

**Southern California Edison
MESA PTC A.15-03-003**

DATA REQUEST SET A1503003 ED-SCE-Deficiency Letter-01

**To: ENERGY DIVISION
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Title: Environmental Project Manager
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Question NOI-01:

Correct inconsistencies within the various technical reports and other appendices or sections of the PEA. Clearly explain any deviation in the numbers between reports.

Response to Question NOI-01:

SCE Response:

The air quality, greenhouse gas, and noise calculations presented in the PEA were based on Attachment 3-C: Construction Equipment and Workforce Estimates in Chapter 3 Project Description. Attachment 3-C: Construction Equipment and Workforce Estimates indicates that 20 haul trucks were assumed for Phase 1, with each operating for 10 hours per day. The numbers of actual truck trips were further defined within the air quality model, so that trips can be spread out over an entire phase based on the activities taking place. The four truck trips that the California Public Utilities Commission notes in this request are water trucks associated with dust suppression activities, but this presents only one type of truck trip.

Based on engineering refinements of the grading phases, as provided in Table 1: Grading Quantities, Workforce, and Vehicle Trips by Construction Phase at Mesa Substation, the air quality emissions, greenhouse gas emissions, and noise levels associated with the Proposed Project have been remodeled. These changes include:

- duration of phase 1 grading and the start of construction laydown yard changed; the original start (June) was moved to April;
- amount of cy of cut/fill for grading were refined based upon further engineering;
- refined number of truck trips for phases 1, 2, and 3; and
- import and export quantities for loop in construction have been revised base on duct bank

dimensions and quantities.

Air quality and greenhouse gas emissions associated with the Proposed Project were remodeled using the California Emissions Estimator Model (CalEEMod), version 2013.2.2, during which the changes described in these deficiency request responses were incorporated. The revised equipment list is provided in the attachment entitled Updated Construction Equipment List. In addition to the revised grading phases and associated truck trips, some dimensions of the subtransmission and distribution duct banks and vaults have been revised to more accurately reflect the planned construction activities. Duct bank and vault dimensions used for the air quality model are shown in Table 2: Duct Bank and Vault Assumptions.

Table 1: Grading Quantities, Workforce, and Vehicle Trips by Construction Phase at Mesa Substation

Phase	Fill Quantity (CY)	Cut Quantity (CY)	Import/Export Quantity (CY)	Source/Destination	Maximum Number of Construction Workers	Maximum Number of Trips per Day		
						Grading Trips	Other Truck Trips	Personal Vehicle Trips
1	250,000	150,000	100,000	Quarry within 45 miles of the site	242	100	430	242
2	5,000	70,000	(65,000)	Stockpile for Phase 3	84	--	125	84
3	325,000	375,000	(50,000)	Landfill within 45 miles of the site	155	100	196	155
Total	580,000	595,000	--	--	--	--	--	---

Notes: Export values in Phase 2 are included in the cut values in Phase 3. Phase 3 raw cut volume is 310,000 CY. “--” indicates “not applicable.”

Table 2: Duct Bank and Vault Assumptions

Structure	Metric	PEA Value (feet/quantity)	Data Request #1 Value (feet/quantity)
Subtransmission Duct Bank	Width	10	2
	Depth	7	2.5
	Length	26,700	18,000
Subtransmission Vault	Width	10	10
	Depth	8	8
	Length	20	20
	Quantity	21	15
Distribution Duct Bank	Width	2	2
	Depth	2.5	2.5
	Length	5,000	1,200
	Width	7	7

Distribution Vault	Depth	8	8
	Length	18	18
	Quantity	3	4

Note: Items shaded grey represent a change from the PEA.

The resulting output reports have been provided in the attachment entitled CalEEMod Output Reports. The attachment entitled Revised Air Quality and Greenhouse Gas Emissions provides updated air quality and greenhouse gas emissions from the construction phase of the Proposed Project. In addition, helicopter emissions were also inadvertently omitted from the analysis presented in the PEA. The revised air quality and greenhouse gas emissions presented in the attachment entitled Revised Air Quality and Greenhouse Gas Emissions now account for helicopter use.

