F I N A L

Exhaust Emissions Control Plan

West of Devers Upgrade Project
Riverside and San Bernardino Counties, California

Prepared by

Southern California Edison

June 2017

Prepared by

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Exhaust Emissions Control Plan Checklist

Applicable Agencies:

- ☐ Bureau of Indian Affairs
- ☒ Bureau of Land Management
- ☐ California Department of Fish and Wildlife
- ☒ California Public Utilities Commission
- ☐ Coachella Valley Conservation Commission
- ☐ Morongo Band of Mission Indians
- ☐ Riverside County Regional Conservation Authority
- ☐ U.S. Fish and Wildlife Service

Applies in the Following Areas:

- ☒ BLM Lands
- ☒ Morongo Reservation
- ☒ San Bernardino County
- ☒ CV-MSHCP
- ☒ WR-MSHCP

Applies to the Following Project Components:

- ☒ Transmission Line
- ☒ Substations
- ☒ Construction Yards
- ☒ Subtransmission
- ☒ Distribution
- ☒ Telecom

Addresses the Following Measures:

FEIR APM AIR-1	Exhaust Emissions Control Plan
FEIR MM-AQ-1b	Control Off-Road Equipment Emissions

Contents

Acronyms and Abbreviations

APCD	air pollution control district
APM	Applicant Proposed Measure
CARB	California Air Resources Board
EIN	Equipment Identification Number
EPA	U.S. Environmental Protection Agency
FEIR	Final Environmental Impact Report
hp	horsepower
kV	kilovolt
MM	Mitigation Measure
NO_X	nitrogen oxide
PEA	Proponent's Environmental Assessment
PERP	Portable Equipment Registration Program
Plan	Exhaust Emissions Control Plan
Project	West of Devers Upgrade Project
ROW	right-of-way
SCE	Southern California Edison

SECTION 1

Introduction

The purpose of this Exhaust Emissions Control Plan is to provide guidelines for minimizing emissions from West of Devers Upgrade Project (Project) equipment and ensure Southern California Edison's (SCE's) compliance with Mitigation Measure (MM) AQ-1b and Applicant Proposed Measure (APM) AIR-1 from the Final Environmental Impact Report (FEIR; CPUC, 2015), which requires the preparation and implementation of an Exhaust Emissions Control Plan (Plan) for the Project to minimize nitrogen oxide (NO_X) emissions.

APM AIR-1 states, "SCE would prepare an Exhaust Emissions Control Plan to establish a target goal of a project-wide fleet average reduction of 20 percent NO_X compared to the estimated unmitigated emissions as presented in the PEA for applicable diesel-fueled off-road construction equipment of more than 50 horsepower." (CPUC, 2015)

MM AQ-1b states, "Off-road equipment with engines larger than 50 horsepower shall have engines that meet or exceed U.S. EPA/CARB Tier 3 Emissions Standards. Exceptions will be allowed only on a case by case basis for two specific situations: (1) an off-road equipment item that is a specialty, or unique, piece of equipment that cannot be found with a Tier 3 or better engine after a due diligence search; and/or (2) an off-road equipment item that will be used for a total of no more than 10 days." (CPUC, 2015)

Measures for reducing emissions include, but are not limited to, the following: the use of newer model engines meeting U.S. Environmental Protection Agency (EPA) Tier 3 standards if available (or better) or other methods that would achieve Tier 3 standard compliant emissions, including low-emissions diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other similar available options.

This document will be incorporated into contract agreements with construction contractors and suppliers to assure that they are aware of the requirements and the need for the minimization of emissions. The construction crew supervisor(s) that will be assigned to the Project must be familiar with the South Coast Air Quality Management District and California Air Resources Board (CARB) Regulations. SCE and its Construction Monitors will monitor compliance and enforce the conditions of the contract.

