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Sent: Tuesday, January 4, 2022 3:42 PM
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Cc: Christina Caro <ccaro@adamsbroadwell.com>; Kelilah D. Federman <kfederman@adamsbroadwell.com>
Subject: Agenda Item No. 26: Appeal of the World Oil Tank Installation Project (SCH No. 2020100119, File No. 22-0026)

-EXTERNAL-

Good afternoon,

Please see the attached **Comments re Agenda Item No. 26: Appeal of the World Oil Tank Installation Project (SCH No. 2020100119, File No. 22-0026)** and **Exhibit A**.

We are also providing a Dropbox link containing supporting references: https://www.dropbox.com/sh/va5gfqgsmcttg6x/AAB0wUOjm2Daj0mM90asCpnya?dl=0.

A hard copy of our Comments and Exhibit A will be provided at this evening's hearing.

If you have any questions, please contact Kelilah Federman.

Thank you.

Alisha Pember

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January 4, 2022

Via Email and Hand Delivery

Mayor Robert Garcia; Councilmembers Mary Zendejas; Cindy Allen; Suzie Price; Daryl Supernaw; Stacy Mungo; Suely Saro; Roberto Uranga; Al Austin II; Rex Richardson
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Re: Agenda Item No. 26: Appeal of the World Oil Tank Installation Project (SCH No. 2020100119, File No. 22-0026)

Dear Mayor Garcia, Councilmembers Zendejas, Allen, Price, Supernaw, Mungo, Saro, Uranga, Austin, Richardson, Ms. De La Garza and Mr. Rubio:

On behalf of Appellant Safe Fuel and Energy Resources California ("SAFER CA") and Long Beach residents Nicholas Garcia, Sopha Sum, and Sophall Sum, we submit these comments in response to the Port's Report on the Appeal of the Adoption of the Initial Study/Negative Declaration for the World Oil Tank Installation Project ("Staff Report") for tonight's hearing on SAFER CA's Appeal of the Board of Harbor Commissioner's October 28, 2021 decision to approve the Harbor Development Permit (No. 19-066) and approval of the Final Initial Study/Negative Declaration ("IS/ND") for the World Oil Tank Installation Project ("Project"), proposed by Ribost Terminal, LLC dba World Oil Terminals

("Applicant").[1] The Project seeks to construct two new 25,000-barrel petroleum storage tanks at the existing World Oil Terminal owned by Applicant located at the Port.[2] The terminal is 261,000 square feet (about 6 acres) and contains seven existing petroleum tanks of various sizes totaling a capacity of 502,000 barrels.[3] The two tanks would provide additional storage capacity of petroleum for refining and distribution and would make two of its existing larger tanks available for lease by third-party vendors.[4] The IS/ND estimates a 10 percent increase in truck trips, as well as an increase in average barrel throughput of fuel oil, but not of crude oil, over existing operations at the facility.[5]

The Staff Report fails to respond to or resolve the major issues raised in SAFER CA comments submitted on November 20, 2020 and October 28, 2021. SAFER CA's comments and Appeal demonstrate substantial evidence that supports a fair argument that the Project may result in potentially significant environmental impacts. SAFER CA and our technical consultant, emissions and air quality expert Dr. Phyllis Fox demonstrated that there is substantial evidence supporting a fair argument that the Project's operational air quality emissions are significant and unmitigated and the Port lacks substantial evidence to support the no-impact conclusions in the IS/ND. The Project may also result in potentially significant construction NOx emissions, that the IS/ND fails to adequately analyze or mitigate. The Project may result in cumulatively significant air quality and greenhouse gas emissions that remain unmitigated. The Port failed to address the fact that the Project will exacerbate sea level rise, and may place Project structures in the path of future sea level rise at the Port. Based on the substantial evidence presented in our comments and addressed herein, the Council should uphold SAFER CA's Appeal.

SAFER CA respectfully requests that the City Council vote to grant this Appeal and overturn the Board of Harbor Commissioner's erroneous approval of the HDP and IS/ND and direct the Harbor Commission to set aside the Project approval and conduct the appropriate CEQA analysis in the form of an environmental impact report ("EIR") as required by CEQA, before reconsidering the Project.

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[1] IS/ND, p. 2-1.
[2] IS/ND, p. 2-1.
[3] IS/ND, p. 1-1.
[4] IS/ND, p. 2-4.
[5] IS/ND, p. 2-6.

