations will be followed during decommissioning and demolition activities.
State and Local		
California Occupational Safety and Health Act, 1973	Establishes minimum safety and health standards for construction activities and industrial facilities in California.	These sections provide federal approval of California's plan for enforcement of its own safety and health requirements, in lieu of most of the federal requirements found in 29 CFR §1910.1 to 1910.1500.
California Building Code Title 24, California Code of Regulations (24 CCR § 3, et seq.).	Consists of 11 parts containing the building design and construction requirements relating to fire and life safety and structural safety. The Building Standards Code includes the electrical, mechanical, energy, and fire codes applicable to the Project. Local planning/building and safety departments enforce the California Building Code.	All applicable requirements will be followed during decommissioning and demolition activities.

LORS	DESCRIPTION	COMMENTS
California Fire Code, Part 9 of Title 24 of the California Code of Regulations.	The Fire Code contains general provisions for fire safety.	All applicable requirements will be followed during decommissioning and demolition activities.
Uniform Fire Code (UFC) Standards, a companion publication to the California Fire Code.	Contains standards of the ASTM and the NFPA. Riverside County adopted the 1997 Uniform Fire Code in 1999. The Riverside County Fire Department administers the UFC.	All applicable requirements will be followed during decommissioning and demolition activities.
Industry Codes and Standards		
ANSI A10.6-1983	Safety requirements for demolition operations.	All applicable requirements will be followed during decommissioning and demolition activities.

Required permits regarding worker health and safety for Project decommissioning and demolition are identified in Table 6.6-2. As identified in Table 6.6-2, a construction activities permit is required and includes a safety permit conference appointment at a Cal/OSHA district office. During this conference, IEEC or its contractor will identify the potential safety and health risks with respect to decommissioning activities and present the specific measures that will be taken to minimize the risks to employees and contractors.

Table 6.6-2 Decommissioning Permit Requirements

PERMIT OR APPROVAL	ISSUING AGENCY	REQUIREMENTS	SCHEDULE
Construction Activity (includes demolition)	Cal/OSHA	Permits are required for the following operations: Trenches and excavations of more than five feet below ground surface where personnel are required to enter. Construction of buildings, structures, scaffolding, or false work that are more than three stories high. Demolition of any building, structure, or the dismantling of scaffolding or false work that are more than three stories high.	Submit completed permit application to Cal/OSHA office and receive a permit within 24 hours.

PERMIT OR APPROVAL	ISSUING AGENCY	REQUIREMENTS	SCHEDULE
Erection of a Fixed Tower Crane Permit	Cal/OSHA	Permits are required for the following operations: Erection, climbing, and dismantling of fixed tower cranes. Additionally, notifications to the Cal/OSHA must be made at least 24 hours prior to the initiation of the following activities: Completion of erection and commencement of operation. Climbing of the tower crane. Dismantling of the tower crane.	Submit completed permit application to Cal/OSHA and receive a permit within 24 hours.

6.6.3 LORS Conformance

In order to ensure compliance with LORS specifically during demolition, the existing operations Safety and Health Program for the Project will be replaced by an approved Demolition Safety and Health Program provided by the demolition contractor. The Program will be designed to address the LORS provided in Table 6.6-1, above, and as discussed below.

6.6.3.1 Federal Regulations

Federal construction health and safety regulations are provided in 29 CFR Section 1926. Part 1926 addresses several types of construction activities, such as general safety and health provisions (Subpart C); occupational health and environmental controls (Subpart D); personal protective and lifesaving equipment (Subpart E); fire protection and prevention (Subpart F); material handling, storage, use, and disposal (Subpart H); tools – hand and power (Subpart I); welding and cutting activities (Subpart J); electrical work (Subpart K); scaffolding (Subpart L); fall protection (Subpart M); cranes, derricks, hoists, elevators, and conveyors (Subpart N); motor vehicles and mechanized equipment (Subpart O); excavations (Subpart P); demolition (Subpart T); blasting and the use of explosives (Subpart U); power transmission and distribution (Subpart V); rollover protection structures and overhead protection (Subpart W); stairways and ladders (Subpart X); toxic and hazardous substances (Subpart Z); confined spaces in construction (Subpart AA) and cranes and derricks in construction (Subpart CC). Federal safety and health regulations for construction also are provided in 40 U.S. Code (USC) 327 et seq.; these requirements are addressed in Title 8, California Code of Regulations (CCR), Chapter 4, Subchapter 4, General Construction Safety Orders.

6.6.3.2 State Regulations

Construction safety orders are published in Title 8 of the California Code of Regulations, sections 1502, et seq., and are made public by Cal/OSHA. These requirements apply to

demolition and will be addressed in the Demolition Safety and Health Program, which will include the following elements:

- Demolition Injury and Illness Prevention Plan;
- Demolition Personal Protective Equipment Program;
- Demolition Exposure Monitoring Program;
- Demolition Heat Stress Protection Plan;
- Demolition Emergency Action Plan; and
- Demolition Fire Prevention and Protection Plan.

Additional programs required under General Industry Safety Orders (8 CCR §§ 3200 to 6184), Electrical Safety Orders (8 CCR §§2299 to 2974), and Unfired Pressure Vessel Safety Orders (8 CCR §§ 450 to 544) will be in place during demolition and part of the Demolition Safety and Health Program.

6.6.3.3 Local Regulations and Ordinances

The Riverside County Code of Ordinances includes many county-specific ordinances on topics including fire regulations, hazardous materials, and waste management. In addition, the County Code also adopts and integrates by inclusion into County law several State and Federal codes and standards. In cases of adoption of State or Federal codes, Riverside County may have made modifications or additional changes or standards to tailor the code to the local climatic, geographical and topographical distinctiveness of the County.

6.6.3.4 Industry Codes and Standards

The National Fire Protection Association (NFPA), the American National Standards Institute (ANSI), the American Society of Mechanical Engineers (ASME), the American Welding Society, the Instrument Society of America, and a few other private and industrial organizations have established internal standards regarding the design and operation of industrial facilities and equipment. Many of these standards have been incorporated into Federal and State regulations and into building codes.

6.6.3.5 Hazard Analysis

Workers may be exposed to hazards during decommissioning and demolition of the Project. Implementation of appropriate engineering and administrative controls and use of personal protective equipment can minimize impacts to workers. Existing health and safety programs designed to mitigate hazards and comply with applicable LORS for the operation of the Project will be replaced by an approved Demolition Safety and Health Program provided by the demolition contractor. This Program will be implemented to protect worker health and safety during decommissioning and demolition, including demolition and site cleaning activities.

A hazard analysis of the expected activities during demolition and site clean-up is summarized in Table 6.6-3. This table lists work activities and associated hazards and

shows programs designed to reduce the occurrence of each exposure, work place, or occupational hazard. In order to ensure that the types of work activities, associated hazards and hazard control approaches are appropriate for demolition and site clean-up activities, IEEC or its demolition contractor will update the analyses of hazards and the specifics of control strategies as the demolition and site clean-up proceeds.

Table 6.6-3 Demolition and Site Clean-up Hazard Analysis

ACTIVITY	HAZARD	CONTROL
Construction Vehicles	Collisions resulting in injury and/or equipment damage.	Demolition contractor will implement a Heavy Equipment Safety Program.
Industrial Trucks	Similar to motor vehicle and heavy equipment use.	Demolition contractor will implement a Forklift Operator Training Program.
Elevated Heights	Injury due to falls from elevated heights or struck by falling objects.	Demolition contractor will implement a Fall Protection Program and Scaffolding Safety Program.
Trenching and Excavation	Injury and/or property damage from unsafe trenches and excavations.	Demolition contractor will implement a Trenching and Excavation Safety Program and Confined Space Permit Program.
Use of Cranes or Derricks	Equipment and property damage from falling loads and injuries to workers.	Demolition contractor will implement Crane Permits per Cal/OSHA requirements and Hoisting and Rigging Safety Program.
Plant Systems and General Decommissioning Activities	Injury and property damage from contact with hazardous energy sources (e.g., heat sources, electrical, tools, and mechanical equipment)	Demolition contractor will implement procedures to control energy sources (e.g., Lockout/Tagout Program and Hot Work Permits)
Flammable and Combustible Liquids	Danger of fire or explosion resulting in damage to property and injury to workers.	Demolition contractor will implement a Hazardous Materials Handling Program; Fire Prevention Program; and Proper Housekeeping Program.
Hot Work	Injury and/or property damage due to a fire. Employee exposure to toxic fumes and eye injury due to exposure to ultraviolet and infrared radiation during cutting and welding.	Demolition contractor will implement a Respiratory Protection Program, Hot Work Program, Exposure Monitoring Program, and Proper Housekeeping Program.
Electrical Equipment and Systems	Injury and equipment damage from flashovers or contact with electrical sources.	Demolition contractor will implement an Electrical Safety Program, Personal Protective Equipment Program, and Hazardous Energy Control Program.

ACTIVITY	HAZARD	CONTROL
Hand Tools	Injury from hand and portable power tools.	Demolition contractor will implement a Hand and Portable Power Tool Safety Program, Personal Protective Equipment Program, and Tool Inspection Program.
Confined Spaces	Injury from working in spaces with poor ventilation or oxygen depleted atmosphere.	Demolition contractor will implement a Confined Space Entry Program
Ingress and Egress	Injury and/or property damage from inadequate walking and working surfaces.	Demolition contractor will implement a Proper Housekeeping Program
Hearing Conservation	Injury from overexposure or inadequate hearing protection.	Demolition contractor will implement a Hearing Conservation Program and a Personal Protective Equipment Program
Lifting	Injury from improper carrying or lifting of materials and equipment.	Demolition contractor will implement a Safe Lifting Program and Personal Protective Equipment Program.
Industrial Hygiene	Injury due to exposure or overexposure to hazardous gases, vapors, dusts, and fumes	Demolition contractor will implement a Hazard Communication Program, Respiratory Protection Program, Personal Protective Equipment Program, and Exposure Monitoring Program.
High Pressure Systems	Injury and/or property damage from sudden or unexpected release of high pressure steam or air.	Demolition contractor will implement a Relief Valve Testing Plan and Lockout/Tagout Program

6.6.3.6 Health and Safety Plan

The following components will be addressed by the contractor's Demolition Safety and Health Program. Project health and safety plans and program components will incorporate Project Owner health and safety program requirements, and maintain compliance with those requirements.

- **Demolition Injury and Illness Prevention Plan (IIPP)**

  The demolition contractor will provide a Demolition IIPP, which is required by Title 8 CCR Section 3203. The Demolition IIPP will meet Cal/OSHA Injury and Illness Prevention Program requirements.

- **Demolition Personal Protective Equipment (PPE) Program**

  The demolition contractor will perform demolition related activities in accordance with its PPE Program. The Demolition PPE Program will meet Cal/OSHA PPE Program requirements.

- **Demolition Exposure Monitoring Program (EMP)**

  The demolition contractor's Safety and Health Plan will address regulated exposures that maybe encountered during demolition and site clean-up.

- **Demolition Heat Stress Protection Program (HSPP)**

  IEEC has in place a HSPP that will be adapted for use during demolition and through the use of existing on-site training materials, appropriate local best practices, and lessons-learned conveyed to the demolition contractor for adaption in its HSPP.

- **Demolition Emergency Action Program (EAP)**

  The demolition contractor will provide an EAP. The Demolition EAP will include regulatory requirements such as emergency procedures for the protection of personnel, equipment, the environment, and materials during demolition, an update of the fire and emergency reporting procedures, and response actions for accidents involving personnel and/or property.

6.6.3.7 Decommissioning Fire Protection and Prevention Program

The existing on-site fire protection systems will be non-operational once the 500 kV back feed is removed to allow decommissioning and demolition activities to commence. Prior to cessation of operation or removal of any portion of the existing fire suppression system, fire extinguishers and other portable firefighting equipment will be made available on-site. These fire extinguishers will be maintained for the full decommissioning and demolition duration, in accordance with applicable Cal/OSHA requirements.

Locations of portable fire extinguishers will also include portable office spaces, hot work areas, flammable chemical storage areas, and mobile equipment (e.g., passenger vehicles and earthmoving equipment). Fire-fighting equipment will be located to allow for unobstructed access to the equipment and will be conspicuously marked. Portable firefighting equipment will be routinely inspected per regulatory requirements and replaced immediately, if defective, or if in need of recharge.

Construction fire prevention regulations in Title 8 CCR § 1920 et seq. will be followed, as necessary, to prevent fires during decommissioning and demolition activities.

Special attention will be given to operations involving open flames, such as welding, cutting, and the use of flammable liquids and gases. Personnel involved in such

operations will have appropriate licensing to perform hot work operations in structural demolition. A fire watch, utilizing the appropriate class of extinguishers or other equipment, will be maintained during hazardous or hot work operations. Site personnel will not be expected to fight fires past the incipient stage.

Equipment refueling will be done through use of a temporary, skid mounted 2500-gallon diesel tank constructed in accordance with applicable LORS, including secondary containment. This tank will be serviced by a fuel delivery service as required.

6.6.3.8 Safety Training Program

The demolition contractor's Demolition Safety Training Program will address the training requirements for the specific work activities occurring during demolition in accordance with Cal/OSHA and all other applicable regulations. Table 6.6-4 lists the typical training courses along with the employees who are required to be trained.

6.6.4 Proposed Conditions

Decommissioning and demolition of the Project will not have significant impacts on worker safety; however, the demolition contractor's Demolition Safety and Health Program will comply with applicable Cal/OSHA requirements.

D-WS-1 The project owner shall require its demolition contractor to prepare necessary Health and Safety Plans (IIPP, PPE, EMP, HSPP, EAP) to reflect the activities expected during decommissioning and demolition.

Verification: The project owner or its contractor shall maintain the decommissioning Health and Safety Plans on-site and furnish to the CPM upon request.

D-WS-2 The project owner shall require its demolition contractor to prepare a decommissioning Fire Protection and Prevention Program (FPPP) to reflect the activities expected during decommissioning and demolition.

Verification: The project owner or its contractor shall maintain on-site the decommissioning Fire Protection and Prevention Program, and furnish it to the CPM upon request.

D-WS-3 The project owner shall ensure that all IEEC employees, contractor workers, and visitors that will be on-site during decommissioning and demolition receive safety training specific to the decommissioning and demolition activities.

Verification: The project owner or its demolition contractor shall maintain on-site records showing that all on-site employees, workers and visitors present during decommissioning and demolition activities have received and understand the Safety Training Program. The project owner or its contractor shall furnish the records to the CPM upon request.

Table 6.6-4 Typical Safety Training Courses

TRAINING REQUIREMENT	TARGET EMPLOYEES
Demolition Injury and Illness Prevention Training	All
Demolition Emergency Action Plan Training	All
Demolition PPE Program Training	All
Heavy Equipment Safety Training	Employees working on, near, or with heavy equipment.
Forklift Operation Training	Employees working with forklifts.
Excavation and Trenching Safety Training	Employees involved with trenching or excavation operations.
Fall Protection Training	All
Scaffolding and Ladder Safety Training	Employees required to erect or to use scaffolding and employees using ladders.
Hoist and Rigging Program	Employees and supervisors responsible for conducting hoists and rigging operations.
Crane Safety Training	Employees supervising, crane operators, and employees involved in crane operations.
Demolition Fire Protection and Prevention Training	All
Confined Space Entry Program	All
Blood Borne Pathogens Training	First Responders
Hazard Communication Training	All
Electrical Safety Training	Employees performing work with electrical systems, equipment, or electrical extension cords. Additionally, employees working with lock out/ tag out activities.
Hand and Portable Power Tool Safety Training	All
Heat Stress and Cold Stress Safety Training	All
Hearing Conservation Training	All
Back Injury Prevention Training	All
Safe Driving Training	All

TRAINING REQUIREMENT	TARGET EMPLOYEES
Pressure Vessel and Pipeline Safety Training	Employees supervising or working on pressurized vessel, pipes, or equipment.
Respiratory Protection Training	All employees required to wear respiratory protection equipment.
Hot Work Training	All employees working with welding, heating, or other equipment that generates ignition sources.

6.7 Biological Resources

This section presents an analysis of the LORS compliance related to biological resources that might be impacted during the decommissioning and demolition of the Project.

6.7.1 Background

The Perris Valley, in which the Project is located, has a Mediterranean climate influenced by the Pacific Ocean and is characterized by hot, dry summers and mild, wet winters. Temperatures average from the mid to upper 60s during the winter months, and from the high 80s to the low to mid 90s during the summer months. Average precipitation in the Perris Valley is 12 inches a year of which the majority falls between November and March with local stations recording 9.65 inches so far this year.[14]

The Project Site is located on flat terrain with the immediate surroundings comprised of development with residential communities, small scale agriculture, and commercial and industrial development. To the south of the Project Site are low hills and foothills. Approximately three miles to the northeast are the Lakeview Mountains, approximately two miles east are the Double Butte Mountains, and around 1.35 miles to the south near Sun City is a small unnamed mountain, with Steele Peak further to the west. At the time of Project development, the area was classified as disturbed agricultural land. Vegetation mapping was based on an assessment completed for the draft Western Riverside Multiple Species Habitat Conservation Plan (MSHCP), with the Project Site within the most highly disturbed area[15]. In 2012, the Western Riverside County Regional Conservation Authority updated the vegetation map database and the Project area and immediate surroundings are classified as within the Agriculture Mapping Unit (Cropland, Orchard, or Vineyard) and Urban or Development Mapping Unit[16].

[14] National Weather Service, US Department of Commerce & NOAA available at www.wrh.noaa.gov (accessed 05/09/2019).

[15] Final Staff Assessment, Inland Empire Energy Center, Docket No. 01-AFC-17, May 23, 2003 (FSA), p. 5.2-6.

[16] Vegetation - Western Riverside County Update - 2012 [ds1196]., Aerial Information Systems, Inc., Publication date 2015-03-01.

6.7.1.1 Existing Vegetation and Wildlife

Currently, the Project Site is predominantly hardscape, (asphalt, concrete, and gravel) along with maintained landscaping near the administrative building and along the site boundary that does not provide suitable habitat for protected species. Two on-site water retention ponds contain some native vegetation; mulefat (*Baccharis salicifolia*), cottonwood (*Populus fremontii*), willow (*salix* sp.), as well as a predominance of nonnative vegetation tamarix (Tamarix sp.) tree tabaco (Nicotiana glauca), stinknet (*Oncosiphon piluliferum*), red stemmed filaree (*Erodium cicutarium*), and thistle (*Sonchus* sp.).The retention ponds will be left in place and not be impacted by decommissioning or demolition activities.

To support preparation of the AFC in 2001, IEEC completed a survey of flora and fauna within the Project Site and surrounding area prior to Project construction.[17] Federal and/or state listed plant and animal species known or expected to occur in this area are identified in the FSA in Biological Resources Table 1- Sensitive Species Known to Occur in the Project Vicinity. Eleven (11) sensitive plant species and fourteen (14) wildlife species (seven birds, two invertebrates, two mammals, and three reptile and amphibian species) were documented as known to occur in the vicinity of the Project Site.

To support development of this proposed Plan, on May 6, 2019, Sapphos Environmental Inc. conducted a California Natural Diversity Database (CNDDB) search for nearby records of sensitive species within five miles of the Project. Information obtained from this search was combined with information compiled in 2001 to create Table 6.7-1 below, which assesses the potential for each species to occur within the Project area. To determine the likeliness for a species to occur, Sapphos Environmental biologist, Paulette Loubet, reviewed aerial imagery, historic site photos, and existing data from the CNDDB and other databases along with information collected during a Project Site visit on May 16, 2019.

[17] FSA, p. 5.2-6.

Table 6.7-1 Species with Potential to Occur

SCIENTIFIC NAME	COMMON NAME	STATUS	POTENTIAL TO OCCUR WITHIN THE PROJECT AREA
Plants			
Allium munzii	Munz's onion	FE, ST, 1B.1*	Does not occur. Found in chaparral, coastal scrub, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland with heavy clay soils. The Project area is entirely developed and does not contain suitable habitat for this species.
Atriplex coronata var. notatior	San Jacinto Valley crownscale	FE, 1B.1	Does not occur. Found in playas, valley and foothill grassland, and vernal pools within alkaline areas in the San Jacinto River Valley. The Project area is entirely developed and does not contain suitable habitat for this species.
Atriplex parishii	Parish's brittlescale	1B.1	Does not occur. Found in vernal pools, chenopod scrub, and playas. Usually on drying alkali flats with fine soils. The Project area is entirely developed and does not contain suitable habitat for this species.
Brodiaea filifolia	Thread-leaved brodiaea	FT, FE, 1B.1	Does not occur. Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. The Project area is entirely developed and does not contain suitable habitat for this species.
Centromadia pungens ssp. laevis	Smooth tarplant	1B.1	Does not occur. Found in alkali meadow, alkali scrub; valley and foothill grassland, chenopod scrub, meadows and seeps, playas, and riparian woodland. The Project area is entirely developed and does not contain suitable habitat for this species.
Chorizanthe parryi var. parryi	Parry's spineflower	1B.1	Does not occur. Usually associated with dry slopes and flats; sometimes at interface of two vegetation types, such as chaparral and oak woodland. Prefers dry, sandy soils. The Project area is entirely developed and does not contain suitable habitat for this species.
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	1B.1	Does not occur. Usually associated with coastal salt marshes, playas, and vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. The Project area is entirely developed and does not contain suitable habitat for this species.

SCIENTIFIC NAME	COMMON NAME	STATUS	POTENTIAL TO OCCUR WITHIN THE PROJECT AREA
Navarretia fossalis	Spreading navarretia	FT, 1B.1	Does not occur. Usually associated with vernal pools, chenopod scrub, marshes and swamps, playas, in swales and vernal pools, often surrounded by other habitat types. The Project area is entirely developed and does not contain suitable habitat for this species.
Orcuttia californica	California Orcutt grass	FE, SE, 1B.1	Does not occur. Found in vernal pool habitat. The Project area is entirely developed and does not contain suitable habitat for this species.
Tortula californica	California screw moss	1B.2*	Does not occur. Found in chenopod scrub, valley and foothill grassland. Moss growing on sandy soil. The Project area is entirely developed and does not contain suitable habitat for this species.
Invertebrates			
Streptocephalus woottoni	Riverside fairy shrimp	FE	Unlikely to occur. Species occupies swales/earth slump basins in grassland and coastal sage scrub. Inhabits seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season. The Project area is entirely developed and does not contain suitable habitat for this species. Potentially suitable habitat found within former construction laydown area MW-51, which is located outside the Site boundary and in which no decommissioning or demolition activities will occur.
Reptiles and Amphibians			
Anniella stebbinsi	Southern California legless lizard	SSC*	Does not occur. Occurs in sandy or loose loamy soils under sparse vegetation. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content. The Project area is entirely developed and does not contain suitable habitat for this species.
Arizona elegans occidentalis	California glossy snake	SSC*	Does not occur. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils. The Project area is entirely developed and does not contain suitable habitat for this species.

SCIENTIFIC NAME	COMMON NAME	STATUS	POTENTIAL TO OCCUR WITHIN THE PROJECT AREA
Aspidoscelis tigris stejnegeri	Coastal whiptail	SSC*	Does not occur. Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. The Project area is entirely developed and does not contain suitable habitat for this species.
Crotalus ruber	Red-diamond rattlesnake	SSC*	Does not occur. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks, or surface cover objects. The Project area is entirely developed and does not contain suitable habitat for this species.
Emys marmorata	Western pond turtle	SSC*	Does not occur. A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation. The Project area is entirely developed and does not contain suitable habitat for this species.
Phrynosoma blainvillii	Coast horned lizard	SSC*	Does not occur. Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects. The Project area is entirely developed and does not contain suitable habitat for this species.
Spea hammondii	Western spadefoot	SSC	Does not occur. Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg laying. The Project area is entirely developed and does not contain suitable habitat for this species.
Birds			
Aquila chrysaetos	Golden eagle	FP	Does not occur. Usually associated with rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas. The Project area is entirely developed and does not contain suitable habitat for this species

SCIENTIFIC NAME	COMMON NAME	STATUS	POTENTIAL TO OCCUR WITHIN THE PROJECT AREA
Athene cunicularia	Burrowing owl	SSC	Unlikely to occur. Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel. The Project area is entirely developed and does not contain suitable habitat for this species
Lanius ludovicianus	Loggerhead shrike	SSC*	Does not occur. Found in broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting. The Project area is entirely developed and does not contain suitable habitat for this species.
Polioptila californica californica	Coastal California gnatcatcher	FT, SSC	Does not occur. Obligate, permanent resident of coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied. The Project area is entirely developed and does not contain suitable habitat for this species.
Vireo bellii pusillus	Least Bell's vireo	FE SE	Does not occur. Summer resident of Southern California in low riparian habitat in vicinity of water or in dry river bottoms. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite. The Project area is entirely developed and does not contain suitable habitat for this species.
Mammals			
Chaetodipus californicus femoralis	Dulzura pocket mouse	SSC*	Does not occur. Usually associated with a variety of habitats including coastal scrub, chaparral and grassland in San Diego County. Attracted to grass-chaparral edges. The Project area is entirely developed and does not contain suitable habitat for this species.
Chaetodipus fallax fallax	Northwestern San Diego pocket mouse	SSC*	Does not occur. Found in coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel. The Project area is entirely developed and does not contain suitable habitat for this species.

SCIENTIFIC NAME	COMMON NAME	STATUS	POTENTIAL TO OCCUR WITHIN THE PROJECT AREA
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE, SSC	Unlikely to occur. Found in alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages. The Project area is entirely developed and does not contain suitable habitat for this species
Dipodomys stephensi	Stephens' kangaroo rat	FE, ST	Likely to occur. Occupies primarily annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Project within historic habitat. A single carcass was reported on the Project Site in 2006.
Eumops perotis californicus	Western mastiff bat	SSC*	Does not occur. Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels. The Project area is entirely developed and does not contain suitable habitat for this species.
Lasiurus xanthinus	Western yellow bat	SSC*	Does not occur. Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees. The Project area is entirely developed and does not contain suitable habitat for this species.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	SSC*	Does not occur. Found in coastal sage scrub habitats in Southern California. Intermediate canopy stages of shrub habitats and open shrub / herbaceous and tree / herbaceous edges. The Project area is entirely developed and does not contain suitable habitat for this species.
Onychomys torridus ramona	Southern grasshopper mouse	SSC*	Does not occur. Found in desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects. The Project area is entirely developed and does not contain suitable habitat for this species.

SCIENTIFIC NAME	COMMON NAME	STATUS	POTENTIAL TO OCCUR WITHIN THE PROJECT AREA
Perognathus longimembris brevinasus	Los Angeles pocket mouse	SSC*	Does not occur. Found in lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead. The Project area is entirely developed and does not contain suitable habitat for this species.

*species not previously identified in FSA Biological Resources Table 1 (CALPINE 2001a),

Status Legend: FE: Federally Endangered; FT: Federally Threatened;

SE: California Endangered; ST: California Threatened; SSC: California Species of Special Concern; FP: California Fully-protected Species

California Native Plant Society (CNPS) 1B: Rare or endangered in California and elsewhere

Threat Ranks: 0.1 - Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat), 0.2 - Moderately threatened in California (20–80% occurrences threatened / moderate degree and immediacy of threat)

During the surveys completed for the AFC, plant species observed consisted primarily of a mixture of native and non-native herbaceous species commonly found in disturbed areas, fallow fields, meadows, and wetlands. Mulefat (*Baccharis salicifolia*), a common riparian species, was also present along drainages at the Project Site.[18]

Wildlife species observed during Project Site visits conducted on October 19 and 30, 2001 and August 14, 2002, included a variety of common songbirds and raptors, several species of toads, frogs, snakes and lizards, ground squirrel, rabbit, coyote, and skunk.

IEEC conducted biological surveys in 2001 and 2002 to assess the potential for presence of occupied, or suitable but unoccupied, habitat for burrowing owl, bald and golden eagles, southwestern willow flycatcher, least Bell's vireo, Quino checkerspot butterfly, arroyo southwestern toad, western spadefoot toad, Stephens' kangaroo rat, and San Bernardino kangaroo rat. No individuals, or sign thereof, were observed during the surveys for these species.[19] The site assessment and focused survey for Stephens' kangaroo rat and San Bernardino kangaroo rat, completed by a permitted biologist, indicated no habitat or sign of the species in the project area.[20] Only potentially occupied habitat for the vernal pool fairy shrimp was identified within the Project

[18] FSA, p. 5.2-6.

[19] FSA, p. 5.2-7.

[20] FSA, p. 5.2-7.

laydown area MW-51.[21] However, the MW-51 area will not be used during decommissioning activities and therefore will not be impacted.

Since the plant energized, one sensitive species has been reported on the Project Site. In May 2006, a single carcass of a kangaroo rat, classified as "probably *Dipodomys stephensi*" was found by plant personnel. This individual was compensated by fee payment into the habitat conservation plan (HCP) for Stephen's kangaroo rat[22]. No additional observation of sensitive biological resources were documented in the 2018 and 2019 Final Biological Reports.[23]

During the Project Site visit conducted on May 16, 2019 Sapphos Environmental Inc. biologist Paulette Loubet observed several old and inactive nests as well as several species exhibiting nesting behavior. The majority of nests observed within structures were those of pigeon (*Columba livia*), European starling (*Sturnus vulgaris*), and house sparrow (*Passer domesticus*), species which are not protected by the Migratory Bird Treaty Act. Common ravens (*Corvus corax*), red tailed hawks (*Buteo jamaicensis*), and a great horned owl (*Bubo virginianus*) were also observed, although no active nests (nests containing chicks or eggs) were identified.

Additionally, mature trees and shrubs along the Project perimeter could provide nesting habitat for avian species.

6.7.1.2 Sensitive Habitats

The Project Site is not located within Critical Habitat for Threatened and Endangered Species designated by U.S. Fish and Wildlife Services (USFWS) or within any Class I Wilderness Areas under the Clean Air Act. The updated CNDDB record search did not result in any rare vegetation communities within five miles of the Project Site. The Project Site, construction laydown area, and linear structures are all located within historic Stephens' kangaroo rat habitat; however, there is no known occupied habitat located near the Project Site. Decommissioning and demolition will be limited to only the developed Project Site and therefore, no sensitive or natural habitats will be impacted.

6.7.1.3 Wetlands and Aquatic Habitats

IEEC completed a wetlands delineation of the Project Site to identify the presence of features subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) under Section 404 of the federal Clean Water Act. The delineation identified six potential jurisdictional areas, as well as drainage features within the Project Site, all of which lie within the FEMA 100-year flood plain of the San Jacinto River.[24]

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[21] FSA, p. 5.2-7.

[22] Inland Empire Energy Center, LLC (IEEC)- BIO 5 Final Report, Ref. No. GE/IEEC- 0369, August 17, 2009.

[23] Inland Empire Energy Center, LLC (IEEC)- BIO 5 Final Report, Waldie Environmental 2018 and 2019.

[24] FSA, p. 5.2-9.

The three indicators used to classify an area as a wetland under the jurisdiction of the USACE include hydrophytic vegetation, hydric soils, and wetland hydrology. Under normal circumstances, evidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination. After careful assessment of the characteristics of these potential wetland areas, it was concluded that none of the six potential wetland areas presented hydric soils and therefore, were not jurisdictional wetlands.[25] It was determined however, that the bed and bank features do meet the requirements for jurisdictional waters of the U.S.[26] No decommissioning or demolition activities will take place in these areas, which are located outside of the Project Site along Project linear facilities that will remain in place.