SECTION 2

Project Overview

The Project would be located primarily within the existing West of Devers right-of-way (ROW) in incorporated and unincorporated parts of Riverside and San Bernardino Counties. The Project upgrades would:

- Replace the existing 220-kilovolt (kV) transmission lines and associated structures with higher-capacity 2,201-kV transmission lines and new 200-kV structures. Upgrades would occur on approximately 30 miles of the Devers-El Casco line, approximately 14 miles of the El Casco-San Bernardino line, approximately 43 miles of the Devers-San Bernardino line, approximately 45 miles of the Devers-Vista No. 1 and No. 2 lines, approximately 3.5 miles of the Etiwanda-San Bernardino line, and approximately 3.5 miles of the San Bernardino-Vista line.
- Upgrade substation equipment at Devers, El Casco, Etiwanda, San Bernardino, and Vista Substations to accommodate increased power transfer on the 220-kV lines.
- Remove and relocate approximately 2 miles of existing 66-kV subtransmission lines.
- Remove and relocate approximately 4 miles of existing 12-kV distribution lines.
- Install telecommunication lines and equipment for the protection, monitoring, and control of transmission lines and substation equipment.

The existing West of Devers corridor traverses a combination of residential, commercial, agricultural, recreation, and open-space land uses. The existing structures and existing conductor would be removed and replaced primarily within the existing ROW, except for an approximately 3-mile portion of Segment 5 on the Morongo Band of Mission Indians Reservation that would be in the new ROW.

SECTION 3

Required Emission Reduction Measures

In order to minimize exhaust emissions from construction, compliance with the following guidelines are required of all SCE crews and contractors on all Project components:

1. Off-road diesel construction equipment with a rating between 50 and 750 horsepower (hp) are required to use engines compliant with EPA Tier 3 non-road engine standards. Please refer to Appendix C, EPA Off-Road Tier Standards, for detailed information on the EPA tier ratings of equipment based on engine model year and hp.
2. Equipment/vehicles shall not be left idling for periods exceeding 5 minutes.
3. Engines shall be maintained in good working order and according to manufacturer's specifications to reduce emissions.
4. Onsite electrical power connections shall be made available where feasible.
5. Ultra-low-sulfur diesel fuel shall be used.
6. Electric- and gasoline-powered equipment shall be substituted for diesel-powered equipment where feasible.
7. Portable equipment such as electric generators, concrete pumps, wood chippers, etc., that are powered with engines greater than 49 hp are required to be permitted through the local Air Pollution Control District or registered through the California Air Resources Board before they can be brought onto a project site. Please refer to SCE Guidance Documents in Appendix A, SCE Air Quality Guidelines for Portable Equipment and Off-Road Vehicles at Construction Sites.
8. Workers shall be encouraged to carpool to work sites, and/or use public transportation for employee commutes.
9. Stationary diesel-powered equipment and haul truck staging areas shall be located as far as practicable from sensitive receptors.

The emissions-reduction measures described above in numbers 1, 3, 4, 5, and 6 directly relate to measures used for compliance with APM AIR-1 and MM AQ-1b. Number 3 ensures compliance with CARB idling regulations, and the other measures provide additional emissions or emissions impact reductions in addition to off-road equipment emissions reductions.

SECTION 4

Implementation Methods

To ensure compliance with APM AIR-1 and MM AQ-1b, SCE and its contractors will maintain an inventory of all construction equipment used for the Project (see Appendix B, Off-Road Construction Equipment Inventory). The equipment inventory list shall be provided to the CPUC and its Environmental Monitors upon request. In addition, equipment that complies with APM AIR-1 and MM AQ-1b shall be provided with numbered air quality compliance stickers to be displayed at all times, indicating that it has met or exceeds EPA/CARB Tier 3 Emissions Standards prior to being used on the Project.

4.1 Off-Road Diesel-Fueled Equipment Over 50 Horsepower

For off-road diesel-fueled construction equipment over 50 hp, the following items will be recorded on the Off-Road Construction Equipment Inventory, as applicable:

- Description of the type of equipment, manufacturer, and model number
- Engine model year
- Hp
- Tier Level
- CARB Equipment Identification Number (EIN)
- Best Available Control Technology
- Date of the anticipated mobilization of vehicle
- ID number of air quality compliance sticker issued

If additional equipment is planned to be brought onto the Project site after initial construction has begun, then that equipment information will be added to the Off-Road Construction Equipment Inventory and submitted to the SCE prior to mobilization.