I. STATEMENT OF INTEREST

SAFER CA advocates for safe processes at California refineries and fuel transport and distribution facilities to protect the health, safety, standard of life and economic interests of its members. SAFER CA supports sustainable development of fuel resources in California that complies with environmental and public health laws. Its members have an interest in enforcing environmental laws, such as CEQA, which require the disclosure of potential environmental impacts of, and ensure safe operations and processes for, California's fuel production, storage, and transport projects. SAFER CA members are concerned about projects, like this one, that present serious environmental risks and public service infrastructure demands without providing countervailing employment and economic benefits to local workers and communities. SAFER CA filed this Appeal to ensure that the City fully complies with its obligations under State and local environmental and public health laws before approving the Project.

SAFER CA members live, work, recreate and raise their families in Los Angeles County, including the City of Long Beach. Accordingly, they would be directly affected by the Project's adverse environmental impacts. The members of SAFER CA's participating unions may also work on the Project itself. They will, therefore, be first in line to be exposed to any hazardous materials, air contaminants, and other health and safety hazards, that exist onsite.

II. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT WILL RESULT IN SIGNIFICANT ENVIRONMENTAL IMPACTS THAT THE IS/ND FAILS TO DISCLOSE OR MITIGATE

The Staff Report erroneously concluded that "SAFER CA has not presented a fair argument that there is substantial evidence that the Project will result in a significant environmental impact."[6] SAFER CA submitted extensive comments, along with our technical consultant, emissions and air quality expert Dr. Phyllis Fox, on the Draft IS/ND on November 20, 2020 and again ahead of the October 28, 2021 Board of Harbor Commissioners hearing. Those comments and our Appeal letter provided the Port with substantial evidence supporting a fair argument that the Project may result in potentially significant environmental impacts, including

[6] Staff Report, p. 5 of 11.

potentially significant and unmitigated emissions of volatile organic compounds ("VOCs") and greenhouse gases (GHGs").

The IS/ND, therefore, is inappropriate and an EIR must be prepared,[7] even if other substantial evidence supports an opposite conclusion.[8] Dr. Fox's comments provide an abundance of substantial evidence, found in both Exhibits A and B attached to SAFER CA's Appeal, supporting a fair argument that the Project will have significant, unmitigated air quality impacts from construction, operation, fugitive sources, and increased facility capacity, all of which the Port failed to disclose and mitigate, in violation of CEQA. In addition, the IS/ND itself provides substantial evidence of significant air quality impacts from Project VOC emissions, which by the Port's own admission will exceed SCAQMD's offset threshold for its New Source Review Rule,[9] triggering the Air District's offset requirement. Neither the Final IS/ND nor the Staff Report resolve these issues.

A. Dr. Fox's Opinion is Substantial Evidence

The SAFER CA Appeal and comments provide substantial evidence supporting a fair argument that the Project may have potentially significant effects on the environment such that an EIR must be prepared. CEQA Guidelines Section 15384(a) defines substantial evidence as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might be reached."[10] Substantial evidence includes "facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts."[11]

SAFER CA's consultant, Dr. Fox, is a highly qualified air quality and hazardous materials expert whose opinions have been upheld by the Supreme Court and the Courts of Appeal, including on issues related to refinery and fuel storage and transport emissions.[12] Dr. Fox provided qualified expert opinion supported by

[7] CEQA Guidelines § 15064 subd. (f), (h).
[8] *See No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75.
[9] "The facility's existing potential to emit is above the SCAQMD New Source Review Rule VOC offset threshold of 4 tons per year; therefore, the new tank emissions were required to be offset." Draft IS/ND, p. 4-9.
[10] CEQA Guidelines § 15384 subd. (a).
[11] *Id.* at § 15384 subd. (b).
[12] See Exhibit A, P. Fox Curriculum vitae; *Commty. for a Better Env't v. SCAQMD* (2010) 47 Cal.App.5th 588 (upholding Dr. Fox's opinion regarding refinery emissions); *Comtys. for a Better*

facts demonstrating that the Project has potentially significant, unmitigated construction and operational emissions, and that the IS/ND substantially underestimated those impacts.

