

February 22, 2021

Page 64

- D-115  
cont. ↑ measure is not enforceable and lacks specific performance criteria that defines “where possible”, or that reduction of disturbed areas is even feasible, this measure violates CEQA and the DEIR fails to support with evidence that impacts will be mitigated below the threshold of significance.
- D-116 ↓
- b. *APM AIR-3: Use Water Trucks or Sprinkler Systems to Prevent Airborne Dust from Leaving the Site.*
- This measure requires the “use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site.” This is too general to be implemented and enforced. CEQA requires an EIR identify mitigation measures which are both effective and enforceable. “Effective” means the measures can reasonably be expected to avoid or reduce a potential significant impact.<sup>348</sup> “Enforceable” means the measures are stated as conditions of approval in a permit, agreement or other legally binding document or incorporated into a plan, policy, regulation, or project design.<sup>349</sup>
- APM AIR-3 would allow water trucks to drive along roads once a day or less frequently without accessing off-road areas where soil is being disturbed. Dr. Fox explains that this is inadequate to reduce impacts, and recommends that, at a minimum, water should be applied every 4 hours within 100 feet of a structure being demolished, every 3 hours to disturbed areas and to disturbed soils after demolition is completed, and at the end of each day of cleanup.<sup>350</sup> Soil should be wet both before and while digging and workers should stay upwind of digging, when feasible.<sup>351</sup> Sprinkler systems should be specified for areas inaccessible by water trucks. Further, Dr. Fox recommends that watering frequency should be increased when wind speeds exceed levels known to raise dust in the local area, typically around 15 mph at the Project site. An on-site wind measuring station should be required to monitor wind speed.<sup>352</sup>

plan for active habitat management of open space preserve).

<sup>348</sup> 14 CCR § 15126.4(a)(1)(A).

<sup>349</sup> 14 CCR § 15126.4(a)(1)(A).

<sup>350</sup> Fox Comments, p. 62; SCAQMD, Table XI-A and WRAP Handbook, Table 3-7.

<sup>351</sup> Fox Comments, p. 62; CDPH, Preventing Valley Fever in Construction Workers, pdf 44: <https://www.cdph.ca.gov/Programs/CCDCPHP/DEODC/OHB/CDPH%20Document%20Library/CDPH-VF-Webinar-Slides.pdf>.

<sup>352</sup> Fox Comments, p. 62. SCAQMD, Table XI-A. 3287-016aep

February 22, 2021  
Page 65

D-116 ↑ This measure does not specify a method to verify that the use of water trucks  
cont. prevents airborne dust from leaving the site. Dr. Fox recommends that real time  
monitoring for tiny Valley Fever spores should be required at all construction site  
boundaries.<sup>353</sup>

D-117 ↑ This measure also fails to address ground areas that are planned to be  
reworked at dates more than one month after initial grading. These areas should  
be sown with a fast germinating, non-invasive grass seed and watered until  
vegetation is established. All disturbed soil areas not subject to revegetation should  
be stabilized using approved chemical soil binders, jute netting, or other methods.

D-118 ↑ **X. THE DEIR FAILS TO ACCURATELY ANALYZE, QUANTIFY, AND  
MITIGATE POTENTIALLY SIGNIFICANT IMPACTS FROM  
GREENHOUSE GAS EMISSIONS**

CEQA requires the lead agency to use scientific data to evaluate GHG  
impacts directly and indirectly associated with a project.<sup>354</sup> The analysis must  
“reasonably reflect evolving scientific knowledge and state regulatory schemes.”<sup>355</sup>  
In determining the significance of GHG emission impacts, the agency must consider  
the extent to which the project may increase GHG emissions compared to the  
existing environmental setting and the “extent to which the project complies with  
regulations or requirements adopted to implement a statewide, regional, or local  
plan for the reduction or mitigation of greenhouse gas emissions.”<sup>356</sup>

<sup>353</sup> Fox Comments, p. 62.

<sup>354</sup> See 14 C.C.R. § 15064.4(a) (lead agencies “shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project); 14 C.C.R. § 15064(d) (evaluating significance of the environmental effect of a project requires consideration of reasonably foreseeable indirect physical changes caused by the project); 14 C.C.R. § 15358(a)(2) (defining “effects” or “impacts” to include indirect or secondary effects caused by the project and are “later in time or farther removed in distance, but are still reasonably foreseeable” including “effects on air”); CEQA Guidelines, Appendix G, § VIII: Greenhouse Gas Emissions (stating agencies should consider whether the project would “generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.”).

<sup>355</sup> 14 C.C.R. § 15064.4(b); see also *Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 504 (holding that lead agencies have an obligation to track shifting regulations and to prepare EIRs in a fashion that keeps “in step with evolving scientific knowledge and state regulatory schemes”).

<sup>356</sup> 14 C.C.R. § 15064.4(b)(1); (3).  
3287-016aep



February 22, 2021  
Page 66

#### A. The DEIR Fails to Adequately Analyze GHG Impacts

D-119 The DEIR concludes that the Project's GHG impacts would be less than significant without mitigation.<sup>357</sup> The DEIR further states the impacts are negligible and substantially lower than the SLOCAPCD's operational significance thresholds.<sup>358</sup> DEIR Table 4.8-1 indicates that the major source of GHG emissions is construction, primarily "ground-based construction" (2,025 MT CO<sub>2</sub>e) and helicopter emissions (699 MT CO<sub>2</sub>e).<sup>359</sup> A secondary source of operational emissions is sulfur hexafluoride (SF<sub>6</sub>) from Project equipment (96 MT CO<sub>2</sub>e).<sup>360</sup> Dr. Fox concludes that these emissions are underestimated and exclude the major source of Project GHG emissions, operation of the BESS facilities. The DEIR fails as an informational document by failing to provide accurate modeling of the GHG impacts.

##### 1. Operational GHG Emissions

D-120 The Project will emit three sources of GHG emissions: (1) sulfur hexafluoride (SF<sub>6</sub>) used in Project equipment; (2) helicopters used in construction of power lines; (3) charging of BESSs.<sup>361</sup> The DEIR fails to support its analysis of the SF<sub>6</sub> emissions and omits the latter two sources of emissions from its analysis. These informational deficiencies violate CEQA.

Dr. Fox and Mr. Marcus determined that the net operational emission increases from the Project are: 60.93 tons of CO<sub>2</sub>e per year; 0.48 pounds of SO<sub>2</sub> per year; and 4.30 pounds of NO<sub>x</sub> per year.<sup>362</sup> The proposed Project as submitted to the CPUC included provisions for three new distribution circuits with a total load-serving capacity of approximately 28 MW. While the DEIR admits that there will be no need for these circuits through at least 2029, based on the current Paso Robles DPA load forecast,<sup>363</sup> it also says that PG&E anticipates needing new distribution capacity within 15 years. Assuming that there would eventually be 28 MW of new storage built in lieu of the proposed new distribution circuits from the Estrella substation, and assuming that storage would operate comparably to

<sup>357</sup> DEIR, pp. 4.8-6.

<sup>358</sup> DEIR, p. 4.3-18.

<sup>359</sup> DEIR, p. 4.8-4.

<sup>360</sup> DEIR, Table 4.8-1, pdf 407.

<sup>361</sup> Fox Comments, p. 81.

<sup>362</sup> Fox Comments, p. 73.

<sup>363</sup> DEIR, p. 2-12, Table 2-5.  
3287-016aep

February 22, 2021

Page 67

D-120  
cont.

existing storage during the great majority of hours when it was not being dispatched to meet local reliability needs, Dr. Fox and Mr. Marcus conclude that the total incremental GHG emissions attributable to the Project would be 28 times the annual emissions of 60.93 tons of CO<sub>2e</sub> per MW calculated above, or **1,552 MT CO<sub>2e</sub>/yr.**<sup>364</sup> Similarly, they conclude that the NO<sub>x</sub> emissions attributable to the Project would be 28 times the annual emissions of 4.30 lb/yr calculated above, or **120.4 lb/yr.**<sup>365</sup> These emissions are significant and unmitigated. A revised DEIR must be circulated to disclose these significant GHG emissions and mitigate the impacts from increased emissions.

### B. The DEIR Fails to Include Adequate GHG Mitigation Measures

D-121

The DEIR fails to adopt all feasible mitigation measures to reduce the Project's significant greenhouse gas ("GHG") impacts to less than significant levels before declaring the impacts "significant and unavoidable." This violates CEQA's requirement that "lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring and reporting, of mitigating the significant effects of greenhouse gas emissions."<sup>366</sup> In *Russel Covington*, the court determined the EIR was deficient due to its conclusory responses to comments proposing specific mitigation measures to address fugitive emissions of Reactive Organic Gas ("ROG") that exceeded the threshold of significance, and because its rejection of those proposed measures was not supported by substantial evidence or reasoned explanation showing they were infeasible.<sup>367</sup>

D-122

Before it can approve the Project, the CPUC must certify the Project's Final EIR and make mandatory CEQA findings. Those findings must include (1) that the Final EIR complies with CEQA, (2) that the City has mitigated all significant environmental impacts to the greatest extent feasible, and (3) that any remaining significant environmental impacts are acceptable due to overriding considerations.<sup>368</sup> Where, as here, the Project will have a significant effect on the environment, the CPUC may not approve the Project unless it finds that it has "eliminated or substantially lessened all significant effects on the environment

<sup>364</sup> Total GHG emissions from operating the BESSs = (60.93 ton/yr/MW)\*28 MW\*(0.91 MT/ton) = **1,552 MT/yr.**

<sup>365</sup> Fox Comments, p. 86.