Please refer to Appendix C, EPA Off-Road Tier Standards, for detailed information on the EPA Tier ratings of equipment based on engine model year and hp.

4.2 Contingency for Unavailability of Tier 3 or Better

For any pieces of equipment that are unable to be found to meet at least Tier 3 emission standards, SCE or SCE contactors shall include documentation with the equipment logs from at least three local heavy construction equipment rental companies for common off-road construction equipment types (such as water trucks, dozer, graders, loaders, etc.), or two rental companies for specialized transmission construction equipment (such as large bull-wheel tensioners), that indicates that the rental equipment companies do not currently have access to higher-tiered equipment for the given class of equipment. This documentation will be submitted to the CPUC for approval, prior to mobilization.

Additionally, an off-road equipment item that will be used for a total of less than 10 days is not subject to the Tier 3 engine requirement. SCE or SCE contactors shall submit documentation requesting this short-term use exception to the CPUC for approval, prior to mobilization. Equipment use information demonstrating compliance with this 10-day use limitation exception will be included in the construction equipment inventory documentation.

SECTION 5

References

California Public Utilities Commission (CPUC). 2015. *Final Environmental Impact Report, Southern California Edison West of Devers Upgrade Project*. SCH #2014051041. December. http://www.cpuc.ca.gov/environment/info/aspen/westofdevers/toc-feir.htm.

SECTION 6

Revisions

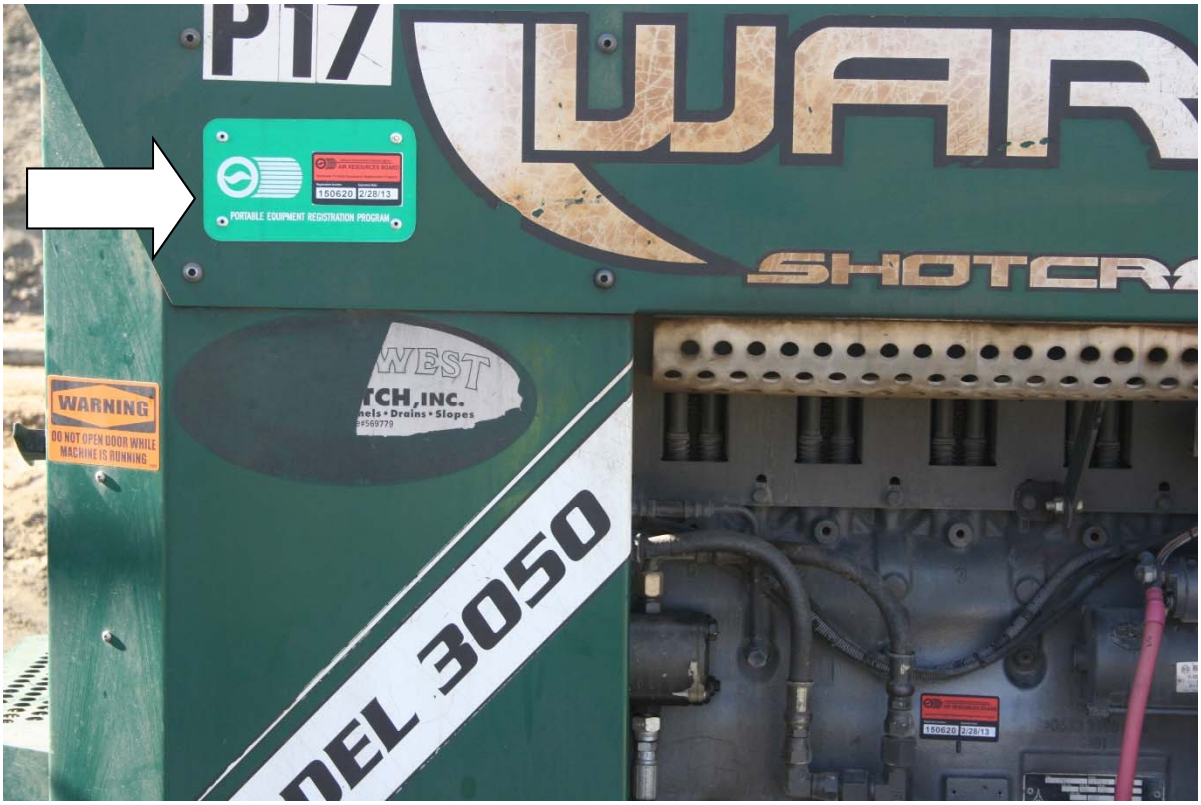
Revisions made to standard text (black ink) should be noted below to document changes in requirements or SCE's approach to this Exhaust Emissions Control Plan.