The Staff Report does not dispute Dr. Fox's qualifications, but contends that Dr. Fox's conclusions about the Project's significant air quality impacts are not based on substantial evidence because the studies she relied on to document the Project's underestimated tank VOC emissions have not been approved by regulatory agencies. In particular, the Staff Report asserts that the "FluxSense Study, industry journal articles or news articles that have not been vetted or approved by any regulatory agency, such as the South Coast Air Quality Management District (SCAQMD), and are not suited for emissions estimation or CEQA significance thresholds; nor are they approved for permitting or regulatory purposes."[13] At other points, the Staff Report asserts that "SAFER CA's referenced demonstration studies and industry journal articles referred to as 'substantial evidence' have not been vetted or approved by any regulatory agency for use in estimating potential future emissions from storage tanks or discreet fugitive sources, such as new petroleum tanks, or for establishing thresholds of significance in CEQA analyses."[14] These assertions are not based in law or fact.

The Staff Report relies on an illusory legal standard that is not supported by caselaw or CEQA. CEQA does not require the facts that experts rely on to be vetted or approved by regulatory agencies. CEQA provides that substantial evidence shall include expert opinion "supported by facts."[15] Whether the evidence relied upon by an expert has an adequate factual foundation can be established through a variety of factors, including the witness' personal knowledge of facts,[16] whether the

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Env't v. City of Richmond (2010) 184 Cal.App.4th 70, 90 fn.7 (acknowledging Dr. Fox as "consulting engineer and refinery expert" and crediting her opinion regarding the lack of support for GHG emissions calculations); *Berkeley Jets*, 91 Cal.App.4th at 1367–1371 (explaining that Dr. Fox's health risk assessment "should have alerted the Port" to a need to analyze TACs related to the project).

[13] Staff Report, Attachment 8 Detailed Response of Harbor Department to the Issues Raised by Safe Fuel and Energy Resources CA, p. 5 of 11, pdf pp. 7, 107.

[15] CEQA Guidelines § 15384 subd. (b).

[15] CEQA Guidelines § 15384 subd. (b).

[16] See *Protect Niles v City of Fremont* (2018) 25 CA5th 1 129; Clews Lan4 & Livestock v City of San Diego (2017) 19 CA5th 161, 195; *Keep Our Mountains Quiet v County of Santa Clara* (2015) 236 CA4tfi 714, 730; *Lucas Valley Homeowners*
Ass'n v County of Marin (1991) 233 CA3d 130, 142; *Oro Fino Gold Mining Corp. v. County of El Dorado* (1990) 225 CA3d 872.

evidence is provided by a qualified expert,[17] whether the evidence is credible,[18] and whether the evidence relies on verifiable data.[19] Opinion evidence submitted by a qualified expert, showing that significant impacts may occur, is usually conclusive as to that impact.[20]

Dr. Fox's expert opinion is supported by fact and easily meets these standards. Dr. Fox's comments on the Project are based on her decades of experience as an engineer, air quality and hazardous materials expert with extensive experience in the field of oil storage, handling and processing. Dr. Fox's qualifications are detailed in Exhibit A to SAFER CA's comments filed on November 5, 2021.[21] Dr. Fox has "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."[22] Dr. Fox has reviewed and commented on hundreds of CEQA documents and air permit applications, including for tank farms, refineries, and other industrial facilities. Dr. Fox has MS and PhD degrees in environmental engineering from the University of California at Berkeley. Dr. Fox's expert opinions have been cited by the Court of Appeal and the California Supreme Court.[23]

The evidence relied upon and calculated by Dr. Fox has equal foundation. She reviewed, evaluated, and in some cases remodeled the Project's emissions using modern industry standard emissions software. Dr. Fox's expert comments are based on the data in the record, as well as 35 independent field monitoring studies,

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[17] *Sierra Club v. Department of Forestry & Fire Protection* (2007) 150 CA4th 370; *Architectural Heritage Ass 'n v County of Monterey* (2004) 122 CA4th 1095, 1117.

[18] *Lucas Valley Homeowners Ass'n,* 233 CA3d at 142.

[19] *Id.* at 157.

[20] See *City of Livermore v LAFCO* (1986) 184.CA3d 531, 541.

[21] Letter from Safe Fuel and Energy Resources California ("SAFER CA"), Appeal of Approval of World Oil Tank Installation Project and Initial Study/Negative Declaration (SCH:2020100119) to Mayor Robert Garcia, Long Beach City Council, Monique De La Garza, Port of Long Beach, Exhibit A.

[22] Fox Comments, p. 3.