When the original modeling results from Section 4.3 Air Quality are compared to the updated results in the attachment entitled Revised Air Quality and Greenhouse Gas Emissions, the Proposed Project now generates peak uncontrolled daily $PM_{2.5}$ emissions that exceed the applicable South Coast Air Quality Management District (SCAQMD) thresholds. However, with the implementation of the applicant-proposed measures (APMs) described in Section 4.3 Air Quality, the controlled $PM_{2.5}$ emissions would be below the applicable thresholds. Similar to the analysis presented in the PEA, nitrogen oxide (NO_x) and carbon monoxide (CO) emissions continue to be the only two pollutants that exceed the SCAQMD thresholds with the implementation of APMs. As a result, the impact analysis presented in the PEA adequately addresses the revised modeling results, and no change in the significance impact levels will result.

As in the PEA, localized emissions were reanalyzed using the SCAQMD's Localized Significance Threshold (LST) methodology. Similar to the PEA, controlled NO_x emissions during construction of Mesa Substation continue to be the only scenario where the LSTs are exceeded. As a result, the impact analysis presented in the PEA adequately addresses the revised modeling results, and no change in the significance impact levels will result.

For greenhouse gas emissions, the results of the modeling show an increase in carbon dioxide equivalent (CO_2e) amortized over 30 years, which increases from 864 metric tons per year, to 962 metric tons per year. The revised emissions continue to be below the SCAQMD threshold of 10,000 metric tons of CO_2e .

Based on the revised grading trips provided in Table 1: Grading, Quantities, Workforce, and

Vehicle Trips by Construction Phase at Mesa Substation and the equipment list provided in the attachment entitled Updated Construction Equipment List, the anticipated noise levels from construction of the Proposed Project were reevaluated. As in the PEA, the revised noise analysis was completed for the worst-time period utilizing the greatest amount and loudest equipment (Phase 1). The following assumptions were used to calculate noise levels:

- As a worst case, it will take a haul and dump truck 10 minutes to navigate each anticipated trip. This is calculated assuming the truck has to travel 3,500 feet and will be traveling at approximately 5 miles per hour.
- Trucks, with the exception of concrete trucks, will be shut down when they are queued on site, but 2 minutes of idle time per trip is anticipated to turn the truck on and shut the truck down.
- As a worst case, it will take a concrete truck 37 minutes to navigate each anticipated trip. The method of determining this is the same as the haul and dump trucks above, plus 8 minutes for the concrete truck to pour the concrete.
- Based on the assumptions above, the usage factor for dump and haul trucks is 10 minutes per trip/60 minutes per hour, or 17 percent.
- The percent usage factor for concrete trucks is 18 minutes per trip/60 minutes per hour, or 30 percent.
- It is assumed there is the possibility of pickup trucks being used to drive around the site above and beyond the identified trips. For these trucks we used the original calculations using equipment quantity and anticipated duration of use rather than the identified trips per hour to determine their noise impact.

Using these assumptions, the noise levels associated with the individual phases were re-calculated as shown in Revised Noise Levels of Substation Construction Equipment, which revises Appendix A of the February 2015 Noise Report included in the PEA. Based on the changes to grading phases and the revised truck trips, construction noise for the Proposed Project was remodeled. Noise associated with construction increased by approximately 1 decibel (dB) during Phase 1 for certain noise contours. The attached figure entitled Revised Construction Noise Contours and table entitled Revised Calculated Noise Levels from Construction show these changes.

The February 2015 Noise Technical Report uses the construction activity in the fourth quarter of 2016 as a worst-case scenario to evaluate construction noise at the noise sensitive receptors. This response documents changes in the anticipated noise for specific activities in that quarter of 2016 (Phase 1) due to the updated phasing and equipment usage. The resultant logarithmic sum of the combined sound level of all Phase 1 activities results in an increase of approximately 1 dB in overall noise levels. However, this incremental increase does not change the construction noise impact conclusions of the PEA.



Revised Calculated Noise Levels (04-23-15S).docx



Revised Noise Levels Construction Equipment (04-23-15S).docx



Updated Construction Equipment List (04-23-15S).docx



Revised Air Quality and GHG Emissions (04-23-15S).docx



CalEEMod Output Reports (04-22-15S).pdf



Mesa Grading Phases (04-23-15S).pdf



Revised Construction Noise Contours (04-23-15S).pdf