6.7.1.4 Coastal Sage Scrub and Chaparral

Within the vicinity of the Project Site, the draft MSHCP identifies coastal sage scrub and chaparral habitat as scattered fragments primarily located in elevated areas identified as mountainous/rural land use, and generally unsuitable for agricultural or urban development (e.g., Double Buttes to the east of the Project area).[27] The protection of coastal sage scrub has been the focus of the Natural Communities Conservation Planning program, under the act of the same name, because it provides habitat to many special status species. The vegetation mapping in the draft MSHCP was not of sufficient detail to determine if the Project area supports the vegetation associations or series cited as rare by the California Department of Fish and Wildlife.[28] Much of this vegetation has been lost to agricultural and urban development. No coastal sage scrub or Chaparral habitat occurs within the Project Site.

6.7.2 Conditions of Certification and Mitigation Measures

The Commission Decision concluded:

> *"The area is predominantly agricultural, including the area proposed for the project. At the plant site and construction laydown areas no sensitive habitats or vegetation dominated by native species will be cleared or disturbed."*[29]

The Commission Decision included COC BIO-1 through BIO-13 intended to mitigate potential impacts to biological resources. These measures where incorporated into the Project's BRMIMP. The BRMIMP is a plan to mitigate potential impacts to biological resources from the construction and operation of the Project. Certain elements of COC BIO-1 through BIO-5 and BIO-10 are relevant to decommissioning and demolition

[25] FSA, p. 5.2-9.

[26] FSA, p. 5.2-9.

[27] FSA, p. 5.2-9.

[28] FSA, p. 5.2-9.

[29] Commission Decision, p. 216.

activities in modified form. IEEC will submit for CEC review and approval a revised Biological Resource Mitigation Implementation and Monitoring Plan (BRMIMP) that includes relevant measures contained in COC BIO-1 through BIO-5 and BIO-10, modified as appropriate for decommissioning and demolition. The proper incorporation and implementation of these measures during decommissioning and demolition will reduce below a level of significance or totally avoid impacts to sensitive species and habitat.

COC BIO-6 pertains specifically to closure (decommissioning and demolition) of the Project. However, the requirements of this COC contemplated restoration of the Project Site to its pre-Project condition, and are not appropriate or feasible given the plan to continue use of the Project Site for energy/industrial activities. COC BIO-6 is not, therefore, included in this Plan.

The following existing COC are also not applicable to the proposed decommissioning and demolition, and are not included in this Plan:

- COC BIO-7: Pertains to requirement to obtain CWA Section 401 water quality certification;
- COC BIO-8: Pertains to requirement to obtain CWA Section 404 Permit from ACOE;
- COC BIO-9: Pertains to design of the Project;
- COC BIO-11: Pertains to one-time payment of fee to compensate for loss of Stephen's kangaroo rat habitat;
- COC BIO-12: Pertains to a one-time payment of Interim Open Space Mitigation Fee; and
- COC BIO-13: Pertains to construction of the transmission line, which will remain in place.

6.7.3 Applicable LORS and Required Permits

LORS potentially applicable to decommissioning and demolition are discussed in Table 6.7-2. No new impacts to streambeds or listed or sensitive species are expected due to decommissioning and demolition activities with the continued implementation of a revised Biological Resource Mitigation Implementation and Monitoring Plan (BRMIMP) that includes relevant measures contained in COC BIO-1 through BIO-5 and BIO-10, modified as appropriate for decommissioning and demolition. Implementation of the revised BRMIMP will avoid or reduce impacts to levels that are less than significant during decommissioning and demolition; therefore, no additional biological resource permits or approvals are needed.

6.7.4 LORS Conformance and Impact Assessment

Decommissioning and demolition activities will be limited to the developed Project Site. No decommissioning or demolition activities will take place within the bed and bank features that meet the requirements for jurisdictional waters of the U.S. Because the Project Site is industrialized and does not contain natural habitat (see Section 6.7.1), no

impacts to biological resources are expected as a result of decommissioning and demolition.

The USFWS threshold of significance is 60 dBA Leg, on an hourly average basis, for sensitive biological resources that may be found in the vicinity of the Project Site. Noise levels associated with demolition and site clean-up is covered in Section 6.13, Noise and Vibration. The analysis indicates that temporary noise associated with decommissioning and demolition will be similar to noise levels associated with current operations. Given that noise levels are not expected to increase materially, and that the Project Site and surrounding area do not include sensitive species or habitat, noise associated with decommissioning and demolition will not have a significant impact on biological resources.

Decommissioning and demolition of the Project will comply with all applicable LORS.

Table 6.7-2 LORS Applicable to Biological Resources

LORS DESCRIPTION COMMENTS	LORS DESCRIPTION COMMENTS	LORS DESCRIPTION COMMENTS
Federal		
Migratory Bird Treaty Act (MBTA): 16 USC Sections 703-721	Prohibits the take of protected migratory birds.	Although no wildlife habitat is found on the Project Site, structures throughout the site and mature trees around the perimeter provide potentially suitable nesting habitat for birds. To minimize potential impacts to birds from decommissioning and demolition, IEEC will submit for CEC review and approval a revised Biological Resource Mitigation Implementation and Monitoring Plan (BRMIMP) that includes relevant measures contained in COC BIO-1 through BIO-5 and BIO-10, modified as appropriate for decommissioning and demolition.
Clean Water Act (CWA) of 1977 Title 33, United States Code, sections 1251-1376, and Code of Federal Regulations, part 30, sections 330.5(a)(26).	Prohibit the discharge of dredged or fill material into the waters of the United States without a permit.	IEEC submitted an application to obtain a CWA 404 permit issued by the USACE and a CWA 401 water quality certification issued by the RWQCB prior to construction of the Project. IEEC will submit for CEC review and approval a revised Biological Resource Mitigation Implementation and Monitoring Plan (BRMIMP) that includes relevant measures contained in COC BIO-1

LORS DESCRIPTION COMMENTS	LORS DESCRIPTION COMMENTS	LORS DESCRIPTION COMMENTS
		through BIO-5 and BIO-10, modified as appropriate for decommissioning and demolition. Implementation of the revised BRMIMP will avoid or reduce impacts to levels that are less than significant during decommissioning and demolition.
Endangered Species Act (ESA) of 1973 Title 16, United States Code, section 1531 et seq., and Title 50, Code of Federal Regulations, part 17.1 et seq.	Designate and provide for the protection of threatened and endangered plant and animal species, and their critical habitat. The administering agency is the USFWS.	Stephens' kangaroo rat. For construction, the USFWS indicated that compliance with the regional incidental take permit (Stephens' kangaroo rat HCP) would ensure compliance for this species.[30] This requirement was incorporated into the BRMIMP to ensure that any related impacts were reduced to levels that are less than significant. IEEC will submit for CEC review and approval a revised Biological Resource Mitigation Implementation and Monitoring Plan (BRMIMP) that includes relevant measures contained in COC BIO-1 through BIO-5 and BIO-10, modified as appropriate for decommissioning and demolition. . Implementation of the revised BRMIMP will avoid or reduce impacts to levels that are less than significant during decommissioning and demolition. Vernal Pool Fairy Shrimp Decommissioning and demolition activities will not occur in areas with potentially suitable habitat.

[30] FSA, p. 5.2-28.

LORS DESCRIPTION COMMENTS	LORS DESCRIPTION COMMENTS	LORS DESCRIPTION COMMENTS
State		
Native Plant Protection Act CDFW Code Sections 1900–1913	Prohibit taking of endangered and rare plants from the wild and requires that CDFW be notified at least 10 days in advance of any change in land use that would adversely impact listed plants.	Not applicable, decommissioning and demolition will be limited to previously disturbed and developed areas.
California Endangered Species Act (CESA) of 1984, Fish and Game Code sections 2050 through 2098; California Code of Regulations Title 14, Division 1, Subdivision 3, Chapter 3, sections 670.2 and 670.5.	Identifies and protects California's rare, threatened, and endangered species.	IEEC will submit for CEC review and approval a revised Biological Resource Mitigation Implementation and Monitoring Plan (BRMIMP) that includes relevant measures contained in COC BIO-1 through BIO-5 and BIO-10, modified as appropriate for decommissioning and demolition. . Implementation of the revised BRMIMP will avoid or reduce impacts to levels that are less than significant during decommissioning and demolition. .
Fish and Game Code Section 3503.5	"It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."	IEEC will submit for CEC review and approval a revised Biological Resource Mitigation Implementation and Monitoring Plan (BRMIMP) that includes relevant measures contained in COC BIO-1 through BIO-5 and BIO-10, modified as appropriate for decommissioning and demolition. . Implementation of the revised BRMIMP will avoid or reduce impacts to levels that are less than significant during decommissioning and demolition. .
Streambed Alteration Agreement (SAA): CFGC Section 1600 et seq.	Requires CDFW to review Project impacts to waters of the State (bed, banks, channel, or associated riparian areas), including impacts to wildlife and vegetation from sediments, diversions, and other disturbances.	Not applicable as decommissioning and demolition activities will be restricted to developed Project Site.

LORS DESCRIPTION COMMENTS	LORS DESCRIPTION COMMENTS	LORS DESCRIPTION COMMENTS
Regional Water Quality Control Board (RWQCB)	Requires every applicant for a federal permit or license for an activity which may result in a discharge into a California water body must request State certification that the proposed activity will not violate state and federal water quality standards. CWA Section 401 certification from the Santa Ana Regional Water Quality Control Board (RWQCB).	The Project Site is not located in or near any surface waters or federally protected wetlands or other jurisdictional waters and therefore, there is no direct loss of this sensitive habitat. IEEC obtained CWA 401 Water Quality Certification issued by the RWQCB in 2005. IEEC will submit for CEC review and approval a revised Biological Resource Mitigation Implementation and Monitoring Plan (BRMIMP) that includes relevant measures contained in COC BIO-1 through BIO-5 and BIO-10, modified as appropriate for decommissioning and demolition. Implementation of the revised BRMIMP will avoid or reduce impacts to levels that are less than significant during decommissioning and demolition
Local		
Western Riverside Multiple Species Habitat Conservation Plan (MSHCP).	The Western Riverside MSHCP is an element of the Riverside County Integrated Project. The MSHCP is designed to conserve open space, nature preserves, and wildlife areas for over 150 species in western Riverside County.	The Project Site is not located in an MSHCP Cellgroup or Criteria Cell. Stephen's kangaroo rat As mentioned above, implementation of COC BIO-5, modified as appropriate for decommissioning and demolition, will ensure that any potential impacts are reduced to levels that are less than significant. Vernal Pool Fairy Shrimp Decommissioning and demolition activities will not occur in areas with potentially suitable habitat. Other MSHCP Species Decommissioning and demolition activities will be restricted to the developed property boundary and adherence to the applicable requirements of the BRMIMP, COC BIO-1 through BIO-5 and BIO-10 will reduce impacts to levels that are less than significant.

LORS DESCRIPTION COMMENTS	LORS DESCRIPTION COMMENTS	LORS DESCRIPTION COMMENTS
Nitrogen Deposition Effects on Areas Proposed for Management under the Draft Western Riverside MSHCP (Draft MSHCP)		The decommissioning and demolition of the Project will eliminate its contribution of Nitrogen Deposition Effects to the surrounding area.
Stephens' Kangaroo Rat Habitat Conservation Plan (HCP).	The Stephens' Kangaroo Rat HCP is a 30-year plan approved in 1996 that is designed to acquire and permanently set-aside, maintain, manage, and fund conservation, preservation, restoration, and enhancement of the Stephens' Kangaroo Rat and its habitat.	Implementation of COC BIO-5, modified as appropriate for decommissioning and demolition activities will ensure that any potential impacts are reduced to levels that are less than significant. Any take of Stephen's kangaroo rat as a result of decommissioning and demolition will be compensated for by fee payment into the HCP.
Riverside County Ordinance No. 663.10, Stephens' Kangaroo Rat Mitigation Fee	Establishes a Plan Fee Assessment Area and sets mitigation fees for development permits in historic Stephen's Kangaroo Rat Habitat.	Fee payment was provided in July 2005 for the total disturbance caused by the Project. Supplemental payments were provided to the County for the increased acreage in 2005, 2006, and 2007. Decommissioning and demolition will be limited to the Property Site boundary and not require additional fees. However, any take of Stephen's kangaroo rat as a result of decommissioning and demolition will be compensated for by fee payment into the HCP.

LORS DESCRIPTION COMMENTS	LORS DESCRIPTION COMMENTS	LORS DESCRIPTION COMMENTS
Riverside County Comprehensive General Plan – Environmental Hazards and Resources Element	This Plan contains general policies regarding the protection and preservation of habitat and sensitive plant and wildlife species.	Activities associated with decommissioning and demolition could further facilitate the introduction of weedy species as a result of ground disturbance, imported fill, or landscaping with non-native species. Weedy plant species growth could suppress native vegetation and infest agricultural lands. However, the Project Site is developed and there is little native vegetation in the immediate vicinity of the Project Site. Decommissioning and demolition activities will be restricted to developed Project Site and therefore will not impact habitat.

6.7.5 Proposed Conditions

The BRMIMP will be revised for specific circumstances related to plant closure, decommissioning, and demolition to minimize or totally avoid impacts to sensitive biological resources.

6.8 Cultural Resources

This section presents an analysis of LORS compliance and potential impacts related to cultural resources that may result from decommissioning and demolition of the Project.

6.8.1 Background

The Commission Decision concluded:

> *There are no known archaeological or historic resources within or adjacent to the critical Area of Potential Effect (APE).*[31] *The Native American Heritage Commission has not recorded any Native American sacred properties within the APE.*[32]
>
> *The Commission therefore concludes that with implementation of the Conditions of Certification below, the proposed project will conform with all applicable laws, ordinances, regulations, and standards relating to cultural*

[31] Commission Decision, p. 244.

[32] Commission Decision, p. 244.

resources as set forth in the pertinent portions of Appendix A of this Decision. [33]

The Commission Decision did not identify any decommissioning and demolition conditions specifically related to cultural resources.

6.8.2 Applicable LORS and Required Permits

LORS potentially applicable to cultural resources during decommissioning and demolition are discussed in Table 6.8-1. No other LORS related to cultural resources are applicable because no off-site or underground work below the level of existing Project foundations is anticipated.

No new or revised permits are required related to cultural resources.

Table 6.8-1 LORS Applicable to Cultural Resources

LORS	DESCRIPTION	COMMENTS
Federal		
Section 106 of the National Historic Preservation Act, 16 U.S.C. § 470; Code of Federal Regulations, 36 CFR Part 800 et seq.,	Require federal agencies to take into account the effects of their undertakings on historic properties through consultations beginning at the early stages of project planning.	No historic properties are located on the Project Site.
State		
California Code of Regulations, Title 14, section 4852.	Defines the term "cultural resource" to include buildings, sites, structures, objects, and historic districts.	Two cultural resources are located in the vicinity of the Project Site; however, decommissioning and demolition will not adversely affect these resources and demolition of the existing cooling tower would reduce indirect impacts to these resources.
Public Resources Code, Section 5000.	Establishes the California Register of Historical Resources (CRHR), establishes criteria for eligibility to the CRHR, and defines eligible resources.	Two historical resources are located in the vicinity of the Project Site; however, decommissioning and demolition will not adversely affect these resources and demolition of the existing cooling tower will reduce indirect impacts to these resources.

[33] Commission Decision, p. 245.

LORS	DESCRIPTION	COMMENTS
The California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.; Title 14, Cal. Code Regs., § 15000 et seq.	Require analysis of potential environmental impacts of proposed projects and requires application of feasible mitigation measures.	Two historical resources are located in the vicinity of the Project Site; however, decommissioning and demolition will not adversely affect these resources and demolition of the existing cooling tower will reduce indirect impacts to these resources.

6.8.3 LORS Conformance and Impact Assessment

As stated in the FSA for the Project, the archaeological inventories for the Project Site and linear components did not record any archaeological sites within the Project Area of Potential Effect (APE).[34] The FSA also concluded that the two historical buildings located at 25626 Antelope Road and 28050 Matthews Road and evaluated as eligible for the CRHR would not be physically impacted by construction of the Project or its associated facilities.[35]

No buried cultural resources were discovered during the construction of the Project, and excavations associated with decommissioning and demolition will not be deeper than they were for Project construction. Furthermore, certain subsurface structures will be left in place, which means that the total extent of excavation associated with decommissioning and demolition will be less than that which occurred during Project construction.

The FSA also specifically addressed Project closure, stating that applicable LORS will be identified in the closure plan, and that if no additional ground disturbance occurs during closure activities and all conditions of certification have been met, no impacts to cultural resources would be expected.[36]

The decommissioning and demolition activities will comply with all LORS pertaining to cultural resources, and will not have a significant adverse impact on any cultural resources.

6.8.4 Proposed Conditions

No cultural resources conditions are proposed related to decommissioning and demolition. All decommissioning and demolition work will occur within previously disturbed areas where no resources were detected during Project construction. Therefore, none of the existing COC nor any additional conditions are necessary.

[34] FSA, p. 5.3-8.

[35] FSA, p. 5.3-12.

[36] FSA, p. 5.8-13.

6.9 Soil and Water Resources

This section presents an analysis of LORS compliance and potential impacts related to soil and water resources that may result from Project decommissioning and demolition.

The Commission Decision concluded that with implementation of the adopted Conditions of Certification:

> *"We therefore conclude that the project will not cause any significant adverse direct, indirect, or cumulative impacts to soil or water resources, and will comply with all applicable laws, ordinances, regulations, and standards (LORS)."*[37]

The Commission Decision did not identify any decommissioning and demolition conditions specifically related to soil and water resources.[38]

6.9.1 Geology and Soils

IEEC investigated soil, groundwater, and surface water at the Project Site in 2005 to evaluate potential areas of concern for contamination as a result of the Project Site's previous agricultural activities.[39] A total of 20 soil borings were advanced, six of which were converted into temporary groundwater monitoring wells. The six soil borings that were converted into monitoring wells were advanced to depths of between 70 and 90 feet below ground surface (bgs). Fourteen soil borings were advanced to a depth of 20 feet bgs. Groundwater was encountered at depths between 75 and 80 feet bgs.

URS collected a surface soil sample from each of the 20 borings, and a total of 23 subsurface soil samples from the 20 borings; one soil sample from 17 of the borings and two samples from three of the borings. The soil samples were delivered to a laboratory and analyzed for Volatile Organic Compounds (VOCs), semi-volatile organic compounds (SVOCs), "Priority Pollutant List" (= Title 22 CAM) Metals, polychlorinated biphenyls (PCBs), and organochlorine and chlorinated pesticides. Two subsurface soil samples were additionally analyzed for 1,4-dioxane.

One groundwater sample was collected from each of the six temporary monitoring wells. The groundwater samples were delivered to a laboratory and analyzed for VOCs, SVOCs, Title 22 CAM Metals, PCBs, organochlorine and chlorinated pesticides, and perchlorate.

One surface water sample and one surface soil sample were collected from a drainage ditch on the western perimeter of the Project Site. The surface water sample was analyzed for the same constituents as the groundwater sample and the surface soil

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[37] Commission Decision, p. 236.

[38] Commission Decision, pp. 39-40.

[39] URS Corporation, Phase II Baseline Investigation, GE Energy, GE Inland Empire Energy Center, 26226 Antelope Road, Romoland, California, May 5, 2005.

sample was analyzed for the same constituents as the surface soil samples described above.

For the soil samples, URS reported that no contaminants were detected above the EPA preliminary remediation goals (PRGs) or California Office of Environmental Health hazard Assessment (OEHHA) soil screening levels (SSLs). The concentrations of metals in the surface soil samples were also found to be below the PRGs and SSLs. Concentrations of arsenic in surface soil were found to exceed the SSL, but were within background concentration levels for California soil.

Comparison of these results to current EPA screening levels indicates that concentrations of contaminants and metals measured by URS in 2005 are below current screening levels for commercial and industrial properties. These concentrations are also below current Environmental Screening levels (ESLs) for commercial properties promulgated by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB).

URS reported that no VOCs were detected above the California Maximum Contaminant Levels (MCLs) for groundwater. The reported concentrations were compared to current MCLs (California Water Boards, 2019) and found to be below regulatory limits. One SVOC, benzo(a)pyrene, was detected above its MCL in one groundwater sample, but at a concentration below the laboratory reporting limit. One groundwater sample was found to have a concentration of perchlorate (6.1 micrograms per liter [µg/L]) slightly above the 2005 California Public Health Goal (PHG) of 6.0 µg/L. The 6.0 µg/L perchlorate concentration is now the MCL (California Water Boards, 2019). URS reported that perchlorate is associated with historic aerospace and fireworks manufacturing. The presence of perchlorate in groundwater may be related to regional manufacturing operations or agriculture in the Colorado River region.

Soil and groundwater samples collected and analyzed by URS in 2005 do not display evidence of contamination at levels that would necessitate a Soil Management Plan during decommissioning and demolition activities. Furthermore, there were no significant releases of contaminants during Project operations, and any minor spills were promptly addressed in accordance with applicable requirements. The Work Plan for Decommissioning and Demolition will provide guidance in the unlikely event that discolored or malodorous soil is encountered during decommissioning and demolition activities.

6.9.2 Storm Water

IEEC's decommissioning contractor, ATC has been provided with IEEC Storm Water Pollution Prevention Plan (SWPPP) Revision 4, dated August 2006. The SWPPP was prepared for the State of California's General Permit for storm water discharges associated with the construction at IEEC.

Section 4.2 of the SWPPP indicated that two sediment basins, located in the southeastern and southwestern corners of the Project Site, were to be constructed to

intercept and monitor sediment-laden site runoff. During construction, storm water was conveyed to these basins by temporary drainage swales. The SWPPP indicated that these swales would be removed as construction progressed, with water subsequently directed to the basins by other temporary means such as pumping. Section 4.2 also indicated that permanent storm drain inlets would be installed at the Project Site.

Appendix F of the SWPPP provided guidance for post-construction storm water management. Section F.4 states that a storm drain system designed to collect storm water runoff would be constructed at the Project Site, and that the sediment ponds would be maintained until the site is fully stabilized.

Section F.4.1 of the SWPPP stated that the Riverside County Flood Control District and Water Conservation District planned to construct the Romoland MOP Flood Control Channel along the southern edge of the Project Site before completion of the Project. After the channel was constructed, the sediment basins were to be backfilled. The backfilled areas were then to be covered with sediment stabilization measures. If the channel was not completed before construction of the Project, then the sediment ponds would not only remain but would be enlarged to accommodate the higher volumes of runoff.

The Romoland MOP Flood Control Channel was not built before Project construction was completed. As per the SWPPP, the sediment basins remained and were enlarged. During the course of the Project's operations, storm water that has accumulated in the basins has been pumped to the Cooling Tower Basin. The storm water basins do not discharge. The California Water Board therefore determined that an Industrial SWPPP was unnecessary for the Project since it did not discharge storm water. The Project currently operates under a Notice of Non-Applicability (NONA).

The Romoland MOP Flood Control Channel has recently been completed. The sediment basins have not been subsequently connected to the flood control channel.

As part of decommissioning, the Cooling Tower Basin will be removed down to six inches below grade and filled to grade level with clean fill and compacted. Any remaining water in the Cooling Tower Basin may be discharged into the Brine Line as per Brine Line Wastewater Discharge Permit Number D1036-3 issued to the Project on May 14, 2018 by the Eastern Municipal Water District. The storm water drainage and retention system will be left in place and remain operable. Since water that accumulates in the sediment basins would no longer be pumped out to the Cooling Tower Basin, for an industrial purpose (cooling tower), then the site may become a storm water discharger.

An initial estimate of the total volume of the two sediment ponds is 500,000 cubic feet. The average rainfall in the vicinity is 11.13 inches per year (National Storm water Calculator modeling program [https://www.epa.gov/water-research/national-stormwater-calculator)]). Given the area of the IEEC (45.8 acres), this gives an annual average volume of rain for the site as approximately 1,850,407 cubic feet of rainfall.

Preliminary calculations, using an estimate of the volume of the two sediment ponds, was performed with the National Storm water Calculator. The National Storm water Calculator has automatic inputs for location, soil type, soil drainage, topography, precipitation, evaporation, land use, land cover, and storm water management practices. The results produced by the National Storm water Calculator indicate that 77 percent of the rainfall would evaporate or infiltrate, leaving 23 percent of the rainfall (415,244 cubic feet) as storm water runoff. The results indicate that the sediment basins would not discharge during a year of average rainfall. However, the possibility exists that during a period of intense rainfall there may be storm water discharge from the Project Site. Therefore, it is recommended that a California General Construction SWPPP be developed for the Project Site, although less than one acre of soil will be exposed during the decommissioning and demolition activities. The California General Construction SWPPP is a form of National Pollution Pollutant Discharge Elimination System (NPDES) permit; no additional permit for storm water discharge would be necessary during decommissioning and demolition activities.

The SWPPP should include, at a minimum, the following Best Management Practices (BMPs):

- Gravel bag or fiber roll berms along the perimeter of the two sediment basins;
- Storm drain inlet protection;
- Trackout control;
- Dust control (see Section 6.9.3); and
- Coverage of soil stockpiles.

Given that surface flow of water is to the south across the Site and in the vicinity, it is recommended that sampling points for discharge be located at the southwestern and southeastern corners of the Project Site.

6.9.3 Dust Control

Although soil exposure at the Project Site will be minimal (less than one acre) during decommissioning and demolition activities, dust control will be necessary. The Project Site is under the jurisdiction of the SCAQMD. Dust control for this district is regulated by SCAQMD Rule 403. Rule 403 does not prohibit the use of potable or municipal water for dust control. However, the California Water Code, Section 13551 prohibits the use of "…water from any source of quality suitable for potable domestic use for non-potable uses, including …industrial… uses, if suitable recycled water is available…" Water that accumulates in the sediment basins may be used for dust control. Should additional water be needed for dust control, recycled water can be purchased through the EMWD through use of a Temporary Construction Meter (TCM) attached to a recycled water hydrant located at the corner of Antelope Road and McLaughlin Road, southwest adjacent to the Project.

6.9.4 Applicable LORS and Required Permits

The LORS related to soil and water resources are briefly summarized in Table 6.9-1.

A Construction SWPPP will be developed for decommissioning and demolition activities. The California General Construction SWPPP is a category of NPDES permit; no additional NPDES permit is needed during decommissioning and demolition activities at the Project Site.

Table 6.9.1 LORS Applicable to Soil and Water Resources

LORS	DESCRIPTION	COMMENTS
Federal		
Clean Water Act (33 USC § 1257 et seq.).	Requires states to set standards to protect water quality through the regulation of point source and certain non-point source discharges to surface water.	Compliance will be managed through use of Construction SWPPP.
State		
California Constitution, Article X, Section 2.	Requires that the water resources of the State be put to beneficial use to the fullest extent possible. The waste, unreasonable use, or unreasonable method of use of water is prohibited.	Decommissioning and demolition activities will adhere to CWC Section 13551. Water for dust control will be obtained from the sediment detention basins or recycled water purchased from the EMWD through use of a Temporary Construction Meter (TCM) attached to a recycled water hydrant located immediately southwest of the IEEC at Antelope Road and McLaughlin Road.
Porter-Cologne Water Quality Control Act of 1967, Water Code Section 13000 et seq.	Requires the State Water Resources Control Board (SWRCB) and the nine RWQCBs to adopt water quality criteria to protect state waters.	Compliance will be managed through use of Construction SWPPP
California Water Code Section 13551.	Prohibits the use of "…water from any source of quality suitable for potable domestic use for non-potable uses, including …industrial… uses, if suitable recycled water is available…"	Water for dust control will be obtained from the sediment detention basins. Recycled water can be purchased through the EMWD through use of a Temporary Construction Meter (TCM) attached to a recycled water hydrant located immediately southwest of the IEEC at Antelope Road and McLaughlin Road.

LORS	DESCRIPTION	COMMENTS
The Safe Drinking Water and Toxic Enforcement Act of 1986, Health and Safety Code section 25249.5 et seq.	Prohibits the discharge or release of chemicals known to cause cancer or reproductive toxicity into drinking water sources.	Compliance will be managed through use of Construction SWPPP.
State Water Resources Control Board Resolution No. 68-16 (the "Anti-Degradation Policy").	Declares the State's policy that, among other things, the discharging of wastes will not pollute or result in a nuisance.	Compliance will be managed through use of Construction SWPPP.
Local		
County of Riverside	Specifies criteria for Grading and Erosion Control and for design of storm water facilities. Assesses a Flood Mitigation Fee to assist in providing revenue for establishing adequate community drainage facilities.	Contractor to obtain a County grading permit. Compliance will be managed through use of Construction SWPPP.
EMWD Regulations	Requires a Service Agreement for providing a host of water and wastewater services to the Project.	Recycled water to be used for dust control may be purchased through the EMWD through use of a Temporary Construction Meter (TCM) attached to a recycled water hydrant located immediately southwest of the IEEC at Antelope Road and McLaughlin Road.
SCAQMD Rule 403	Specifies requirements for Dust Control.	See California Water Code Section 13551. Water that accumulates in sediment basins can be used for dust control. Additional water can be purchased from EMWD as indicated above.

6.9.5 LORS Conformance and Impact Assessment

Demolition activities will occur on the Project Site and will have limited subsurface disturbance below the level of existing Project foundations. Certain underground facilities such as select foundations and piping within twelve (12) feet of surface elevation will be removed. No substantial earthmoving is planned related to decommissioning and demolition.

The potential for impacts to water quality from storm water and erosion will be minimized during decommissioning and demolition. Some facilities and foundations will be left in place, existing roads will be used, some underground pipelines will remain in the ground, either evacuated and capped or left for continued use by the site's new owner, and earthmoving during decommissioning and demolition will be minimized. Pipe removal activities will be completed with excavation equipment equipped to minimize subsurface disturbance.

IEEC will obtain a Construction SWPPP and implement Best Management Practices (BMPs) as described in the SWPPP Plan. Therefore, there will not be significant potential for adverse impacts to soil and water resources as a result of decommissioning and demolition.

6.9.6 Proposed Conditions

IEEC will implement a modified version of COC SOIL & WATER-2 as follows:

> SOIL & WATER 2: Prior to beginning site mobilization for decommissioning, the project owner shall submit a Notice of lntent for construction under the General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Storm Water Associated with Construction Activity to the State Water Resources Control Board (SWRCB). The project owner shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for the decommissioning of the Project. The SWPPP shall be submitted to Riverside County for review and comment, and to the CPM for review and approval. The SWPPP shall include a final decommissioning drainage design consistent with the criteria specified by County of Riverside and specify Best Management Practices (BMPs) for all on-site project facilities. BMPs shall control soil erosion from storm water drainage below the detention pond and from storm water discharge of the eastern boundary interception ditch.
>
> Verification: No later than 60 days prior to the start of site mobilization for decommissioning, the SWPPP for Construction Activity, and a copy of the Notice of lntent for construction under the General NPDES Permit for Discharges of Storm Water Associated with Construction Activity filed with the SWRCB, shall be submitted by the project owner to the County of Riverside Building and Safety Department for comments and to the CPM for approval. Approval of the SWPPP must be received from the CPM prior to site mobilization for decommissioning.

None of the other existing COC are applicable to the decommissioning or demolition and are not included in this Plan, and no additional conditions related to soil and water resources are proposed for decommissioning or demolition.

6.10 Geology and Paleontology

This section presents an analysis of the LORS compliance and potential impacts related to geological and paleontological resources that may result from decommissioning and demolition of the Project.