[23] Dr. Fox's expert opinions have been cited by the courts in *Berkeley Keep Jets Over the Bay Committee v. Board of Port Com'rs* (2001) 91 Cal.App.4th 1344, 1364 and *Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 317.

including a study conducted by SCAQMD itself.[24] Contrary to the contentions in the Staff Report, as Dr. Fox explains in her attached comments, every study she relies on has been vetted and approved by regulatory agencies, including the South Coast Air Quality Management District ("SCAQMD"), the U. S. EPA, the European Union ("EU"), and others, including for use in monitoring VOC emissions from fugitive components, which are present on tanks and the connecting pipeline.[25] Though it is not required for these methods to be vetted by a regulatory agency, they were. Dr. Fox explains that the methods used in the 35 studies [Dr. Fox cites] demonstrating that the IS/ND's tank VOC emissions are underestimated have been vetted and approved by all relevant regulatory agencies.[26] She states that "these methods have been validated by EPA for use in monitoring VOC emissions from fugitive components, which are present on tanks and are used by the California Air Resources Board (CARB) to verify emission inventories."[27] In particular, Dr. Fox relied on remote sensing methods to evaluate the Project's emissions that have been validated by numerous regulatory agencies and are used to determine compliance with emission limits.[28] Dr. Fox reiterates in her comments that the use of remote sensing methods used in the studies to detect leaks from fugitive components, including tanks such as those in the proposed Project, has been thoroughly vetted and approved by regulatory agencies in California, by the U.S. EPA, and by the United Nations, and is regularly used in place of the demonstrably inaccurate TANKS modeling software used by the Port.

The Staff Report wages a similar unsupported attack on Dr. Fox to the one that failed in *Save the Agoura Cornell Knoll v. City of Agoura Hills*.[29] There, the Appellant challenged the evidentiary value of the comments made by Dr. King, an expert in Native American archaeology and history. The court determined that Dr. King was, in fact, an expert, based on Dr. King's letter detailing his qualifications.[30] The court held that "he had an adequate background and knowledge base to support his opinion about the significant effects of the project on the site's cultural resources."[31] Further, the court cited *Pocket Protectors v. City of Sacramento* that "expert opinion if supported by facts, even if not based on specific observations as to

[24] Fox Comments, p. 2.
[25] See Exhibit A, pp 3-10.
[26] *Id.* at 3.
[27] *Id.*
[28] Fox Comments, p. 3.
[29] (2020) 46 Cal.App.5th 665, 689.
[30] *Id.*
[31] *Id.*

the site under review may qualify as substantial evidence supporting a fair argument."[32] Here, Dr. Fox has an adequate background and knowledge base to support her opinions about the significant effects of the Project on the environment, and relied on evidence generated by and vetted by the same regulatory agencies that have jurisdiction over the Project. The agency would be within its right to disregard comments from experts that amounted to "irrelevant generalization, too vague and nonspecific to amount to substantial evidence of anything."[33] But, Dr. Fox presented a specific, factual basis for her reliance on the above mentioned 35 studies and reports to show that the Project may result in potentially significant effect on the environment.

This circumstance is distinct from that addressed in *Parker Shattuck Neighbors v. Berkeley City Council* (2013) 222 Cal.App.4th 768. There, the court determined that the expert opinion was "insufficient to create a fair argument of a significant effect on the environment because a suggestion to investigate further is not evidence, much less substantial evidence, of an adverse impact."[34] Here, Dr. Fox, presented more than a suggestion to investigate Project impacts further, but presented facts demonstrating potentially significant environmental impacts associated with Project construction and operation using the facts in the record. Specifically, Dr. Fox provided substantial evidence demonstrating that tank VOC emissions are significant and unmitigated, NOx emissions are significant and unmitigated, operational hazardous air pollutants from tanks will result in a significant cancer risk, and detailed additional significant impacts as discussed herein and in SAFER CA's prior comments and Appeal.[35]

When qualified experts present conflicting evidence on the nature or extent of a project's impacts, the agency must accept the evidence tending to show the impacts to be significant and prepare an EIR.[36] When "expert opinions clash, an EIR should be done."[37] "It is the function of an EIR, not a negative declaration, to

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[32] *Save the Agoura Cornell Knoll* (2020) 46 Cal.App.5th 665, 689, quoting *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 928.
[33] *Lucas Valley Homeowners Assn. v. County of Marin* (1991) 233 Cal.App.3d 130, 157.
[34] *Shattuck Neighbors v. Berkeley City Council* (2013) 222 Cal.App.4th 768, 786.
[35] Fox Comments, p. 1.
[36] *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 935; *Sierra Club v. County of Sonoma* (1992) 6 Cal.App.4th 1307, 1317–1318; CEQA Guidelines § 15064(f)(5). See *Rominger v. County of Colusa* (2014) 229 Cal.App.4th 690; *City of Carmel-by-the-Sea v. Board of Supervisors* (1986) 183 Cal.App.3d 229, 249.
[37] *Pocket Protectors*, 124 Cal.App.4th at 928; *Sierra Club*, 6 Cal.App.4th at 1317–1318.