Date	Description of Revision	Contact

Appendix A
SCE Air Quality Guidelines for Portable Equipment and Off-Road Vehicles at Construction Sites

Portable Internal Combustion Engines

Southern California Edison (SCE) Air Quality Compliance Construction Site Guidelines
West of Devers Upgrade Project
Tammy Yamasaki, SCE Air Quality, 626-633-3345



All portable engines 50 horsepower (hp) and above must have a written permit to operate from the local air pollution control district (APCD) or be registered by California Air Resources Board (CARB) under the Portable Equipment Registration Program (PERP). All fuel types are included (diesel, gasoline, propane, etc.). If there is no nameplate or other engine identification, then it must be removed from the construction site if it appears to be over 10 hp.

If the engine is permitted through the local APCD, then the operator or site manager must have a paper copy of the unexpired written permit on the job site. If not, the equipment must be removed from the construction site immediately.

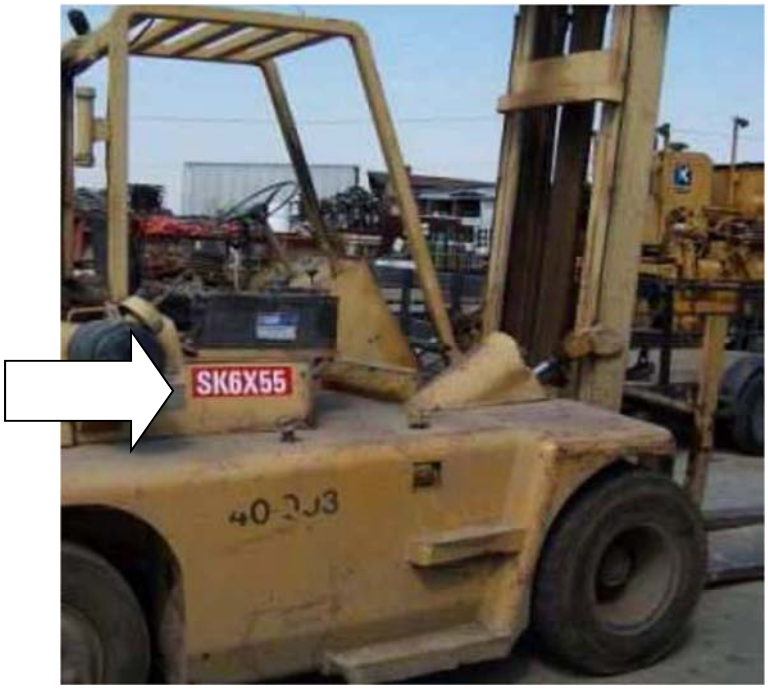
If the engine is registered under PERP, then a metal placard with a legible expiration date and registration number must be affixed to the device as shown above, and the operator or site manager must have a copy of the unexpired registration certificate with operating conditions. If there is no unexpired placard and no unexpired registration certificate, then the equipment must be removed from the construction site immediately.

This applies to all portable engines on the site, including SCE-owned, contractor-owned or rental units.

November 2016

Off-Road Diesel Vehicles

SCE Air Quality Compliance Construction Site Guidelines
West of Devers Upgrade Project
Tammy Yamasaki, SCE Air Quality, 626-633-3345



All self-propelled off-road vehicles with diesel engines 25 hp and above must be registered by the California Air Resources Board (CARB) under the Off-Road Diesel Vehicle Regulation. Equipment examples include bobcats, backhoes, front-end loaders, graders, forklifts, cranes, man-lifts, and similar self-propelled diesel equipment. If the equipment has no nameplate or other engine identification, then it must be removed from the construction site if it appears to be over 5 hp.