6.10.1 Background

The Project Site is located with Perris Valley. The Perris Valley consists of mostly flat desert terrain with surficial sands and silts of the Holocene Era deposited from the mountains and foothills that surround the valley. To the south are low hills and foothills. Approximately three miles to the northeast are the Lakeview Mountains, approximately two miles east are the Double Butte Mountains, and low mountains with Steele Peak lies further to the west. The Project Site was previously classified as disturbed agricultural land.

The Commission Decision concluded:

> *From past work on the site, no paleontological resources were discovered in the project area. Due to extensive disturbance by previous construction, there is a low probability the site contains fossil remains of paleontological importance. There is currently no evidence of geological or paleontological resources at the project site.*
>
> *The Commission therefore concludes that implementation of the Conditions of Certification, below, ensure that project activities will not cause adverse impacts to either geological or paleontological resources or expose the public to geological hazards.*[40]

The Commission Decision did not include any decommissioning and demolition conditions specifically related to paleontological resources.[41]

The Project Site is located within the Peninsular Ranges geomorphic province at the southern end of the Perris Valley, Riverside County, California. This area, within the Peninsular Ranges, is characterized by mountains to the west and east and consists of a broad, nearly flat plain. Exploration at the Project Site encountered a surficial light brown, dense to very dense, silty sand overlying alluvium. The Project Site lies in an area which exhibits minor geologic hazards.[42]

There are no known geologic or mineralogic resources located at or immediately adjacent to the Project Site. Prior to construction of the Project, IEEC conducted a paleontologic resources field survey and a sensitivity analysis for the Project Site and linear routes. No significant fossil localities were identified.[43]

Since the Project Site lies in an area which exhibits minor geologic hazards and no known geologic, mineralogic or paleontologic resources, the potential for significant

[40] Commission Decision, p. 255.

[41] Commission Decision, pp. 39-40.

[42] Commission Decision, p. 254.

[43] Commission Decision, p. 254.

adverse impacts from geologic hazards, and to potential geologic, mineralogic, and paleontologic resources from Project decommissioning and demolition is low.

6.10.2 Applicable LORS and Required Permits

The LORS related to geological and paleontological resources are briefly summarized in Table 6.10-2.

No new or revised permits are required related to geological and paleontological resources.

Table 6.10-2 LORS Applicable to Geological and Paleontological Resources

LORS	DESCRIPTION	COMMENTS
Federal		
None	None	None
State		
The California Building Code (CBC), 1998 edition, is based upon the Uniform Building Code (UBC), 1997 edition.	The CBC is a series of standards that are used in project investigation, design (Chapters 16 and 18) and construction (including grading and erosion control as found in Appendix Chapter 33).The CBC supplements the UBC's grading and construction ordinances and regulations.	As no excavation is expected to go significantly below 15 feet, basic grading and erosion control of soils will be implemented. Shoring is anticipated to be needed on a minimal basis, if at all.
California Environmental Quality Act Guidelines Appendix G	Provides a checklist of questions that a lead agency should normally address if relevant to a project's environmental impacts. Section (V) (c) asks if the project will directly or indirectly destroy a unique paleontological resource or site or unique geological feature. Sections (VI) (a), (b), (c), (d), and (e) pose questions that are focused on whether or not the project would expose persons or structures to geologic hazards. Sections (X) (a) and (b) pose questions about the project's effect on mineral resources.	As no paleontological resources or unique geological features were previously identified during Project construction and operations, there will be a less than significant impact to any paleontological resources or unique geological features.

LORS	DESCRIPTION	COMMENTS
"Measures for Assessment and Mitigation of Adverse Impacts to Non-renewable Paleontologic Resources: Standard Procedures" (Society of Vertebrate Paleontology, 1995).	Establishes procedures and standards for assessing and mitigating impacts to vertebrate paleontological resources.	Because the soil stratigraphy of the Project Site is not cretaceous nor holocene, there is anticipated to be no paleontological resources. Therefore, procedures and standards for assessment and mitigation of impacts are not required.

6.10.3 LORS Conformance and Impact Assessment

The Project Site was substantially disturbed prior to the construction of the Project and was further disturbed by Project construction and almost 35 years of active use. No geological or paleontological resources were identified during construction. Demolition activities will be limited to the Project Site and will not have any subsurface disturbance below the level of existing Project foundations. Certain underground facilities will be left in place, and no substantial earthmoving is planned related to decommissioning and demolition. Therefore, there will not be significant adverse impacts to geological or paleontological resources during decommissioning and demolition.

The decommissioning and demolition activities will comply with all LORS applicable to geological and paleontological resources.

6.10.4 Proposed Conditions

All decommissioning and demolition work will occur within previously disturbed areas where no resources were detected during Project construction. Therefore, none of the existing COC nor any additional conditions are necessary

6.11 Land Use

This section presents an analysis of LORS compliance and potential environmental impacts to land use that may result from the decommissioning and demolition of the Project. The land use analysis focuses on two main issues: (1) whether decommissioning and demolition of the Project is consistent with local land use plans, ordinances, and policies; and (2) whether decommissioning and demolition of the Project is compatible with existing and planned land uses.

6.11.1 Background

The Project was permitted by the CEC on December 17, 2003 and has been in operation for 16 years. The Project supplies electricity to the California Independent System Operator ("CAISO") on a merchant basis. The Project sells both Local and

System Resource Adequacy ("RA") and bids daily into the merchant energy markets. The Project has RA commitments through December 31, 2019. One of the two turbines at the Project has been mothballed since March 2017 based on economic considerations, and IEEC has decided to cease operation of the entire Project as of December 31, 2019.

The Project is located on approximately 46 acres in Riverside County. The Project Site is bordered by a 300-foot-wide transmission line easement owned by Southern California Edison that runs along McLaughlin Road to the south, San Jacinto Road to the east, Antelope Road to the west, and the Burlington Northern & Santa Fe Railway to the north. The Project was located in the County of Riverside when it was permitted; however, the Project Site was subsequently incorporated into the City of Menifee on October 1, 2008.[44]

The City of Menifee General Plan Designation for the Project Site is Menifee North Specific Plan, Heavy Industrial (HI) 0.15 – 0.50 FAR.[45] The City of Menifee has adopted the Riverside County Zoning Ordinance (County Ordinance 348). Currently, this ordinance serves as the primary zoning regulation in the City. The County Ordinance 348 zoning designation for the Project Site is M-H (Manufacturing, Heavy). The Project Site is within Area 3 of the County's Menifee North Specific Plan, which has a land use designation of "Industrial Park," and a zoning designation of "Industrial," which reflects the County's M-H zone. The Menifee North Specific Plan is both a Riverside County Comprehensive General Plan Amendment and a County Zoning Ordinance Amendment.

The proximity of the Project Site to nearby sensitive receptors such as residential areas, schools, and churches (e.g., Romoland Elementary School, Headstart Daycare) has the potential to create air quality, public health, visual, and noise impacts to these sensitive receptors as a result of decommissioning and demolition activities. These potential impacts are addressed in greater detail in the Air Quality, Public Health, Visual Resources, and Noise sections of this Plan.

The Commission Decision concluded the following with regard to the Project's compliance with land use LORS and potential land use impacts:

> *"The Commission therefore concludes that construction and operation of the IEEC will not result in direct, indirect, or cumulative land use impacts. Implementation of the Condition of Certification, below, ensures that the IEEC will comply with all applicable laws, ordinances, regulations, and standards (LORS) related to land use."*[46]

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[44] City of Menifee. Incorporation of the City. Available at: http://cityofmenifee.us/85/History.

[45] City of Menifee. City of Menifee Specific Plan Land Use Background Document and Definitions. Available at: https://www.cityofmenifee.us/DocumentCenter/View/3654/Land-Use-Background-Document-and-Definitions?bidId=.

[46] Commission Decision, p. 269.

The Commission Decision did not identify any decommissioning or demolition conditions specifically related to Land Use.[47]

6.11.2 Applicable LORS and Required Permits

All decommissioning and demolition activities will be limited to the Project Site. Potentially applicable LORS fall into three categories: federal, state, and local. The only applicable federal regulations are Federal Aviation Regulations, Part 77, Section 77.13 ff, which require notification of development more than 200 feet in height for certain imaginary surface planes that extend outward and upward from the runways of designated airports. It is not anticipated that the decommissioning and demolition activities will trigger this regulation as the Project does not propose any construction over 200 feet in height. Additionally, there are no State of California land use LORS directly applicable to decommissioning and demolition of the Project. Local LORS that would apply to decommissioning and demolition activities include land use regulations from the City of Menifee General Plan and Zoning Code and are shown in Table 6.11-1.

Table 6.11-1 LORS Applicable to Land Use

LORS	DESCRIPTION	COMMENTS
Local		
City of Menifee General Plan Adopted November, 2013.	The General Plan consists of a statement of development policies and must include a diagram and text setting forth the objectives, principles, standards and proposals of the document. As per State of California, Government Code Section 65300, a General Plan must include seven mandatory elements including Land Use, Circulation (Transportation), Housing, Conservation, Open Space, Noise, and Safety. The Land Use Element of the General Plan provides land use designations, goals, and policies for the development and conservation of land within the City of Menifee. In addition to the mandatory elements listed above, the City of Menifee has also adopted Economic Development, Community Design, and	The goals and policies of the Land Use, Conservation, Circulation and Infrastructure, Noise, Safety, and Economic Development Elements are applicable to the proposed decommissioning and demolition activities. However, these activities will not conflict with these elements, with the exception of the Economic Development Element. Decommissioning and demolition of the Project will be inconsistent with the Economic Development Element, since it will result in the loss of permanent jobs at the Project. This would conflict with the following Economic Development Policies: ***ED-1.1****: Focus economic development efforts on the primary objective of increasing the number of jobs that pay above-average wages and salaries.*

[47] Commission Decision, pp. 39-40.

LORS	DESCRIPTION	COMMENTS
	Infrastructure Elements to the City's General Plan.	***ED-1.2**: Diversify the local economy and create a balance of employment opportunities across skill and education levels, wages and salaries, and industries and occupations.* ***ED-1.3**: Establish a long-term employment objective where the number of jobs in the city will be equal to or up to 10% higher than the number of employed people living in Menifee.*[48]
Menifee North Specific Plan	The purpose of a specific plan is to provide detailed policies, standards, and criteria for the development or redevelopment of an area. As required by State law, specific plans generally consist of a land plan, circulation plan, development standards, design guidelines, and phasing plan and set forth detailed implementation programs necessary to serve the development. The Project site is located within the Menifee North Specific Plan, which is in both the City of Menifee and Riverside County.[49]	The Menifee North Specific Plan designation for the Project Site is Heavy Industrial (HI) 0.15 – 0.50 FAR. The HI land use designation is intended to be suitable for more intense industrial activities, such as manufacturing uses, that can generate significant impacts such as excessive noise, dust, and other nuisances.[50]

[48] City of Menifee. General Plan Economic Development Element. May 2013. Available at: https://cityofmenifee.us/235/Economic-Development-Element

[49] City of Menifee. Updated General Plan Land Use Map. May 2018. Available at: https://www.cityofmenifee.us/DocumentCenter/View/7685/Updated-General-Plan-Land-Use-Map-May-2018

[50] City of Menifee. Land Use Designations. Available at: https://cityofmenifee.us/DocumentCenter/View/1014/Exhibit_LU-3_LandUseDesignations_20151020?bidId=

LORS	DESCRIPTION	COMMENTS
Riverside County Zoning Ordinance (ORD 348)	The City of Menifee has adopted the Riverside County Zoning Ordinance (ORD 348). Currently, this ordinance serves as the primary zoning regulation in the City.[51,52]	The County Ordinance 348 zoning designation as M-H (Manufacturing, Heavy). The site is within Area 3 of the County's Menifee North Specific Plan, which has a land use designation of "Industrial Park" and a zoning designation of "Industrial," which reflects the County's M-H zone. The M-H zone permits electrical apparatus and components, and public utility substations and storage yards.[53]

At the time the AFC was filed, the Project Site was located in unincorporated Riverside County near the town of Romoland, but it was later annexed into the City of Menifee, approximately 30 miles southeast of the City of Riverside. The Project Site was incorporated into the City of Menifee on October 1, 2008.54 The Project Site is located within the Menifee North Specific Plan, which is in both the City of Menifee and Riverside County.[55]

6.11.3 LORS Conformance and Impact Assessment

The County of Riverside General Plan and Zoning Code have been revised and updated, and the Project Site has been incorporated into the City of Menifee since preparation of the AFC submitted to the CEC for the Project and the beginning of commercial plant operations in 2003. Although specific language and details in both land use guidance documents have changed, the Project as described in the 2003 AFC was consistent with the County's land use designation and zoning for the area at the time. Similarly, the currently proposed decommissioning and demolition of the Project is also consistent with the City of Menifee's currently adopted land use designation and zoning of the Project Site area. Additionally, the proposed decommissioning and demolition is consistent with the goals and policies of the Land Use, Conservation, Circulation and Infrastructure, Noise, and Safety elements of the City's General Plan.

[51] City of Menifee. Riverside County Zoning Ordinance (ORD. 348). October 17, 2018. Available at: http://library.amlegal.com/nxt/gateway.dll/California/menifee_ca/riversidecountyzoningordinanceord348?f=templates$fn=default.htm$3.0

[52] Telephone call with Brandon Cleary, Planning Technician. City of Menifee Planning Department. May 16, 2019.

[53] City of Menifee. Riverside County Article XII M-H Zone (Manufacturing – Heavy). Available at: http://library.amlegal.com/nxt/gateway.dll/California/menifee_ca/riversidecountyzoningordinanceord348?f=templates$fn=default.htm$3.0

[54] City of Menifee. Incorporation of the City. Available at: http://cityofmenifee.us/85/History

[55] City of Menifee. Updated General Plan Land Use Map. May 2018. Available at: https://www.cityofmenifee.us/DocumentCenter/View/7685/Updated-General-Plan-Land-Use-Map-May-2018

However, the decommissioning and demolition will conflict with the City's Economic Development Element as decommissioning and demolition of the Project will result in the loss of permanent jobs at the Project.

Decommissioning the Project will result in the loss of IEEC as a business and all associated jobs at the plant. Since the Project Site will be redeveloped as a Battery Energy Storage System (BESS), it is anticipated that some new jobs will be created by planned industrial activities. The absolute number of job loss or gain and the skills required is uncertain.

6.11.4 Proposed Conditions

No conditions related to land use are required.

6.12 Noise

This section presents an analysis of LORS compliance and potential environmental impacts from noise that may result from the decommissioning and demolition of the Project.

6.12.1 Background

Operation of the Project includes a number of noise producing sources, including the combustion turbine generators (CTG), the steam turbine generator (STG), the heat recovery steam generators (HRSG), boiler feedwater pumps, and the cooling towers. Secondary noise sources include auxiliary pumps, ventilation fans, motors, valves, and gas compressors. The noise emitted by power plants during normal operations is generally broadband, steady state in nature.

The Commission's Decision for the Project concluded:

> *Construction and operation of the IEEC will not increase noise levels significantly above existing ambient levels in the surrounding community.*
>
> *Construction noise levels are temporary and transitory in nature and will be mitigated to the extent feasible by sound reduction devices, limiting noisy construction to daytime hours, and providing notice to nearby residences and businesses, as appropriate.*
>
> *The nearest sensitive receptor to the IEEC project is located 1,000 feet from the Project site.*
>
> *The Commission therefore concludes that implementation of the following Conditions of Certification ensures that IEEC will comply with the applicable laws, ordinances, regulations, and standards on noise and*

vibration as set forth in the pertinent portion of Appendix A of this Decision.[56]

The Commission did not identify any decommissioning and demolition conditions specifically related to Noise.[57]

6.12.2 Applicable LORS and Required Permits

LORS applicable to noise during decommissioning and demolition are listed in Table 6.12-1.

There are no permits required related to noise.

6.12.3 LORS Conformance and Impact Assessment

Decommissioning and demolition activities will generate noise from the operation of demolition equipment and vehicles. Noise anticipated to occur during demolition and decommissioning activities was estimated and compared with estimated noise during operation of the Project to evaluate the potential for the decommissioning and demolition activities to increase potential impacts from noise.

Table 6.12-1 LORS Applicable to Noise

LORS	DESCRIPTION	COMMENTS
Federal		
Occupational Health and Safety Act of 1970. 29 USC Section 651 et seq. Title 29 CFR Section 1910.95	Regulates the worker noise exposure to 90 decibels (dBA) over an eight-hour work shift. Areas above 85 dBA need to be posted as high noise level areas and hearing protection will be required.	Dismantling activities will comply with these requirements.
State		
Title 8 CCR Section 5095 et seq.	Establishes California Occupational Safety and Health Administration (Cal/OSHA) employee noise exposure limits. These standards are equivalent to the Federal OSHA standards. Worker noise exposure limited to 90 dBA over an eight-hour work shift. Areas where worker noise exposure exceeds 85 dBA must be posted as a noise hazard zone and a hearing conservation program is required.	Dismantling activities will comply with these requirements.

[56] CEC Final Decision, pages 307 to 308.

[57] Commission Decision, pp. 39-40.

Local		
Comprehensive Riverside County General Plan	Defines the land noise levels that are normally acceptable in residential areas as between 50 and 60 dBA. This same range is identified with respect to schools and other similar land uses.	Dismantling activities will comply with these requirements through use of mitigating measures as required.
The Menifee North Specific Plan	Identifies the maximum outdoor noise level of 65 dBA CNEL for residential land uses.	Dismantling activities will comply with these requirements, through the use of mitigating measures as required.

Demolition noise will be generated by the use of equipment and vehicles, typically for dismantling, and for the transport of demolition material and workers to and from the Project Site. Demolition noise levels are a function of the number and type of equipment used and the timing and duration of their noise-generating activities. Table 6.12-2 provides a list of noise levels generated by various types of equipment and vehicles that could potentially be used for the demolition activities.

As shown in Table 6.12-2, maximum noise levels (Lmax) from equipment and vehicles range from approximately 70 to 90 dBA Lmax at 50 feet from the equipment.

These noise levels vary for individual pieces of equipment, based on different sizes and engines. Equipment noise levels also vary as a function of the activity level, or duty cycle. In a typical construction project, the loudest short-term noise generators tend to be earth-moving equipment under full load, at approximately 85 to 90 dBA at a distance of 50 feet from the source. In addition to these maximum instantaneous noise levels, the magnitude of the overall demolition noise can be defined by the type of demolition activity, the various pieces of equipment operating, and the duration of their activity. Typically, short-term noise is averaged over time, such as a one-hour average, expressed as dBA Leq.

Typical low-impact (e.g., not pavement cutting or breaking, or blasting) equipment is estimated to generate maximum noise levels of short duration not to exceed 90 dBA Lmax at 50 feet, and hourly or average noise levels of approximately 80 dBA Leq at 50 feet. However, demolition will include potential concrete and material breaking/cutting activities. The high-impact demolition equipment and activities are estimated to generate maximum noise levels of short duration from 90 to 105 dBA Lmax at 50 feet, and average noise levels of approximately 90 dBA Leq at 50 feet.

Table 6.12-2 Construction/Demolition Equipment Noise Levels

EQUIPMENT	MAXIMUM NOISE LEVEL (DBA) 50 FEET FROM SOURCE
All Other Equipment (5 horsepower or less)	85
Backhoe	80
Boring Jack Power Unit	80
Chain Saw	85
Compressor (air)	80
Concrete (Diamond) Saw	90
Dozer	85
Dump Truck	84
Excavator	85
Flat Bed Truck	84
Front-End Loader	80
Generator (25 KVA or less)	70
Generator (more than 25 KVA)	82
Grader	85
Horizontal Boring Hydraulic Jack	80
Hydra Break Ram	90
Jackhammer	85
Pneumatic Tools	85
Pumps	77
Scraper	85
Tractor	84
Vacuum Street Sweeper	80

Source: FHWA, 2006. *Highway Construction Noise Handbook, Construction Equipment Noise Levels*.
Note: KVA = kilovolt ampere.

Traffic associated with truck hauling of demolished materials, and equipment; and construction worker daily trips will generate noise on-site and along access roadways during demolition. Haul trucks traveling to and from the Project Site will use designated truck routes, and demolition workers will travel to and from the Project Site using regional major arterials.

The collecting, sorting, and hauling of demolished materials with heavy equipment will increase the existing average daytime noise level, which no longer will include the

Project operating noise, as the Project will have been taken off-line (i.e., not operational).

Noise levels from demolition activities will attenuate with distance as point sources at a rate of six dBA per doubling of distance over hard site surfaces (such as streets and parking lots).[58] A worst-case hourly average noise level of approximately 105 dBA Leq at 50 feet will attenuate to approximately 79[59] dBA Leq at 1,000 feet, which is the distance to the nearest sensitive receptor identified as Eller Park. As a result, temporary noise attenuation fences, preferential location of equipment, and use of noise suppression technology should be utilized to bring average noise levels below thresholds as advised in the County of Riverside General Plan N13.3.[60] Furthermore the Noise Element of the County of Riverside General Plan States that projects should "minimize noise spillover or encroachment from commercial and industrial land uses into adjoining residential neighborhoods or noise sensitive uses N 1.6." With this attenuation, ambient noise levels during demolition will be similar to those during Project operation at the nearest sensitive receptor.

The potential for noise impacts to wildlife (including birds) was also considered. Although the Project Site does not contain any natural vegetation communities, landscaped trees and shrubs along the property boundary as well as structures within the facility itself could provide potentially suitable nesting opportunities for avian species. Potential impacts to wildlife and nesting birds is disused further in Section 4.7, Biological Resources. This section also addresses mitigation and avoidance measures to reduce impacts to less than significant levels or altogether avoid impacts to sensitive species.

As stated above, the presumed peak noise level would be 79[61] dBA Lmax. Therefore, surrounding hourly average noise levels during demolition will not be greatly increased and would be similar to ambient levels. A worst-case hourly average noise level of other demolition activities will be approximately 105 dBA Leq at 50 feet, which will attenuate to approximately 79[62] dBA Leq at 1,000 feet. Finally, noise from decommissioning and demolition will occur only during daytime hours. Therefore, the decommissioning and demolition will comply with applicable noise LORS and not cause a significant impact.

[58] FHWA, 2006. Highway Construction Noise Handbook, Construction Equipment Noise Levels.

[59] Engineering ToolBox, (2005). Inverse Square Law. [online] Available at: https://www.engineeringtoolbox.com/inverse-square-law-d_890.html [14.05.19].

[60] *Noise Element* (Rep.). (2015, December 8). Retrieved May 29, 2019, from City of Riverside website: https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch07_Noise_120815.pdf?ver=2017-10-11-102104-080

[61] Engineering ToolBox, (2005). Inverse Square Law. [online] Available at: https://www.engineeringtoolbox.com/inverse-square-law-d_890.html [14.05.19].

[62] Engineering ToolBox, (2005). Inverse Square Law. [online] Available at: https://www.engineeringtoolbox.com/inverse-square-law-d_890.html [14.05.19].

6.12.4 Proposed Conditions

The Section 6.6, Worker Safety, discusses the Health and Safety Plans that must remain in place during decommissioning and demolition, including the requirement for worker hearing protection when needed. In addition the following condition is proposed:

D-Noise-1:

Temporary noise attenuation fences, preferential location of equipment, and use of noise suppression technology will be utilized as necessary to bring average noise levels below thresholds as advised in the County of Riverside General Plan N13.3.[63]

No additional conditions related to noise are proposed for the decommissioning and demolition. I

6.13 Socioeconomics

This section addresses the potential short- and long-term socioeconomic impacts of the Project decommissioning and demolition on local housing, employment and population, schools, medical and protective services, and the fiscal and physical capability of local agencies to meet the needs of project related population changes. It describes existing socioeconomic conditions and discusses potential impacts during decommissioning activities and once decommissioning is completed. The section covers a range of economic and demographic characteristics of the area. Environmental justice considerations are addressed separately in this section.

6.13.1 Background

The Project is located approximately six miles west of the City of Hemet and approximately 30 miles southeast of the City of Riverside. The Project was located in the County of Riverside when it was permitted; however, the Project Site was subsequently incorporated into the City of Menifee on October 1, 2008.[64] The Project AFC submitted to the CEC in May 2003, included an analysis of the Project's impact on the economic base of the local area, as well as on population, housing, public services, and utilities. The study area assessed (affected area) includes Los Angeles, Orange, Riverside, San Bernardino, and Sand Diego Counties. Also included in this study were the Romoland Census Designated Place (CDP) and Sun City CDP, which were discontinued as CDPs in the 2010 census.

[63] *Noise Element* (Rep.). (2015, December 8). Retrieved May 29, 2019, from City of Riverside website: https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch07_Noise_120815.pdf?ver=2017-10-11-102104-080

[64] City of Menifee. Incorporation of the City. Available at: http://cityofmenifee.us/85/History

The Commission Decision concluded:

> *A large skilled labor pool in the greater Riverside County area is available for construction and operation of the project;*
>
> *The project will not cause an influx of a significant number of construction or operation workers to relocate in the local area;*
>
> *The project will not result in significant adverse effects to local employment, housing, schools, public utilities, or emergency;*
>
> *There is no evidence of unmitigated disproportionate impacts to minorities or low-income populations;*
>
> *We therefore conclude that implementation of all Conditions of Certification in this Decision and the mitigation measures identified in the evidentiary record ensures that the project will comply with all applicable laws, ordinances regulations, and standards relating to socioeconomic factors as identified in the pertinent portion of Appendix A of this Decision.*[65]

The Commission Decision did not identify any decommissioning and demolition conditions specifically related to socioeconomics.[66]

6.13.2 Applicable LORS and Required Permits

There are no socioeconomic LORS directly applicable to decommissioning and demolition. Local LORS, including the Riverside County General Plan and the North Menifee Specific Plan, apply indirectly vis-à-vis noise and air quality, and are addressed in those sections.

No socioeconomics-related permits are required for the proposed decommissioning and demolition.

6.13.3 LORS Conformance and Impact Assessment

The following sections discuss the potential effects of decommissioning and demolition on socioeconomics. The potential for environmental justice impacts is also evaluated in this section.

[65] Commission Decision, pp. 324-325.

[66] Commission Decision, pp. 39-40

6.13.3.1 Evaluation Methods and Significance Criteria

For the purposes of this evaluation, local socioeconomic impacts were determined by comparing decommissioning and demolition demands and non-operation of the facility with the existing socioeconomic resources for the study area.

Decommissioning and demolition-related impacts would be considered significant if they:

- Induce substantial growth or concentration of population;
- Displace a substantial number of people or existing housing;
- Cause a substantial decrease in employment or property values;
- Result in the substantial change (increase or decrease) of students into an impacted school;
- Cause a substantial change (increase or decrease) in the demand for public services that would affect local agencies' ability to provide public services; or
- Cause a substantial disruption or division of the physical arrangement of an established community.

Socioeconomic impacts from decommissioning and demolition could also be considered significant if they were to cause substantial change in community interaction patterns, social organization, social structures, or social institutions; cause substantial conflict with community attitudes, values, or perceptions; or cause substantial inequities in the distribution of decommissioning costs and benefits.

6.13.3.2 Existing Socioeconomic Conditions

Since the population, housing, economic, employment, public service, utility, and fiscal resources of the communities within the Project area have changed since the Project was constructed, information is provided below to describe the current socioeconomic conditions of the Project area.

For the purpose of this socioeconomic analysis, the study area is considered to be the primary residential communities of the current Project labor force. An average of 23 workers are based at the facility during normal operation. Of these workers, 80 percent live in the communities of Menifee, Perris, and Hemet.

Pursuant to Executive Order 12898, this socioeconomics analysis also addresses environmental justice to identify whether adverse human health or environmental effects are likely to fall disproportionately on minority and/or low-income populations of the community. The study area for the environmental justice analysis was delineated by a six-mile radius from the Project Site per CEC guidelines. At the time the FSA was issued the study areas included a 45.2 percent minority population based on Census 2000 data. Currently that percentage is above 50 percent in all surrounding communities studied.

Population

Table 6.13-1 represents population estimates as of the April 2010 Census for communities in the study area. From the 2010 Census to the 2018 population estimate, the population of Riverside County increased by nearly 12 percent to 2,450,758.[67] Roughly 200,000 people live in the cities of Perris, Hemet, Winchester, Nuevo, and the surrounding unincorporated areas, or about 10 percent of the County's population overall.

Table 6.13-1 Study Area Population Counts 2010 Census

GEOGRAPHY/SUBAREA	2010 POPULATION CENSUS
Perris	68,386
Hemet/Winchester	78,657
Nuevo	6,447
Riverside County	2,189,641

Source: https://www.census.gov/quickfacts

Housing

Table 6.13-2 presents study area housing estimates for communities and surrounding counties of the Project. According to the 2010 Census, there were 840,207 housing units in Riverside County. Household counts for Perris, Hemet, Nuevo, and Riverside Counties summarized in the table below are based on Census 2010 counts. Owner-occupied housing percentages are near the national average of 63 percent, and are bolstered by the County Neighborhood Stabilization Program, and participation in the HOME program through the National Affordable Housing Act. Recreational vehicle (RV) facilities and apartment housing represent the bulk of the remainder. Temporary housing would likely be used by workers who relocate to the area during decommissioning and demolition. Temporary housing in the form of hotel/motel rooms are present in Perris and Menifee, and many are present in Hemet. Temporary housing opportunities are available in the form of RV facilities, mobile home sites, and campgrounds.

[67] Accessed May 16, 2019 US Census Bureau Quick Facts: Riverside County, Nuevo CDP, Hemet City, Perris City
https://www.census.gov/quickfacts/fact/table/perriscitycalifornia,nuevocdpcalifornia,hemetcitycalifornia,riversidecountycalifornia,US/PST045218

Table 6.13-2 Study Area Housing Estimates, 2010 Census (Extrapolated)

GEOGRAPHY/SUBAREA	HOUSEHOLDS	OWNER OCCUPIED HOUSING RATE
Perris	16,582	62.6%
Hemet/Winchester	29,726	74.7%
Nuevo	1905	57.6%
Riverside County	711,724	65.0%

Source: https://www.census.gov/quickfacts

Economy and Employment

Table 6.13-3 presents 2010 annual average employment figures for those workers (by craft) most likely required for decommissioning and demolition as well as employment projections for the selected occupations for 2020. The region includes San Bernardino County and Riverside County for statistical purposes. As of 2010, there were relatively high numbers of construction trade workers, material moving workers, and truck drivers.

Employment projections for material moving workers and truck drivers were also relatively high, with projections for over 20 percent more occupations by 2020. Specialized positions were fewer in number, including construction managers and excavating machine operators; however, specialized machine operators are more likely to commute longer distances based on the value for work performed.