<sup>366</sup> 14 CCR § 15126.4(c).

<sup>367</sup> *Covington*, 43 Cal.App.5th at 867.

<sup>368</sup> 14 CCR sections 15090, 15091.

3287-016aep

February 22, 2021  
Page 68

D-122  
cont. ↑

where feasible” and that any unavoidable significant effects on the environment are “acceptable due to overriding concerns.”<sup>369</sup>

The DEIR estimates that the Project’s operational GHG emissions would be negligible and substantially lower than the SLOCAPCD’s operational significance thresholds. The DEIR deemed these impacts less than significant.

The DEIR states that like the Project, GHG emissions from Alternatives would be largely one-time, construction-related emissions. The DEIR determined that total construction emissions would be 2,6724 metric tons of carbon dioxide equivalents (“MT CO<sub>2</sub>e”). The total annualized emissions would be 187 MT CO<sub>2</sub>e. ROG and NO<sub>x</sub> emissions would exceed significance thresholds, even with implementation of Mitigation measure AIR-1, and the impact remains significant and unavoidable.

Commenters reviewed the Project’s proposed GHG mitigation measures, and concluded that the DEIR fails to require all feasible mitigation available to reduce the Project’s GHG impacts.<sup>370</sup>

D-123

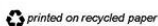
The DEIR must be revised and recirculated to consider alternative mitigation measures and incorporate all feasible measures identified as binding mitigation for the Project. Only if the Project’s GHG impacts remain significant after requiring all such feasible mitigation can the CPUC consider declaring the Project’s GHG impacts to be significant and unavoidable.

D-124 ↓

**XI. THE DEIR FAILS TO ADEQUATELY ANALYZE, QUANTIFY AND MITIGATE SIGNIFICANT IMPACTS FROM NOISE**

The DEIR deemed impacts from helicopter noise significant and unavoidable. Mitigation measures are insufficient to reduce noise levels to those allowed under the San Luis Obispo County General Plan Noise Element.<sup>371</sup> Unlike construction noise, helicopters noise is not exempt from the County of San Luis Obispo noise regulations.<sup>372</sup>

<sup>369</sup> PRC § 21081; 14 CCR § 15092(b)(2)(A) & (B).  
<sup>370</sup> Fox Comments, p. 87-88.  
<sup>371</sup> County of San Luis Obispo General Plan, Noise Element, May 1992, Resolution 92-227.  
<sup>372</sup> San Luis Obispo County, CA Noise Ordinance § 23.06.042.  
 3287-016aep



February 22, 2021  
Page 69

D-124  
cont.

Noise sensitive receptors in proximity to the Project site and distribution line segment include numerous residences and a recreation area, the Hunter Ranch Golf Course.<sup>373</sup> Sensitive receptors within 1,427 feet of helicopter landing zones or pole installation sites would be subjected to noise levels exceeding the FTA's recommended significance threshold.<sup>374</sup> Likewise, all sensitive receptors along or within 1,304 feet of the flight path would be subject to level flight noise in excess of 90 dBA.<sup>375</sup> The most severe impacts associated with helicopter activities would be those along the reconductoring segment, where there are numerous residences in close proximity to the existing 70 kV power line and construction work areas.<sup>376</sup>

There are numerous residences within 50 feet of the potential work areas for the reconductoring segment. There are residences as close as 100 feet to planned helicopter landing zones and helicopters operating above pole installation locations could be as close as about 250 feet to residences.<sup>377</sup> At this distance, helicopter noise levels could be in range of about 83 to 87 dBA.<sup>378</sup> Ground level idling is below 90 dBA at all distances.<sup>379</sup> Helicopter activities may occur approximately 132 days during the 18-month construction period for the substation and the 70 kV power line.<sup>380</sup>

D-125

As stated previously, before it can approve the Project, the CPUC must certify the Project's Final EIR and make mandatory CEQA findings. Those findings must include (1) that the Final EIR complies with CEQA, (2) that the City has mitigated all significant environmental impacts to the greatest extent feasible, and (3) that any remaining significant environmental impacts are acceptable due to overriding considerations.<sup>381</sup> Where, as here, the Project will have a significant effect on the environment, the CPUC may not approve the Project unless it finds that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns."<sup>382</sup>

<sup>373</sup> DEIR, p. 4.13-25.

<sup>374</sup> DEIR, p. 4.13-17.

<sup>375</sup> DEIR, p. 4.13-17.

<sup>376</sup> DEIR, p. 4.13-17.

<sup>377</sup> PEA, 3.12-20.

<sup>378</sup> *Id.*

<sup>379</sup> DEIR, p. 4.13-17.

<sup>380</sup> DEIR, p. 2-78.

<sup>381</sup> 14 CCR sections 15090, 15091.

<sup>382</sup> PRC § 21081; 14 CCR § 15092(b)(2)(A) & (B).  
3287-016aep

February 22, 2021

Page 70

- D-125 cont. ↑ The DEIR did not detail why operating helicopters in close proximity to noise-sensitive receptors is unavoidable. The DEIR merely states that “[n]o other feasible mitigation is available to reduce these impacts” to a less-than-significant level.<sup>383</sup> This statement is conclusory and lacks substantial evidence to support it. The DEIR fails as an informational document because it does not sufficiently analyze, mitigate, or consider alternatives to helicopter use during construction.
- D-126 XII. THE DEIR FAILS TO ADEQUATELY ANALYZE CUMULATIVE IMPACTS
- CEQA requires an EIR’s cumulative impacts analysis evaluate the incremental impact of the project in conjunction with, or collectively with, other closely related past, present, and reasonably foreseeable probable future projects.<sup>384</sup> “Cumulative impacts” are defined as “two or more individual effects, which, when considered together, are considerable or which compound or increase other environmental impacts.”<sup>385</sup> The purpose of this requirement is to avoid “piecemeal” approval of projects without consideration of the total environmental effects the project would have when taken together.<sup>386</sup> The adequacy of an EIR’s discussion of cumulative impacts is determined by standard of practicality and reasonableness.<sup>387</sup>
- D-127 ↓ A. The DEIR Fails to Adequately Analyze Cumulative Agricultural Impacts
- The DEIR correctly determines that the Project would have significant cumulative impacts on the loss of important farmland in San Luis Obispo County.<sup>388</sup> However, the cumulative impacts analysis is inadequate because it is too general. “The analysis should not be so general that the potential combined impacts of the project and a key nearby project are not disclosed.”<sup>389</sup> In *City of Long Beach v. City of Los Angeles*, the court held that the fact that “CEQA does not require quantified

<sup>383</sup> DEIR, p. 4.13-18.<sup>384</sup> 14 CCR § 15355(b); *City of Long Beach v. Los Angeles Unified School Dist.* (2009) 176 Cal.App.4th 889, 905.<sup>385</sup> 14 CCR § 15355.<sup>386</sup> Cecily Talbert Barclay and Matthew S. Gray, *California Land Use and Planning Law* (Solano Press, 37th ed. 2020) p. 180.<sup>387</sup> *Environmental Protection & Information Center v. California Dept. of Forestry & Fire Protection* (2008) 44 Cal.4th 459, 525; 14 CCR § 15130(b).<sup>388</sup> DEIR, p. 6-21.<sup>389</sup> *City of Long Beach v. City of Los Angeles* (2018) 19 Cal.App.5th 465, 490. 3287-016aep

February 22, 2021  
Page 71

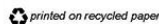
D-127 cont. ↑ analysis does not mean that all meaningful information on a subject can be omitted from an EIR’s cumulative impacts analysis.”<sup>390</sup> Here, the DEIR is inadequate because it omits meaningful information to determine the cumulative impact on agricultural resources.

D-128 The DEIR only includes the Paso Robles Gateway Project. The DEIR fails to list any other projects that might have a cumulative impact on conversion of important farmland. CEQA Guidelines section 15130 require that an adequate cumulative impact analysis include a list of the projects producing related or cumulative impacts, a summary of the expected environmental impacts from those projects and a reasonable analysis of the cumulative impacts of the relevant projects.<sup>391</sup> When using a list approach, the EIR should define the relevant area affected and provide a reasonable explanation for the geographic limitation used.<sup>392</sup> The DEIR does not clarify why projects farther than 0.8 miles away were not included in cumulative impacts, where the loss of agricultural resources in San Luis Obispo County cumulatively impacts the whole County. The DEIR’s explanation that only projects within the “Activity Area” were considered is insufficient. “Activity Area” includes the immediate areas in which physical actions that are part of the Proposed Project, reasonably foreseeable distribution components and alternatives would take place. The geographic limitation is not sufficient to explain why the loss of important farmland was not determined to be the entire County of San Luis Obispo. The DEIR should be revised and recirculated to address cumulative impacts with a larger geographic limitation or provide a reasonable explanation for the geographic limitation chosen. The DEIR should be revised in accordance with the California Supreme Court’s holding in *Laurel Heights Improvement Association v. Regents of University of California*, that an EIR must be recirculated when the draft EIR was so fundamentally inadequate and conclusory that meaningful public review and comment were precluded.<sup>393</sup>

D-129 ↓

D-130 Further, the DEIR states that the impact from “other changes in the existing environment that, because of their location or nature, could result in conversion of Farmland to nonagricultural use” is less than significant.<sup>394</sup> This statement is not

<sup>390</sup> *City of Long Beach v. City of Los Angeles* (2018) 19 Cal.App.5th 465, 490.  
<sup>391</sup> *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 729.  
<sup>392</sup> *Cecily Talbert Barclay and Matthew S. Gray, California Land Use and Planning Law* (Solano Press, 37th ed. 2020) p. 181.  
<sup>393</sup> *Id.* at 190; *Laurel Heights Improvement Association v. Regents of University of California* (1992) 6 Cal. 4th 1112, 1114.  
<sup>394</sup> DEIR, p. 4.2-15.  
 3287-016aep





February 22, 2021  
Page 72

D-130  
cont.

supported by substantial evidence. The DEIR further states that “with increasing urbanization and development, there is potential for loss of Farmland to non-agricultural uses.”<sup>395</sup> This impact should not be deemed less than significant.