resolve conflicting claims, based on substantial evidence, as to the environmental effects of a project."[38] Where substantial evidence is presented, "evidence to the contrary is not sufficient to support a decision to dispense with preparation of an EIR and adopt a negative declaration, because it could be 'fairly argued' that the project might have a significant environmental impact."[39]

The Port's attempt to discredit Dr. Fox's evidence is a specious attempt to avoid the inevitable result under CEQA – when expert opinions clash, and EIR must be prepared.[40]

B. Substantial Evidence Supports a Fair Argument that the Project May Result in Potentially Significant Air Quality Impacts

Substantial evidence supports a fair argument that the Project may result in potentially significant impacts. The IS/ND, therefore, is inappropriate and an EIR must be prepared,[41] even if other substantial evidence supports the opposite conclusion.[42]

Here, the IS/ND itself provides substantial evidence of significant air quality impacts from Project VOC emissions, which by the Port's own admission will exceed SCAQMD's offset threshold for its New Source Review Rule,[43] triggering the Air District's offset requirement. Further, Dr. Fox's comments identified three sources of tank emissions that were not analyzed in the IS/ND including: 1) roof landing emissions; 2) degassing emissions; and 3) cleaning emissions. These represent major sources of tank VOC emissions.[44] Dr. Fox concludes that when these emissions occur, they are likely to exceed the allowable SCAQMD VOC emissions thresholds.[45] Dr. Fox's comments provide substantial evidence supporting a fair argument that the Project will have significant, unmitigated air quality impacts from emissions of construction, operation, fugitive sources, and increased facility capacity, all of which

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[38] *Pocket Protectors*, 124 Cal.App.4th at 935.
[39] *Sundstrom*, 202 Cal.App.3d at 310 (citation omitted).
[40] *Pocket Protectors*, 124 Cal.App.4th at 928; *Sierra Club*, 6 Cal.App.4th at 1317–1318.
[41] CEQA Guidelines § 15064 subd. (f), (h).
[42] *See No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75.
[43] "The facility's existing potential to emit is above the SCAQMD New Source Review Rule VOC offset threshold of 4 tons per year; therefore, the new tank emissions were required to be offset." Draft IS/ND, p. 4-9.
[44] Fox Comments, p. 8.
[45] *Id.*

the Port failed to disclose and mitigate, in violation of CEQA. These impacts must be fully disclosed and mitigated in an EIR.

The Port lacks substantial evidence to support the no-impact conclusions in the IS/ND. As SAFER CA's Appeal and prior comments laid out, the IS/ND is legally inadequate as it failed to provide substantial evidence to support its findings of no significant air quality, public health, and other impacts, as discussed in our comments. Additionally, the Port used flawed methodology in its analyses, resulting in underestimated impacts and unsupported conclusions, including the unsupported conclusion that the Project will have no significant impacts and requires no mitigation. Its conclusions, for example, that operational emissions are insignificant, omit any of the calculations or criteria supporting its conclusions—reviewers are left to accept, categorically and without question, the agency's conclusory and unsupported statements. An agency cannot conclude that an impact is less than significant unless it produces rigorous analysis and concrete substantial evidence justifying the finding.[46] The omission of information required by CEQA is a failure to proceed in the manner required by law.[47] SAFER CA and our air quality expert consultant Dr. Fox presented the City with substantial evidence supporting a fair argument that the Project will have a potentially significant air quality and public health impacts.

The IS/ND contains several more violations, as outlined in our comment letters, demonstrating that the Port improperly relied on mitigation measures disguised as design features in an effort to make impacts appear less significant than they are. The IS/ND provides that "Special Condition AQ-1 is not identified as a CEQA mitigation measure, and its implementation has not been assumed to determine the construction emissions significance findings."[48] However, the Port concluded that construction emissions would be less than significant based on CalEEMod modeling that assumes the use of Tier Final 4 engines, the most stringent low-emission construction equipment available, without a binding commitment to use this equipment for the Project and without disclosing how high emissions would be if less efficient equipment is used.[49]

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[46] *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 732.
[47] *Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236.
[48] IS/ND, p. 4-10.
[49] Pages 1 and 13 of the document "20180914_RIBOST_CalEEMod_ALL_ATT 1.PDF" provided to us by the Port in response to our records requests state that the Port requires Tier 4 engines for off-road equipment, but the CalEEMod Air Quality Analysis in Appendix A of the IS/ND contains no such language.