Table 6.13-3 Local Labor Pool by Craft Riverside Region, 2018

OCCUPATIONAL TITLE	ANNUAL AVERAGE EMPLOYMENT		EMPLOYMENT CHANGE		AVERAGE ANNUAL JOB OPENINGS		
	2010	2020	Number	Percent	New Jobs	Net Replacement	Total
Construction Managers	5,000	5,490	490	9.8%	49	32	81
Construction Trades Workers	52,650	57,040	4,390	8.3%	483	1,041	1,524
Material Moving Workers	56,140	69,830	13,690	24.4%	1,369	1,687	3,056
Heavy and Tractor-Trailer Truck Drivers	22,530	28,960	6,430	28.5%	643	448	1,091
Excavating/ Loading / Dragline Operators	280	300	20	7.1%	2	8	10

Source: http://www.calmis.ca.gov/file/occproj/rive$occproj.xls

Table 6.13-4 presents information on the labor force and unemployment rates within the study area and by community based on the EDD's preliminary labor force data for March 2019.[68] For 2019, the Riverside County labor force is estimated at 1,100,000 with an unemployment rate of 4.7 percent.[69] In February 2019, there were 20,409 individuals certified for unemployment benefits in Riverside County.[70]

Table 6.13-4 Preliminary Labor Force and Unemployment Rates, March 2019

			UNEMPLOYMENT		CENSUS RATIOS	
AREA NAME	LABOR FORCE	EMPLOY-MENT	NUMBER	RATE	EMPLOYED	UNEMPLOYED
Riverside County	1,100,000	1,048,600	51,400	4.7%	1.000000	1.000000
Hemet city	30,100	28,100	2,100	6.9%	N/A	N/A
Homeland CDP	3,000	2,900	200	5.0%	0.002747	0.002971
Menifee city	39,100	37,200	1,900	4.8%	N/A	N/A
Nuevo CDP	3,100	2,900	200	5.7%	0.002798	0.003427
Perris city	31,000	29,200	1,800	5.8%	N/A	N/A
Romoland CDP	800	800	0	2.7%	0.000780	0.000456

Source: Monthly Labor Force Data for Cities and Census Designated Places (CDP)

Public Services and Utilities

The County Sheriff's Department provides law enforcement and public safety services to the Project Site. The Perris sheriff's station is located at 137 North Perris Boulevard, and serves the communities of Canyon Lake, Gavilan Hills, Glen Valley, Homeland, Juniper Flats, Lake Mathews, Lakeview, Nuevo, Mead Valley, Menifee, Perris, Romoland, Winchester, and Woodcrest.

Fire protection services are provided by the Riverside County Fire Department (RCFD). RCFD Station 76 (Menifee Lakes Fire Station) located southeast of the decommissioning site, Station 7 (Menifee City Fire Station) located to the southwest, Station 101 (City of Perris County Fire Station) is to the northwest along State Route 215, and the Homeland Fire Station located directly east along State Route 74.

[68] Appendix C to Socioeconomics Section: Economic Development Department Monthly Labor Force Data for Cities and Census Designated Places (CDP) https://www.labormarketinfo.edd.ca.gov

[69] Accessed May 16, 2019: EDD regional statistical information for Riverside County https://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProfileQSResults.asp?selectedarea=Riverside+County&selectedindex=33&menuChoice=localAreaPro&state=true&geogArea=0604000065&countyName=

[70] Accessed May 19, 2019 Unemployment Claims by County EDDhttps://www.edd.ca.gov/about_edd/Quick_Statistics_Information_by_County.htm

The nearest full-service hospital is Menifee Valley Medical Center, located south of the Project Site in Menifee. Menifee Valley Medical Center is an 84-bed hospital providing emergency services, imaging, lab, surgical, and inpatient and outpatient services.[71]

Public elementary and middle schools near the Project Site are part of the Menifee Union School District, serving 10,200 students as of 2018.[72] Nearby Heritage High School, Perris Lake High School, and Paloma Valley High school are part of the Perris Union School District.

Fiscal Resources

A summary of Riverside County[73] and City of Menifee[74] expenses and revenues for the 2017 fiscal year is provided in Table 6.13-5. The Project is located in the City of Menifee, and any impacts from tax losses will be to the City and the County. Impacts to County fiscal resources from decommissioning will be temporary as the property is slated to change hands and will continue to be used as an energy facility. While the City collects more than 2/3 of its revenues from taxes, only eight percent of County revenues come from taxes, and four percent from operational licensing, permitting, etc. For the fiscal year 2018, revenues for Riverside County and City of Menifee totaled approximately $4.84B and $35.8MM, respectively, and expenditures totaled $4.80B and $33.27MM, respectively. Riverside County's key expenditures were on public protection ($1.48MM), health and sanitation ($1.22B), and public assistance ($1.04B).

[71] Accessed May 9, 2019 Menifee Valley Medical Center Services
http://www.menifeevalleymedicalcenter.com/pages/services?sub=Patients%20and%20Visitors

[72] Accessed May 9, 2019 Menifee Union School District: About Us
https://www.menifeeusd.org/District/220-About-Us.html

[73] Accessed May 14, 2019 Riverside County, Budget and Financial Information: Income Statement
https://countyofriverside.us/AbouttheCounty/BudgetandFinancialInformation.aspx

[74] Accessed May 14, 2019: City of Menifee, Budget and Financial Information: CAFD
https://cityofmenifee.us/DocumentCenter/View/6605/City-of-Menifee-FY-16-17-CAFR

Table 6.13-5 Riverside County and City of Menifee Expenses and Revenues for FY2017

EXPENSES AND REVENUES	RIVERSIDE COUNTY AMOUNT (MILLIONS)	PERCENT YOY CHANGE	MENIFEE AMOUNT (MILLIONS)
Expenses	$4,800.1	1.7%	$33.276
Public Protection	$1,488.3	2.5%	$20.700
Health and Sanitation	$1,220.1	3.2%	$3.378
Public Assistance	$1,043.2	-1.2%	$3.643
General Government	$709.1	-1.4%	$4.698
Public Ways and Facilities	$172.7	10.7%	--
Debt Service	$120.7	4.1%	--
Education	$23.4	4.6%	--
Recreation and Cultural Services	$22.5	2.3%	$0.822
Other Activity/Enterprise	--	--	--
Revenues	$4,485.3	3.3%	$35.830
General Government	$1,467.0	3.1%	$8.061
Health and Sanitation	$1,102.9	3.9%	$1.160
Public Assistance	$990.3	0.1%	
Public Protection	$997.0	3.2%	
Public Ways and Facilities	$159.3	17.6%	$0.655
Debt Service	$84.2	1.2%	$0.060
Education	$24.7	13.1%	
Recreational and Cultural Services	$19.9	8.0%	
Other Activity/Enterprise	---		$24.036

Environmental Justice

Table 6.13-6 presents the minority population composition of the study area and for Riverside County. The County has a minority population of 64.6 percent, higher than Hemet, Winchester, and Nuevo, but lower than Perris. All study areas have a minority population greater than 50 percent. Furthermore, Perris and Nuevo both have Hispanic populations greater than 50 percent, while the County has a 49.1 percent Hispanic population, and the City of Hemet has a 42.7 percent Hispanic population. The median household income for Riverside County is higher than Perris or Hemet, but lower than Nuevo.

The Perris City census area has 21.2 percent of its population living below the poverty level. Hemet/Winchester census area has 23.2 percent of its population living below the poverty level (23.2 percent), which is higher than the comparison area of Riverside County as a whole (12.9 percent). Nuevo has a lower percentage of population below the poverty level at 8.9 percent.

Census data used in the preparation of the 2003 FSA indicated minority percentages lower than 50 percent in the census areas within a six-mile radius of the Project. However, the 2003 FSA included focused air quality assessment for construction scenarios to evaluate the potential for environmental justice issues related to PM10 particulate matter from construction based on pockets of higher concentrations of minority population in the study area. The FSA mitigation guidelines for construction included parametric monitoring of construction dust emissions and a limitation on the construction schedule, with ambient air quality monitoring being recommended by staff for compliance assurance (see AQ-SC5 and AQ-SC6 of the FSA). Currently, the minority population in the Project environs is much higher. However, mitigation measures to address fugitive dust and emissions from demolition would be similar to the construction scenario, and, impacts would be reduced below levels of insignificance.[75]

Table 6.13-6 Environmental Justice Characteristics

GEOGRAPHIC AREA	TOTAL POPULATION (2010)	TOTAL MINORITY (PERCENTAGE MINORITY) (2010)	MEDIAN HOUSEHOLD INCOME	POPULATION LIVING BELOW THE POVERTY LEVEL
Perris	68,386	89.7%	$54,657	21.2%
Hemet/ Winchester	78,657	57.1%	$37,171	23.2%
Nuevo	6,447	61.1%	$66,895	8.9%
Riverside County	2,189,641	64.6%	$60,807	12.9%

Source:
https://www.census.gov/quickfacts/fact/table/perriscitycalifornia,nuevocdpcalifornia,hemetcitycalifornia,riversidecountycalifornia,US/PST045218

6.13.3.3 Discussion of Impacts from Decommissioning and Demolition Activities

The following subsections describe the potential impacts resulting from decommissioning and demolition, and the permanent loss of the Project, on population, housing, employment, public services, schools, and the economic base and fiscal resources of Riverside County, the City of Menifee, and/or local communities within the study area, where appropriate.

[75] 2003 Staff Report, Page 70

Workforce and Population

During operation, the Project employed an average of 23 workers.[76] It is expected that some employees may be able to find employment at other nearby traditional or alternative energy generation facilities in the region. The vast majority of these workers and their families live in the Perris and Menifee areas. Based on an average household size of 3.26, a maximum of 75 people could leave the Perris/Menifee/Hemet area, representing .037 percent of the total estimated population.

Project employees were paid approximately $1.3 million in wages, including salary, benefits, overtime, and incentives annually, and the Project plant supported $538,109 annually in indirect income in the region.[77] While some of the IEEC plant employees may find other positions in the local area, including Perris, Menifee, and Hemet, others may have to relocate. Because the new owner will use the site for battery storage, new jobs are expected to be created that may offset all or some of the jobs lost by closure of the Project.

Decommissioning and demolition is expected to occur over a total of 12 months. The decommissioning will require an estimated average of 30 workers per day, including both IEEC employees and demolition contractor staff, over the 12-month decommissioning period. It is assumed that demolition contractor workers will commute from within Riverside County, or the surrounding counties of San Bernardino, Los Angeles, and San Diego, with some relocating temporarily. The primary trades required for decommissioning and demolition include managers, trades workers, material moving workers, heavy truck drivers, and loading machine operators. Even at the peak of decommissioning and demolition activities, the availability of key occupations in the region would be more than sufficient to meet employment needs; the decommissioning would require less than 0.01 percent of the available workforce assuming all workers came from Riverside County. Therefore, labor demand would not significantly affect the availability of labor in the region. It is anticipated that the vast majority of the workforce would commute to the site rather than relocate. Thus, impacts to population are expected to be minimal and the decommissioning would not induce substantial growth. Additionally, the decommissioning and demolition would be limited to existing site boundaries and would not displace existing populations.

Housing

Decommissioning and demolition is expected to have a less than significant impact on housing because of the relatively small number of employees employed at the Project during operation, and the limited number and term for decommissioning and demolition personnel. Some current IEEC employees are expected to find nearby employment; however, even if all workers (and their families) leave the Perris/Menifee/Hemet area, this would only marginally increase vacancy rates. Furthermore, because the Project

[76] IEEC FSA, 2003 Section 5.8, page 283 Socioeconomics

[77] IEEC FSA, 2003 Section 5.8, page 284 Socioeconomics

Site will be developed for battery energy storage, some of the IEEC employees and/or their families could find employment at the new facility.

As mentioned above, it is assumed that few, if any, demolition workers would permanently relocate to the communities nearest the Project Site. This assumption is based on the expectation that workers of this type of work typically commute relatively long distances to work sites, on a contract basis, and maintain a home base elsewhere. Should some workers choose to stay temporarily at a local area motel or hotel, there is sufficient transient housing in both Perris and Hemet to accommodate that demand. Additional housing opportunities are available in the form of RV, mobile home sites, and campgrounds. Should a portion of the workers relocate to the area for the duration of their assignment, impacts to available housing would be minor, as the rental vacancy rate is sufficient for workers to find nearby rental units.

Economy and Employment

As stated above, an average of 23 full-time employees were employed at the facility during normal operation including general staff and administrative support, plant maintenance, and operations staff. These employees included various technicians, skilled personnel, operators, and engineers. Upon the cessation of plant operations, these employees may lose their jobs and be forced to either find employment elsewhere or leave the labor force.

It is anticipated that most of these workers could find employment within the immediate region. However, some would be forced to leave the Perris/Menifee/Hemet area for employment elsewhere. Statistically, a loss of even 100 positions in the Perris/Menifee/Hemet area by itself would cause a negligible (less than .1 percent) change in local unemployment and would be negligible at the local and county level.It is uncertain how many workers will be employed at the BESS facility, but these will offset, to some degree, the loss of IEEC employees should those individuals leave the area or not obtain ongoing employment.

The employees who worked at the Project were paid approximately $1.3 million in wages annually and the plant supported $538,109 in indirect income in the immediate area. The loss of this direct and indirect income will be partially or entirely offset with jobs created by the BESS facility. During the decommissioning and demolition period, the indirect income will likely be higher due to the increased decommissioning activities. The resulting change is uncertain, but at worst would represent a slight decrease in the total income and is not a significant impact.

Project decommissioning and demolition will create a temporary, positive impact on the local economic base and fiscal resources. Wages and salaries will provide some minor additional income to the area, as will expenditures within the region for decommissioning and demolition materials and services. The payroll has been estimated at approximately $3M over twelve months including IEEC, consultant and contractor personnel. Expenditures and local spending on decommissioning and

demolition materials and equipment is expected to be negligible as heavy equipment, trucks, and temporary labor may be sourced outside of the local area.

The minor economic benefit of decommissioning and demolition wages and salaries will create both indirect and induced secondary economic benefits in the region. However, given the relatively small number of personnel and the short timeframe for the activities, these secondary economic impacts will be negligible compared to the overall economic activity in the region.

Public Services, Utilities, and Schools

The decommissioning and demolition of the Project will not increase demands on local police, fire, medical, or other emergency services, nor will it increase the need for additional public utilities.

No significant impacts to local public services are expected during decommissioning and demolition activities. Current law enforcement, fire, and medical service capacity should be sufficient to handle emergencies at the Project Site. Communication equipment will be available on Project Site at all times to contact first responders if emergencies arise. Health and safety programs designed to mitigate hazards and comply with applicable LORS will be developed and implemented to protect worker health and safety during decommissioning and demolition activities.

Although minimal or no population impacts are expected, there will be some demands on utility services during decommissioning as a result of onsite activities.

Decommissioning and demolition will likely require potable water and electrical utility supplies and will generate wastewater and solid waste. It is anticipated that existing electrical and water services will be adequate for use considering that electrical and water service for the power block and balance of plant will not be required. Sanitary wastes generated will likely be collected in portable, self-contained toilets and hauled to an appropriate disposal site. No significant impacts are expected.

Decommissioning and demolition is expected to have an insignificant local and regional impact on schools. A large proportion of the workforce is expected to commute to the site daily. Further, workers who relocate temporarily for a work assignment typically do not bring their families with them. Romoland Elementary School, located northwest of the Project, across State Route 74, is the closest school to the Project Since the school is located approximately 1,575 feet away, decommissioning and demolition would not have any long-term impacts on the elementary school. The next nearest schools, Heritage High School and Hans Christensen Middle School are located 1.5-1.75 miles away from the Project Site, and school activities will not be affected by impacts associated with decommissioning and demolition activities (e.g., air quality).

Fiscal Resources

Estimates suggest that the Project contributed $4MM annually in property taxes. According to the latest Riverside County revenue information (FY2017), this represents

less than one percent of the total tax revenues. The loss of taxes will be distributed among local agencies and programs within the County, as noted in the Fiscal Resources section above, tax revenues only account for 8 percent of the County's revenues overall. The decrease from the decommissioning and demolition of the Project is considered negligible and will be replaced to some extent by revenues from the new owner of the site. This is not a significant impact.

Expenditures on decommissioning and demolition materials, supplies, and equipment are expected to be limited. Riverside County and local city revenues resulting from taxes on materials, supplies, and equipment are not expected to be significant and would likely not affect budgeting or activities at the County level.

Environmental Justice

Federal guidelines for addressing environmental justice include a two-step screening process to determine whether a project could result in disproportionate impacts on low-income and minority populations. The first step is to evaluate whether the potentially affected community or area includes minority and low-income populations. If it contains these population groups, the second step is to determine whether the environmental impacts fall disproportionately on minority and low-income members of the community. In this case, a 65 percent concentration of minorities or a 13 percent concentration of people with low income (i.e., above the rate seen for Riverside County as a whole) are used as the cut-offs to indicate that there is a potential issue in a given area.

Based on the first step of the screening process described above, the proportion of low-income populations in Perris and Hemet 12.9 percent in both cities. The proportions of minority residents in Perris is higher than in Riverside County as a whole.

In the context of decommissioning the Project, the primary environmental justice issues would typically be potential air, noise, or traffic issues that could adversely affect the health of nearby populations. As discussed in the relevant sections of this Plan, these impacts during decommissioning and demolition will be comparable to the impacts from construction and operation and can be mitigated to a level below significance by implementing the proposed mitigation measures for emissions, fugitive dust, noise, and traffic control. The decommissioning and demolition of the Project will result in a decrease in operational air quality impacts and impacts to surrounding communities from noise and traffic generation, and will not create significant socioeconomic impacts.

6.13.4 Proposed Conditions

No significant impacts have been identified and no conditions are warranted.

6.14 Traffic and Transportation

This section presents potential impacts to traffic that may result from the proposed decommissioning and demolition of the Project. Impacts are presented, and as appropriate, mitigation to reduce any potentially significant transportation impacts to a less than significant level is proposed.

6.14.1 Background

The Commission Decision concluded that with implementation of the COC, the additional traffic generated by the construction and operation of the Project would not significantly impact traffic in the area.

> *The addition of traffic associated with construction or operation of the IEEC Project will not have a significant effect on existing Levels of Service (LOS) at local intersections in the project vicinity.*[78]

6.14.2 Applicable LORS and Required Permits

Table 6.14-1 describes the applicable LORS associated with traffic and transportation.

No additional permits are needed related to the decommissioning and demolition.

Table 6.14-1 LORS Applicable to Transportation

LORS	Description	Comments
Federal		
49 CFR Chapter III, Subchapter B, Sections 350-399 on Motor Carrier Safety, Registration, and Transportation of Hazardous Materials	Establishes regulations affecting interstate motor carrier operations, routing registrations, insurance of vehicles and operational safety; describes transportation standards for radioactive and hazardous materials	Dismantling activities will comply with these requirements
State		
California Vehicle Code Division 15. Size, Weight, and Load Section 35000-35796	Provides requirements as to the size and licensing of vehicles on public highways	Vehicles associated with the decommissioning and demolition activities will meet these requirements or obtain the required permits to exceed the requirements.

[78] Commission Decision, p. 279.

LORS	Description	Comments
California Streets and Highway Code	Provides regulation pertaining to the modification of street infrastructure	Since the decommissioning and demolition activities do not propose to remove, replace, or modify any facility within road rights-of-way, these requirements are not applicable.
Local		
Riverside County Congestion Management Program (CMP)	• Requires a Traffic Impact Analysis (TIA) for projects that generate substantially more trip at thresholds of more than 50 daily truck trips. • Requires projects that are truck intensive to study truck access routes, confirm the adequacy of existing streets to be used, safety issues related to truck traffic, and impacts to truck traffic on existing traffic on surrounding land uses.	Since the decommissioning and demolition activities propose to generate 20 daily truck trips, a TIA is not required. However, activities will maintain compliance with the CMP objectives and policies.

6.14.3 LORS Conformance and Impact Assessment

Conformance with each of the LORS described in Section 6.14.2 will be assured as follows:

- The Code of Federal Regulations (CFR), Title 49, govern the transportation of goods and materials over public highways – Vehicles associated with the decommissioning and demolition activities will meet these requirements.
- The California Vehicle Code provides requirements as to the size, weight, and licensing of vehicles on public highways – Vehicles associated with the decommissioning activities will meet these requirements or obtain the required permits to exceed the requirements.
- The California Streets and Highway Code pertaining to the modification of street infrastructure – Since the decommissioning activities do not propose to remove, replace, or modify any facility within road rights-of-way, these requirements are not applicable.

- The Riverside County Congestion Management Program (CMP)[79] requirement for a Traffic Impact Analysis (TIA) for projects that generate substantially more trip at thresholds of more than 50 daily truck trips – Since the decommissioning activities are proposed to only generate 20 truck trips or 35 Passenger Car Equivalent (PCE), a TIA is not required.
- In addition to the standard TIA requirement, projects that are truck intensive are required to study truck access routes, confirm the adequacy of existing streets to be used, safety issues related to truck traffic, and impacts of truck traffic on existing traffic on surrounding land uses.

6.14.3.1 Existing Traffic Conditions and Level of Service

Access to the Project Site is provided by California State Route (SR-74), a conventional two-lane or four-lane that connects Perris and Hemet through the City of Menifee, and residential communities throughout nearby Romoland. SR-74 begins at the interchange with Interstate 5 (I-5) in San Juan Capistrano and stretches toward Palm Desert in Riverside County, with access to the Project Site via Sherman Road that runs in a north-south direction and intersects Antelope Road which is located to the west of the Project Site. Equipment and shipment of materials may also be feasible via the Burlington Northern & Santa Fe Railway (BNSF). The BNSF runs diagonally to the east of the Project Site and intersects with San Jacinto and Ethanac Roads and parallels Russell Road and SR-74. As Russell Road eventually connects to Ethanac Road, access from the east through Ethanac Road and Antelope Road is discussed.

Antelope Road intersects with Ethanac Road which connects the Menifee Specific Plan Area to the North. Ethanac Road is a highly traveled two-lane thoroughfare that bifurcates north Menifee. Currently undergoing expansion to four-lanes, Ethanac Road will eventually be widened with anticipated increase of traffic due to development and revitalization of communities at Romoland and Riverside County. As Ethanac Road connects to Antelope Road which runs directly adjacent to the Project Site, Ethanac Road is an important access point to the Project Site. Antelope Road intersects with Ethanac Road in a “T” configuration and provides access to the industrial region and Project Site south of Ethanac Road. Antelope Road is a paved one lane at the Project Site that provides direct access to the Project area. Approximately 200 feet east of Antelope Road is one set of BNSF railroad tracks. Currently, the tracks cross Ethanac Road at grade.

Level of Service (LOS) is a quantitative measure of quality of service of a specific mode of transportation. The Highway Capacity Manual divides highway quality of service into six letter grades, “A” through “F,” with “A” being the best and “F” being the worst. Currently, the LOS at the Project intersection by Antelope Road is at C, or acceptable condition to maneuver at operating speed. At Ethanac Road and Antelope Road, the LOS is projected to improve from a D to C or better following expansion with improved

[79] Riverside County. Congestion Management Program. 2011, Accessible via www.rctcdev.info/uploads/media_items/congestionmanagement program.original.pdf

connectivity for businesses, residents, and surrounding commercial and industrial activities.

Table 6.14-2 Level of Service Criteria for Riverside County Roadways and Intersections

Level of Service (LOS)	Average Control Delay (Seconds/ Vehicle) for Signalized/ Unsignalized Intersections	General Description
A	≤10/ 0 – 10	Free Flow
B	>10 – 20/ >10 – 15	Stable Flow (slight delays)
C	>20 – 35/ >15 – 25	Stable Flow (acceptable delays)
D	>35 – 55/ >25 – 35	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 – 80/ >35 – 50	Unstable flow (intolerable delay)
F	>80/ >50	Forced flow (congested and queues fail to clear)

Source: Highway Capacity Manual 2010, Transportation Research Board, 2010.

Existing traffic volumes were obtained from the Caltrans Traffic Data Branch and from the County of Riverside. Data from these agencies are the most current publicly available. They were collected by County of Riverside between 2014 and 2018.To Project traffic volume from the collection dates of 2014-2018 to current year level at 2019, a one percent annual increase was assumed.

6.14.3.2 Vehicle Trips during Demolition

Based on anticipated conditions associated with decommissioning and demolition following is activity specific estimated truck trip information:

- Mobilization and demobilization of heavy equipment - 20 truckloads;
- Removal of salvage metals - 1,540 truckloads;
- Removal of construction and demolition debris - 100 truckloads;
- Import of fill material – 160 truckloads;
- Fuel delivery - 100 truckloads;
- Total estimated Project truckloads – 1,920 or 3,840 round trip truck trips.

During the 12-month decommissioning and demolition duration, 3,840 round trip truck trips will occur, or 6,758 PCE using a conversion factor of 1.76[80]. Considering approximately 280 work days, this equates to approximately 14 daily truck trips.

[80] Transportation Research Board. Highway Capacity Manual. 2000.

Based on this review it is anticipated that the Project would result in less than 20 truck trips per day. This is below the 50 daily truck trips established by the City of Menifee to require a TIA during the heavy traffic hours. Based on regional traffic data, total estimated daily truck trips within the vicinity of the Project is greater than 13,000 trips. Thus, decommissioning and demolition represents a less than 1 percent increase over area trucking activity, which is not considered significant.

6.14.4 Proposed Conditions

The decommissioning and demolition activity over the course of the 12-month decommissioning and demolition duration would not result in significant transportation impacts.

Nevertheless, the following condition is proposed:

D-T&T-1:

A traffic management plan shall be developed to ensure compliance with the Riverside County Congestion Management Program (CMP). This plan must include information regarding truck access routes, confirm the adequacy of existing streets to be used, and assess safety issues related to truck traffic.

6.15 Visual Resources

This section presents an analysis of LORS compliance and potential environmental impacts to visual resources that may result from the proposed decommissioning and demolition.

6.15.1 Background

The Project is within the City of Menifee, which also encompasses the neighboring communities of Sun City, Quail Valley, and parts of Romoland.[81] The surrounding area consists of diverse topographic features and distinct natural character such as valleys, mountains, and rock formations.[82] The regional landscape consists of broad, flat alluvial plains that are punctuated by small, rocky hills, and bordered by treeless buttes that rise up to 300 feet or more above the valley floor. The valleys are typically surrounded by arid, undeveloped hill lands, and much of the flat land on the plains is devoted to a mix of irrigated and dry-farmed field crops. Developed communities within the immediate Project vicinity include Romoland, Perris, and Sun City. These areas exhibit landscape characteristics typical of a built urban environment. Electric transmission infrastructure is also a prominent presence in the regional landscape with Southern California

[81] City of Menifee, California. Available at: https://www.cityofmenifee.us/85/History

[82] City of Menifee, California. September 4, 2014. Community Design Background Document & Definitions. Available at: https://www.cityofmenifee.us/DocumentCenter/View/1059/3_CD_Background-Document_HD0913_edited?bidId=

Edison's (SCE) 500 kV Valley Substation serving as the hub of the regional transmission and distribution system.

The existing community is currently characterized by agricultural, residential, commercial, and industrial uses.[83] Although much of the Project vicinity landscape has a rural or quasi-rural appearance, it is, in reality, a landscape that is in transition to a more uniformly urbanized level of development. Indeed, much of the area's now-open agricultural lands will likely be converted to suburban density residential and commercial uses as well as industrial use. Such conversion is already starting to take place in the Interstate 215 (I-215) corridor with the construction of residential tract developments.

The Project Site is located within Menifee near the communities of Romoland and Sun City in the County of Riverside. The 46-acre site is bounded by Ethanac Road and the Burlington Northern & Santa Fe Railway (BNSF) on the north, McLaughlin to the south, San Jacinto Road to the east, and Antelope Road on the west.

The Project includes the natural gas-fired generating facility located on the Project Site as well as electrical transmission, natural gas, water, and wastewater source and discharge connections under the CEC's jurisdiction. The off-site linear facilities will remain after decommissioning and demolition.

The visual impact evaluation includes two categories for assessment: visual settings and visual changes. Visual settings criteria consist of visual quality, viewer concern, viewer exposure, and visual sensitivity. The visual changes criteria include contrast, dominance, and view blockage. These criteria are evaluated from the perspective of specified view areas or Key Observation Points (KOPs).

COC adopted to mitigate visual impacts of the Project include: VIS-1 through VIS-8. COC VIS 1 thru VIS-3 and VIS-6 thru VIS-8 mitigate impacts of Project-specific structure to levels of no significance. Measures VIS-4 and VIS-5 to mitigate the night lighting impacts of the Project to levels of no significance.

The Commission Decision concluded the following with regard to the Project's compliance with visual resources LORS and potential visual resources impacts:

> *The Commission therefore concludes that implementation of the mitigation measures contained in the Conditions of Certification and otherwise described in Conditions of Certification and otherwise described the evidentiary record ensure that the IEEC will not result in significant adverse direct or cumulative impacts to visual resources.*[84]

[83] City of Menifee, California. April 5, 2016. Land Use Background Document and Definitions. Available at: http://www.cityofmenifee.us/DocumentCenter/View/3654/Land-Use-Background-Document-and-Definitions?bidId=

[84] Commission Decision, p. 290.

The Commission Decision did not identify any decommissioning or demolition conditions specifically related to Visual Resources.[85]

6.15.2 Applicable LORS and Required Permits

KOPs are evaluated using only the Local LORS for the Project Site. The local LORS consist of Riverside County Comprehensive General Plan, Menifee North Specific Plan, Sun City/Menifee Valley Community Plan, and City of Perris General Plan. Federal and State LORS do not apply due to the property being on private land and no state roads or highways being designated or eligible under the State Scenic Highway. However, the roads surrounding the Project Site, SR-74 and I-215 are designated Eligible County Scenic Highways; therefore, local LORS would apply. In addition, local LORS were found to be applicable to the enhancement and/or maintenance of visual quality and the protection of views.

Decommissioning and demolition activities will occur only at the Project Site. LORS potentially applicable to visual resources in this area are shown in Table 6.16-1.

Table 6.16-1 LORS Applicable to Visual Resources

LORS	DESCRIPTION	COMMENTS
Local		
Riverside County Zoning Ordinance; Ordinance 655	Ordinance implements the light pollution policies of the Riverside County Comprehensive General Plan	Decommissioning and demolition activities will not occur during night-time hours. Some night-time lighting with existing facility lights will be used for the purposes of maintaining site security.
Sun City/Menifee Valley Community Plan; Policy (d): Lighting	Night lighting shall be provided in industrial areas for security and shall be directed away from adjacent properties	The Project incorporates directional shielding and light management procedures and technology (see also COC VIS-5)

[85] Commission Decision, pp. 39-40.

LORS	DESCRIPTION	COMMENTS
Sun City/Menifee Valley Community Plan; Policy (a) and (d): Visually Sensitive Road Corridors	(a) Within [660 feet of] scenic road corridors, trees and other roadside landscaping shall be utilized to protect and enhance the view from the road; (d) The design and appearance of new land uses within scenic road corridors shall be compatible with the scenic setting or environment. All appurtenant equipment and storage areas shall be screened as needed to make them compatible with the scenic setting or environment	The existing roadside landscaping consisting of trees, shrubs and groundcovers will remain to continue providing screening and visual character to the surrounding area; is a net benefit to the surrounding area

6.15.3 LORS Conformance and Impact Assessment

Decommissioning and demolition activities will occur during the daylight hours; therefore, substantial night lighting of the Project Site will not be necessary. Existing facility lighting operable after separation from the 500 kV backfeed, as well as temporary lighting, as necessary, will be used for the purposes of maintaining site security at night, and will be used in accordance with the lighting and shielding requirements of the existing COC.

Decommissioning and demolition of the Project will result in the elimination of certain of the above ground portions of the power plant and the removal of the resulting waste from the Project Site. Other structures will be left in place for use by the new owners. Since other industrial facilities dominate the Project area landscape, the visual character of the Project area will remain substantially unchanged following decommissioning and demolition of the Project.

Decommissioning and demolition of the Project will not result in a significant adverse impact to visual resources.