**B. The DEIR Fails to Adequately Analyze Cumulative Biological Impacts**

D-131

The DEIR concludes that “[t]he Proposed Project, reasonably foreseeable distribution components, and alternatives would not make a cumulatively considerable contribution to this significant cumulative impact. The contribution of the Proposed Project, reasonably foreseeable distribution components, and alternatives cumulative impact would be less than significant with mitigation.”<sup>396</sup> This statement does not comport with the substantial evidence in the DEIR that provides: 1) the Project would result in significant impacts on a suite of sensitive biological resources;<sup>397</sup> 2) impacts from the Proposed Project (and all alternatives), in combination with impacts from other projects, would result in a significant cumulative impact on biological resources;<sup>398</sup> 3) there is potential for the Project to have a cumulatively considerable incremental contribution to the significant cumulative impact.<sup>399</sup>

D-132

The DEIR provides that the Project’s significant impacts would be reduced to a less-than-significant level with implementation of the APMs and mitigation measures identified in Section 4.4 of the DEIR and these measures would ensure that impacts on protected species, communities, and habitats are reduced to a level that would protect their continued existence.<sup>400</sup> The APMs and mitigation measures are designed to reduce significant impacts not eliminate the impacts entirely.<sup>401</sup>

Mr. Cashen determined that there would be residual impacts after implementation of all APMs and mitigation measures.<sup>402</sup> For example, because the DEIR’s compensatory habitat requirement is limited to impacts to blue oak

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<sup>395</sup> DEIR, p. 4.2-15.  
<sup>396</sup> DEIR, p. 6-22.  
<sup>397</sup> DEIR, p. 6-22.  
<sup>398</sup> DEIR, p. 6-22.  
<sup>399</sup> DEIR, Table 6-3.  
<sup>400</sup> DEIR, p. 6-22.  
<sup>401</sup> Cashen Comments, p. 14.  
<sup>402</sup> Cashen Comments, p. 14.  
3287-016aep



February 22, 2021  
Page 73

D-132  
cont.

woodland, there would be residual impacts to special-status species associated with grasslands and agricultural lands.<sup>403</sup> Similarly, there may be residual impacts on the golden eagle and other special-status birds because the DEIR does not require compensatory mitigation for fatalities caused by electrocutions and collisions with the new power line facilities.<sup>404</sup> Whereas these residual impacts may not rise to the level of significance at the Project-level, they may be significant at the cumulative level when combined with the residual impacts of other projects.<sup>405</sup> For example, the DEIR notes that the impact on avian fatalities would not be limited to the Project, but rather, that the Project would incrementally increase a fatality risk that already exists in the area.<sup>406</sup> The Project’s contribution to this potentially significant cumulative impact is cumulatively considerable because it would place seven miles of new power lines in an area that supports foraging raptors, and that has multiple golden eagle nests.<sup>407</sup>

Mr. Cashen determined that none of the DEIR’s biological resource mitigation measures are designed to alleviate the cumulative impact. The APMs and mitigation measures do not address potentially significant cumulative impacts, and CPUC’s conclusion that the Project’s contribution to those cumulative impacts would be less than cumulatively considerable is not supported by substantial evidence.

D-133

**XIII. THE DEIR FAILS TO ADEQUATELY ANALYZE SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES**

**A. The DEIR Fails to Adequately Analyze Significant Irreversible Agricultural Impacts**

The Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use is a significant irreversible environmental change. The loss of agricultural land beneath the substation is an irreversible environmental change under Section 15126.2(d) of the CEQA Guidelines. This change “generally commits future generations to similar uses.”<sup>408</sup> The Project also involves uses that may cause “irreversible damage...from

<sup>403</sup> See DEIR, Table 4.4-1.  
<sup>404</sup> Cashen Comments, p. 14.  
<sup>405</sup> Cashen Comments, p. 14.  
<sup>406</sup> DEIR, p. 4.4-50.  
<sup>407</sup> DEIR, Table 4.4-1.  
<sup>408</sup> 14 CCR § 15126.2(d).  
3287-016aep



February 22, 2021

Page 74

D-133  
cont. ↑ environmental accidents associated with the project.<sup>409</sup> Significant irreversible changes were not considered in the DEIR with respect to agricultural impacts. The DEIR should be revised and recirculated to include impacts to agricultural resources as a significant irreversible agricultural impact from the Proposed Project, Alternatives PLR-1A, PLR-1C, and SE-PLR-2.

D-134 ↓ **B. The DEIR Fails to Adequately Analyze Significant Irreversible Impact from Hazards**

The DEIR fails to adequately analyze impacts from battery handling and transportation accidents and battery disposal. Dr. Fox determined that transportation of batteries could result in crush or puncture damage, possibly leading to the release of electrolyte material along transport routes or in storage.<sup>410</sup> Dr. Fox further determined that such releases would result in significant irreversible changes because irreversible damage could result from a potential environmental accident associated with the Project.<sup>411</sup> The DEIR provides that “significant irreversible changes from accidents are not expected.”<sup>412</sup> This statement is not supported by substantial evidence.

CEQA Guidelines Section 15126.2(d) requires discussion of “significant irreversible environmental changes which would be caused by the proposed project should it be implemented.”<sup>413</sup> The CEQA Guidelines provide further that “irreversible damage can result from environmental accidents associated with the project.”<sup>414</sup>

Lithium-ion batteries are sensitive to damage, especially during handling and transport.<sup>415</sup> They are also sensitive to high ambient temperatures,<sup>416</sup> which will be experienced by the Project’s batteries as they will likely have to pass through sensitive biological habitat. Battery accidents frequently occur during handling,

<sup>409</sup> *Id.*

<sup>410</sup> Fox Comments, p. 60.

<sup>411</sup> 14 CCR § 15126.2(d); DEIR, p. 6-2.

<sup>412</sup> DEIR, p. 6-3.

<sup>413</sup> 14 CCR § 15126.2(d).

<sup>414</sup> 14 CCR § 15126.2(d).

<sup>415</sup> Kjell-Arne Jonsson, The Dangerous Consequences of Taking Shortcuts When Shipping Lithium-Ion Batteries, March 9, 2018; <http://info.nefab.com/lib-blog/lithium-ion-batteries-shipping-shortcuts>.

<sup>416</sup> Allianz Risk Consulting, Lithium-Ion Batteries, Risk Bulletin, 2017; <https://www.agcs.allianz.com/content/dam/onemarketing/agcs/agcs/pdfs-risk-advisory/risk-bulletins/ARC-Lithium-Ion-Batteries.pdf>.

3287-016aep

February 22, 2021  
Page 75

D-134  
cont. ↑ loading, and unloading in warehouses and during transportation.<sup>417</sup> The DEIR fails to discuss the risk of accidents during battery storage, handling, and transportation to the site and thus fails as an informational document under CEQA. A revised EIR is necessary to adequately analyze all impacts from battery storage and transportation.

#### XIV. CONCLUSION

D-135 ↓ For the reasons discussed above, the DEIR for the Project remains wholly inadequate under CEQA. It must be thoroughly revised to provide legally adequate analysis of, and mitigation for, all of the Project's potentially significant impacts. These revisions will necessarily require that the DEIR be recirculated for public review. Until the DEIR has been revised and recirculated, as described herein, the CPUC may not lawfully approve the Project.

Thank you for your attention to these comments. Please include them in the record of proceedings for the Project.