California law does not currently require construction fleets to contain exclusively Tier 4 (or even Tier 3) equipment, and allows the phasing-in of higher tiered equipment over a number of years.[50] Without a binding mitigation measure obligating the Applicant to use exclusively Tier 4 engines for the Project, there is no assurance that the Project will utilize this equipment, and no supporting evidence in the record to support the IS/ND's assertion that construction emissions would be less than significant. As a result, the IS/ND does not disclose the full extent of construction emissions, in violation of CEQA.

Special Condition AQ-1 acts in place of mitigation, but is not defined as mitigation by the IS/ND. CEQA defines mitigation to include "[m]inimizing impacts by limiting the degree or magnitude of the action and its implementation."[51] Special Condition AQ-1 will be implemented to "reduce the off-road equipment engine emissions, particularly NOx and particulate matter emissions."[52] This Special Condition acts as a mitigation measure for the purposes of CEQA. This measure must be implemented as binding mitigation in an EIR in compliance with CEQA.

Special Condition AQ-1 is not enforceable mitigation under CEQA. Dr. Fox notes in her comments, that "without enforceable mitigation… construction emissions would be significant."[53] Further, the Project Applicant has not made assurances as to the availability of Tier 4 equipment and whether the implementation of Special Condition AQ-1 is even possible. Dr. Fox provides that "In general, Tier 4 construction equipment availability is limited."[54] Given that the Tier 4 equipment may not be available for the Applicant's use during construction, Tier 4 equipment cannot adequately reduce significant construction air emissions. Rather than admitting that the Project requires mitigation in the form of Tier 4 equipment, the City obfuscates the CEQA process by requiring a special condition on the Project.

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[50] 13 Cal. Code Regs. § 2449(d)(6); See CARB In-Use Off Road Diesel-Fueled Fleets Regulation Overview, available at https://ww2.arb.ca.gov/sites/default/files/classic/msprog/ordiesel/faq/overview_fact_sheet_dec_2010-final.pdf.
[51] CEQA Guidelines § 15370.
[52] IS/ND, p. 4-9.
[53] Fox Comments, p. 11.
[54] *Id.*

The IS/ND also suggested the use of emission reduction credits ("ERCs") to offset VOC emissions, disregarding Dr. Fox's prior comments explaining that ERCs are not valid mitigation. Nevertheless, the IS/ND improperly claims that none of them are mitigation. This is another violation of CEQA, which prohibits the use of mitigation measures disguised as project features.[55]

A negative declaration is, by definition, a declaration that the Project needs no mitigation because it will not result in any impacts. If any measures are imposed to avoid adverse impacts, even if the agency chooses to call them by another name, their very existence invalidates the preparation of an ND. An EIR must be prepared.

C. The Port Failed to Adequately Respond to SAFER CA's Comments and Failed to Proceed in a Manner Required by Law

The Port failed to comply with CEQA when it failed to respond adequately to the vast majority of the comments we submitted on the Draft IS/ND, as well as failing to respond altogether to nearly all of the comments submitted by our technical expert, Dr. Fox.

The Port's responses to Dr. Fox's comments failed to address any of the specific, technical evidence she cited and instead simply directed the reader to its responses to comments by other commenters, most of which do not contain the same level of technical detail. Evidence of this egregious failure by the Port to uphold its duty to fully consider public comments can be seen in the attached Staff Report and Responses to Comments. Agencies are required to provide "detailed written response to comments . . . to ensure that the lead agency will fully consider the environmental consequences of a decision before it is made, that the decision is well informed and open to public scrutiny, and the public participation in the environmental review process is meaningful."[56] Comments raising significant environmental issues must be addressed in detail.[57] Failure of a lead agency to respond to comments before approving a project frustrates CEQA's informational purpose, rending an EIR legally inadequate.[58] "There must be good faith, reasoned

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[55] *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645, 658.
[56] *City of Long Beach v. Los Angeles Unified Sch. Dist.* (2009) 176 Cal.4th 889, 904.
[57] 14 Cal. Code Regs § 15088(c).
[58] *Flanders Found. v. City of Carmel-by-the-Sea* (2012) 202 Cal.4th 603, 615; *Rural Landowners Ass'n v. City Council* (1983) 143 Cal.3d 1013, 1020.