6.15.4 Proposed Conditions

Decommissioning and demolition of the Project will eliminate structures that currently impact visual resources in the area, and will therefore result in a positive impact. Existing facility fencing will screen the decommissioning and demolition activities from public view to the extent feasible. Existing perimeter landscaping will not be materially affected by decommissioning and demolition, and existing signage will be removed. Existing lighting, supplemented with temporary lighting as necessary, will be used during decommissioning and demolition. Based on the foregoing, the existing COC are not relevant to decommissioning and demolition and no conditions related to visual resources are required. No significant impacts to visual resources will result from decommissioning and demolition.

APPENDIX A AIR QUALITY AND GREENHOUSE GAS CALCULATIONS

APPENDIX A

AIR QUALITY AND GREENHOUSE GAS CALCULATIONS

NARRATIVE

Appendix A consists of a series of Tables designed to calculate both criteria pollutant and greenhouse gas (GHG) emissions associated with the demolition of the Inland Empire Energy Center (IEEC). Emissions are calculated, as described in the IECC Decommissioning Plan, for both diesel-fueled mobile off-road equipment, as well as gasoline-fueled and diesel-fueled on-road vehicles.

A list of these Tables and their contents is shown below:

Table A-1 NOx and VOC Emission Factor Calculations – Mobile Off-Road Vehicles

Table A-2 PM, CO and SOx Emission Factor Calculations – Mobile Off-Road Vehicles

Table A-3 Hourly, Daily and Annual Emission Rates – Mobile Off-Road Equipment

Table A-4 Compliance with 2020 Fleet Standards for Mobile Off-Road Equipment

Table A-5 GHG Emissions from Mobile Off-Road Vehicles

Table A-6 Criteria Pollutant Emissions from On-Highway Vehicle Tailpipes

Table A-7 GHG Emissions from On-Highway Vehicle Tailpipes

Table A-8 Summary of Annual Emissions from Demolition Operations

Appendix A also contains a series of Attachments that include the California Air Resources Board (CARB) Executive Orders for each of the engines found in the mobile off-road equipment that is planned to be utilized at the Project.

TABLE A-1

NOx and VOC Emission Factor Calculations - Mobile Off-Road Vehicles

Note: For Tier 2 and Tier 3 Engines marked with *, assume NOx = 95% of NMHC + NOx value found in the ARB Executive Order

	Vehicle Type	HP	Executive Order - ARB	EPA Engine Family Name		NOx Emission Factor g/kw-hr	NOx Emission Factor g/hp-hr	Maximum HP	Maximum FUEL	NOx Emission Factor Pounds/Gallon
1	Excavator 1	433	U-R-005-0359	AKLXL15.2ED7	*	3.325	2.479	560	27.86	0.1099
2	Excavator 2	359	U-R-005-0395	DKLXL11.0DDA		1.800	1.342	362	18.00	0.0595
3	Excavator 3	359	U-R-005-0439	HKLXL11.0DDC		0.250	0.186	362	17.86	0.0083
4	Excavator 4	355	U-R-003-0058	BVSXL12.8T4I		1.800	1.342	355	17.57	0.0598
5	Excavator 5	288	U-R-003-0061	CVSXL12.8T41		1.800	1.342	288	14.43	0.0591
6	Skidsteer 1	85	U-R-025-0311	7KBXL03.8AAD	*	6.080	4.534	85	4.66	0.1824
7	Skidsteer 2	85	U-R-025-0456	AKBXL03.8AAD	*	3.990	2.975	85	4.53	0.1231
8	Compactor 1	156	U-R-022-0214	JPKXL04.4MUI		0.28	0.209	157	8.57	0.0084
9	Loader 1	225	U-R-001-0550	JCPXL7.01HPF		1.83	1.365	241	12.43	0.0583
10	Crane 1	333	U-R-002-0671	JCEXL08.9AAN		0.19	0.142	333	17.00	0.0061

Note: For Tier 2 and Tier 3 Engines marked with *, assume VOC = 5% of NMHC + NOx value found in the ARB Executive Order

	Vehicle Type	HP	Executive Order - ARB	EPA Engine Family Name		VOC Emission Factor g/kw-hr	VOC Emission Factor g/hp-hr	Maximum HP	Maximum FUEL	VOC Emission Factor Pounds/Gallon
1	Excavator 1	433	U-R-005-0359	AKLXL15.2ED7	*	0.175	0.130	560	27.86	0.0058
2	Excavator 2	359	U-R-005-0395	DKLXL11.0DDA		0.005	0.004	362	18.00	0.0002
3	Excavator 3	359	U-R-005-0439	HKLXL11.0DDC		0.250	0.186	362	17.86	0.0083
4	Excavator 4	355	U-R-003-0058	BVSXL12.8T4I		0.010	0.007	355	17.57	0.0003
5	Excavator 5	288	U-R-003-0061	CVSXL12.8T41		0.020	0.015	288	14.43	0.0007
6	Skidsteer 1	85	U-R-025-0311	7KBXL03.8AAD	*	0.320	0.239	85	4.66	0.0096
7	Skidsteer 2	85	U-R-025-0456	AKBXL03.8AAD	*	0.210	0.157	85	4.53	0.0065
8	Compactor 1	156	U-R-022-0214	JPKXL04.4MUI		0.01	0.007	157	8.57	0.0003
9	Loader 1	225	U-R-001-0550	JCPXL7.01HPF		0.03	0.022	241	12.43	0.0010
10	Crane 1	333	U-R-002-0671	JCEXL08.9AAN		0.01	0.007	333	17.00	0.0003

TABLE A-2

PM, CO and SOx Emission Factor Calculations - Mobile Off-Road Vehicles

	Vehicle Type	HP	Executive Order - ARB	EPA Engine Family Name	PM Emission Factor g/kw-hr	PM Emission Factor g/hp-hr	Maximum HP	Maximum FUEL	PM Emission Factor Pounds/Gallon
1	Excavator 1	433	U-R-005-0359	AKLXL15.2ED7	0.130	0.097	560	27.86	0.0043
2	Excavator 2	359	U-R-005-0395	DKLXL11.0DDA	0.010	0.007	362	18.00	0.0003
3	Excavator 3	359	U-R-005-0439	HKLXL11.0DDC	0.002	0.001	362	17.86	0.0001
4	Excavator 4	355	U-R-003-0058	BVSXL12.8T4I	0.010	0.007	355	17.57	0.0003
5	Excavator 5	288	U-R-003-0061	CVSXL12.8T41	0.010	0.007	288	14.43	0.0003
6	Skidsteer 1	85	U-R-025-0311	7KBXL03.8AAD	0.350	0.261	85	4.66	0.0105
7	Skidsteer 2	85	U-R-025-0456	AKBXL03.8AAD	0.320	0.239	85	4.53	0.0099
8	Compactor 1	156	U-R-022-0214	JPKXL04.4MUI	0.02	0.015	157	8.57	0.0006
9	Loader 1	225	U-R-001-0550	JCPXL7.01HPF	0.004	0.003	241	12.43	0.0001
10	Crane 1	333	U-R-002-0671	JCEXL08.9AAN	0.004	0.003	333	17.00	0.0001

	Vehicle Type	HP	Executive Order - ARB	EPA Engine Family Name	CO Emission Factor g/kw-hr	CO Emission Factor g/hp-hr	Maximum HP	Maximum FUEL	CO Emission Factor Pounds/Gallon
1	Excavator 1	433	0 U-R-005-0359	AKLXL15.2ED7	0.400	0.298	560	27.86	0.0132
2	Excavator 2	359	0 U-R-005-0395	DKLXL11.0DDA	0.400	0.298	362	18.00	0.0132
3	Excavator 3	359	0 U-R-005-0439	HKLXL11.0DDC	0.040	0.030	362	17.86	0.0013
4	Excavator 4	355	0 U-R-003-0058	BVSXL12.8T4I	0.100	0.075	355	17.57	0.0033
5	Excavator 5	288	0 U-R-003-0061	CVSXL12.8T41	0.100	0.075	288	14.43	0.0033
6	Skidsteer 1	85	0 U-R-025-0311	7KBXL03.8AAD	1.600	1.193	85	4.66	0.0480
7	Skidsteer 2	85	0 U-R-025-0456	AKBXL03.8AAD	0.900	0.671	85	4.53	0.0278
8	Compactor 1	156	0 U-R-022-0214	JPKXL04.4MUI	0.030	0.022	157	8.57	0.0009
9	Loader 1	225	0 U-R-001-0550	JCPXL7.01HPF	0.200	0.149	241	12.43	0.0064
10	Crane 1	333	0 U-R-002-0671	JCEXL08.9AAN	0.004	0.003	333	17.00	0.0001

The SOx Enission Factor for all engines is calcualted based on the California Air Resources Board (ARB) requiring all diesel fuel utilized in Califonia to have a maximum sulfur content of 15 PPM. Noting that 1 pound of Sulfur yields 2 pounds of SOx, the SOx Emission Factor is calculated as: 7.0 pounds of fuel/gallon x (15/1,000,000) x (2 lbs SOx/lb of S) = 0.00021 Pounds/Gallon

TABLE A-3

Hourly, Daily and Annual Emission Rates - Mobile Off-Road Equipment

	Vehicle Type	HP	HOURLY FUEL			DAILLY FUEL			ANNUAL FUEL		
						Hours			Days		
1	Excavator 1	433	21.54	Gallon		8	130	Gallon	250	23,400	Gallon
2	Excavator 2	359	17.85	Gallon		8	105	Gallon	250	18,900	Gallon
3	Excavator 3	359	17.71	Gallon		8	105	Gallon	250	18,900	Gallon
4	Excavator 4	355	17.57	Gallon		8	100	Gallon	250	18,000	Gallon
5	Excavator 5	288	14.43	Gallon		8	90	Gallon	250	16,200	Gallon
6	Skidsteer 1	85	4.66	Gallon		8	15	Gallon	250	2,700	Gallon
7	Skidsteer 2	85	4.53	Gallon		8	15	Gallon	250	2,700	Gallon
8	Compactor 1	156	8.52	Gallon		8	32	Gallon	45	1,440	Gallon
9	Loader 1	225	11.60	Gallon		8	40	Gallon	45	1,800	Gallon
10	Crane 1	333	17.00	Gallon		8	96	Gallon	5	480	Gallon
									Total	**104,520**	**Gallon**

			HOURLY EMISSIONS (lbs)					DAILY EMISSIONS (lbs)					ANNUAL EMISSIONS (tons)				
	Vehicle Type	HP	NOx	VOC	PM	CO	SOx	NOx	VOC	PM	CO	SOx	NOx	VOC	PM	CO	SOx
1	Excavator 1	433	2.37	0.12	0.093	0.28	0.005	14.28	0.75	0.56	1.72	0.027	1.29	0.07	0.050	0.15	0.0025
2	Excavator 2	359	1.06	0.00	0.006	0.24	0.004	6.25	0.02	0.03	1.39	0.022	0.56	0.00	0.003	0.12	0.0020
3	Excavator 3	359	0.15	0.15	0.001	0.02	0.004	0.87	0.87	0.01	0.14	0.022	0.08	0.08	0.001	0.01	0.0020
4	Excavator 4	355	1.05	0.01	0.006	0.06	0.004	5.98	0.03	0.03	0.33	0.021	0.54	0.00	0.003	0.03	0.0019
5	Excavator 5	288	0.85	0.01	0.005	0.05	0.003	5.32	0.06	0.03	0.30	0.019	0.48	0.01	0.003	0.03	0.0017
6	Skidsteer 1	85	0.85	0.04	0.049	0.22	0.001	2.74	0.14	0.16	0.72	0.003	0.25	0.01	0.014	0.06	0.0003
7	Skidsteer 2	85	0.56	0.03	0.045	0.13	0.001	1.85	0.10	0.15	0.42	0.003	0.17	0.01	0.013	0.04	0.0003
8	Compactor 1	156	0.07	0.00	0.005	0.01	0.002	0.27	0.01	0.02	0.03	0.007	0.01	0.00	0.000	0.00	0.0002
9	Loader 1	225	0.68	0.01	0.001	0.07	0.002	2.33	0.04	0.01	0.26	0.008	0.05	0.00	0.000	0.01	0.0002
10	Crane 1	333	0.10	0.01	0.002	0.00	0.004	0.59	0.03	0.01	0.01	0.02	0.00	0.00	0.000	0.00	0.0001
		2678	**7.74**	**0.38**	**0.21**	**1.08**	**0.03**	**40.48**	**2.06**	**1.01**	**5.31**	**0.15**	**3.42**	**0.18**	**0.09**	**0.46**	**0.01**
		HP	**NOx**	**VOC**	**PM**	**CO**	**SOx**	**NOx**	**VOC**	**PM**	**CO**	**SOx**	**NOx**	**VOC**	**PM**	**CO**	**SOx**

TABLE A-4

COMPLIANCE WITH 2020 MEDIUM FLEET STANDARDS FOR MOBILE OFF-ROAD VEHICLES

	RANGE OF HP		25-49	50-74	75-99	100-174	175-299	300-599	600-750	>750	HP x
	2020 NOx TARGET		4.1	4.2	3.4	3.1	2.9	2.8	2.9	4.5	NOx
	Vehicle Type	HP									
1	Excavator 1	433						2.8			1212
2	Excavator 2	359						2.8			1005
3	Excavator 3	359						2.8			1005
4	Excavator 4	355						2.8			994
5	Excavator 5	288					2.9				835
6	Skidsteer 1	85			3.4						289
7	Skidsteer 2	85			3.4						289
8	Compactor 1	156				3.1					484
9	Loader 1	225					2.9				653
10	Crane 1	333						2.8			994
	TOTALS	**2678**				**Fleet Target NOx Emission Factor =**		**2.90**			**7760**

	Vehicle Type	HP	Model Year	Engine Tier	Actual g/hp-hr	Weighted HP x NOx
1	Excavator 1	433	2010	Tier 3	2.48	1074
2	Excavator 2	359	2013	Tier 4 I -Alt	1.34	482
3	Excavator 3	359	2016	Tier 4 Final	0.19	67
4	Excavator 4	355	2011	Tier 4 - Alt	1.34	477
5	Excavator 5	288	2012	Tier 4 I - Alt	1.34	387
6	Skidsteer 1	85	2007	Tier 2	4.53	385
7	Skidsteer 2	85	2010	Tier 3	2.98	253
8	Compactor 1	156	2018	Tier 4 Final	0.21	33
9	Loader 1	225	2018	Tier 4 - Alt	1.36	307
10	Crane 1	333	2018	Tier 4 Final	0.14	47
	TOTALS	**2678**				3511

Actual Fleet NOx Emission Factor = 1.31

Percentage Below Fleet Standard for 2020 = 54.8%

TABLE A-5

GHG EMISSIONS FROM MOBILE OFF-ROAD VEHICLES

1 **GHG EMISSION FACTORS FOR DIESEL FUEL**

Heat Value of Diesel Fuel	**0.138**	**MM BTU/GALLON**

EMISSION FACTOR CALCULATIONS

CO2 FACTOR		CH4 FACTOR		N2O FACTOR	
KG/MM BTU	KG/ 1000 GALLON	G/MM BTU	KG/ 1000 GALLON	G/MM BTU	KG/ 1000 GALLON
73.96	10206.48	3	0.414	0.6	0.0828

Total Fuel Consumption - All Off-Road Vehicles	**104,520**	**GALLON/YEAR**

EMISSION CALCULATIONS

CO2 EMISSIONS (Metric Tons)	CH4 EMISSIONS (Metric Tons)	N2) EMISSIONS (Metric Tons)
1066.78	0.04	0.01
CO2 EQUIVALENT (Metric Tons)	**CO2 EQUIVALENT (Metric Tons)**	**CO2 EQUIVALENT (Metric Tons)**
1066.78	0.91	1.94

Total GHG Emissions from all Mobile Off-Road Vehicles	**1,070**	**METRIC TON CO2e**

TABLE A-6

CRITERIA POLLUTANT EMISSIONS FROM ON-HIGHWAY VEHICLE TAILPIPES

VEHICLE TYPE	NUMBER OF TRIPS		1-WAY	NOx EMISSIONS			VOC EMISSIONS			CO EMISSIONS		
	DAILY	ANNUAL	(Miles)	E Factor g/mile	DAILY pounds	ANNUAL tons	E Factor g/mile	DAILY pounds	ANNUAL tons	E Factor g/mile	DAILY pounds	ANNUAL tons
Passenger Car, Gasoline	10	2600	15	0.0508	0.034	0.004	0.0148	0.0098	0.0013	0.8309	0.550	0.071
Passenger Truck - Light Duty - Gas	10	2600	15	0.1530	0.101	0.013	0.0428	0.0283	0.0037	1.7668	1.169	0.152
Passenger Truck - Light Duty - Diesel	10	2600	15	0.0534	0.035	0.005	0.0219	0.0145	0.0019	0.1690	0.112	0.015
Work Truck (8.5K - 10K GVWR)	1	260	15	2.1215	0.140	0.018	0.0816	0.0054	0.0007	0.4669	0.031	0.004
Work Truck (10K - 14K GVWR)	2	360	15	1.8571	0.246	0.022	0.0759	0.0100	0.0009	0.4252	0.056	0.005
Medium Duty 2-Axle Truck	1	10	20	2.9267	0.258	0.013	0.1596	0.0141	0.0001	0.5575	0.049	0.000
Heavy Duty 5-Axle Truck Trip Type A	2	20	31	4.8640	1.313	0.007	0.1828	0.0493	0.0002	0.6958	0.188	0.001
Heavy Duty 5-Axle Truck Trip Type B	20	1540	28	4.8640	12.053	0.464	0.1828	0.4530	0.0174	0.6958	1.724	0.066
Heavy Duty 5-Axle Truck Trip Type C	2	100	29	4.8640	1.222	0.031	0.1828	0.0459	0.0011	0.6958	0.175	0.004
Heavy Duty 5-Axle Truck Trip Type D	5	160	10	4.8640	1.072	0.017	0.1828	0.0403	0.0006	0.6958	0.153	0.002
Heavy Duty 5-Axle Truck Trip Type E	1	100	30	4.8640	0.633	0.032	0.1828	0.0238	0.0012	0.6958	0.090	0.005
				TOTAL NOx Emissions	**17.107 POUNDS DAILY**	**0.625 TONS ANNUAL**	**TOTAL VOC Emissions**	**0.694 POUNDS DAILY**	**0.029 TONS ANNUAL**	**TOTAL CO Emissions**	**4.297 POUNDS DAILY**	**0.326 TONS ANNUAL**

VEHICLE TYPE	NUMBER OF TRIPS		1-WAY	PM10 EMISSIONS			PM2.5 EMISSIONS			SOx EMISSIONS		
	DAILY	ANNUAL	(Miles)	E Factor g/mile	DAILY pounds	ANNUAL tons	E Factor g/mile	DAILY pounds	ANNUAL tons	E Factor g/mile	DAILY pounds	ANNUAL tons
Passenger Car, Gasoline	10	2600	15	0.0018	0.0012	0.0002	0.0017	0.0011	0.0001	0.0028	0.0019	0.0002
Passenger Truck - Light Duty - Gas	10	2600	15	0.0029	0.0019	0.0003	0.0027	0.0018	0.0002	0.0033	0.0022	0.0003
Passenger Truck - Light Duty - Diesel	10	2600	15	0.0070	0.0046	0.0006	0.0067	0.0044	0.0006	0.0029	0.0019	0.0002
Work Truck (8.5K - 10K GVWR)	1	260	15	0.0177	0.0012	0.0002	0.0169	0.0011	0.0001	0.0046	0.0003	0.0000
Work Truck (10K - 14K GVWR)	2	360	15	0.0177	0.0023	0.0002	0.0170	0.0022	0.0002	0.0050	0.0007	0.0001
Medium Duty 2-Axle Truck	1	10	20	0.0992	0.0087	0.0004	0.0949	0.0084	0.0000	0.0095	0.0008	0.0000
Heavy Duty 5-Axle Truck Trip Type A	2	20	31	0.0874	0.0236	0.0001	0.0836	0.0226	0.0001	0.0137	0.0037	0.0000
Heavy Duty 5-Axle Truck Trip Type B	20	1540	28	0.0874	0.2166	0.0083	0.0836	0.2072	0.0080	0.0137	0.0340	0.0013
Heavy Duty 5-Axle Truck Trip Type C	2	100	29	0.0874	0.0220	0.0005	0.0836	0.0210	0.0005	0.0137	0.0034	0.0001
Heavy Duty 5-Axle Truck Trip Type D	5	160	10	0.0874	0.0193	0.0003	0.0836	0.0184	0.0003	0.0137	0.0030	0.0000
Heavy Duty 5-Axle Truck Trip Type E	1	100	30	0.0874	0.0114	0.0006	0.0836	0.0109	0.0005	0.0137	0.0018	0.0001
				TOTAL PM10 Emissions	**0.313 POUNDS DAILY**	**0.012 TONS ANNUAL**	**TOTAL PM 2.5 Emissions**	**0.299 POUNDS DAILY**	**0.011 TONS ANNUAL**	**TOTAL SOx Emissions**	**0.054 POUNDS DAILY**	**0.002 TONS ANNUAL**

TABLE A-7

GHG EMISSIONS FROM ON-HIGHWAY VEHICLE TAILPIPES

VEHICLE TYPE	ANNUAL TRIPS	1-WAY (Miles)	CO_2 EMISSIONS		CH_4 EMISSIONS		N_2O EMISSIONS		ANNUAL CO_2e
			E Factor g/mile	ANNUAL Metric tons	E Factor g/mile	ANNUAL Metric tons	E Factor g/mile	ANNUAL Metric tons	Metric Tons
Passenger Car, Gasoline	2600	15	286.2783	22.33	0.0037	0.00029	0.0053	0.00042	**22.46**
Passenger Truck - Light Duty - Gas	2600	15	332.811	25.96	0.0095	0.00074	0.0316	0.00246	
Passenger Truck - Light Duty - Diesel	2600	15	301.8314	23.54	0.001016	0.00008	0.0474	0.00370	**24.69**
Work Truck (8.5K - 10K GVWR)	260	15	482.3014	3.76	0.003792	0.00003	0.0758	0.00059	**3.95**
Work Truck (10K - 14K GVWR)	360	15	531.5955	5.74	0.003525	0.00004	0.0836	0.00090	**6.02**
Medium Duty 2-Axle Truck	10	20	1002.845	0.40	0.007414	0.00000	0.1576	0.00006	**0.42**
Heavy Duty 5-Axle Truck Trip Type A	20	31	1451.693	1.78	0.008491	0.00001	0.2282	0.00028	**1.86**
Heavy Duty 5-Axle Truck Trip Type B	1540	28	1451.693	125.64	0.008491	0.00073	0.2282	0.01975	**131.78**
Heavy Duty 5-Axle Truck Trip Type C	100	29	1451.693	8.27	0.008491	0.00005	0.2282	0.00130	**8.68**
Heavy Duty 5-Axle Truck Trip Type D	160	10	1451.693	4.65	0.008491	0.00003	0.2282	0.00073	**4.87**
Heavy Duty 5-Axle Truck Trip Type E	100	30	1451.693	8.56	0.008491	0.00005	0.2282	0.00135	**8.98**
TOTALS				**230.64 ANNUAL Metric tons**		**0.00205 ANNUAL Metric tons**		**0.03154 ANNUAL Metric tons**	**213.72 ANNUAL Metric tons**

TABLE A-8

SUMMARY OF ANNUAL EMISSIONS FROM DEMOLITION OPERATIONS

SOURCE OF EMISSIONS	CRITERIA POLLUTANT EMISSION RATES (Tons/Year)						GHG Metric Tons
	VOC	CO	NOx	SOx	PM10	PM2.5	CO2e
All Mobile Off-Road Equipment	0.179	0.457	3.416	0.011	0.088	N/A	1,070
All On-Road Vehicles	0.029	0.326	0.625	0.002	0.000	0.0001	214
Total All Demolition Emissions	**0.208** TONS VOC	**0.783** TONS CO	**4.041** TONS NOx	**0.013** TONS SOx	**0.088** TONS PM10	**0.000** TONS PM2.5	**1,284** Metric Tons CO2e

ATTACHMENT A-1

EXCAVATOR 1

CARB EXECUTIVE ORDER

U-R-005-0359

California Environmental Protection Agency AIR RESOURCES BOARD	KOMATSU LIMITED	EXECUTIVE ORDER U-R-005-0359 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2010	AKLXL15.2ED6	15.2	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Engine Control Module, Direct Diesel Injection, Turbocharger, Charge Air Cooler, Exhaust Gas Recirculation	Loader, Dozer, Generator and Other Industrial Equipment

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
225 ≤ kW < 450	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
		CERT	--	--	3.6	0.4	0.15	11	4	16

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 24th day of December 2009.

D Nguyen

for Annette Hebert, Chief
Mobile Source Operations Division

Attachment 1 of 1
12-16-2009

U-R-005-0359

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
AKLXL15.2ED6	3C01	SAA6D140E-5	518@2000	270	181	1601@1400	326	153	EM,TC,CAC,EGR,DFI,ECM
AKLXL15.2ED6	3C02	SAA6D140E-5	357@1900	204	128	1331@1250	279	116	EM,TC,CAC,EGR,DFI,ECM
AKLXL15.2ED6	3C03	SAA6D140E-5	496@1800	281	170	1619@1350	322	146	EM,TC,CAC,EGR,DFI,ECM
AKLXL15.2ED6	3C04	SAA6D140E-5	433@1800	251	150	1435@1400	290	130	EM,TC,CAC,EGR,DFI,ECM
AKLXL15.2ED6	3C05	SAA6D140E-5	360@1900	205	130	1353@1300	285	123	EM,TC,CAC,EGR,DFI,ECM
AKLXL15.2ED6	3C06	SAA6D140E-5	452@2000	238	160	1497@1400	303	143	EM,TC,CAC,EGR,DFI,ECM
AKLXL15.2ED6	3C07	SAA6D140E-5	453@2000	243	163	1541@1400	316	149	EM,TC,CAC,EGR,DFI,ECM
AKLXL15.2ED6	3C08	SAA6D140E-5	407@2000	225	151	1468@1400	305	144	EM,TC,CAC,EGR,DFI,ECM
AKLXL15.2ED6	6DTA15KCM-3	SAA6D140E-5	496@1800	281	170	1619@1350	322	146	EM,TC,CAC,EGR,DFI,ECM
AKLXL15.2ED6	3G01	SAA6D140E-5	578@1800	334	201	—	—	—	EM,TC,CAC,EGR,DFI,ECM

ATTACHMENT A-2

EXCAVATOR 2

CARB EXECUTIVE ORDER

U-R-005-0395

California Environmental Protection Agency AIR RESOURCES BOARD	KOMATSU LIMITED	EXECUTIVE ORDER U-R-005-0395 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2013	DKLXL11.0DDA	11.0	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Periodic Trap Oxidizer, and Engine Control Module	Loader and Other Industrial Equipment

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Interim Tier 4 / ALT NOx	STD	0.19	2.0	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.005	1.8	--	0.4	0.01	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 10 day of July 2012.

Annette Hebert, Chief
Mobile Source Operations Division

Attachment 1 of 1

Engine Model Summary Template

U-R-005-0395
6-18-2012

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
DKLXL11.0DDA	4C01	SAA6D125E-6	333@2000	176	118	1237@1400	243	114	OC EM,TC,CAC,EGR,DFI,ECM PTOX
DKLXL11.0DDA	4C02	SAA6D125E-6	362@1900	198	126	1114@1400	215	101	EM,TC,CAC,EGR,DFI,ECM
DKLXL11.0DDA	4C03	SAA6D125E-6	274@2000	149	100	964@1450	192	93	EM,TC,CAC,EGR,DFI,ECM
DKLXL11.0DDA	4C04	SAA6D125E-6	404@2000	221	142	1259@1400	251	117	EM,TC,CAC,EGR,DFI,ECM

ATTACHMENT A-3

EXCAVATOR 3

CARB EXECUTIVE ORDER

U-R-005-0439

California Environmental Protection Agency Air Resources Board	KOMATSU LIMITED	EXECUTIVE ORDER U-R-005-0439 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2017	HKLXL11.0DDC	11.0	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Periodic Trap Oxidizer, Engine Control Module, Selective Catalytic Reduction-Urea, and Ammonia Oxidation Catalyst	Loader, Dozer, Off-Road Truck

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.01	0.25	--	0.04	0.002	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 9th day of December 2016.

for Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

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U-R-005-0439
11/18/2016

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
HKLXL11.0DDC	5C01	SAA6D125E-7	333@2000	176	118	1237@1400	239	108	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, ~~DOC~~ DOC
HKLXL11.0DDC	5C02	SAA6D125E-7	362@1900	201	125	1114@1400	217	98	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, ~~DOC~~
HKLXL11.0DDC	5C03	SAA6D125E-7	267@1900	152	94	938@1400	186	83	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, ~~DOC~~
HKLXL11.0DDC	5C04	SAA6D125E-7	274@2000	149	99	964@1450	187	88	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, ~~DOC~~
HKLXL11.0DDC	5C05	SAA6D125E-7	405@2000	216	139	1259@1400	244	111	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, ~~DOC~~

ATTACHMENT A-4

EXCAVATOR 4

CARB EXECUTIVE ORDER

U-R-003-0058

California Environmental Protection Agency AIR RESOURCES BOARD	VOLVO CONSTRUCTION EQUIPMENT AB	EXECUTIVE ORDER U-R-003-0058 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2011	BVSXL12.8T4I	12.8	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Modules, Smoke Puff Limiter, Exhaust Gas Recirculation, Periodic Trap Oxidizer	Loaders, Articulated Hauler, Excavators, Other Industrial Equipment

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 / ALT NOx	STD	0.19	2.0	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.01	1.8	--	0.1	0.01	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 17th day of December 2010.

Annette Hebert, Chief
Mobile Source Operations Division

Attachment 1 of 1

Engine Model Summary Template

U-R-003-0058
12-7-10

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm^3/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm^3/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
BVSXL12.8T4I	13-6*) 13-20	D13H	441@1900	248 ± 4%	157 ± 4%	1741@1200	335 ± 4%	134 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	**)Ref to 13-6	D13H	432@1900	243 ± 4%	154 ± 4%	1706@1200	328 ± 4%	131 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	13-8, 13-22	D13H	288@1700	179 ± 4%	101 ± 4%	1165@1300	226 ± 4%	98 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	13-9, 13-25	D13H	355@1800	206 ± 4%	123 ± 4%	1328@1350	257 ± 4%	116 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	13-12, 13-23	D13H	261@1900	151 ± 4%	96 ± 4%	1380@1050	263 ± 4%	92 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	**)Ref to 13-12	D13H	261@1900	151 ± 4%	96 ± 4%	1058@1050	206 ± 4%	72 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	***)Ref to 13-12	D13H	261@1900	151 ± 4%	96 ± 4%	1121@1050	218 ± 4%	76 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	13-13, 13-24	D13H	286@1900	164 ± 4%	104 ± 4%	1497@1000	290 ± 4%	97 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	**)Ref to 13-13	D13H	286@1900	164 ± 4%	104 ± 4%	1184@1000	232 ± 4%	77 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	***)Ref to 13-13	D13H	286@1900	164 ± 4%	104 ± 4%	1195@1000	233 ± 4%	78 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	13-14, 13-26	D13H	331@1900	186 ± 4%	118 ± 4%	1646@1100	313 ± 4%	115 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	**)Ref to 13-14	D13H	331@1900	186 ± 4%	118 ± 4%	1305@1100	250 ± 4%	92 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	***)Ref to 13-14	D13H	331@1900	186 ± 4%	118 ± 4%	1335@1100	256 ± 4%	94 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	13-15, 13-27	D13H	382@1900	211 ± 4%	134 ± 4%	1646@1100	313 ± 4%	115 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	**)Ref to 13-15	D13H	354@1900	198 ± 4%	125 ± 4%	1646@1100	314 ± 4%	115 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	***)Ref to 13-15	D13H	354@1900	198 ± 4%	125 ± 4%	1350@1100	258 ± 4%	95 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
BVSXL12.8T4I	****)Ref to 13-15	D13H	354@1900	198 ± 4%	125 ± 4%	1401@1100	268 ± 4%	98 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF

*) Test engine

**) MultiTorque Curve Level 1

***)MultiTorque Curve Level 2

****)MultiTorque Curve Level 3

ATTACHMENT A-5

EXCAVATOR 5

CARB EXECUTIVE ORDER

U-R-003-0061

California Environmental Protection Agency AIR RESOURCES BOARD	VOLVO CONSTRUCTION EQUIPMENT AB	EXECUTIVE ORDER U-R-003-0061 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2012	CVSXL12.8T4I	12.8	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Modules, Smoke Puff Limiter, Exhaust Gas Recirculation, Periodic Trap Oxidizer	Loaders, Articulated Hauler, Excavators, Other Industrial Equipment

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Interim Tier 4 / ALT NOx	STD	0.19	2.0	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.02	1.8	--	0.1	0.01	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 31 day of October 2011.