Sincerely,



Kelilah D. Federman  
Associate Attorney

KDF:acp  
Attachments

<sup>417</sup> FAA Office of Security and Hazardous Materials Safety, Lithium Batteries & Lithium Battery-Powered Devices, August 1, 2019; [https://www.faa.gov/hazmat/resources/lithium\\_batteries/media/Battery\\_incident\\_chart.pdf](https://www.faa.gov/hazmat/resources/lithium_batteries/media/Battery_incident_chart.pdf).  
3287-016aep

**EXHIBIT A**

**Comments**  
**on the**  
**Draft Environmental Impact Report**  
**for the**  
**Estrella Substation and Paso Robles**  
**Area Reinforcement Project**

San Luis Obispo County, California

February 22, 2021

Phyllis Fox, PhD, PE

**TABLE OF CONTENTS**

1. INTRODUCTION ..... 1

2. CONSTRUCTION EMISSIONS ARE UNDERESTIMATED, SIGNIFICANT, AND UNMITIGATED ..... 3

    2.1. Construction Mitigation Is Inadequate and Inconsistent with SLOCAPCD Guidance..... 4

    2.2. SLOCAPCD Standard Mitigation Measures for Construction Equipment..... 5

    2.3. Best Available Control Technology (BACT) for Construction Equipment..... 6

        2.3.1. Selective Catalytic Reduction ..... 8

        2.3.2. Lean NOx Catalysts ..... 8

        2.3.3. Exhaust Gas Recirculation ..... 8

        2.3.4. Other NOx Mitigation Measures ..... 9

    2.4. Standard Mitigation Measures for PM10 Emissions from Construction Equipment..... 10

    2.5. Impact of Job Site Conditions on Emissions..... 12

    2.6. Construction Equipment Emission Factors Underestimated ..... 12

    2.7. Fugitive Dust PM10 Emissions Are Omitted ..... 13

    2.8. Construction Health Risks Were Not Evaluated and Are Significant..... 17

        2.8.1. Construction Cancer Risks Are Significant..... 21

            2.8.1.1. Scenario 1 Cancer Risks..... 22

            2.8.1.2. Scenario 2 Cancer Risks..... 23

        2.8.2. Construction Acute Health Impacts Are Significant ..... 24

    2.9. Construction Ambient NOx Impacts Are Significant ..... 27

    2.10. Significant Construction Health and Ambient NOx Impacts Must Be Mitigated ..... 29

3. VALLEY FEVER IMPACTS ARE SIGNIFICANT AND UNMITIGATED ..... 31

    3.1. A Conventional Dust Control Plan Is Inadequate to Address Potential Health Risks Posed by Exposure to Valley Fever..... 36

    3.2. The DEIR Fails to Require Adequate Mitigation for Valley Fever..... 37

    3.3. Recommended Mitigation to Control Valley Fever ..... 40

    3.4. The DEIR’s Fugitive Dust Mitigation Program Will Not Control Valley Fever Spores ..... 44

3.4.1. Reduce Disturbed Area ..... 46

3.4.2. Water Trucks/Sprinkler Systems ..... 46

3.4.3. Stockpile Areas (AIR-3)..... 47

3.4.4. Vehicle Speed (AIR-3) ..... 48

3.4.5. Cover Trucks (AIR-3) ..... 48

3.4.6. Sweep Streets (AIR-3)..... 49

3.5. Omitted Fugitive Dust Mitigation Measures ..... 50

3.6. Monitoring Should Be Required for Valley Fever Spores ..... 54

4. BATTERY ENERGY STORAGE SYSTEM (BESS) IMPACTS ..... 55

4.1. Impacts of Operating BESS Facilities Using Lithium-Ion Batteries ..... 58

4.2. Fires at Existing Battery Storage Facilities Demonstrate That Lithium-Ion  
Battery Fires Pose a Serious Risk to Human Health and the Environment..... 59

4.3. Impacts of Flow Batteries ..... 67

4.4. Battery Handling and Transportation Accidents ..... 68

5. IMPACTS OF PROPOSED BESS FACILITIES ..... 68

5.1. The DEIR Omits Risk of Upset Analyses..... 69

5.1.1. Alternative BS-2..... 69

5.2. The DEIR Omits Hazards Associated with the Transportation and  
Disposal of Batteries ..... 74

6. OPERATIONAL GREENHOUSE GAS EMISSIONS ARE  
UNSUPPORTED, UNDERESTIMATED, AND SIGNIFICANT ..... 75

6.1. Operational GHG Emissions ..... 75

6.1.1. Sulfur Hexafluoride (SF<sub>6</sub>)..... 76

6.1.2. CO<sub>2</sub>e Emissions from the Use of Helicopters for Facility Inspection ..... 76

6.2. Emissions from Charging the BESSs ..... 76

6.3. GHG Emissions from BESS Charging Are Significant ..... 81

6.4. Mitigation for Operational Emissions ..... 82

7. THE DEIR FAILS TO MITIGATE THE IMPACTS OF THE  
TRANSMISSION LINE ..... 83

7.1. Impacts of the Transmission Line..... 85

7.1.1. Fire Risks of the Transmission Line ..... 85



7.1.2. Worker Impacts ..... 90  
 7.1.3. Electric and Magnetic Field Impacts ..... 91  
 7.2. The Transmission Line Should Be Underground ..... 93

**LIST OF TABLES**

Table 1: Sensitive Receptors in Vicinity of Project ..... 19  
 Table 2: Summary of Work-Associated Outbreaks of Coccidioidomycosis –  
 California, 2007–2014..... 33  
 Table 3: CDPH Controls to Minimize Worker Dust Exposure..... 43  
 Table 4: Storage Pile Fugitive Dust Mitigation Measures ..... 48  
 Table 5: SCAQMD Mud/Dirt Trackout Control Measures ..... 50  
 Table 6: Number of Fatal Work Injuries and Nonfatal Occupational Injuries and  
 Illnesses Involving Days Away from Work, 2011–2015..... 91

**LIST OF FIGURES**

Figure 1: Average Wind Speeds for Paso Robles Airport..... 14  
 Figure 2: Proximity of Homes to Reconductoring ..... 20  
 Figure 3: Cancer Risk Isopleth Map, Scenario 1 (Tier 4 Engines) ..... 22  
 Figure 4: Cancer Risk Isopleth Map, Scenario 2 (Tier 2 Engines) ..... 23  
 Figure 5: Cancer Risk Isopleth for Scenario 2, Showing Homes East of the  
 Reconductoring Segment..... 24  
 Figure 6: Acute Health Isopleths for Scenario 1 ..... 26  
 Figure 7: Acute Health Isopleths for Scenario 2 ..... 27  
 Figure 8: Ambient Construction NOx Concentrations, Scenario 1..... 28  
 Figure 9: Ambient Construction NOx Concentrations, Scenario 2..... 29  
 Figure 10A: San Luis Obispo County Valley Fever Rates per 100,000, 2005–2015..... 32  
 Figure 10B: San Luis Obispo County Valley Fever Cases 2005-2015..... 32  
 Figure 11: Typical Dust Storm in Project Area ..... 34  
 Figure 12: Construction Crew Valley Fever ..... 34  
 Figure 13: Size of Cocci Spores Compared to Soil Particles (in mm) ..... 35  
 Figure 14: Fire Damage at Korean BESS Facilities ..... 60

Figure 15: BESS Alternatives Located Near Sensitive Receptors ..... 70

Figure 16: Segments of Transmission Line (in blue) Proposed for  
Undergrounding (in pink) ..... 84

Figure 17: Reported Fire Incidents Triggered by Electrical Line Malfunctions,  
2014–2017..... 87

## 1. INTRODUCTION

D-136 The Estrella Substation and Paso Robles Area Reinforcement Project (Project) is proposed by Horizon West Transmission, LLC (HWT), formerly NextEra Energy Transmission West, LLC, and Pacific Gas and Electric Company (PG&E), together referred to as the Applicants. The purpose of the Project is to mitigate thermal overloads and voltage issues in the Los Padres 70 kV system (specifically in the San Miguel, Paso Robles, Templeton, Atascadero, Cayucos, and San Luis Obispo areas).

The Project involves: (1) the construction and operation of a new 230 kilovolt (kV)/70 kV substation to be operated by HWT; (2) a new 70 kV substation to be operated by PG&E; (3) a new approximately 7-mile-long 230 kV transmission line interconnection and replacement/reconductoring of approximately 3 miles of an existing 70 kV power line to be operated by PG&E; (4) reconductoring and pole replacement of a portion of the existing 70 kV power line to be operated by PG&E; (5) various distribution system components, including three new 21 kV distribution feeders; and (6) battery energy storage systems (BESSs).

D-137 I reviewed the Draft Environmental Impact Report (DEIR),<sup>1</sup> the Proponent's Environmental Assessment (PEA),<sup>2</sup> and supporting documents obtained from the Public Utilities Commission (PUC) via Public Record Act (PRA) requests. In my opinion, the DEIR has failed to identify and mitigate all significant environmental impacts, requiring recirculation of the DEIR. Further, because it failed to evaluate an important component of the Project—the BESS—arguing such analysis would be "speculative at this time," a future EIR is required to evaluate the impacts of this critical Project component. My review of the DEIR indicates the following errors, omissions, and unidentified significant impacts:

- D-138
- D-139
- D-140
- The DEIR failed to impose all construction mitigation required by SLOCAPCD CEQA guidelines, including prohibitions on diesel idling and locating staging and queuing areas within 1,000 feet of sensitive receptors;
  - The DEIR failed to require Tier 4 Final construction equipment, which was assumed in its estimate of construction emissions. Instead, the

<sup>1</sup> Horizon, Draft Environmental Impact Report, Estrella Substation and Paso Robles Area Reinforcement Project, Prepared for California Public Utilities Commission (CPUC), December 2020; <https://www.cpuc.ca.gov/environment/info/horizonh2o/estrella/DEIR.html>.