analysis in response. Conclusory statements unsupported by factual information will not suffice."[59]

Further, numerous instances can be found throughout the IS/ND demonstrating the Port's disregard for its legal obligation to comply with CEQA, particularly the aspects of the statute regarding public participation and disclosure of supporting documents. Instead of providing evidence to support its conclusions and to allow the public an opportunity to independently review the Project's potential impacts, the Port offered conclusory statements in its responses to comments, claiming that it coordinated with SCAQMD, for example, "to ensure that all new piping component fugitive VOC emissions are included in the emissions estimate."[60] An agency's conclusory assurances that it has "ensured" the accuracy of a project's estimated impacts ignores the public participation requirement of CEQA. An EIR must be prepared to adequately address and mitigate these issues.

D. The City Failed to Adequately Analyze the Potentially Significant Hazards Impacts Associated with Sea Level Rise

CEQA requires an agency to analyze "any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected."[61] Further, an agency must "evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards area."[62] This Project potentially exacerbates the risk of sea level rise and resultant hazards impacts at the Project site, due to its direct contribution of greenhouse gas emissions and siting at the Port, and may also be impacted by sea level rise given the proximity of the Project's tanks to the ocean waters at the Port. The Project's primary objective is the storage of crude oil, refinement and burning of which is a primary driver of global warming. The Staff Report does not adequately address the Project's impacts associated with sea level rise as required by CEQA.

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[59] CEQA Guidelines, § 15088, subd. (c); *The Flanders Foundation v. City of Carmel-by-the-Sea* (2012) 202 Cal.App.4th 603, 615; see *Laurel Heights Improvement Assn. v. Regents of University of California* (1993) 6 Cal.4th 1112, 1124.
[60] *Id.*
[61] CEQA Guidelines § 15126.2(a).
[62] *Id.*

SAFER CA recognizes that the court in *Ballona Wetlands Land Trust v. City of Los Angeles* held that CEQA does not require the lead agency to analyze or disclose the effects of sea level rise on the proposed development.[63] CEQA requires analysis and disclosure of a project's effects on the environment, and does not require an analysis of the environment's effect on the project.[64] But in *Cal. Bldg. Indus. Ass'n v. Bay Area Air Quality Mgmt. Dist. (CBIA),* the California Supreme Court carved out an exception to this general rule where a project may exacerbate an environmental hazard.[65] The court held that "the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[66] The court requires "evaluating a project's potentially significant *exacerbating* effects on existing environmental hazards – effects that arise because the project "brings people into the area affected."[67]

The Project will exacerbate sea level rise, and may place Project structures in the path of future sea level rise at the Port. Any contribution of greenhouse gas emissions from the Project will result in the worsening of sea level rise in California. "Aggressive reductions in greenhouse gas emissions may substantially reduce but do not eliminate the risk to California of extreme sea-level rise from Antarctic ice loss." [68] Further, "[c]oastal California is already experiencing the early impacts of a rising sea level, including more extensive coastal flooding during storms, periodic tidal flooding, and increased coastal erosion."[69] This Project will contribute GHG emissions through the extraction of the crude oil, the transport and storage, the refinement, and eventually the burning of the final fuel product. All these GHGs will indirectly contribute to the sea level rise that threatens the Port of Long Beach and Project components.

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[63] *Ballona Wetlands Land Tr. v. City of L.A.* (2011) 201 Cal. App. 4th 455.
[64] *Id.*
[65] Cal. Bldg. Indus. Ass'n v. Bay Area Air Quality Mgmt. Dist., (2015) 62 Cal. 4th 369.
[66] *Id.* at 388.
[67] *Id.*
[68] California Ocean Protection Council Science Advisory Team, *Rising Seas in California: An Update on Sea-Level Rise Science* (April 2017). Available at https://www.opc.ca.gov/webmaster/ftp/pdf/docs/rising-seas-in-california-an-update-on-sea-level-rise-science.pdf.
[69] *Id.*

Sea level rise will exacerbate potential hazards on the Project site. If the Project is submerged, Project components may corrode, crude oil may leak and cause a catastrophic crude oil spill. The Staff Report does not remedy the IS/ND's failure to adequately analyze this potentially significant impact. The Staff Report fails to mention the impact at all.