Annette Hebert, Chief
Mobile Source Operations Division

Attachment 1 of 1

U-R_003_0061

10-28-2011

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm^3/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm^3/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
CVSXL12.8T4I	13-6*) 13-20	D13H	441@1900	248 ± 4%	157 ± 4%	1741@1200	335 ± 4%	134 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF DD1
CVSXL12.8T4I	**)Ref to 13-6	D13H	432@1900	243 ± 4%	154 ± 4%	1706@1200	328 ± 4%	131 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	13-8, 13-22	D13H	288@1700	179 ± 4%	101 ± 4%	1165@1300	226 ± 4%	98 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	13-9, 13-25	D13H	355@1800	206 ± 4%	123 ± 4%	1328@1350	257 ± 4%	116 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	13-12, 13-23	D13H	261@1900	151 ± 4%	96 ± 4%	1380@1050	263 ± 4%	92 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	**)Ref to 13-12	D13H	261@1900	151 ± 4%	96 ± 4%	1058@1050	206 ± 4%	72 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	***)Ref to 13-12	D13H	261@1900	151 ± 4%	96 ± 4%	1121@1050	218 ± 4%	76 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	13-13, 13-24	D13H	286@1900	164 ± 4%	104 ± 4%	1497@1000	290 ± 4%	97 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	**)Ref to 13-13	D13H	286@1900	164 ± 4%	104 ± 4%	1184@1000	232 ± 4%	77 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	***)Ref to 13-13	D13H	286@1900	164 ± 4%	104 ± 4%	1195@1000	233 ± 4%	78 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	13-14, 13-26	D13H	331@1900	186 ± 4%	118 ± 4%	1646@1100	313 ± 4%	115 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	**)Ref to 13-14	D13H	331@1900	186 ± 4%	118 ± 4%	1305@1100	250 ± 4%	92 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	***)Ref to 13-14	D13H	331@1900	186 ± 4%	118 ± 4%	1335@1100	256 ± 4%	94 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	13-15, 13-27	D13H	382@1900	211 ± 4%	134 ± 4%	1646@1100	313 ± 4%	115 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	**)Ref to 13-15	D13H	354@1900	198 ± 4%	125 ± 4%	1646@1100	314 ± 4%	115 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	***)Ref to 13-15	D13H	354@1900	198 ± 4%	125 ± 4%	1350@1100	258 ± 4%	95 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF
CVSXL12.8T4I	****)Ref to 13-15	D13H	354@1900	198 ± 4%	125 ± 4%	1401@1100	268 ± 4%	98 ± 4%	EM,ECM,TC,CAC,EGR,SPL,DPF

*) Test engine

**) MultiTorque Curve Level 1

***)MultiTorque Curve Level 2

****)MultiTorque Curve Level 3

ATTACHMENTA-6

SKIDSTEER 1

CARB EXECUTIVE ORDER

U-R-025-0311

California Environmental Protection Agency AIR RESOURCES BOARD	KUBOTA CORPORATION	EXECUTIVE ORDER U-R-025-0311 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2007	7KBXL03.8AAD	3.769	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger	Telescopic Material Handler and Other Industrial Equipment

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
37 ≤ kW < 75	Tier 2	STD	N/A	N/A	7.5	5.0	0.40	20	15	50
		CERT	--	--	6.4	1.6	0.35	6	3	13

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 20 day of December 2006.

Annette Hebert, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **KUBOTA Corporation**

Engine category: **Nonroad CI**

EPA Engine Family: **7KBXL03.8AAD**

Mfr Family Name: **N/A**

Process Code: **Running Change**

EO#U-R-025-6311

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
V3800-DI-T-ES01	V3800-DI-T-ES	97.6@2600	65.0	37.8	247.2@1500	72.5	24.3	EM
V3800-DI-T-ES02	V3800-DI-T-ES	97.6@2600	65.0	37.8	239.7@1500	70.5	23.6	EM
V3800-DI-T-ES03	V3800-DI-T-ES	94.7@2400	66.3	35.6	239.7@1500	70.5	23.6	EM
V3800-DI-T-ES04	V3800-DI-T-ES	90.8@2200	66.7	32.8	239.7@1500	70.5	23.6	EM
V3800-DI-T-ES05	V3800-DI-T-ES	82.7@2100	64.7	30.4	239.7@1500	72.2	24.2	EM
V3800-DI-T-ES06	V3800-DI-T-ES	98.7@2600	66.5	38.7	238.4@1500	70.5	23.6	EM
V3800-DI-T-ES07	V3800-DI-T-ES	85.0@2400	60.7	32.6	228.6@1700	68.0	25.8	EM
V3800-DI-T-ES08	V3800-DI-T-ES	88.6@2600	60.0	34.9	213.4@1500	63.0	21.1	EM
V3800-DI-T-ES09	V3800-DI-T-ES	92.0@2400	65.2	35.0	232.3@1600	70.4	25.2	EM
V3800-DI-T-ES10	V3800-DI-T-ES	82.6@2200	61.6	30.3	228.6@1500	70.2	23.5	EM

ATTACHMENT A-7

SKIDSTEER 2

CARB EXECUTIVE ORDER

U-R-025-0456

California Environmental Protection Agency AIR RESOURCES BOARD	KUBOTA Corporation	EXECUTIVE ORDER U-R-025-0456 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2010	AKBXL03.8AAD	3.769	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Mechanical Direct Injection, Turbocharger, Electronic Control Module (Some Model), Exhaust Gas Recirculation	Tractor, Compressor, Generator Set, Other Industrial Equipment

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
56 ≤ kW < 75	Tier 3	STD	N/A	N/A	4.7	5.0	0.40	20	15	50
		CERT	--	--	4.2	0.9	0.32	10	3	20

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 22ND day of December 2009.

M. Tuarte FOR A6M

Annette Hebert, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **KUBOTA Corporation**
Engine category: **Nonroad CI**
EPA Engine Family: **AKBXL03.8AAD**
Mfr Family Name: **N/A**
Process Code: **New Submission**

Attachment

U-R-025-0456

12/15/2009

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
V3800-DI-T-ET01	V3800-DI-T-ET	99.2@2600	67.0	38.9	261.8@1400	80.0	25.0	TC EM,EGR
V3800-DI-T-ET02	V3800-DI-T-ET	99.2@2600	67.0	38.9	239.7@1600	73.0	26.1	EM,EGR
V3800-DI-T-ET03	V3800-DI-T-ET	98.7@2600	67.5	39.2	238.2@1600	73.0	26.1	EM,EGR
V3800-DI-T-ET04	V3800-DI-T-ET	88.6@2600	60.5	35.2	213.2@1600	66.5	23.8	EM,EGR
V3800-DI-T-ET05	V3800-DI-T-ET	92.0@2400	66.0	35.4	232.3@1600	72.0	25.8	EM,EGR
V3800-DI-T-ET05e	V3800-DI-T-ET	92.0@2400	66.0	35.4	232.3@1600	72.0	25.8	EM,Electronic, EGR
V3800-DI-T-ET06	V3800-DI-T-ET	85.0@2400	59.0	31.7	228.6@1600	70.0	25.0	EM,EGR
V3800-DI-T-ET07	V3800-DI-T-ET	81.0@2400	57.0	30.6	217.6@1600	67.0	24.0	EM,EGR
V3800-DI-T-ET08	V3800-DI-T-ET	75.0@2400	54.0	29.0	202.1@1600	64.0	22.9	EM,EGR
V3800-DI-T-ET09	V3800-DI-T-ET	82.6@2200	61.0	30.0	228.6@1600	71.0	25.4	EM,EGR
V3800-DI-T-ET10	V3800-DI-T-ET	89.4@2600	61.5	35.7	216.1@1600	67.5	24.1	EM,EGR
V3800-DI-T-ET11	V3800-DI-T-ET	90.0@2400	65.0	34.9	228.6@1600	70.0	25.0	EM,EGR

Mechanical DI

ATTACHMENT A-8

COMPACTOR 1

CARB EXECUTIVE ORDER

U-R-022-0214

CALIFORNIA AIR RESOURCES BOARD	PERKINS ENGINES COMPANY LTD.	EXECUTIVE ORDER U-R-022-0214 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in California Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2018	JPKXL04.4MU1	4.4	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Engine Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Selective Catalytic Reduction-Urea, Ammonia Oxidation Catalyst	Crane, Loaders, Tractor, Dozer, Pump, Compressor, Generator Set

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
75 ≤ kW < 130	Tier 4 Final	STD	0.19	0.40	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.01	0.28	--	0.03	0.02	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 27 day of December 2017.

Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

ATTACHMENT 1 OF 2
DATE: 11/03/2017
EO #: U-R-022-0214

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
JPKXL04.4MU1	Cert Test 1	4068/2200	174@2200	133	64	553@1400	162	50	DDI TAA ECM DOC EGR SCR AMOX EPR
JPKXL04.4MU1	1	4068/2200	174@2200	133	64	553@1400	162	50	DDI TAA ECM DOC EGR SCR AMOX EPR
JPKXL04.4MU1	2	4070/2200	157@2200	125	60	504@1400	148	45	DDI TAA ECM DOC EGR SCR AMOX EPR
JPKXL04.4MU1	3	4186/2200	150@2200	119	57	479@1400	139	43	DDI TAA ECM DOC EGR SCR AMOX EPR
JPKXL04.4MU1	4	3992/2200	141@2200	116	56	465@1400	136	42	DDI TAA ECM DOC EGR SCR AMOX EPR

ATTACHMENT 2 OF 2
DATE: 11/03/2017
EO #: U-R-022-0214

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
JPKXL04.4MU1	Cert Test 5	4526/1800	173@1800	154	61	505@1800	154	61	DDI TAA ECM DOC EGR SCR AMOX EPR
JPKXL04.4MU1	5	4526/1800	173@1800	154	61	505@1800	154	61	DDI TAA ECM DOC EGR SCR AMOX EPR

TAA = TC + CAC

ATTACHMENT A-9

LOADER 1

CARB EXECUTIVE ORDER

U-R-001-0550

California Environmental Protection Agency Air Resources Board	CATERPILLAR INC.	EXECUTIVE ORDER U-R-001-0550 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2018	JCPXL7.01HPF	7.01	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Diesel Oxidation Catalyst, Engine Control Module, Exhaust Gas Recirculation, Periodic Trap Oxidizer	Generator, Motorgrader, Feller Buncher

The engine models and codes are attached.

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 Final/ALT 5% NOx	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		FEL	N/A	2.00	--	N/A	N/A	N/A	N/A	N/A
		CERT	0.03	1.83	--	0.2	0.004	--	--	--

BE IT FURTHER RESOLVED: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 20TH day of September 2017.

M. Tweats

FOR Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

ATTACHMENT 1 OF 1

Engine Model Summary Template

U-R-001-0550
8/29/2017

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
JCPXL7.01HPF	Cert Test 1	C7.1	302@2200	170	123	940@1400	198	91	DDI TC CAC ECM DOC PTOX EGR
JCPXL7.01HPF	Cert Test 2	C7.1	321@1800	195	118	NA	NA	NA	DDI TC CAC ECM DOC PTOX EGR
JCPXL7.01HPF	4462/1800	C7.1	247@1800	143	87	NA	NA	NA	DDI TC CAC ECM DOC PTOX EGR
JCPXL7.01HPF	4468/2100	C7.1	212@2100	118	83	763@1200	159	64	DDI TC CAC ECM DOC PTOX EGR
JCPXL7.01HPF	4472/2100	C7.1	192@2100	113	80	707@1000	150	51	DDI TC CAC ECM DOC PTOX EGR
JCPXL7.01HPF	4476/2100	C7.1	185@1800	115	70	627@1000	128	43	DDI TC CAC ECM DOC PTOX EGR
JCPXL7.01HPF	4478/1800	C7.1	204@1800	123	75	687@1000	142	48	DDI TC CAC ECM DOC PTOX EGR
JCPXL7.01HPF	4480/1800	C7.1	241@1800	144	87	791@1400	163	77	DDI TC CAC ECM DOC PTOX EGR
JCPXL7.01HPF	4464/1800	C7.1	321@1800	195	118	NA	NA	NA	DDI TC CAC ECM DOC PTOX EGR

ATTACHMENT A-10

CRANE 1

CARB EXECUTIVE ORDER

U-R-002-0671

California Environmental Protection Agency Air Resources Board	CUMMINS INC.	EXECUTIVE ORDER U-R-002-0671 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2018	JCEXL08.9AAN	8.9	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Periodic Trap Oxidizer, Selective Catalytic Reduction – Urea, Ammonia Oxidation Catalyst	Crane, Loader, Tractor, Dozer, Pump, Compressor, and Generator Set

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.01	0.19	--	0.00	0.004	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 29th day of September 2017.

J. Lawrence

Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

Engine Model Summary Template

U-R-002-0671 Attachment #5 1/1 8/28/2017

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
JCEXL08.9AAN	4807:FR95299	QSL8.9	380@2100	217	137	1200@1573	230	115	DDI,ECM,TC, CAC, EGR , DOC, ~~DPF~~
JCEXL08.9AAN	4807:FR95300	QSL8.9	350@2100	206	130	1200@1500	230	115	DDI,ECM,TC, CAC, EGR , DOC, ~~DPF~~
JCEXL08.9AAN	4807:FR95301	QSL8.9	333@2100	178	119	1050@1500	199	99	DDI,ECM,TC, CAC, EGR , DOC, ~~DPF~~

+PTox SCR Annex

APPENDIX B PHASE I ENVIRONMENTAL SITE ASSESSMENT W/O APPENDICES

PHASE I ENVIRONMENTAL SITE ASSESSMENT
OF

INLAND EMPIRE ENERGY CENTER, LLC
26226 ANTELOPE ROAD
MENIFEE, CALIFORNIA 92585

ATC PROJECT NO. NPGEP19001

MAY 31, 2019

Prepared by:

ATC Group Services LLC
25 Cupania Circle
Monterey Park, California 91755
Phone: 323-517-9780
Fax: 737-207-8260

Prepared for:

Mr. Mark Mellana, Managing Director
GE Power
901 Main Avenue
Norwalk, Connecticut 06851

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1.0 EXECUTIVE SUMMARY

1.1 General Information

Project Information:
Inland Empire Energy Center, LLC
NPGEP19001

Consultant Information:
ATC Group Services LLC
25 Cupania Circle
Monterey Park, California 91755
Phone: 323-517-9780
Fax: 737-207-8260
Inspection Date: May 9, 2019
Report Date: 05/31/2019

Site Information:
Inland Empire Energy Center, LLC
26226 Antelope Road
Menifee, California 92585
County: Riverside
Latitude, Longitude: 33.738988, -117.169876
Site Access Contact: Mr. Ben Kling with GE Power

Client Information:
GE Power
Mr. Mark Mellana, Managing Director
901 Main Avenue
Norwalk, Connecticut 06851

Site Assessor

Steve Anderson
Senior Scientist

Project Manager

Gwen C. Reed
Program Manager

Environmental Professional Statement:

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in Section 312.10 part of 40 CFR 312. We have the specific qualifications based on education, training and experience to assess a property of the nature, history and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Steve Anderson - Senior Scientist

1.2 Findings and Conclusions Summary

ATC Group Services LLC (ATC) has performed a Phase I Environmental Site Assessment (ESA) of the property in conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Standard Practice E1527-13. Any exceptions to, or deletions from, this practice are described in Section 2.0 of this report. This assessment has revealed no evidence of *recognized environmental conditions* in connection with the property. The table below provides a summary of report findings and conclusions.

Report Section		Further Action?	De minimis Condition	REC and/or CREC	Historical REC	ASTM Non - Scope Condition	Description
4.0	**User Provided Information**	No					
5.1.1	**Federal Database Findings**	No					
5.1.2	**State and Tribal Database Findings**	No					
5.1.3	**Local Environmental Record Sources**	No					
5.3	**Historical Records Sources**	No					See note 1
6.2	**Hazardous Substance Use, Storage, and Disposal**	No					
6.3	**Underground Storage Tanks**	No					
6.4	**Aboveground Storage Tanks**	No					See note 2
6.5	**Other Petroleum Products**	No					
6.6	**Polychlorinated Biphenyls (PCBs)**	No					
6.7	**Unidentified Substance Containers**	No					
6.8	**Nonhazardous Solid Waste**	No					
6.9	**Wastewater**	No					
6.10	**Waste Pits, Ponds and Lagoons**	No					
6.11	**Drains and Sumps**	No					
6.12	**Septic Systems**	No					
6.13	**Stormwater Management System**	No					
6.14	**Wells**	No					
7.0	**Subsurface Vapor Migration**	No					
8.0	**Interviews**	No					
9.1	**Asbestos-Containing Material (ACM)**	No					
9.2	**Radon**	No					
9.3	**Lead in Drinking Water**	No					
9.4	**Lead-Based Paint (LBP)**	No				X	See note 3
9.5	**Mold Screening**	No					
9.6	**Additional User Requested Services**	No					

Note 1: Due to the presence of former agricultural activity on the property between at least 1938 and 2002, it is possible that environmentally persistent pesticides and herbicides may have been used on the property in the past. A 2005 Baseline investigation by URS (see Section 5.3.9) included surface and subsurface sampling for pesticides and herbicides in which low concentrations of various pesticide and herbicide compounds were identified at concentrations well below Environmental Protection Agency (EPA) and

California Department of Toxic Substances Control (DTSC) screening levels in use at that time. The amount of mixing, grading and cut and fill operations necessary to prepare the property for development has likely altered and diluted agricultural chemicals further in the developed portions of the property. Accordingly, the former use of pesticides and herbicides on the property is not considered to represent a *recognized environmental condition* at this time. However, it is possible that additional sampling for pesticides and herbicides may be required prior to any redevelopment of the property following decommissioning.

Note 2: Numerous aboveground storage tanks (ASTs) are present at the property. These range in size from a 2,100,000-gallon process water tank to 240-gallon ASTs for waste oil and sodium chloride. Most ASTs appear to be stored within secondary containment. No indications of releases were identified near the ASTs observed on-site.

Note 3: Based on the age of the property improvements (post 2006), it is unlikely that lead-based paint (LBP) has been used in the offices and other commonly occupied areas; however, in industrial settings, painted equipment such as ASTs, piping, and fire pump equipment, may represent an exception and have elevated levels of lead. As the areas with painted equipment, such as the Water Treatment Building and fire pump room, are not slated for demolition, testing for lead is not recommended at this time. Nonetheless, lead-safe practices should be practiced when conducting any work that might disturb painted surfaces. Lead-based paint lies outside of the scope of ASTM and is therefore not considered to represent a *recognized environmental condition*. All painted surfaces at the property appeared to be in good condition.

1.3 Significant Data Gap Summary

Data gaps may have been encountered during the performance of this Phase I ESA and are discussed within the section of the report where they were encountered. However, according to ASTM Standard Practice E1527-13, data gaps are only significant if "other information and/or professional experience raises reasonable concerns involving the data gap." The following table is a summary of significant data gaps identified in this report.

SIGNIFICANT DATA GAP SUMMARY	
Report Section	**Description**
3.5 Current Uses of Adjoining Properties	No significant data gaps identified.
4.2 Environmental Liens or Activity and Use Limitations (AULs)	No significant data gaps identified.
5.1 Standard Environmental Records	No significant data gaps identified.
5.2 Physical Setting Sources	No significant data gaps identified.
5.3 Historical Records Sources	No significant data gaps identified.
6.1 Methodology and Limiting Conditions	No significant data gaps identified.
7.0 Subsurface Vapor Migration	No significant data gaps identified.
8.0 Interviews	No significant data gaps identified.

1.4 Recommendations

Based on information collected for this Phase I ESA, ATC offers no recommendations for further action at this time.

2.0 INTRODUCTION

2.1 Purpose

The purpose of this Phase I ESA was to identify *recognized environmental conditions* in connection with the property at the time of the site reconnaissance. The scope of work for this Phase I ESA may also include certain potential environmental conditions beyond the scope of ASTM Standard Practice E1527-13 as listed below. This report documents the findings, opinions and conclusions of the Phase I ESA.

2.2 Scope

This Phase I ESA was conducted in general accordance with the ASTM Standard Practice E1527-13, consistent with a level of care and skill ordinarily practiced by the environmental consulting profession currently providing similar services under similar circumstances. Significant additions, deletions or exceptions to ASTM Standard Practice E1527-13 are noted below or in the corresponding sections of this report. The scope of this assessment included an evaluation of the following:

- Physical setting characteristics of the property through a review of referenced sources such as topographic maps and geologic, soils and hydrologic reports.

- Usage of the property, adjoining properties and surrounding area through a review of referenced historical sources such as land title records, fire insurance maps, city directories, aerial photographs, prior reports and interviews.

- Observations and interviews regarding current property usage and condition including: the use, treatment, storage, disposal or generation of hazardous substances, petroleum products, hazardous wastes, nonhazardous solid wastes and wastewater.

- Usage of adjoining and surrounding area properties and the likely impact of known or suspected releases of hazardous substances or petroleum products from those properties in, on, or at the property.

- Information in referenced environmental agency databases and local environmental records, within the specified approximate minimum search distance from the property.

- Potential for subsurface vapor migration in, on or at the property as described in Section 7.0.

The scope of the assessment also included consideration of the following potential environmental issues or conditions that are beyond the scope of ASTM Standard Practice E1527-13:

- Visual observation of suspect asbestos-containing materials (ACM), consisting of providing an opinion on the condition of suspect ACM on the property based upon visual observation during the site reconnaissance. No sampling of suspect ACM was conducted.

- Radon document review, consisting of the review of published radon data with regard to the potential for elevated levels of radon gas in the surrounding area of the property. No radon sampling was conducted.

- Lead in drinking water data review, consisting of contacting the water supplier for information regarding whether or not the potable water provided to the property meets the drinking water standards for lead.

- Visual observation of suspect lead-based paint (LBP), consisting of providing an opinion on the potential for LBP based on the construction date of buildings on the property and visual observation of the condition of suspect LBP.

- Wetlands document review, consisting of a review of a current National Wetlands Inventory map of the surrounding area to note if the property is identified on the map as having a wetland.

- Flood plain document review, consisting of a review of a reasonably ascertainable flood plain map of the surrounding area to note if the property is identified on the map as being located within a flood plain.

- Regulatory Agency File and Records Review, consisting of conducting a file review (i.e., via Freedom of Information Act (FOIA) request or alternative method/source) for the property and/or one adjoining property at one regulatory agency, as warranted by the findings of the ESA. If ATC determines that additional Regulatory Agency File and Records Reviews are warranted, ATC will advise Client and seek written authorization for the additional services and fees.

- Mold screening consisting of visual observation of certain heating, ventilation and air conditioning (HVAC) system areas and other readily accessible building areas likely to become subject to water damage, plumbing leaks, and flooding. The mold screening did not include destructive methods of observation. No sampling or laboratory analyses were conducted. The mold screening service as described herein was limited in scope and by the time and cost considerations typically associated with performing a Phase I ESA. No method can guarantee that a hazard will be discovered if evidence of the hazard is not encountered within the performance of the mold screening as authorized and that opinions and conclusions must, out of necessity, be extrapolated from limited information and discrete, non-continuous data points. Unidentified mold or other microbial conditions may exist on the property.

2.3 Significant Assumptions

The assumptions in this report were not considered as having a significant impact on the determination of *recognized environmental conditions* associated with the property.

2.4 Limitations and Exceptions

ATC has prepared this Phase I ESA report using reasonable efforts to identify *recognized environmental conditions* associated with hazardous substances or petroleum products in, on, or at the property. Findings contained within this report are based on information collected from observations made on the day(s) of the site reconnaissance and from reasonably ascertainable information obtained from certain public agencies and other referenced sources.

The ASTM Standard Practice E 1527-13 recognizes inherent limitations for Phase I ESAs, including, but not limited to:

- *Uncertainty Not Eliminated:* a Phase I ESA cannot wholly eliminate uncertainty regarding the potential for *recognized environmental conditions* in connection with a property.

- *Not Exhaustive:* a Phase I ESA is not an exhaustive assessment of the environmental conditions on a property.

- *Past Uses of the Property:* a Phase I ESA does not require review of standard historical sources at less than five year intervals. Therefore, past uses of the property may not be discovered.

Users of this report may refer to ASTM Standard Practice E 1527-13 for further information regarding these and other limitations. This report is not definitive and should not be assumed to be a complete and/or specific definition of all conditions above or below grade. Current subsurface conditions may differ from the conditions determined by surface observations, interviews and reviews of historical sources. The most reliable method of evaluating subsurface conditions is through intrusive techniques, which are beyond the scope of this report. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, or other property construction purposes. Any use of this report by any party, beyond the scope and intent of the original parties, shall be at the sole risk and expense of such user.

ATC makes no representation or warranty that the past or current operations at the property are, or have been, in compliance with all applicable federal, state and local laws, regulations and codes. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions

present of a type or at a location not investigated. Regardless of the findings stated in this report, ATC is not responsible for consequences or conditions arising from facts not fully disclosed to ATC during the assessment.

An independent data research company provided the government agency databases referenced in this report. Information on surrounding area properties was requested for approximate minimum search distances and is assumed to be correct and complete unless obviously contradicted by ATC's observations or other credible referenced sources reviewed during the assessment. ATC shall not be liable for the database firm's failure to make relevant files or documents properly available, to properly index files, or otherwise to fail to maintain to produce accurate or complete records.

ATC makes no warranty, guarantee or certification regarding the quality, accuracy or reliability of any prior report provided to ATC and discussed in this Phase I ESA report. ATC expressly disclaims any and all liability for any errors or omissions contained in any prior reports provided to ATC and discussed in this Phase I ESA report.

ATC used reasonable efforts to identify evidence of aboveground and underground storage tanks and ancillary equipment on the property during the assessment. "Reasonable efforts" were limited to observation of accessible areas, review of referenced public records and interviews. These reasonable efforts may not identify subsurface equipment or evidence hidden from view by things including, but not limited to, snow cover, paving, construction activities, stored materials and landscaping.

Any estimates of costs or quantities in this report are approximations for commercial real estate transaction due diligence purposes and are based on the findings, opinions and conclusions of this assessment which are limited by the scope of the assessment, schedule demands, cost constraints, accessibility limitations and other factors associated with performing the Phase I ESA. Subsequent determinations of costs or quantities may vary from the estimates in this report. The estimated costs or quantities in this report are not intended to be used for financial disclosure related to FASB Statement No. 143, FASB Interpretation No. 47, Sarbanes/Oxley Act or any United States Securities and Exchange Commission reporting obligations, and may not be used for such purposes in any form without the express written permission of ATC.

ATC is not a professional title insurance or land surveyor firm and makes no guarantee, express or implied, that any land title records acquired or reviewed in this report, or any physical descriptions or depictions of the property in this report, represent a comprehensive definition or precise delineation of property ownership or boundaries.

The Environmental Professional Statement in Section 1.1 of this report does not "certify" the findings contained in this report and is not a legal opinion of such *Environmental Professional*. The statement is meant to document ATC's opinion that an individual meeting the qualifications of an *Environmental Professional* was involved in the performance of the assessment and that the activities performed by, or under the supervision of, the *Environmental Professional* were performed in conformance with the standards and practices set forth in 40 CFR Part 312 per the methodology in ASTM Standard Practice E 1527-13 and the scope of work for this assessment.

Per ASTM Standard Practice E 1527-13, Section 6, User Responsibilities, the User of this assessment has specific obligations for performing tasks during this assessment that will help identify the possibility of *recognized environmental conditions* in connection with the property. Failure by the User to fully comply with the requirements may impact their ability to use this report to help qualify for *Landowner Liability Protections* (LLPs) under CERCLA. ATC makes no representations or warranties regarding a User's qualification for liability protection under any federal, state or local laws or regulations.

In accordance with the ASTM Standard Practice E 1527-13, this report is presumed to be valid for a six month period. If the report is older than six months, the following information must be updated in order for the report to be valid: (1) regulatory review, (2) site visit, (3) interviews, (4) specialized knowledge, and (5) environmental liens. Reports older than one year may not meet ASTM Standard Practice E 1527-13 and therefore, the report must be updated to reflect current conditions and property-specific information.

Other limitations and exceptions that are specific to the scope of this report may be found in corresponding sections.

2.5 Special Terms and Conditions (User Reliance)

This report is for the use and benefit of, and may be relied upon by, GE Power, Inland Empire Energy Center, LLC, and any of its affiliates and their respective successors and assigns, in connection with a commercial real estate transaction involving the property. No third party is authorized to use this report for any purpose. Any use by or distribution of this report to third parties, without the express written consent of ATC, is at the sole risk and expense of such third party.

3.0 SITE DESCRIPTION

3.1 Location and Legal Description

The property consists of an irregularly-shaped parcel, approximately 43.14 acres in area, located at 26226 Antelope Road, Menifee, California. A legal description was not provided to ATC; however, based on information contained on the Assessor's parcel map, the property appears to consist of lots 742, 743, 744, 745, 746, 749, 750, 751, 752, and 753 of the Romola Farms 6A, tract as recorded in Book 14, Pages 63-65, in the office of the county recorder of Riverside County, California, Excepting therefrom, the south 95 feet of Lots 746 and 749, and the south 132 feet of Lot 753. The Assessor's Parcel Number for the property is 331-180-022.

3.2 Surrounding Area General Characteristics

The surrounding area is generally level and developed with a mixture of vacant land, commercial and industrial uses. The specific adjacent property uses are discussed in Section 3.5.

3.3 Current Use of the Property

The property is developed with a power generation plant and associated buildings, sheds, equipment, and internal roadways and parking areas.

3.4 Description of Property Improvements

The following table provides general descriptions of property improvements.