<sup>2</sup> SWCA, Proponent's Environmental Assessment Estrella Substation and Paso Robles Area Reinforcement Project, Prepared for NextEra Energy Transmission West, LLC and Pacific Gas and Electric Company (PEA), January 2017; [https://www.cpuc.ca.gov/environment/info/horizonh2o/estrella/docs/PEA\\_January2017.pdf](https://www.cpuc.ca.gov/environment/info/horizonh2o/estrella/docs/PEA_January2017.pdf).

D-140 cont.	↑	DEIR allows Tier 2 and 3 construction equipment, which have much higher emissions than included in the construction emission calculations;
D-141		<ul style="list-style-type: none"> <li>• The DEIR failed to require BACT, required by SLOCAPCD CEQA guidance, for construction equipment, including SCR, lean NOx catalysts, and exhaust gas recirculation;</li> </ul>
D-142		<ul style="list-style-type: none"> <li>• The DEIR failed to require off-site mitigation for significant ROG+NOx construction emissions, required by SLOCAPCD CEQA guidance;</li> </ul>
D-143		<ul style="list-style-type: none"> <li>• The DEIR failed to require all SLOCAPCD fugitive dust mitigation measures;</li> </ul>
D-144		<ul style="list-style-type: none"> <li>• Construction emissions were underestimated for failing to address unique job site conditions;</li> </ul>
D-145		<ul style="list-style-type: none"> <li>• Emissions of fugitive dust were omitted from construction emissions, which are not estimated in the CalEEMod model used to estimate construction emissions, thus significantly underestimating construction PM10 and PM2.5 emissions;</li> </ul>
D-146		<ul style="list-style-type: none"> <li>• Construction health risks from diesel particulate matter (PM2.5) were not estimated, even though sensitive receptors are adjacent to construction sites;</li> </ul>
D-147		<ul style="list-style-type: none"> <li>• Cancer and acute health risks during construction over a very wide area including hundreds of homes are significant and unmitigated;</li> </ul>
D-148		<ul style="list-style-type: none"> <li>• Construction NOx emissions exceed the California 1-hour NOx ambient air quality standard of 339 µg/m<sup>3</sup>, which is both a significant public health impact and a significant ambient air quality impact;</li> </ul>
D-149		<ul style="list-style-type: none"> <li>• Valley Fever impacts were not evaluated, are significant, and unmitigated;</li> </ul>
D-150		<ul style="list-style-type: none"> <li>• Risk of upset, including fire and explosion, of the battery energy storage facility (BESS) were not evaluated and are significant;</li> </ul>
D-151		<ul style="list-style-type: none"> <li>• Impacts from battery handling and transportation accidents and battery disposal were not evaluated and are potentially significant;</li> </ul>
D-152		<ul style="list-style-type: none"> <li>• Greenhouse gas emissions from battery charging are significant and unmitigated; and</li> </ul>
D-153		<ul style="list-style-type: none"> <li>• Significant aesthetic, biological, and public health impacts of the transmission line can be mitigated by undergrounding the entire length of the transmission line.</li> </ul>
D-154	↓	The DEIR failed to select the environmentally superior alternative, which should include undergrounding of the transmission line. In sum, the DEIR fails as an informational document under CEQA for omitting critical information, for failing to identify and evaluate all impacts, for failing to mitigate significant impacts, and for

D-154  
cont. ↑ failing to select the environmentally superior alternative. A revised DEIR should be prepared and recirculated for public review. Further, a future EIR should be prepared to evaluate impacts of the battery storage option when it has been selected.

D-155 My resume is included in Exhibit 1 to these Comments. I have over 40 years of experience in the field of environmental engineering, including air emissions and air pollution control; greenhouse gas (GHG) emission inventory and control; water quality and water supply investigations; hazardous waste investigations; hazard investigations; risk of upset modeling; environmental permitting; nuisance investigations (odor, noise); health risk assessments; EIRs; and litigation support. I have reviewed and commented on hundreds of CEQA documents and air permit applications, including for tank farms, refineries, solar and wind facilities, geothermal facilities, ethanol plants, oil and gas production, quarries, terminals, ports, battery energy storage systems, and many other industrial facilities. I have MS and PhD degrees in environmental engineering from the University of California at Berkeley. I am a licensed professional engineer (chemical) in California. My work has been cited in two published CEQA opinions: (1) *Berkeley Keep Jets Over the Bay Committee, City of San Leandro, and City of Alameda et al. v. Board of Port Commissioners* (2001) 111 Cal. Rptr. 2d 598 and *Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal. 4th 310 and has supported the record in many other CEQA cases.

D-156 2. **CONSTRUCTION EMISSIONS ARE UNDERESTIMATED, SIGNIFICANT, AND UNMITIGATED**

The Project's construction emissions are generated from two sources: operation of construction equipment and helicopters.<sup>3</sup> The DEIR concluded that some of these emissions were significant but failed to identify all construction emissions and failed to adequately mitigate them.

D-157 The DEIR concluded that maximum daily ROG+NO<sub>x</sub> construction emissions of 275.46 lb/day were significant, exceeding the daily significance threshold of 137 lb/day. Under SLOCAPCD guidance,<sup>4</sup> this requires "Standard Mitigation Measures."<sup>5</sup>

D-158 ↓ The DEIR also concluded that maximum quarterly construction emissions of ROG+NO<sub>x</sub> of 9.25 ton/quarter were significant, exceeding the Tier 1 significance

<sup>3</sup> DEIR, pdf 433.

<sup>4</sup> SLOCAPCD, CEQA Air Quality Handbook, April 2012, Table 2-1 and Attachment 1, Clarifications; [https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/CEQA\\_Handbook\\_2012\\_v2%20%28Updated%20Map2019%29\\_LinkedwithMemo.pdf](https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/CEQA_Handbook_2012_v2%20%28Updated%20Map2019%29_LinkedwithMemo.pdf).

<sup>5</sup> Ibid., Attachment 1, Clarifications, pdf 67.

D-158  
cont. ↑ threshold of 2.5 ton/quarter.<sup>67</sup> Under SLOCAPCD guidance, this requires “Standard Mitigation Measures and Best Available Control Technology (BACT) for construction equipment. Off-site mitigation may be required if feasible mitigation measures are not implemented, or if no mitigation measures are feasible for the project.”<sup>8</sup>

D-159 ↑ The DEIR also concluded that maximum quarterly construction emissions of ROG+NO<sub>x</sub> of 9.25 ton/quarter were significant, exceeding the Tier 2 significance threshold of 6.3 ton/quarter.<sup>9</sup> Under SLOCAPCD guidance this requires “Standard Mitigation Measures, BACT, implementation of a Construction Activity Management Plan (CAMP) and off-site mitigation...”<sup>10</sup>

D-160 ↑ Finally, the DEIR concluded that maximum fugitive dust PM<sub>10</sub> emissions of 3.04 ton/quarter were significant, exceeding the Tier 1 significance threshold of 2.5 ton/quarter. Under SLOCAPCD guidance, this requires “Fugitive PM<sub>10</sub> Mitigation Measures and may require the implementation of a CAMP.”<sup>11</sup> With respect to PM<sub>10</sub>, the DEIR clarifies that the significant fugitive dust emissions are “mainly related to the helicopter fugitive dust emissions which will primarily occur at the Paso Robles airport.”<sup>12</sup> As discussed in Comment 2.7, this is misleading because the DEIR failed to estimate fugitive dust emissions from on-site construction. These emissions are not calculated by the CalEEMod model used to estimate construction emissions and must be separately calculated. The DEIR did not estimate these emissions.

D-161 ↑ **2.1. Construction Mitigation Is Inadequate and Inconsistent with SLOCAPCD Guidance**

The DEIR asserts that these significant emissions will be mitigated using Applicant Proposed Measures (APMs) and mitigation measure (MM) AQ-1 as follows:<sup>13</sup>

- AIR-1: Minimize ROG, NO<sub>x</sub>, and PM Combustion
- AIR-2: Air Quality Best Available Control Technology for Construction Equipment

<sup>6</sup> DEIR, pdf 433-434, Table 4.3-5.

<sup>7</sup> SLOCAPCD, CEQA Air Quality Handbook, Attachment 1, pdf 67.

<sup>8</sup> Ibid.

<sup>9</sup> The DEIR incorrectly reports the quarterly Tier 2 significance threshold for ROG + NO<sub>x</sub> as 26.3 ton/quarter. The correct quarterly Tier 2 significance threshold is 6.3 ton/quarter.

<sup>10</sup> Ibid., Attachment 1, pdf 67.

<sup>11</sup> Ibid, p. 2-2.

<sup>12</sup> DEIR, pdf 434.

<sup>13</sup> DEIR, Table ES-1, pdf 46, p. ES-22.

D-161  
cont.

- AIR-3: Minimize Fugitive Dust
- MM AQ-1: Prepare a Construction Activity Management Plan (CAMP) for approval by SLOCAPCD

D-162

The construction mitigation plan is included in Appendix F to the DEIR. The DEIR concludes that construction air quality impacts remain significant and unavoidable (SU) after the implementation of these mitigation measures.<sup>14</sup> This conclusion is unsupported because the DEIR has failed to impose the mitigation required by the SLOCAPCD CEQA guidelines, as outlined above. It further has failed to impose all feasible mitigation, which includes measures not addressed in the SLOCAPCD CEQA Guidelines. These issues are discussed below.