All such vehicles must display a red and white CARB Equipment Identification Number (EIN) as shown above. Each character of the EIN must be at least 3 inches tall and 1.5 inches wide. If no EIN is displayed and the owner/operator cannot show proof of CARB fleet registration, then the unit must not be used on the construction site.

Per MM 5.3-1, all off-road vehicles with diesel engines 50 hp and above must meet the highest EPA-certified tiered emissions standards, Tier 3 emissions standards at a minimum.

This applies to all diesel self-propelled vehicles on the site, including SCE-owned, contractor-owned, or rental units.

Appendix B
Off-Road Construction Equipment Inventory

Appendix B

Off-Road Construction Equipment Inventory – Mitigation Measure AQ-1b Compliance

Equipment Description	Manufacturer	Model	Engine Model Year	HP	EIN	BACT	Engine Tier Level	Compliant (Y/N)?	Approximate Mobilization Date	Comments
Backhoe	John Deere	410J	2014	105	JB4A56	Yes	4	Yes	3/22/2016	EXAMPLE
5 Ton Roller	Dynapac	CC1200	2010	39	NA6C47	Yes	3	Yes	3/22/2016	EXAMPLE

Revision History 11/16/2016

Appendix C
EPA Off-Road Tier Standards

Table 1. ARB and USEPA Off-Road Compression-Ignition (Diesel) Engine Standards (NMHC+NOx/CO/PM in g/bhp-hr). When ARB and USEPA standards differ, the standards shown here represent the more stringent of the two.

Maximum horsepower	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015+
<11	See Table 2 footnote (a)					7.8 / 6.0 / 0.75					5.6 / 6.0 / 0.6			5.6 / 6.0 / 0.30[a]							
11≤hp<25						7.1 / 4.9 / 0.60					5.6 / 4.9 / 0.60			5.6 / 4.9 / 0.30							
25≤hp<50	-					7.1 /4.1 / 0.60				5.6 / 4.1 / 0.45				5.6 / 4.1 / 0.22					3.5 / 4.1 / 0.02		
50≤hp< 75						- / 6.9 / - / -[b]				5.6 / 3.7 / 0.30				3.5 / 3.7 / 0.22[e]					3.5 / 3.7 / 0.02[e]		
75≤hp<100														3.5 / 3.7 / 0.30				0.14 / 2.5 / 3.7 / 0.015[b,c]			0.14 / 0.30 / 3.7 / 0.015[b]
100≤hp<175									4.9 / 3.7 / 0.22				3.0 / 3.7 / 0.22								
175≤hp<300									4.9 / 2.6 / 0.15												
300≤hp<600	-					1.0 / 6.9 / 8.5 / 0.40[b]				4.8 / 2.6 / 0.15			3.0 / 2.6 / 0.15[e]				0.14 / 1.5 / 2.6 / 0.015[b,c]			0.14 / 0.30 / 2.2 / 0.015[b]
600≤hp≤750																					
Mobile Machines > 750hp																					0.14 / 2.6 / 2.6 / 0.03[b]
750hp<GEN ≤1200hp	-					1.0 / 6.9 / 8.5 / 0.40[b]							4.8 / 2.6 / 0.15	0.30 / 2.6 / 2.6 / 0.07[b]							0.14 / 0.50 / 2.6 / 0.02[b]
GEN>1200 hp																	0.30 / 0.50 / 2.6 / 0.07[b]				

a) The PM standard for hand-start, air cooled, direct injection engines below 11 hp may be delayed until 2010 and be set at 0.45 g/bhp-hr.
b) Standards given are NMHC/NOx/CO/PM in g/bhp-hr.
c) Engine families in this power category may alternately meet Tier 3 PM standards (0.30 g/bhp-hr) from 2008-2011 in exchange for introducing final PM standards in 2012.
d) The implementation schedule shown is the three-year alternate NOx approach. Other schedules are available.
e) Certain manufacturers have agreed to comply with these standards by 2005.

: Tier 1 : Tier 2 : Tier 3 : Tier 4 Interim / Final