PROPERTY IMPROVEMENTS	
Size of Property (approximate)	43.14 acres (per Assessor)
General Topography of Property	Generally level
Adjoining and/or Access/Egress Roads	Antelope Road to the west and an unpaved road to the east and northeast.
Paved or Concrete Areas (including parking)	Gravel-paved yard over most of the developed area. Asphalt-paved parking and selected drive areas. Concrete-paved pads and foundations locally.
Unimproved Areas	Unpaved areas around the perimeter, north of the main plant area, water retention basins, and selected drive areas.
Landscaped Areas	Lawn, shrubbery and trees located around the perimeter, lining the entrance roadway, parking lots, and near the administration building.
Surface Water	None apart from intermittent quantities in the water retention basins.
Potable Water Source	Eastern Municipal Water District
Sanitary Sewer Utility	Eastern Municipal Water District
Storm Sewer Utility	City of Menifee
Electrical Utility	Southern California Edison (SCE)
Natural Gas Utility	Southern California Gas
Current Occupancy Status	100% occupied
Unoccupied Buildings/Spaces/Structures	There are undeveloped areas at the northern end of the property, but all are under the control of one occupant.
Number of Occupied Buildings	Three principal buildings with numerous pieces of equipment and smaller structures.
Building Name or General Building Description	Inland Empire Energy Center (power plant)
Number of Floors	Administration Building: two; Water Treatment Building and Warehouse: one
Total Square Feet of Space (approximate)	Administration Building: 20,520 (estimated); Water Treatment Building: 10,920 (per IEEC); North Warehouse: 11,250 (per IEEC)
Construction Completion Date (year)	Northern warehouse: Between 2005 and 2006; Remaining structures: Between 2006 and 2009
Construction Type	Metal

Interior Finishes Description	Administration Building: Walls: wallboard/joint compound or ceramic tile; Floors: carpeting, ceramic tile, resilient floor tile, and unfinished concrete; Ceilings: wallboard/joint compound or acoustical ceiling panels; Water Treatment Building: Walls: wallboard/joint compound or metal; Floors: resilient floor tile or unfinished concrete; Ceilings: wallboard/joint compound or exposed metal beams with insulating pads; Warehouse: metal walls and ceilings with an unfinished concrete floor.
Exterior Finishes Description	Painted metal
Cooling System Type	Roof-mounted electric package units
Heating System Type	Roof-mounted electric package units
Emergency Power	Two diesel-fueled emergency generators (with internal fuel tanks) located at the western ends of Power Generation Units 1 and 2.

3.5 Current Uses of Adjoining Properties

Current uses of the adjoining properties were observed to be as described in the following table.

CURRENT USES OF ADJOINING PROPERTIES				
Direction From Property	**Address**	**Occupant(s) Name**	**Current Use**	**Potential Environmental Conditions**
Northwest, beyond Antelope Road	None	No signage	Gravel-paved lot	None
North	26100 Antelope Road	Redi-Mix Concrete / Holiday Trucking	Commercial/ Industrial	This facility is listed as an aboveground storage tank (AST) facility and is registered on the California Environmental Reporting System (CERS).
North, beyond a railroad right -of-way and Matthews Road	28261 State Highway 74	Datatronics	Industrial	This site is listed as a Resource Conservation and Recovery Act (RCRA) Large-Quantity Generator and is registered on CERS.
Northeast, beyond a railroad right -of-way and Matthews Road	28261 State Highway 74	Ahern Equipment Rentals	Commercial/ Industrial	This site is listed under current and former tenants as a RCRA Small-Quantity Generator, RCRA Non-Generator, an AST facility, and is registered on CERS.
East	None	Vacant	Unimproved	None
South, beyond a stormwater channel	None	Vacant / SCE	High voltage tower right-of-way	None
Southwest, beyond a stormwater channel and Antelope Road	None	Vacant	Unimproved	None
West, beyond Antelope Road	26311 Antelope Road	RV Storage of Murrieta Valley	Commercial	None
West, beyond Antelope Road	None	Vacant (three lots)	Unimproved	None
West, beyond Antelope Road	None	No signage (equipment yard)	Commercial/ Industrial	This address is listed as a RCRA Non-Generator.

4.0 USER PROVIDED INFORMATION

The following section summarizes information (if any) provided by GE Power and Inland Empire Energy Center, LLC (User) with regard to the Phase I ESA. Documentation may be found in Appendix D or where referenced in this report.

4.1 Title Records

The User provided no title records information.

4.2 Environmental Liens or Activity and Use Limitations (AULs)

The User provided no information regarding property environmental liens or activity and use limitations (AULs). ATC contracted Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut, to perform an environmental lien search for the property. According to EDR, no environmental liens or AULs (such as engineering controls, land use restrictions or institutional controls) were identified for the property. A copy of the report is included in Appendix L. The review of the environmental lien and AUL search did not identify past uses indicating *recognized environmental conditions* in connection with the property.

4.3 Specialized Knowledge or Experience of the User

The User provided no information regarding *recognized environmental conditions* at the property.

4.4 Significant Valuation Reduction for Environmental Issues

The User provided no information regarding a significant valuation reduction for environmental issues associated with the property.

4.5 Owner, Property Manager, and Occupant Information

The User identified the owner as the Inland Empire Energy Center, LLC, which is also the occupant. The User did not identify a specific property Manager; however, the User identified Mr. Ben Kling with GE Power as the site contact.

4.6 Reason For Performing Phase I ESA

The User indicated that this ESA was being performed in connection with a decomissioning of the property facility.

4.7 Other User Provided Documents

Per the ASTM Standard Practice E 1527-13, ATC obtained the documents listed below from the User. Further discussion may be found in Section 5.3.9 and other relevant sections of this report.

OTHER USER PROVIDED DOCUMENTS		
Title	**Date (if known)**	**Author and/or Source (if known)**
Phase I Environmental Site Assessment, Inland Empire Energy Center, 26226 Antelope Road, Romoland, California	May 14, 2001	Foster Wheeler Environmental Corporation
Final Amended Geotechnical Report, Inland Empire Energy Center, Romoland, California	April 2005	GZA GeoEnvironmental, Inc.
Phase II Baseline Investigation, GE Energy, GE Inland Empire Energy Center, 26226 Antelope Road, Romoland, California	May 5, 2005	URS Corporation

5.0 RECORDS REVIEW

5.1 Standard Environmental Records

The regulatory agency database report discussed in this section, provided by EDR of Shelton, Connecticut, was reviewed for information regarding reported use or release of hazardous substances and petroleum products on or near the property. Unless otherwise noted, the information provided by the regulatory agency database report and other sources referenced in this report, were considered sufficient for *recognized environmental condition (REC)*, *controlled recognized environmental condition (CREC)*, *historical recognized environmental condition (HREC)* or *de minimis condition* determinations without conducting supplemental agency file reviews. ATC also reviewed the "unmappable" (also referred to as "orphan") listings within the database report, cross-referencing available address information and facility names. Unmappable sites are listings that could not be plotted with confidence, but are potentially in the general area of the property, based on the partial street address, city, or zip code. Any unmappable site that was identified by ATC as being within the approximate minimum search distance from the property, based on the site reconnaissance and/or cross-referencing to mapped listings, is included in the discussion within this section. The complete regulatory agency database report may be found in Appendix E.

SUMMARY OF FEDERAL, STATE AND TRIBAL DATABASE FINDINGS								
Regulatory Database	**Target Property**	**Search Distance (Miles)**	**< 1/8**	**1/8 - 1/4**	**1/4 - 1/2**	**1/2 - 1**	**> 1**	**Total Plotted**
National Priority List (NPL)		1	0	0	0	0	NR	0
Superfund Enterprise Management System (SEMS)		0.5	0	0	0	NR	NR	0
Superfund Enterprise Management System Archive (SEMS-ARCHIVE)		0.5	0	0	0	NR	NR	0
Corrective Action Report (CORRACTS)		1	0	0	0	0	NR	0
RCRA - Treatment, Storage and Disposal (RCRA-TSDF)		0.5	0	0	0	NR	NR	0
RCRA - Large Quantity Generators (RCRA-LQG)	X	0.25	1	0	NR	NR	NR	2
RCRA - Small Quantity Generators (RCRA-SQG)		0.25	1	2	NR	NR	NR	3
RCRA - Non Generators / No Longer Regulated (RCRA NonGen / NLR)		0.25	0	3	NR	NR	NR	3
Engineering Controls Sites List (US ENG CONTROLS)		0.5	0	0	0	NR	NR	0
Sites with Institutional Controls (US INST CONTROL)		0.5	0	0	0	NR	NR	0
Emergency Response Notification System (ERNS)		TP	NR	NR	NR	NR	NR	0
Facility Index System/Facility Registry System (FINDS)	X	TP	NR	NR	NR	NR	NR	6
Integrated Compliance Information System (ICIS)	X	TP	NR	NR	NR	NR	NR	1
Enforcement & Compliance History Information (ECHO)	X	TP	NR	NR	NR	NR	NR	1
State Response Sites (CA RESPONSE)		1	0	0	0	0	NR	0
EnviroStor Database (CA ENVIROSTOR)		1	0	1	0	1	NR	2
Leaking Underground Fuel Tank Report (GEOTRACKER) (CA LUST)		0.5	0	0	1	NR	NR	1

Regulatory Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Active UST Facilities (CA UST)		0.25	0	0	NR	NR	NR	0
Hazardous Substance Storage Container Database (CA HIST UST)		0.25	0	1	NR	NR	NR	1
SWEEPS UST Listing (CA SWEEPS UST)		0.25	0	1	NR	NR	NR	1
Facility Inventory Database (CA CA FID UST)		0.25	0	0	NR	NR	NR	0
Aboveground Petroleum Storage Tank Facilities (CA AST)	X	0.25	1	2	NR	NR	NR	4
Statewide SLIC Cases (GEOTRACKER) (CA CPS-SLIC)		0.5	0	0	0	NR	NR	0
Solid Waste Information System (CA SWF/LF (SWIS))		0.5	0	0	2	NR	NR	2
Voluntary Cleanup Program Properties (CA VCP)		0.5	0	0	0	NR	NR	0
California Hazardous Material Incident Report System (CA CHMIRS)	X	TP	NR	NR	NR	NR	NR	4
NPDES Permits Listing (CA NPDES)	X	TP	NR	NR	NR	NR	NR	1
California Integrated Water Quality System (CA CIWQS)	X	TP	NR	NR	NR	NR	NR	2
CERS HAZ WASTE (CA CERS HAZ WASTE)	X	0.25	3	2	NR	NR	NR	6
CalEPA Regulated Site Portal Data (CA CERS)	X	TP	NR	NR	NR	NR	NR	2
California Environmental Reporting System (CERS) Tanks (CA CERS TANKS)	X	0.25	1	2	NR	NR	NR	4
Emissions Inventory Data (CA EMI)	X	TP	NR	NR	NR	NR	NR	1
Facility and Manifest Data (CA HAZNET)	X	TP	NR	NR	NR	NR	NR	8
EDR Exclusive Historical Cleaners (EDR Hist Cleaner)		0.125	0	NR	NR	NR	NR	0
EDR Exclusive Historical Auto Stations (EDR Hist Auto)		0.125	0	NR	NR	NR	NR	0
Risk Management Plans (RMP)	X	TP	NR	NR	NR	NR	NR	2
Leaking Underground Storage Tanks on Indian Land (INDIAN LUST R9)		0.5	0	0	0	NR	NR	0
Underground Storage Tanks on Indian Land (INDIAN UST R1)		0.25	0	0	NR	NR	NR	0
Voluntary Cleanup Priority Listing (INDIAN VCP R1)		0.5	0	0	0	NR	NR	0

5.1.1 Federal Database Findings

The property is listed on the following federal databases searched for this assessment:

Inland Empire Energy Center, GE Centerline Installation, The Conco Co., Total Western NA Inc., Industra Service Corp, TIC-The Industrial Co. at Inland Empire
26226 Antelope Road
Databases: RCRA Large-Quantity Generator (LQG), FINDS, ECHO, US AIRS
Approximate Distance from the Property: Not Applicable (N/A) (Property)
Assumed Groundwater Gradient: N/A
Regulatory Data Summary: The property is listed as a RCRA LQG. The wastes generated included aqueous solutions with less than 10% organic residue, off-specification, aged or surplus inorganics, oxygenated solvents, waste oil and mixed oil, unspecified oil-containing waste, other organic solids, liquids with pH less than 2 with metals, ignitable waste, corrosive waste, reactive waste, barium, chromium, lead, methyl ethyl ketone, tetrachloroethylene, trichloroethylene, spent non-halogenated solvents. No violations were identified. The facility is listed on the US AIRS list. US AIRS is an administrative database serving as a repository for information regarding airborne pollution. The entries for US AIRS listed by EDR provided no specific information regarding emissions at the property. The property is listed on the Enforcement Compliance History Online (ECHO). ATC reviewed information for the property on the ECHO website, https://ech.epa.gov, and determined that the property has had no violations for the past three years or enforcement actions for the last five years, the intervals tracked by the system. The property is listed in the Federal Index System (FINDS). FINDS is a research aid that lists other databases where information about a given site may be found. In this case, FINDS listed the RCRA, US AIRS, and several state databases that will be discussed in Section 5.1.2.
Discussion: Based on the absence of violations, the RCRA waste generation activities at the property are not considered to represent an environmental concern to the property. Based on their administrative nature, the FINDS, ECHO, and US AIRS databases are not considered to represent a concern to the property.

The following adjacent properties are listed on federal databases, identified as follows:

Datatronics
28151 Highway 74
Databases: RCRA LQG
Approximate Distance from the Property: Adjacent to the north, beyond a railroad track and Matthews Road
Assumed Groundwater Gradient: Cross- to downgradient
Regulatory Data Summary: This facility is a large-quantity generator of RCRA-managed waste. The wastes were identified by EDR as non-halogenated solvents, corrosive wastes, ignitable wastes, empty containers less than 30 gallons in size, unspecified organic liquid mixtures, and off-specification, aged, or surplus organics. There were no reported violations.
Discussion: Based on the absence of violations and the cross- to downgradient location, the presence of this RCRA LQG facility adjacent to the property is not considered to represent an environmental concern to the property.

Ahern Equipment Rentals / Matthews International Corp.
28261 Highway 74
Databases: RCRA Non-Generator / RCRA small-quantity generator
Approximate Distance from the Property: Adjacent to the northeast, beyond a railroad track and Matthews Road
Assumed Groundwater Gradient: Cross-gradient
Regulatory Data Summary: Ahern Equipment Rentals (Ahern) is a RCRA non-generator of RCRA-managed waste. Non-generators no longer generate RCRA waste. EDR did not report what types of waste were formerly generated. No violations were reported. The same address was once occupied by Matthews International Corp., a RCRA small-quantity generator. The types of waste generated were not reported by EDR; however, no violations were reported.
Discussion: Based on the absence of violations and the cross-gradient location, the presence of this RCRA small-quantity generator, is not considered to represent an environmental concern to the property.

Sahara Scaffold, Inc.
26245 Antelope Road
Databases: RCRA Non-Generator
Approximate Distance from the Property: Adjacent to the west, beyond Antelope Road
Assumed Groundwater Gradient: Cross- to downgradient
Regulatory Data Summary: This facility is listed as a RCRA non-generator. Non-generators no longer generate RCRA waste. EDR did not report what types of waste were formerly generated. No violations were reported.
Discussion: Based on the absence of violations and the cross- to downgradient location, the presence of this RCRA non-generator, is not considered to represent an environmental concern to the property.

Based on distance, assumed groundwater gradient, current regulatory status, and/or the absence of reported releases, none of the remaining sites listed in the federal agency databases are considered to represent a likely past, present or material threat of release in, on, or at the property. Given the physical setting characteristics of the property and surrounding area supplemental agency file reviews were deemed unnecessary.

5.1.2 State and Tribal Database Findings

The property is listed on the following state and/or local databases searched for this assessment:

Inland Empire Energy Center, Bigge Crane, Brewer Crane, Marley Cooling Tower, Titan Contracting & Leasing Co.
26226 Antelope Road
Databases: CHMIRS, AST, HAZNET, NPDES, EMI, CERS, CIWQS, RMP
Approximate Distance from the Property: N/A (Property)
Assumed Groundwater Gradient: N/A
Regulatory Data Summary: The property is listed eight times on the California Hazardous Materials Incident Reporting System (CHMIRS) for spill incidents occurring between 2006 and 2011. Most were small (30 gallons or less) of hydraulic oil caused by broken equipment lines. The largest and most recent of the releases, was a 340-gallon release of aqueous ammonia in March of 2011 that resulted from a ruptured hose during a delivery. The release was reported as immediately contained and cleaned up. The facility is listed on the AST database. The number of ASTs, their contents, and or total capacity were not reported by EDR. The property and certain subcontractors were listed on the Facility and Manifest Data (HAZNET) database as having generated manifested wastes. A partial list of the wastes generated included off-specification, aged, or surplus organics, other organic solids, waste oil and mixed oil, hydrocarbon solvents, and unspecified oil containing waste. One presumed contractor associated with the property address, Titan Contracting and Leasing Co., is listed as having a National Pollutant Discharge Elimination System (NPDES) permit. EDR provided no additional details regarding this permit. The facility is listed on the Emissions Inventory (EMI) database. EMI tracks facilities whose air emissions reach certain thresholds. EDR provided emissions statements for the years 2006 through 2016. The property is also registered on the California Environmental Reporting System (CERS). CERS is a computerized platform for business to submit forms or required reports to agencies and that allows agencies to share that information. CERS is not accessible to the general public. EDR indicated that the property had several violations issued by the Riverside County Department of Environmental Health in October of 2014. These violations were generally for failure to provide certain types of information as required or take certain required steps per the Risk Management Plan. EDR noted that compliance was achieved the following month for all items. The property is listed on the California Integrated Water Quality System (CIWQS) as having been issued a construction related NPDES permit in June of 2005, which was terminated in August of 2005. No other details were available, but this coincides generally with early construction activity at the facility and is not considered to represent a concern. EDR also indicated that the facility is listed as having a Risk Management Plan (RMP), which is certified by the State of California.
Discussion: Based on the small-scale and or remediated nature, none of the eight CHMIRS releases are considered to represent an environmental concern to the property. During the site reconnaissance, ATC observed numerous ASTs in a variety of sizes and contents. None were observed to have associated releases. HAZNET does not track violators and the presence of a site on this database does not necessarily indicate that a problem exists at that facility. Based on the wastes reported, the HAZNET listings are not considered to represent a concern to the property. The presence of a facility on the EMI database does not

necessarily indicate that a problem exists at this facility. Accordingly, the EMI listing is not considered to represent an environmental concern to the property.

The following adjacent properties are listed on state databases, identified as follows:

Holiday Trucking
26100 Antelope Road #2
Databases: AST
Approximate Distance from the Property: Adjacent to the north
Assumed Groundwater Gradient: Cross- to downgradient
Regulatory Data Summary: This facility is listed as a registered AST site. No additional information was available regarding the number or contents of AST(s) at this facility.
Discussion: Based on the downgradient component of its location and the absence of this site from other databases that track releases, the presence of this facility on the AST database is not considered to represent an environmental concern to the property.

Ahern Rentals Inc.
28261 East Highway 74
Databases: AST
Approximate Distance from the Property: Adjacent to the northeast, beyond a railroad track and Matthews Road
Assumed Groundwater Gradient: Cross-gradient
Regulatory Data Summary: This facility is listed as a registered AST site. No additional information was available regarding the number or contents of AST(s) at this facility.
Discussion: Based on the cross-gradient location and the absence of this site from other databases that track releases, the presence of this facility on the AST database is not considered to represent an environmental concern to the property.

Based on distance, assumed groundwater gradient, current regulatory status, and/or the absence of reported releases, none of the remaining sites listed in the state, tribal, or local agency databases are considered to represent a likely past, present or material threat of release in, on, or at the property. Given the physical setting characteristics of the property and surrounding area additional file reviews were deemed unnecessary.

5.1.3 Local Environmental Record Sources

Riverside County Department of Environmental Health (RCDEH)

Based on the assumption that the records made available to ATC by the User through an online data room would be representative of those on file with the RCDEH, together with the fact that significant releases were not reported at the property by EDR, a separate file search for RCDEH records of the property was not conducted by ATC.

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC)

According to the DTSC EnviroStor website, http://www.envirostor.dtsc.ca.gov/public, the DTSC has no files for the property.

Regional Water Quality Control Board (RWQCB)

According to the RWQCB GeoTracker website, http://geotracker.waterboards.ca.gov, no leaking underground storage tank (LUST) or Spills, Leaks, Investigations and Clean-Ups (SLIC) cases are located on the property.

South Coast Air Quality Management District (SCAQMD)

According to information contained on the SCAQMD website, http://www.aqmd.gov, the SCAQMD has a total of 67 entries for permitted equipment, rejected permit applications, Title V permit renewal applications, and changes of title, all from various years. The types of equipment listed included cooling towers, electric

generators, turbine engines utilizing other fuel, natural gas boilers, selective catalytic reduction, and tanks with other aqueous solutions.

The facility had six prior notices of violation, the most recent of which was dated October 2015 for inaccurate NOx emissions due to the calculation protocols not being accurately programed into the CEMS software. Compliance was achieved along with each of the earlier five violations. The review of information on the SCAQMD website did not reveal *recognized environmental conditions* at the property.

Department of Planning and Zoning

According to a zoning map posted to the City of Menifee website, https://www.cityofmenifee.us, the property is within the Menifee North Specific Plan.

5.2 Physical Setting Sources

5.2.1 Topography

According to the United States Geological Survey (USGS) 7.5-Minute Series Topographic Map of the *Romoland, California* Quadrangle, the pre-development elevation of the property ranged approximately between 1,439 and 1,448 feet above mean sea level. The area has a slope to the west-southwest. A copy of the topographic map is included in Appendix A.

5.2.2 Geology

The property is located in the Perris-South Subbasin of the San Jacinto Groundwater Basin and is situated on older alluvial fan deposits of middle to late Pleistocene age that were derived from erosion of the local highlands. The maximum depth of valley fill in the western San Jacinto Basin is approximately 900 feet. Six borings advanced on the property by URS in 2005 to depths between 70 and 80 feet below ground surface (bgs) classified the subsurface generally as alternating beds of silty sand, sand, and clayey silt. Generally the clay content increased with depth (USGS, 2003a; USGS, 2003b; California Geological Survey, 2006).

5.2.3 Soils

According to the United States Department of Agriculture (USDA) Soil Conservation Service publication *Soil Survey, Western Riverside Area, California*, 1971, the soil type most prevalent at the property is the Exeter Sandy Loam, 2-8 percent slopes, eroded. Exeter soils are over 60 inches deep, are well-drained, and have moderate subsoil permeability. In a typical profile, they have brown, slightly acidic sandy loam surface layers about 16 inches thick. The subsoil is brown, neutral to slightly alkaline, heavy (i.e., are dense and clay-rich) loam to a depth of approximately 37 inches where a silica-cemented hardpan layer is sometimes present to a depth of approximately 50 inches. Below this is a dark brown coarse sandy loam.

A 2005 Geotechnical report of the property prepared by GZA GeoEnvironmental, Inc. described the upper five feet of soil in several borings generally as light brown to brown, dense, fine to coarse sand with traces of silt.

5.2.4 Hydrology

According to a 2005 subsurface investigation of the property conducted by URS prior to development, the depth to groundwater as measured in six temporary monitoring wells evenly distributed over the property ranged from 65 to 72 feet below ground surface. The primary direction of groundwater flow was toward the northwest, with a secondary gradient across the southern half of the property to the south-southwest. A northwest gradient is consistent with a regional groundwater flow diagrams in an earlier study reviewed by ATC (USGS, 2003).

Estimated groundwater levels and/or flow direction(s) may vary due to seasonal fluctuations in precipitation, local usage demands, geology, underground structures, or watering operations.

5.2.5 Other Physical Setting Sources

Flood Plain Map

According to information provided by the Federal Emergency Management Agency (FEMA) website, https://msc.fema.gov/portal, an irregular area approximating the southern half of the property is located in flood zone X, or areas outside of 500-year flood risk. The approximate northern half of the property is in flood zone X (shaded), areas of 0.2% annual chance flood, areas of 1% annual chance flood with average depths of less than one foot or with drainage areas of less than one square mile, and areas protected by levees from 1% annual chance flood. The community/panel number for the Flood Insurance Rate Map for the property is 06037C 1700F and the effective date is September 26, 2008. A copy of the flood plain map is included in Appendix L.

Wetlands Map

According to the United States Fish and Wildlife Service (USFWS) Wetlands Mapper website, http://www.fws.gov/wetlands/Data/Mapper.html, no wetlands are present on the property. The nearest plotted wetland is a patch of artificially flooded hydrophyllic vegetation located approximately 315 feet north of the property. A similar patch of vegetation is plotted approximately 630 feet southeast of the property. The wetland map plots two small artificially flooded ponds located approximately 580 feet south and 0.35 mile east of the property. These nearby wetlands, which were not observed during the site reconnaissance, are not considered to have an adverse environmental impact to the property. A copy of the National Wetlands Inventory map is included in Appendix L.

5.3 Historical Records Sources

The table presented below summarizes the findings of the research pertaining to historical property and surrounding area uses.

Intervals (greater than five years) were encountered during the research of historical use information for the property and surrounding area. However, based on the review of reasonably ascertainable historical sources, these intervals did not have an impact on the determination of *recognized environmental conditions* for this ESA and are therefore not considered to be *significant*.

HISTORICAL USE SUMMARY				
Period	**Property Historical Uses**	**Surrounding Area Historical Uses**	**Source(s)**	**Intervals/Comments**
Prior to 1940	Vacant Agricultural	Vacant Agricultural	Aerial Photograph Topographic Map	A 1901 topographic map is the earliest record identified. One 36-year data gap (1902-1937). Possible use change from vacant to agriculture.
1940 - 1960	Agricultural	Agricultural, vacant, commercial, residential, institutional, industrial	Aerial Photographs Topographic Maps	One seven-year data gap (1954-1960). No use changes from agriculture across the data gap.
1961 - 1980	Agricultural	Agricultural, vacant, commercial, residential, institutional, industrial	Aerial Photographs Topographic Maps City Directory	No data gaps.
1981 - 2000	Agricultural	Agricultural, vacant, commercial, residential, institutional, industrial	Aerial Photographs City Directories	No data gaps

Period	Property Historical Uses	Surrounding Area Historical Uses	Source(s)	Intervals/Comments
2001 - present	Agricultural Industrial	Agricultural, vacant, commercial, residential, institutional, industrial	Aerial Photographs Topographic Map City Directories Building Department Record Property Tax Record Prior Reports	No data gaps. Construction of the current power plant and associated structures began circa 2006.

5.3.1 Aerial Photographs

ATC reviewed available aerial photographs of the property and surrounding areas provided by EDR. Available aerial photographs ranged from 1938 to 2016. The following are descriptions and interpretations from the aerial photograph review.

AERIAL PHOTOGRAPH SUMMARY			
Year	**Scale**	**Property Comments**	**Surrounding Area Comments**
1938, 1949, 1953, 1961, 1967, 1978, 1985, and 1989	1"=500'	The property is under cultivation.	Apart from a few commercial or industrial buildings to the north across the railroad tracks and Matthews Road, the adjacent parcels on all sides are under cultivation, except for the 1989 photograph, where the east-adjacent parcel appears to be vacant land and, on the south-adjacent parcel, in addition to being farmed, a high voltage tower is discernible.
1997	1"=500'	The property is under cultivation.	The adjacent property to the north is shown as developed with the asphalt plant. Several industrial buildings and a paved yard are located to the north, beyond the railroad tracks and Matthews Road. An agricultural field is located beyond the tracks and Matthews Road to the northeast. The adjacent parcels to the east and south are under cultivation. A high voltage tower is present on the south-adjacent parcel as well.
2002	1"=500'	The property is under cultivation.	The current cement plant is now present on the north-adjacent parcel as well. Industrial buildings and a vacant parcel are located beyond the railroad tracks and Matthews Road to the north and northeast, respectively. Adjacent to the east is a vacant parcel, on the northwestern corner of which is an area of dark soil or gravel, possibly from the asphalt plant's activities. Adjacent to the south are high voltage lines and a tower on a parcel that appears to be under cultivation. Adjacent to the west are two fenced properties, one of which has numerous parked vehicles and the other has an area of dark brown soil, the purpose of which is unclear. Adjacent to the west of the southern end of the property is an agricultural field.

Year	Scale	Property Comments	Surrounding Area Comments
2006	1"=500'	The property facility is under construction. The northern warehouse appears to be present along with a number of other sheds and buildings on the northwestern portion of the property.	Adjacent to the north are the current cement and asphalt plants. Adjacent to the north and northeast, beyond the railroad tracks and Matthews Road, are industrial buildings and their yard and a vacant parcel. Adjacent to the south is undeveloped land. The high voltage tower is not discernible. Adjacent to the west, beyond Antelope Road, are two fenced lots, once of which is an equipment yard, while the other is of unknown activity. Farther to the south is a vacant area. Adjacent to the northwest, beyond Antelope Road, is a gravel-paved lot with numerous parked vehicles.
2009 and 2012	1"=500'	The current power generation plant and the property appears very similar to its current appearance.	Adjacent to the north are the cement and asphalt plants. Adjacent to the north and northeast, beyond the railroad tracks and Matthews Road are industrial buildings, their paved yards, and a small vacant area. Adjacent to the east is vacant land, on the northwest corner of which is a large gravel-paved area with several gray stockpiles. Adjacent to the south is vacant land, along with two high voltage towers. Adjacent to the west, beyond Antelope Road are various fenced lots, most of which appear unoccupied except for a lot across from the northern end of the property, which appears to be used as a parking lot, and the eastern half of the current RV storage lot, which is present in the 2012 aerial photograph.
2016	1"=500'	The property appears essentially as it does currently.	Apart from the absence of an equipment yard currently present on the west-adjacent site, but nearly unoccupied in the 2016 photograph, The adjoining parcel on all sides appear essentially as they do currently.

Due to the presence of former agricultural activity on the property between at least 1938 and 2002, it is possible that environmentally persistent pesticides and herbicides may have been used on the property in the past. A 2005 Baseline investigation by URS (see Section 5.3.9) included surface and subsurface sampling for pesticides and herbicides in which low concentrations of various pesticide and herbicide compounds were identified at concentrations well below EPA and DTSC screening levels in use at that time. The amount of mixing, grading and cut and fill operations necessary to prepare the property for development has likely altered and diluted agricultural chemicals further in the developed portions of the property. Accordingly, the former use of pesticides and herbicides on the property is not considered to represent a *recognized environmental condition* at this time. However, it is possible that additional sampling for pesticides and herbicides may be required prior to any redevelopment of the property following decommissioning. Copies of the aerial photographs are included in Appendix F.

5.3.2 Fire Insurance Maps

ATC requested copies of historical Sanborn Fire Insurance Maps (Sanborn Maps) depicting the property and surrounding area from EDR. According to EDR, Sanborn Map coverage of the property is not available. A copy of EDR's "unmapped property" letter is included in Appendix G.

5.3.3 Property Tax Files

According to information on file with the Riverside County Assessor, the current owner of the property is Inland Empire Energy Center LLC, which acquired title in 2015. No prior owners were named. The review of tax files did not identify *recognized environmental conditions* at the property.

5.3.4 Recorded Land Title Records

The acquisition of recorded land title records was not required by the scope of work for the Phase I ESA.

5.3.5 Historical USGS Topographic Maps

ATC reviewed available historical USGS Topographic Quadrangles for information regarding past uses of the property. Topographic maps were reviewed for the years 1901, 1942, 1943, 1947, 1953, 1973, 1979, and 2012. ATC's findings by year are as follows:

No developments are shown on the property on any of the map editions reviewed.

On all of the map editions except those of 1901 and 2012, a school is shown north of the property, beyond the railroad tracks and Matthews Road. A small non-adjacent structure is shown a short distance to the north of the property on the southeast corner of Ethanac Road and Antelope Road on all map editions except for 2012. The 2012 map edition typically depicts no features of development except for streets. The remaining adjacent parcels on all sides are shown as undeveloped.