D-163

## 2.2. SLOCAPCD Standard Mitigation Measures for Construction Equipment

The SLOCAPCD CEQA guidance requires the implementation of “standard mitigation measures for construction equipment” when construction emissions exceed significance thresholds,<sup>15</sup> as identified in Comment 2.7. Mitigation Measure (MM) APM AIR-1 in the Mitigation Monitoring and Reporting Plan<sup>16</sup> includes some, but not all, of the standard mitigation measures for construction equipment required to comply with the SLOCAPCD CEQA guidelines. The following required mitigation measures were omitted from DEIR Appendix F:

- Diesel idling within 1,000 feet of sensitive receptors is not permitted.
- Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors.

These omissions are of great concern because a significant portion of Project construction will occur within 1,000 feet of sensitive receptors.<sup>17</sup> Diesel particulate matter (DPM) from idling construction equipment and construction equipment staging and queuing in these areas result in significant cancer and acute health impacts and violate the California 1-hour NO<sub>x</sub> ambient air quality standard. See Comment 2.8. These omitted SLOCAPCD measures must be included as Project mitigation.

<sup>14</sup> Ibid.

<sup>15</sup> SLOCAPCD, CEQA Air Quality Handbook, pp. 2-6 to 2-7.

<sup>16</sup> DEIR, Appendix F, p. F-14 to F-16.

<sup>17</sup> See, for example, DEIR, Figures 2-8, sheets 3-8 (70 kV power line adjacent to residential neighborhoods); PEA, p. 3.3-19 (“Sensitive receptors have been identified within a 1-mile radius of the site, with the nearest residence located within 265 feet of the substation site.”).

D-164

Further, the SLOCAPCD CEQA guidance requires the following additional diesel idling restrictions to protect public health and air quality that are omitted from the DEIR's Mitigation Monitoring and Reporting Plan in Appendix F:<sup>18</sup>

- Signs that specify the no-idling requirements must be posted and enforced at the construction site;
- Idling restrictions for on-road vehicles;
- Signs must be posted in the designated queuing areas and job sites to remind drivers of the 5-minute idling limits;
- Off-road diesel equipment shall comply with the 5-minute idling restriction;
- Signs shall be posted in the designated queuing areas and job sites to remind off-road equipment operators of the 5-minute idling limit.

None of these measures is required in the Mitigation Monitoring and Reporting Plan in Appendix F.

D-165

### 2.3. Best Available Control Technology (BACT) for Construction Equipment

The DEIR concluded that construction ROG+NO<sub>x</sub> emissions are significant.<sup>19</sup> SLOCAPCD CEQA guidance requires BACT for ROG and NO<sub>x</sub> when construction emissions exceed significance thresholds.<sup>20</sup> The SLOCAPCD CEQA Guidance for BACT specifies:<sup>21</sup>

- Further reducing emissions by expanding use of Tier 3 and Tier 4 off-road and 2010 on-road compliant engines;
- Repowering equipment with the cleanest engines available; and
- Installing California Verified Diesel Emission Control Strategies. These strategies are listed at: <http://www.arb.ca.gov/diesel/verdev/st/cvt.htm>

In contrast, the DEIR in APM AIR-2 only requires:<sup>22</sup>

- Reducing emissions by expanding use of Tier 3 off-road and 2010 on-road compliant engines; and
- Installing California Verified Diesel Emission Control Strategies.

<sup>18</sup> SLOCAPCD, CEQA Air Quality Handbook, p. 2-3.

<sup>19</sup> DEIR, Table 4.3-5.

<sup>20</sup> SLOCAPCD, CEQA Air Quality Handbook, pp. 2-6 to 2-7.

<sup>21</sup> SLOCAPCD CEQA Guidance, p. 2-7; see also pp. 4-14 to 4-15.

<sup>22</sup> DEIR, Appendix F, p. F-16, APM AIR-2.



D-165  
cont.

However, the DEIR fails to disclose that the construction emission calculations assumed the use of 100% Tier 4 final engines in its CalEEMod emissions modeling,<sup>23</sup> which have much lower NO<sub>x</sub> and ROG emissions than Tier 2 or 3 engines. Thus, “expanding the use of Tier 3 engines”<sup>24</sup> is not mitigation and is not BACT. Rather, it allows higher construction emissions than the significant construction emissions estimated in the DEIR and does not mitigate significant impacts.

APM AIR-2 should be modified to state: “All diesel-powered construction equipment shall use Tier 4 Final construction equipment, to be confirmed on site by the on-site construction supervisor during each day of use.” If a Tier 4 final engine is not available for select construction equipment, controls shall be installed on the highest tier equipment available to achieve Tier 4 Final standards. Effective controls include diesel particulate filters for PM<sub>2.5</sub> (DPM)<sup>25</sup> and selective catalytic reduction (SCR) for NO<sub>x</sub>.

Tier 4 Final (2015) construction equipment has significantly lower NO<sub>x</sub> and ROG emissions than either Tier 3 or “transitional Tier 4” (2011) equipment. The Tier 4 Final NO<sub>x</sub> emission factor, for example, is 0.30 g/bhp-hr while the transitional Tier 4 NO<sub>x</sub> emission factors for engines of 56 to 130 kW are 1.7 to 2.5 g/bhp-hr and for engines of 130 to 560 kW, the Tier 4 Final NO<sub>x</sub> emission factor is 1.5 g/bhp-hr.<sup>26</sup> The text of the DEIR does not disclose the NO<sub>x</sub> emission factor that was used in the CalEEMod analysis for construction equipment. However, Appendix C, which contains the CalEEMod output, does disclose that Tier 4 Final engines were assumed for all construction equipment.<sup>27</sup> Thus, NO<sub>x</sub> emissions would be 5 to 8 times higher<sup>28</sup> than reported in Table 4.3-5, requiring substantially more mitigation for NO<sub>x</sub> than disclosed in the DEIR. Thus, APM AIR-2 does not reduce NO<sub>x</sub> and ROG emissions, but rather allows a significant increase in NO<sub>x</sub> and ROG emissions, compared to emissions reported in DEIR Table 4.3-5.

There are other recognized and feasible methods to reduce NO<sub>x</sub> and ROG from construction equipment that satisfy BACT, which should be required if Tier 4 Final

<sup>23</sup> DEIR, Appendix C, pdf 3: “Construction Off-road Equipment Mitigation—Change to assume all equipment Tier 4 Final.” See also Appendix C, pdf 420, 560, 561.

<sup>24</sup> DEIR, Table 2-12, p. 2-93, pdf 173.

<sup>25</sup> See Comment 2.8.1.2.

<sup>26</sup> DieselNet, United States: Nonroad Diesel Engines, “alternative NO<sub>x</sub> limits” during “phase-in period”; <https://dieselnet.com/standards/us/nonroad.php>.

<sup>27</sup> DEIR, Appendix C, pdf 3: “Construction Off-road Equipment Mitigation—Change to assume all equipment Tier 4 Final.” See also Appendix C, pdf 420, 560, 561.

<sup>28</sup> Increase in NO<sub>x</sub> emission factor if Tier 4 rather than Tier 4 Final engines are used: for 56-130 kW engines: 2.5/0.3 = 8.3. For engines 130-560 kW: 1.5/0.3 = 5.0.

D-165  
cont.

construction equipment is not available for all equipment required to construct the Project. These are discussed in Sections 2.3.1 to 2.3.4.

### 2.3.1. Selective Catalytic Reduction

NO<sub>x</sub> emissions from lower-tier construction equipment (i.e., Tiers 1, 2, 3) can be reduced by installing selective catalytic reduction (SCR). An SCR can reduce NO<sub>x</sub> emissions by 75% to 90%, while simultaneously reducing VOC emissions by up to 80% and PM emissions by 20% to 30%. SCR systems have been successfully demonstrated on off-road vehicles.<sup>29</sup> For example, the City of Houston Diesel Field Demonstration Project has demonstrated an 84% reduction in NO<sub>x</sub> emissions by using a diesel particulate filter (DPF)/SCR combination on a 1992 MY Cummins Gradall G3WD (5.9L 190 hp). As a result of this field demonstration program, the City of Houston retrofitted 33 rubber tire excavators and a dump truck with SCR systems.<sup>30</sup>

### 2.3.2. Lean NO<sub>x</sub> Catalysts

Lean NO<sub>x</sub> catalyst (LNC) technology can achieve a 10% to 40% reduction in NO<sub>x</sub> emissions. LNC technology does not require any core engine modifications and can be used to retrofit older engines. This retrofit technology can be combined with DPFs or diesel oxidation catalysts (DOCs) to provide both NO<sub>x</sub> and PM<sub>10</sub> reductions. An LNC added to an exhaust system using a DPF can reduce NO<sub>x</sub> emissions by 10% to 25%.<sup>31</sup> Lean NO<sub>x</sub> catalyst technology has been demonstrated and commercialized for a variety of off-road retrofit applications, including heavy-duty earthmoving equipment.<sup>32</sup>

### 2.3.3. Exhaust Gas Recirculation

Exhaust gas recirculation (EGR) reduces NO<sub>x</sub> by reducing the temperature at which fuel burns in the combustion chamber. Engines employing EGR recycle a portion of engine exhaust back to the engine air intake. The oxygen-depleted exhaust gas is mixed into the fresh air that enters the combustion chamber, which dilutes the oxygen content of the air in the combustion chamber. This reduction in oxygen reduces the engine burn temperature, and hence reduces NO<sub>x</sub> emissions.<sup>33</sup> Engine retrofits

<sup>29</sup> Manufacturers of Emission Controls Association (MECA), Retrofitting Emission Controls on Diesel-Powered Vehicles, pp. 2-3, April 2006; <http://www.meca.org>. See also MECA 3/6, p. 17.

<sup>30</sup> MECA 03/06, p. 12.

<sup>31</sup> MECA 03/06, p. 14.

<sup>32</sup> MECA 03/06, p. 19.

<sup>33</sup> Diesel Technology Forum, Retrofitting America's Diesel Engines: A Guide to Cleaner Air Through Cleaner Diesel; <https://www.dieselforum.org/files/dmfile/Retrofitting-America-s-Diesel-Engines-11-2006.pdf>.

D-165  
cont.

with low-pressure EGR in conjunction with a diesel particulate filter can achieve NO<sub>x</sub> reductions of over 40% and PM reductions of more than 90% and have been successfully demonstrated on off-road equipment.<sup>34</sup>

#### 2.3.4. Other NO<sub>x</sub> Mitigation Measures

Other mitigation measures that are feasible and have been required elsewhere to reduce NO<sub>x</sub> from construction equipment include:

- Use alternative fueled equipment (e.g., propane), where available;
- Limit engine idling to 2 minutes for all construction equipment;<sup>35</sup>
- Purchase offsets;
- Employ a construction site manager to verify that engines are properly maintained and to maintain a log.

Further, the SLOCAPCD CEQA Guidance allows the use of off-site mitigation if feasible on-site mitigation measures are not available for the Project.<sup>36</sup> Off-site mitigation is available and feasible. Voluntary Emission Reduction Agreements or VERAs have been used as CEQA mitigation. A VERA would require the Applicant to make a one-time payment for its significant unmitigated emissions in excess of significance thresholds to the SLOCAPCD, which would then use the payment to develop off-site mitigation.

VERAs have been identified as mitigation measures within other CEQA documents.<sup>37</sup> Types of projects that have been funded include electrification of stationary internal combustion engines and replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks. The San Joaquin Valley Air Pollution Control District (SJVAPCD) has repeatedly concluded that a VERA “is a feasible mitigation measure under CEQA, effectively achieving emission reductions necessary to reduce impacts to a less than significant level.”<sup>38</sup>

This approach has been found legally sufficient by court rulings in the following cases: *California Building Industry Assn. v. San Joaquin Valley APCD*, Fresno County Case No. 06 CECG 02100 DS13; *National Association of Home Builders v. San Joaquin Valley*

<sup>34</sup> MECA 04/06, p. 14.

<sup>35</sup> See, for example, SCAQMD, *CEQA Air Quality Handbook*, April, 1993, Tables 11-2 and 11-3. Further, many states limit idling time to 2 minutes.

<sup>36</sup> SLOCAPCD CEQA Guidance, Attach 1, Clarifications, p. 2, pdf 67 and pp. 17-18.

<sup>37</sup> SJVAPCD, Summary of Comments and Responses to Proposed Revisions to the GAMAQI-2012, May 31, 2012, p. 3; <https://www.valleyair.org/transportation/GAMAQIDRAFT-2012/GAMAQIResponseComments5-10-12%20.pdf>.

<sup>38</sup> SJVAPCD 2017, pp. 5, 9.

D-165 cont. ↑ *Unified Air Pollution Control District; Federal District Court, Eastern District of California, Case No. 1:07-CV-00820-LJO-DLB; and Center for Biological Diversity et al. v. Kern County, Fifth Appellate District, Case No. F061908.*

**2.4. Standard Mitigation Measures for PM10 Emissions from Construction Equipment**

D-166 The SLOCAPCD CEQA Guidance requires “standard mitigation measures for construction equipment” and may require the implementation of a Construction Activity Management Plan (CAMP)<sup>39</sup> when fugitive dust PM10 emissions exceed 3.04 ton/quarter, as here. For projects with grading areas greater than 4 acres or that are within 1,000 feet of any sensitive receptor, both of which occur for the Project, the SLOCAPCD CEQA Guidance identifies 14 required fugitive dust mitigation measures.<sup>40</sup>

Project fugitive dust mitigation is addressed in APM AIR-3, Minimize Fugitive Dust.<sup>41</sup> The DEIR excludes several required SLOCAPCD standard mitigation measures for fugitive dust, the omission of which would increase fugitive dust. No justification is provided for the omissions, which include:

- D-167 • SLOCAPCD measure b: “Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible”.<sup>42</sup> As discussed in Comment 2.7, wind gusts in excess of 15 mph, up to 25 mph, occur frequently at the site. Figure 1. Thus, the omission of increased watering frequency during high wind events will result in substantially higher PM10 emissions than disclosed in the DEIR.
- D-168 • SLOCAPCD measure b: The SLOCAPCD expanded this measure in a November 2017 Clarification Memo.<sup>43</sup> It now additionally requires the following, omitted from the DEIR:

Use of water trucks or sprinkler systems, in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the APCD’s limit of 20% opacity for greater than 3 minutes in any 60-minute period. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible. Please note that during drought conditions, water use may be a concern and the contractor or builder shall consider the use of an APCD-approved dust suppressant where feasible to reduce the amount of water used for dust control.

<sup>39</sup> Ibid., p. 2-6, Section 2.3.

<sup>40</sup> Ibid., p. 2-9, pdf 21, “Fugitive Dust Mitigation Measures: Expanded List.”

<sup>41</sup> DEIR, Appendix F, p. F-16.

<sup>42</sup> SLOCAPCD CEQA Guidance, p. 2-8, 2-9, 4-12, and pdf 68.

<sup>43</sup> SLOCAPCD CEQA Guidance, pdf 66: Memo from SLOCAPCD to All Interested Parties, Re: Clarification Memorandum for the SLOCAPCD’s 2012 CEQA Air Quality Handbook.

D-169	<ul style="list-style-type: none"> <li>• SLOCAPCD measure d: “Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities”;</li> </ul>
D-170	<ul style="list-style-type: none"> <li>• SLOCAPCD measure e: “Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established”;</li> </ul>
D-171	<ul style="list-style-type: none"> <li>• SLOCAPCD measure g: “All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used”;</li> </ul>
D-172	<ul style="list-style-type: none"> <li>• SLOCAPCD measure j: “Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site”;</li> </ul>
D-173	<ul style="list-style-type: none"> <li>• SLOCAPCD measure j: The SLOCAPCD expanded this measure in the November 2017 Clarification Memo.<sup>44</sup> It now additionally requires the following, omitted from the DEIR:   <p>“Track-Out” is defined as sand or soil that adheres to and/or agglomerates on the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto any highway or street as described in California Vehicle Code Section 23113 and California Water Code 13304. To prevent Track Out, designate access points and require all employees, subcontractors, and others to use them. Install and operate a “track-out prevention device” where vehicles enter and exit unpaved roads onto paved streets. The track-out prevention device can be any device or combination of devices that are effective at preventing track out, located at the point of intersection of an unpaved area and a paved road. Rumble strips or steel plate devices require periodic cleaning to be effective. If paved roadways accumulate tracked out soils, the track-out prevention device may need to be modified.</p> </li> </ul>
D-174	<ul style="list-style-type: none"> <li>• SLOCAPCD measure k: “Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads...” The DEIR modified this measure to limit street sweeping to “soil material extending over 50 feet,” thus limiting the amount of street sweeping required.</li> </ul>
D-175	<p>All of these omissions and modifications of required SLOCAPCD fugitive dust mitigation measures will result in higher fugitive PM10 emissions than allowed by the SLOCAPCD guidance or disclosed in the DEIR.</p>
	<p><sup>44</sup> SLOCAPCD CEQA Guidance, pdf 68.</p>

D-176 In sum, construction emissions are significantly underestimated, and the proposed mitigation measures do not mitigate the significant construction impacts to the maximum extent feasible.

D-177 **2.5. Impact of Job Site Conditions on Emissions**  
 The DEIR used the CalEEMod model to estimate construction emissions. This model uses a lot of default emission assumptions that do not apply to the Project site. It is well known that there are large discrepancies between measured emissions data and theoretical emission models such as CalEEMod. The emissions from construction equipment depend upon the load under which each piece of equipment operates.<sup>45</sup> The equipment load, in turn, depends on soil conditions. The DEIR used default load factors as provided in CalEEMod. However, default load factors are not appropriate for this Project due to the nature of the terrain.

Job site conditions affect the emissions from construction equipment. A recent study reported that:<sup>46</sup>

The fuel consumption and emissions of equipment inevitably increase in tough working conditions involving hills and slopes on jobsites, or medium to hard underground or ground soil conditions. The amounts of fuel consumptions or emissions can increase up to 2-4 times for heavy duty works, as compared with light duty applications for the same equipment, according to Caterpillar Performance Handbook.