The review of historical USGS Topographic Quadrangles did not identify specific past uses indicating *recognized environmental conditions* at the property or the surrounding area. Copies of topographic maps are included in Appendix G.

5.3.6 City Directories

ATC reviewed historical city directories at the Riverside Main Library. ATC also consulted a City Directory Image Report prepared by EDR. EDR reviewed city directories at approximate five-year intervals between 1975 and 2014 for indications of current and adjacent property use. ATC's findings from both sources are summarized as follows.

CITY DIRECTORY SUMMARY		
Year	**Property Comments**	**Surrounding Area Comments**
1975, 1981, 1985, 1989, 1990, 1992, 1995, and 1998	Antelope Road: No listings.	Antelope Road: No listings near the property.
2003-04	Antelope Road: No listings.	Antelope Road: 26100-Western Rock Co.; 26245-Address listed, occupant not given.
2005	Antelope Road: No listings.	Antelope Road: No listings near the property.
2007-08	Antelope Road: 26226-Conoco Cement Co, GE Energy, Inland Empire Energy Center, Titan Contracting, Top Grade Construction, Total Western Inc.	26100-Address listed, occupant not given.
2010	Antelope Road: 26226-Agate Incorporated, General Electric Company, Top Grade Construction.	Antelope Road: No listings near the property.
2011-12	Antelope Road: 26226-Address listed, occupant not given.	Antelope Road: No adjacent listings.

Year	Property Comments	Surrounding Area Comments
2014	Antelope Road: 26226-General Electric Company.	Antelope Road: No listings near the property.

The review of historical city directories did not reveal *recognized environmental conditions* at the property. A copy of the EDR City Directory Image Report is included in Appendix G.

5.3.7 Building Department Records

ATC attempted to review available historical building permits at the City of Menifee Building Department. However, ATC was informed that they had no records pertaining to the property address. ATC attempted to review building permits for the property online on the Riverside County Transportation and Land Management Agency website, http://onlineservices.rctlma.org, where there was a record that a Conditional Use Permit had been issued for the property on January 28, 2008. No specifics about the permit were listed. ATC submitted a request to review specific permits pertaining to the property at the Riverside Department of Building and Safety; however, a response has not yet been received. A report addendum will be prepared if the response contains relevant information; however, based on information reviewed from other historical sources, ATC does not anticipate that the pending records review will contain information that would alter the conclusions of this report. The data gap created by the pending agency response is therefore not considered to be *significant*.

5.3.8 Zoning/Land Use Records

Historical zoning information was not readily ascertainable; however, based on a review of historical aerial photographs, the property was likely zoned for agriculture from the late 1930s until the early 2000s.

5.3.9 Prior Reports

ATC was provided with portions of three prior reports by the User. The first report, entitled *Phase I Environmental Site Assessment, Inland Empire Energy Center,* was prepared by Foster Wheeler Environmental Corporation (Foster Wheeler) and dated May 14, 2001. This report was prepared prior to construction of the current power plant. Foster Wheeler did not identify current or past hazardous materials use at the property and made no recommendations for additional investigation.

ATC generally concurs, but notes that the potential for pesticide or herbicide applications to be present on the property was not discussed.

The second report, entitled *Final Amended Geotechnical Report, Inland Empire Energy Center, Romoland, California*, was prepared by GZA GeoEnvironmental, and dated April 2005. This report provided information regarding subsurface soil characteristics obtained from soil boring logs.

The third report, entitled *Phase II Baseline Investigation, GE Energy, GE Inland Empire Energy Center, 26226 Antelope Road, Romoland, California*, was prepared by URS Corporation (URS) and dated May 5, 2005. As part of a pre-development investigation, URS collected surface and subsurface soil samples from 20 boring locations evenly distributed across the property. URS converted six of the borings to temporary groundwater wells to collect groundwater samples for analysis. URS collected one surface water sample and one sediment sample from a drainage ditch along Antelope Road where a sheen had been observed on the water's surface.

A total of 20 surface samples and 25 subsurface samples were selected for analysis from the 20 soil borings. Surface samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260B, semi-volatile organic compounds (SVOCs) by EPA Method 8270C, priority pollutant metals by EPA methods 6010B and 7471A, polychlorinated biphenyls (PCBs) by EPA Method 8082, organochlorine pesticides by EPA Method 8081A, and chlorinated herbicides by EPA Method 8151A. Subsurface soil samples were generally analyzed similarly, although there were individual exceptions where selected analyses were not conducted. Two subsurface samples, collected from Boring 3 at 30 feet and Boring 5 at 51 feet, were analyzed for 1,4-dioxane. A number of locations had to be re-sampled at a later date due to procedural errors.

Groundwater samples were analyzed using the same tests with the addition of perchlorate using EPA Method 314.0, once more with selected exceptions.

The surface water and sediment were analyzed by the same tests as the groundwater samples, with the exception that the sediment was not analyzed for perchlorate. A low concentration of perchlorate (not stated) was identified in the surface water sample and arsenic was the only contaminant identified in the sediment sample. URS concluded that the observed sheen was unlikely to be from a petroleum source.

The results of soil and groundwater analyses generally identified low concentrations of selected VOCs, SVOCs, pesticides, herbicides, perchlorate, and metals in the various media tested. No PCBs or 1, 4-dioxane were detected in any of the samples. Nearly all compounds identified were reported to be below the screening standards utilized, which included the California Office of Environmental Health Hazard Assessment (OEHHA) soil screening levels and the EPA preliminary remediation goals (PRGs) for industrial soil. For groundwater, the standards included EPA, California Department of Health Services (DHS) Maximum Contaminant Levels (MCLs) and California Public Health Goals (PHGs). Some VOCs were attributed laboratory contaminants, while others URS offered no explanation for a possible source. The most notable finding in surface soils was for arsenic, which ranged from 0.765 milligrams per kilogram (mg/kg) to 1.19 mg/kg. The OEHHA SSL for arsenic in commercial and industrial soil was stated as 0.24 mg/kg. URS pointed out that natural occurrences of arsenic vary widely and often exceed desired screening levels.

Notable findings in groundwater included five samples with detectable amounts of perchlorate, with one sample at a concentration of 6.1 micrograms per liter (ug/L), slightly exceeding the California PHG of 6.0 ug/L. One groundwater sample had a benzo (A) pyrene concentration of 2.3 ug/L. The MCL for this compound was reported by URS as 0.2 ug/L; however, it was not identified in the overlying soil samples. Pesticides were not detected in groundwater, but certain herbicides were identified at low levels. However, the herbicide MCPP was identified in two groundwater wells at concentrations of 4,500 ug/L and 210 ug/L. URS indicated that there is no established MCL for MCPP.

The findings summarized above are necessarily a cursory discussion which were themselves broadly summarized in the report text provided to ATC. The tables that would have identified the concentration of each analyte at each sample point were not included in the portions of the report provided to ATC. However, the overall conclusion of URS's study was that there were no reporting requirements and no required response actions. URS made no further recommendations.

ATC makes no warranty, guaranty or certification regarding the quality, accuracy or reliability of any prior report provided to ATC and discussed in this Phase I ESA report. ATC expressly disclaims any and all liability for any errors or omissions contained in any prior reports provided to ATC and discussed in this Phase I ESA report.

Based on the low concentrations reported in most instances, and the lack of an obvious on-site source, apart from pesticide and herbicide use, ATC does not regard the findings to represent a *recognized environmental condition*; however, the screening standards employed by URS have generally been replaced or updated by later standards compiled by the DTSC Human and Ecological Risk Office (HERO) and/or the RWQCB. If the property, or portions of it, are planned for redevelopment, ATC considers it probable that new soil sampling, particularly for pesticides and herbicides, would likely be a requirement of the development agency. Copies of the portions of the prior reports reviewed are included in Appendix H.

5.3.10 Other Historical Sources

No other historical sources were reviewed.

6.0 SITE RECONNAISSANCE

ATC assessor Mr. Steve W. Anderson conducted the site reconnaissance on May 9, 2019. ATC was accompanied during the site reconnaissance by Mr.Ben Kling, Plant Manager with GE Power. Mr. Kling has been familiar with the property for approximately 13 years. The following is a summary of visual and/or physical observations of the property on the day of the site visit. Photographs can be found in Appendix C.

6.1 Methodology and Limiting Conditions

The site reconnaissance consisted of visual and/or physical observations of: the property and improvements; adjoining sites as viewed from the property; and, the surrounding area based on visual observations made during the trip to and from the property. Unimproved portions of the property (if any) were observed along the perimeter and in a general grid pattern in safely accessible areas. Building exteriors were observed along the perimeter from the ground, unless described otherwise. Access was unavailable to the roof of the water treatment building and north warehouse. Otherwise, there were no access restrictions encountered at the property. The weather during the site reconnaissance was sunny and mild. There were no visibility restrictions due to weather conditions.

6.2 Hazardous Substance Use, Storage, and Disposal

ATC reviewed the property for hazardous materials storage and use, as well as indications that such materials may have been spilled or dumped. As mentioned previously, the property is developed with a power plant along with various support structures and equipment. A complex site, chemical use and storage occurs in many areas and a comprehensive itemization of chemical use is not feasible from a single walk through; however, the major areas of chemical use and storage at the property observed by ATC were as follows:

Administration Building: The Administration building is divided into three major areas. The northern end of the building contains offices. Minor amounts of cleaning supplies in retail-sized containers were observed beneath the sink in the lunch room. The office has two floors and one hydraulic elevator is present. No oil stains were observed in the elevator service room. South of the office area is a shop area. One flame-resistant cabinet located against one wall contained several grease guns, small bottles of brake cleaner and various aerosol cans. Housekeeping in the shop area was very good with no stains or floor drains. The remainder of the building is a large warehouse area. Generally non-chemical items are stored here, but two stacked flame-resistant cabinets were observed, which contained six one-gallon cans of alcohol, tubes of caulk, various aerosol cans, and small containers of adhesive and paint.

South of the Administration building are three large ASTs containing water, one of which is used for fire suppression. On the south side of this AST is a small metal room containing a 300-gallon diesel AST that fuels the fire pumps. The AST is within secondary containment. No indications of staining were observed in the room.

Water Treatment Building: At the northwestern corner of the Water Treatment building is a small laboratory. Small bottles of various chemicals used to test water were observed primarily beneath the sink. A floor drain was observed in the room. No staining was observed. A small room adjacent to the lab on the east contained banks of batteries. The batteries are used in conjunction with control room operations and water treatment controllers. Farther south in the warehouse is an array of pipes and tanks. ATC noted the presence of a 55-gallon drum of a corrosive cleaning solution, and several containers of what appeared to be water treatment chemicals. All of the containers were stored on secondary containment trays. Farther toward the south wall were several large polyethylene ASTs within concrete berms. One AST was empty while the others contained an anti-scale solution and biocide. Two more ASTs, one of which was located within a berm, contained sodium chloride.

Along the eastern exterior wall of the Water Treatment building, were an 8,500-gallon AST of sodium hypochlorite (bleach) and two 2,000-gallon ASTs of sodium bisulfite. Four smaller ASTs (approximately 1,000 gallons each) of dechlorinating solution are stationed against the exterior southern wall of the building.

A short distance southeast from this point are two 16,000-gallon bermed ASTs containing an ammonia solution. Farther east, directly south of one of the electricity generation units, is another bermed area with six ASTs, which included two 6,000-gallon ASTs of sulfuric acid, two 8,500-gallon ASTs of sodium hypochlorite, a 1,000-gallon AST containing Gengard GN-7000, and a 550-gallon AST containing Spectrus BD 1500. These chemicals are dedicated to cleaning up the long row of cooling towers.

On the eastern side of the property are two racks, each with six tubular ASTs of hydrogen gas.

Hazardous Waste Area: A short distance east-northeast of the Unit 1 turbine is the hazardous waste area consisting of two pole-sheds facing each other from opposite ends of a concrete pad. The southern shed was divided into sub-areas, within which were different sorts of compressed gasses. In one compartment were seven empty propane cylinders and canisters. Seven full propane forklift fuel canisters were stored in a rack in the adjacent area. Nearby were seven oxygen and a similar number of acetylene cylinders chained to opposite sides of their area. Also stored in their respective areas were three salvage drums, seven empty 55-gallon drums, and two empty dollies.

North of this shed was a larger pole shed divided into two sub-areas. On the right-hand side was a 240-gallon waste oil tank. Across from the AST were two 55-gallon drums of used oil filters and a drum full of used sorbent. The fenced area on the left-hand side contained approximately 35 55-gallon drums, most of which contain various oils, with at least two containing a citrus cleaner. Several smaller five-gallon containers are stored along with the drums on a narrow spill-catching mat. However, no indications of spills were observed. In the northwest corner of this area were five flame-resistant cabinets containing aerosol cans of paint, small containers of alcohol, adhesive, and grease tubes. Also present in the cabinets were three five-gallon gasoline containers, one five-gallon container for diesel, and two gallons of alcohol.

Between the northern and southern sheds was a 480-gallon diesel AST. No stains were present near the AST.

Turbine Area: The central portion of the property is occupied by two natural gas fueled turbines, known simply as Unit 1 and Unit 2. A small fenced enclosure is located along the southern fence line of the property. This enclosure is occupied by Southern California Gas and serves as a distribution point for the turbines. The location of the pipeline bringing natural gas in to the property is not known; however, a natural gas pipeline marker was observed just outside the eastern fence line close to the southeast corner of the facility. The turbines are identical in layout. Various ASTs are located within, or adjacent to the framework. These include a 50,000-gallon condensate tank, additional ammonia ASTs, fuel drain tanks, and a wash water drain tank. Two lube oil ASTs totaling approximately 15,878 gallons are located in the north-central portion of each Unit, no staining was observed. At the western exterior end of each turbine Unit are diesel-fueled emergency generators. The fuel for each generator is contained in a 3,500-gallon belly tank. No staining was observed near the generators.

Northern Warehouse: Located on the north-central portion of the property is a metal warehouse structure, used, for the most part, for the storage of non-chemical items; however, large numbers of compressed gas cylinders were observed stored along one wall.

Hazardous waste generated at the property appears to consist primarily of waste oil, oily rags and pads, and universal waste. According to Mr. Kling, Clean Harbors is the hazardous waste vendor and Safety Kleen removes universal wastes. Reportedly, each firm comes on an as-needed basis.

6.3 Underground Storage Tanks

ATC did not identify visual or documentary evidence of current or former underground storage tanks (USTs) at the property.

6.4 Aboveground Storage Tanks

Numerous ASTs are present at the property. These range in size from a 2,100,000-gallon process water tank to 240-gallon ASTs for waste oil and sodium chloride. Most ASTs appear to be stored within secondary containment. No indications of releases were identified near the ASTs observed on-site.

6.5 Other Petroleum Products

Apart from what was discussed in Section 6.2 and what might be contained inside hydraulic equipment and transformers, ATC did not observe other petroleum products on-site.

6.6 Polychlorinated Biphenyls (PCBs)

According to Mr. Kling, a total of 19 privately-owned transformers are present on the property, although it is unclear if this total includes a pad-mounted switch and transformer located at the far northwestern corner of the property, that appear to be typical of SCE equipment. Based on the age of the property improvements, it is unlikely that any of the transformers on-site contain PCBs.

Another potential source of PCBs is the ballasts of fluorescent lights. Fluorescent lighting is present in the property buildings. Based on the age of the property improvements (post-2006), it is unlikely that PCB-containing ballasts are present. As part of normal maintenance, ballasts should be inspected for labeling indicating their PCB content. In general, any ballast not specifically labeled as not containing PCBs is presumed to contain them and will require special disposal practices when eventually discarded.

PCBs have also been used as an additive in hydraulic oil. One hydraulic elevator is present in the Administration building and containers of hydraulic oil were observed in various areas of the property. Based on the age of the property improvements, it is unlikely that the elevator or any of the oil supplies purchased for use at the property contain PCBs.

6.7 Unidentified Substance Containers

ATC did not observe unidentified substance containers at the property.

6.8 Nonhazardous Solid Waste

Non-hazardous solid waste is disposed of in a standard dumpster located by the Administration building. Additionally a large roll-off dumpster is located near the North Warehouse. According to Mr. Kling, Waste Management empties the standard dumpster twice per week and removes the large roll-off as needed.

6.9 Wastewater

Wastewater at the property consists of storm runoff, condensates from various processes, sanitary sewage, and unusable brine. Sanitary sewage is conveyed off-site to the municipal sewer system. The brine is piped off-site to the Santa Ana Watershed Project Authority where it is transported to a water treatment plant operated by the Orange County Sanitation District. Stormwater is conveyed to two large stormwater retention basins located near the southeastern and southwestern corners of the property, where it is removed, filtered, treated, and re-introduced into the system as process water. Water derived from sources such as condensate or drains inside of berms is treated through the oil/water separator before being returned to the system as process water.

6.10 Waste Pits, Ponds and Lagoons

As mentioned previously, there are two large stormwater retention basins at the southeastern and southwestern corners of the property.

6.11 Drains and Sumps

Floor drains were noted in several areas of building interiors. Storm drains were noted locally in the yard areas. None of the drains were observed to have associated staining. Grated catch basins (essentially sumps) are located in many AST berms as well as the bermed hazardous materials area. No associated stains were observed in association with these basins.

6.12 Septic Systems

ATC did not observe evidence of a septic system at the property.

6.13 Stormwater Management System

Stormwater is conveyed from building roofs by exterior downspouts. Storm drains located in the yard convey stormwater to the retention basins, where it is ultimately recycled for use as process water.

6.14 Wells

ATC did not observe wells of any type on the property.

7.0 SUBSURFACE VAPOR MIGRATION

ATC conducted a limited screening for potential vapor encroachment conditions (VECs) that may affect the property. The VEC screening focused on the current and historical usage of the property and also utilized the aforementioned regulatory agency database report provided by EDR to evaluate identified Chemicals of Concern (COCs), including petroleum hydrocarbons. To identify the area of concern (AOC) for contaminated sites with non-petroleum hydrocarbon COCs, ATC utilized the approximate minimum search distance defined by ASTM E 2600-10 of 1,760 feet (1/3 mile) from the property boundary for COC-contaminated sites. For sites contaminated with petroleum hydrocarbon COCs, ATC utilized the AOC approximate minimum search distance of 528 feet (1/10 mile). The AOC was adjusted accordingly based on review of physical setting characteristics, known release information, property and land features, groundwater flow direction, and soil type, et al.

ASTM's Vapor Encroachment guidance indicates that when groundwater flow direction can be estimated or determined, the cross-gradient or downgradient radius distances can be significantly reduced. Reduced AOC distances may be calculated when considering groundwater flow direction by utilizing the following default distances, which were determined using the Buonicore Methodology: (non-petroleum hydrocarbon COCs) 1,760 feet in the upgradient direction; 365 feet in the cross-gradient direction; and 100 feet in the downgradient direction and (petroleum hydrocarbon COCs) 528 feet in the upgradient direction; 165 feet in the cross-gradient direction if Light, Non-Aqueous Phase Liquid, (LNAPL i.e. floating product) is suspected; 95 feet in the cross-gradient direction if no LNAPL is suspected; 100 feet in the downgradient direction (LNAPL suspected); and 30 feet in the downgradient position (LNAPL not suspected).

The screening was further refined by evaluating the Critical Distance (CD) factor. The CD is the upper distance a vapor may migrate through soil in the vadose zone assuming the path of least resistance is directly from the closest boundary of the contaminated media (i.e. groundwater or soil) to the nearest property boundary. For non-petroleum hydrocarbon COCs, the CD is 100 feet. For LNAPL petroleum hydrocarbon COCs, the CD is also 100 feet. For dissolved petroleum hydrocarbon COCs, the CD is 30 feet.

ATC reviewed potential sources of COCs from the facilities reported on the EDR database report.

No vapor encroachment conditions were identified on the property or from the surrounding area.

8.0 INTERVIEWS

The persons identified in the table below were interviewed to obtain information regarding *recognized environmental conditions* in connection with the property.

Not included in this listing are those governmental employees that were contacted solely for the purpose of retrieving public information pertaining to the property and who would not be expected to have first-hand knowledge of *recognized environmental conditions* at the property.

Pertinent information from the interviews is discussed in applicable sections of this report with details documented (including failed attempts to interview) on Record of Communication forms in Appendix J.

INTERVIEW SUMMARY				
Role	**Name**	**Title/Company**	**Years Assoc. With Property**	**Interview Type**
Escort / Tenant representative	Mr. Ben Kling	Plant Manager / Inland Empire Energy Center	13 years	In Person

9.0 OTHER ENVIRONMENTAL CONDITIONS

9.1 Asbestos-Containing Material (ACM)

A limited asbestos survey was not a part of the scope of services for this ESA. Readily accessible suspect ACMs observed at the property included (but are not necessarily limited to) wallboard/joint compound, resilient floor tile, flooring mastics, and acoustical ceiling panels. Although not observed directly, other materials that potentially contain asbestos include duct wrap, insulation, and gaskets. Based on the age of the property improvements (post-2006), it is unlikely that ACM is present; however, prior to any renovation or demolition activity, an asbestos survey should be conducted of any suspect ACMs likely to be disturbed. All suspect ACMs appeared to be in good condition.

9.2 Radon

Radon is a naturally occurring colorless, odorless gas that is a by-product of the decay of radioactive materials potentially present in bedrock and soil. The EPA guidance action level for annual residential exposure to radon is 4.0 picoCuries per liter of air (pCi/L). The guidance action level is not a regulatory requirement for private owners of commercial real estate, but is commonly used for comparison purposes to suggest whether further action at a building may be prudent.

ATC's review of published radon data indicates that the property is located in a county designated by the EPA as Zone 2. Zone 2 areas have a predicted radon concentration of greater than or equal to 2.0 pCi/L and less than or equal to 4.0 pCi/L. According to statistical data provided by EDR, an EPA survey of 12 sites in Riverside County revealed none with radon concentrations in excess of 4.0 pCi/L. Additionally, a state survey of six sites located within the same zip code as the property identified none with radon concentrations in excess of 4.0 pCi/L. Based on these statistics, and the fact that the structures are non-residential, radon is not considered to represent an environmental concern at the property and no additional investigations are recommended at this time.

9.3 Lead in Drinking Water

According to a recent annual water-quality report, the potable water supplied to the property neighborhood, meets all state and federal standards for drinking water, including those for lead.

9.4 Lead-Based Paint (LBP)

Based on the age of the property improvements (post 2006), it is unlikely that LBP has been used in the offices and other commonly occupied areas; however, in industrial settings, painted equipment such as ASTs, piping, and the fire pump equipment, may represent an exception and have elevated levels of lead. As the areas with painted equipment, such as the Water Treatment Building and fire pump room, are not slated for demolition, testing for lead is not recommended at this time. Nonetheless, lead-safe practices should be practiced when conducting any work that might disturb painted surfaces. Lead-based paint lies outside of the scope of ASTM and therefore not considered to represent a *recognized environmental condition*. All painted surfaces at the property appeared to be in good condition.

9.5 Mold Screening

ATC conducted a screening survey for mold conditions at the property. The screening consisted of limited interview, document review (if applicable) and physical observation. ATC spoke with Mr. Ben Kling, Plant Manager at the property since construction activity began circa 2006 (or approximately 13 years). Mr. Kling indicated that there have been no roof leaks significant water-intrusion events, or past occurrences of mold during the time he was associated with the property. Accordingly, there was no prior mold documentation for ATC to review.

During the site reconnaissance, ATC did not observe suspect mold at the property. Minor water stains, most likely from HVAC equipment were noted locally in the Administration building.

9.6 Additional User Requested Services

No additional User requested services were included in the scope of work for this ESA.

10.0 REFERENCES

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11.0 TERMINOLOGY

The following provides definitions and descriptions of certain key terms that may be used in this report. Italics indicate terms that are defined by ASTM Standard Practice E 1527-13. The Standard Practice should be referenced for further detail (such as the precise wording), related definitions or additional explanation regarding the meaning of these or other terms.

recognized environmental condition(s) (REC) - the presence or likely presence of any *hazardous substances* or *petroleum products* in, on, or at a *property*: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a *material threat* of a future release to the environment.

material threat - a physically observable or obvious threat which is reasonably likely to lead to a release that, in the opinion of the environmental professional (EP), is threatening and might result in impact to public health or the environment. An example might include an aboveground storage tank system that contains a hazardous substance and which shows evidence of damage such that it may cause or contribute to tank integrity failure with a release of contents to the environment.

de minimis condition - is a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of the appropriate governmental agencies. An example might include a release of *hazardous substances* or *petroleum products* that could reasonably and foreseeably result in a concentration exceeding the applicable regulatory agency risk-based residential standards or substantial damage to natural resources. The risk of that exposure or damage would represent a threat to human health or the environment. If an enforcement action would be less likely than not, then the condition is considered to be generally not likely the subject of an enforcement action. A condition determined to be *de minimis* is not a *REC* or *controlled recognized environmental condition (CREC).*

historical recognized environmental condition (HREC) - a past release of any *hazardous substances* or *petroleum products* that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a *HREC*, the environmental professional (EP) must determine whether the past release is a *REC* at the time the assessment is conducted (for example, if there has been a change in the regulatory criteria). If the EP considers the past release to be a *REC* at the time the Phase I ESA is conducted, the condition will be reported in Section 1.2 the Findings and Conclusions Summary table as a *REC*.

controlled recognized environmental condition (CREC) - a *recognized environmental condition* resulting from a past release of *hazardous substances* or *petroleum products* that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with *hazardous substances* or *petroleum products* allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitation, institutional controls, or engineering controls). Per E1527-13, a *CREC* will be reported in the Section 1.2 Findings and Conclusions Summary table as a *CREC* and a *REC*.

migrate/migration - refers to the movement of *hazardous substances* or *petroleum products* in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface.

business environmental risk (BER) - refers to a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated per the ASTM standard.

APPENDIX C SOCIOECONOMIC/MONTHLY LABOR FORCE DATA

State of California
April 19, 2019
March 2018 Benchmark

Employment Development Department
Labor Market Information Division
http://www.labormarketinfo.edd.ca.gov
(916) 262-2162

Monthly Labor Force Data for Cities and Census Designated Places (CDP)
March 2019 - Preliminary
Data Not Seasonally Adjusted

Area Name	Labor Force	Employ-ment	Unemployment Number	Unemployment Rate	Census Ratios Emp	Census Ratios Unemp
Riverside County	1,100,000	1,048,600	51,400	4.7%	1.000000	1.000000
Banning city	11,400	10,700	700	5.7%	N/A	N/A
Beaumont city	22,200	21,300	900	4.0%	N/A	N/A
Bermuda Dunes CDP	3,900	3,700	200	4.1%	0.003542	0.003092
Blythe city	6,100	5,800	300	4.7%	0.005514	0.005597
Cabazon CDP	1,500	1,300	200	10.5%	0.001241	0.002952
Calimesa city	3,400	3,200	200	4.8%	0.003092	0.003222
Canyon Lake city	5,700	5,500	200	3.3%	0.005224	0.003595
Cathedral City city	26,200	25,300	900	3.5%	N/A	N/A
Cherry Valley CDP	3,500	3,300	100	4.0%	0.003167	0.002691
Coachella city	19,800	18,000	1,900	9.5%	N/A	N/A
Corona city	84,900	81,800	3,100	3.6%	N/A	N/A
Desert Hot Springs city	11,600	11,000	600	5.5%	N/A	N/A
East Hemet CDP	8,000	7,400	600	7.8%	0.007052	0.012162
Eastvale City city	32,200	31,100	1,100	3.3%	N/A	N/A
El Cerrito CDP	2,400	2,300	100	3.1%	0.002194	0.001443
Hemet city	30,100	28,100	2,100	6.9%	N/A	N/A
Highgrove CDP	2,200	2,000	200	8.0%	0.001941	0.003446
Home Gardens CDP	5,600	5,400	200	3.5%	0.005160	0.003827
Homeland CDP	3,000	2,900	200	5.0%	0.002747	0.002971
Idyllwild Pine Cove CDP	1,400	1,300	0	1.8%	0.001274	0.000475
Indian Wells city	1,800	1,800	0	2.6%	0.001696	0.000931
Indio city	40,400	38,500	1,900	4.8%	N/A	N/A
Jurupa Valley city	48,400	46,300	2,100	4.3%	N/A	N/A
La Quinta city	19,000	18,300	700	3.7%	N/A	N/A
Lake Elsinore city	30,300	28,900	1,400	4.7%	N/A	N/A
Lakeland Village CDP	5,900	5,400	400	7.5%	0.005186	0.008530
Lakeview CDP	1,100	1,000	100	5.7%	0.000998	0.001220
March AFB CDP	300	300	0	4.8%	0.000265	0.000270
Mecca CDP	3,400	3,300	200	4.7%	0.003106	0.003101
Menifee city	39,100	37,200	1,900	4.8%	N/A	N/A
Moreno Valley city	95,500	90,700	4,800	5.1%	N/A	N/A
Murrieta city	55,700	53,600	2,200	3.9%	N/A	N/A
Norco city	11,900	11,400	500	4.4%	N/A	N/A
Nuevo CDP	3,100	2,900	200	5.7%	0.002798	0.003427
Palm Desert city	24,700	23,800	900	3.8%	N/A	N/A
Palm Springs city	23,000	22,100	900	3.9%	N/A	N/A
Perris city	31,000	29,200	1,800	5.8%	N/A	N/A
Rancho Mirage city	6,500	6,200	200	3.7%	0.005944	0.004684

Data Not Seasonally Adjusted

Area Name	Labor Force	Employ-ment	Unemployment Number	Unemployment Rate	Census Ratios Emp	Census Ratios Unemp
Riverside city	155,300	148,700	6,600	4.3%	N/A	N/A
Romoland CDP	800	800	0	2.7%	0.000780	0.000456
San Jacinto city	19,100	17,900	1,200	6.3%	N/A	N/A
Temecula city	55,700	53,600	2,000	3.6%	N/A	N/A
Thousand Palms CDP	2,900	2,800	100	3.5%	0.002629	0.001928
Valle Vista CDP	6,600	6,300	300	5.0%	0.005975	0.006398
Wildomar city	17,700	17,000	800	4.3%	N/A	N/A
Winchester CDP	1,200	1,100	100	7.9%	0.001040	0.001807
Woodcrest CDP	8,400	8,100	300	4.1%	0.007707	0.006686

CDP is "Census Designated Place" - a recognized community that was unincorporated at the time of the 2012-2016 5-Year American Community Survey (ACS).

Notes:
1) Data may not add due to rounding. All unemployment rates shown are calculated on unrounded data.
2) These data are not seasonally adjusted.
3) N/A = Estimate created by Bureau of Labor Statistics

Methodology:
Monthly city labor force data are derived by multiplying current estimates of county employment and unemployment by the relative employment and unemployment shares (ratios) of each city at the time of the 2010-2014 American Community Survey. Ratios for cities were developed from special tabulations based on ACS employment, unemployment, and population and Census population from the Bureau of Labor Statistics. For smaller cities and CDPs, ratios were calculated from published census data.

Monthly CDP's labor force data are derived by multiplying current estimates of county employment and unemployment by the relative employment and unemployment shares (ratios) of each CDP at the time of the 2012-2016 ACS survey. Ratios for CDPs' were developed from special tabulations based on ACS employment and unemployment from the Bureau of Labor Statistics.

This method assumes that the rates of change in employment and unemployment since the 2010-2014/2012-2016 American Community Survey are exactly the same in each city and CDP as at county level (i.e., that the shares are still accurate). If this assumption is not true for a specific city or CDP, then the estimates for that area may not represent the current economic conditions. Since this assumption is untested, caution should be employed when using these data.