The Project site involves difficult working conditions, including steep hills and slopes and areas subject to subsidence, erosion, and liquefaction.<sup>47</sup> The CalEEMod inputs, on the other hand, are based on default conditions—namely, flat land without the potential for subsidence, erosion, and liquefaction. Thus, actual emissions of GHGs and criteria pollutants from Project construction are higher than disclosed in the DEIR.

D-178 **2.6. Construction Equipment Emission Factors Underestimated**  
 Emission models, such as the CalEEMod model, use fleet average emission factors that are mostly obtained from steady-state engine dynamometer results, adjusted for various factors. They do not represent real-world duty cycles, a serious issue for this site due to its hilly nature. Dynamometer tests do not capture the episodic

<sup>45</sup> See, for example, K. Barati and X. Shen, Operational Level Emissions Modelling of On-Road Construction Equipment through Field Data Analysis, *Automation in Construction*, v. 72, pp. 338-346, 2016 (“Emission rates of CO<sub>2</sub>, CO, HC and NO<sub>x</sub> were also found to be directly related to changes in engine load. For example, for one specific type of vehicle, CO<sub>2</sub> was around 2 g/s at 20% engine load, which increased almost linearly to 8 g/s at an engine load of 90%.”). Exhibit 4.

<sup>46</sup> H. Fan, A Critical Review and Analysis of Construction Equipment Emission Factors, *Procedia Engineering*, v. 196, pp. 351-358, 2017; <https://www.sciencedirect.com/science/article/pii/S187705817330801>. Exhibit 19.

<sup>47</sup> DEIR, Section 4.7. See for example, p. 4.7-11 and Figures 4.7-1/3.

D-178  
cont. ↑ nature of fuel use and emissions during real-world duty cycles, such as idling, use of an attachment, movement of a load, and so on. These emission factors should be confirmed for the specific equipment and work conditions in the field by connecting a particulate emissions monitoring system (PEMS) to the vehicle's engine and to its exhaust system to monitor the emissions while the vehicle is in use.<sup>48</sup>

D-179 2.7. Fugitive Dust PM10 Emissions Are Omitted

The DEIR concluded that fugitive dust PM10 emissions of 3.04 ton/quarter exceed the significance threshold of 2.5 ton/quarter.<sup>49</sup> The DEIR asserts that these fugitive dust PM10 emissions are "mainly related to the helicopter fugitive dust emissions which will primarily occur at the Paso Robles airport."<sup>50</sup> Table 4.3-5 shows 2.98 ton/quarter for helicopter operations and 0.05 ton/quarter for on-site construction. However, none of the mitigation measures in the Mitigation Monitoring and Reporting Plan in Appendix F addresses fugitive dust emissions at the airport. Thus, these emissions are significant and unmitigated.

D-180 Further, the PM10 fugitive dust emissions from Project construction are significantly underestimated because the CalEEMod model used to estimate construction emissions does not include all sources of PM10 and PM2.5 construction emissions, let alone from the unique aspects of this Project. It omits the major source of fugitive PM10 emissions at construction sites—windblown dust from graded areas and storage piles and fugitive dust from off-road travel:<sup>51</sup>

Fugitive dust associated with grading, demolition, truck loading, and on-road vehicles traveling along paved and unpaved roads. (Fugitive dust from wind blown sources such as storage piles and inactive disturbed areas, as well as fugitive dust from off-road vehicle travel, are not quantified in CalEEMod, which is consistent with approaches taken in other comprehensive models.)

These emissions must be separately calculated using methods in AP-42<sup>52</sup> and added to the CalEEMod PM10 and PM2.5 emissions. Fugitive dust emissions arise from storage piles, grading, truck loading, and inactive disturbed areas. Based on calculations I have made in other cases, these are the major sources of PM10 and PM2.5

<sup>48</sup> P. Lewis and others, Requirements and Incentives for Reducing Construction Vehicle Emissions and Comparison of Nonroad Diesel Engine Emissions Data Sources, *Journal of Construction Engineering and Management*, v. 135, no. 5, pp. 341-351, 2009. Exhibit 5.

<sup>49</sup> DEIR, Table 4.3-5, pdf 433/444, pp. 4.3-15/16.

<sup>50</sup> DEIR, pdf 434, p. 4.3-16.

<sup>51</sup> CAPCOA 2016, pdf 8. This same language appears in CAPCOA 2017, pdf 7.

<sup>52</sup> U.S. EPA, Compilation of Air Pollutant Emission Factors, Report AP-42; <https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emission-factors#Proposed>.

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cont.

emissions from construction projects. Fugitive dust emissions taken alone frequently exceed the PM10 and PM2.5 significance thresholds. Thus, the DEIR, which relied on the CalEEMod emission calculations, fails as an informational document under CEQA.

D-181

Windblown dust from Project disturbed soils is a particular concern at this site because high winds occur regularly during spring.<sup>53</sup> The DEIR fails as an informational document under CEQA for failing to include a wind rose for the Project area, which is known for high winds called the Santa Lucia winds.<sup>54</sup> Wind speed data for the Paso Robles Airport for the period September 2012 to December 2020 report an average wind speed of 9 mph.<sup>55</sup> Gusts up to 25 mph occur throughout the year. Figure 1.

**Figure 1: Average Wind Speeds for Paso Robles Airport<sup>56</sup>**



In comparison, the DEIR’s construction emissions assumed an average wind speed of 3.2 m/s (7.2 mph).<sup>57</sup> The higher winds that occur at the Project site can raise significant amounts of dust, even when conventional dust control methods are used. If these winds occurred during grading, cut and fill, or soil movement, from bare graded soil surfaces (even if periodically wetted), significant amounts of PM10 and PM2.5 as well as silica dust would be released. As dust control is not required during nighttime hours when no active construction activity occurs, PM10 and PM2.5 emissions could be even higher than during active construction work. These emissions could result in public health impacts from Valley Fever spores (Comment 3), silica, and/or violations of PM10 and PM2.5 California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS). The DEIR did not evaluate these potential impacts, thus failing as an informational document under CEQA.

<sup>53</sup> DEIR, pdf 496, p. 4.4-50; pdf 891, p. 4.2-9.

<sup>54</sup> DEIR, p. 4.20-9, pdf 891.

<sup>55</sup> Windfinder, Paso Robles Airport; [https://www.windfinder.com/windstatistics/paso\\_robles\\_municipal\\_airport](https://www.windfinder.com/windstatistics/paso_robles_municipal_airport).

<sup>56</sup> Ibid.

<sup>57</sup> DEIR, Appendix C, pdf 27, 160, 288, 417, 558.



D-181  
cont.

Wind erosion emissions are typically calculated using methods in AP-42,<sup>58</sup> which require detailed information on site topography, wind profiles, and dispersion modeling. This information is not cited or included in the DEIR. Generally, wind erosion ambient air quality impacts are estimated using the AERMOD model. The DEIR does not include any calculations of wind erosion emissions, any of the information required to calculate them, or any estimation of ambient PM10 impacts from wind erosion. Rather, the DEIR tacitly assumes that compliance with conventional construction mitigation measures and regulations constitutes adequate wind erosion control, without any analysis at all or without acknowledging the added risk of high-velocity winds that occur in the area.

Wind erosion emissions depend on the disturbed area. The CalEEMod runs in Appendix C assumed a disturbed area of 119.4 acres.<sup>59</sup> The basis for this disturbed area is not disclosed. The DEIR text reported disturbed areas ranging from 122.7 acres<sup>60</sup> to 163.5 acres (Alternative PLR-1A)<sup>61</sup> to 181.24 acres (Alternative PLR-1C).<sup>62</sup>

The DEIR does not include a construction schedule, required to determine the maximum amount of acreage disturbed during the maximum quarter, thus failing as an informational document under CEQA. I assume the maximum graded area based on the CalEEMod output in Appendix C of 27 acres<sup>63</sup> in my calculations of wind erosion emissions below.

Particulate matter emissions can be estimated from the EPA emission factor for construction activity of 1.2 tons per acre per month of activity.<sup>64</sup> Studies indicate that on average, PM10 accounts for 34% to 52% of the total suspended particulates (TSP) when watering is used for dust control.<sup>65</sup> Thus, earthmoving activities could generate up to

<sup>58</sup> U.S. EPA, AP-42, Section 13.2.5 Industrial Wind Erosion; <https://www3.epa.gov/ttnchie1/ap42/ch13/final/c13s0205.pdf>.

<sup>59</sup> DEIR, Appendix C, pdf 27, 160, 288, 417, 558.

<sup>60</sup> DEIR, Table 2-3, pdf 153-154.

<sup>61</sup> DEIR, Table 3-4, pdf 238.

<sup>62</sup> DEIR, Table 3-8, pdf 268.

<sup>63</sup> DEIR, Appendix C, pdf 33, 166, 294, 424.

<sup>64</sup> AP-42, Section 13.2.3 Heavy Construction Operations, pdf 1; <https://www3.epa.gov/ttn/chief/ap42/ch13/final/c13s02-3.pdf>.

<sup>65</sup> Ingrid P. S. Araujo, Dayana B. Costa, and Rita J. B. de Moraes, Identification and Characterization of Particulate Matter Concentrations at Construction Job Sites, *Sustainability*, v. 6, pp. 7666-7688, 2014, Table 5, <https://ideas.repec.org/a/gam/jsusta/v6y2014i11p7666-7688d41878.html>.