The City of Long Beach issued a draft Climate Action and Adaptation Plan which assumes that sea level will rise 11 inches by 2030, 24 inches by 2050, and 66-inches by 2100.[70] By the City's own calculation, the Project will potentially be subject to upwards of 36 inches of sea level rise, plus additional storm surge inundation, during the Project's lifetime.[71] The Project applicant noted that storage tank life is variable but can often exceed 50 years.[72] The Project site does not contain a flood control system, therefore the potentially significant flood hazard impacts associated with sea level rise remains unmitigated. The IS/ND proposes the use of air driven pumps which would be used to divert 36-inches of sea level rise plus a 100-year flood storm surge inundation over the containment wall during a flood event.[73] This measure is wildly insufficient to protect Project components and sensitive receptors from risks from flooding, hazards, and associated environmental impacts. Further, the City of Long Beach Proposed Climate Action and Adaptation Plan stated:

> [T]he Port of Long Beach studied the combine impacts of [sea level rise], storm surge, and precipitation based flooding from the Dominguez Channel. The modeling found that under extreme conditions, more intensive riverine storms coupled with SLR could cause the Dominguez Channel to overtop its banks, resulting in extensive flooding to Port infrastructure.[74]

By the City's own estimates, even absent a 100-year flood event, the Dominguez Channel may overtop its banks and result in "extensive flooding to Port

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[70] City of Long Beach, Proposed Climate Action and Adaptation Plan, (Nov. 2020) https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/caap/lb-caap-full-version_dec-14.
[71] *Id.*
[72] IS/ND, p. 4-28.
[73] *Id.*
[74] City of Long Beach, Proposed Climate Action and Adaptation Plan, (Nov. 2020). Available at: https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/caap/lb-caap-full-version_dec-14.

infrastructure."[75] This impact was not analyzed or mitigated in the IS/ND. The IS/ND is silent to the potential for this event, and fails to provide mitigation to protect Project components and nearby sensitive receptors in the event of a Dominguez Channel flood event. Workers on the Project site could potentially be stranded or endangered during a flood event. The IS/ND does not analyze or mitigate this potentially significant impact.

Further, the Project contravenes the Climate Adaptation and Coastal Resiliency Plan which requires the utilization of adaptation strategies to protect Port assets from future climate stressors, including storm surge and sea level rise.[76]

The Project will bring people into the area affected, including exposing workers and sensitive receptors to hazardous materials and crude oil that may leak as a result of rising seas. The City of Long Beach Proposed Climate Action and Adaptation Plan states that some of the key vulnerabilities in Long Beach include 4 miles of road which provide access to Port of Long Beach facilities.[77] This type of flooding could endanger the health and safety of individuals that the Project brings to the area affected, who may work in the Project vicinity. The Port of Long Beach is the second busiest seaport in the United States.[78] The Project will bring workers and individuals associated with Project construction and operation to the area.

The Project's impacts associated with exacerbating sea level rise, bringing people to the area affected, and contravening the Climate Adaptation and Coastal Resiliency Plan constitute significant impacts under CEQA, which must be analyzed and mitigated in an EIR.

III. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT MAY RESULT IN CUMULATIVELY CONSIDERABLE GREENHOUSE GAS EMISSIONS IMPACTS

The IS/ND asserts, absent substantial evidence, that the Project would have a less than significant impact with respect to "cumulatively considerable" impacts.

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[75] *Id.*
[76] Port of Long Beach, Climate Adaptation and Coastal Resiliency Plan (Fall 2016). Available at: https://www.slc.ca.gov/wp-content/uploads/2018/10/POLB.pdf.
[77] City of Long Beach, Proposed Climate Action and Adaptation Plan, (Nov. 2020) https://www.longbeach.gov/globalassets/lbds/media-library/documents/planning/caap/lb-caap-full-version_dec-14.
[78] *Id.*

"Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."[79] The IS/ND does not analyze or mitigate this potentially significant impact. Cumulative impact analysis is necessary because the full environmental impact of a proposed project cannot be gauged in a vacuum. This Project is a prime example of the principle that "environmental damage often occurs incrementally from a variety of small sources."[80] GHG impact sources may appear insignificant, but assume "threatening dimensions only when considered in light of the other sources with which they interact."[81]

As described in the state's Climate Change Scoping Plan of 2008, GHG sources in the state collectively result in emissions that are higher than the targets established by Assembly Bill 32, which indicates that GHG emissions in the state continue to contribute to a total significant, state-wide cumulative impact.[82] The GHG emissions from this Project will contribute to the cumulatively significant GHG emissions of past projects, current projects and probable future projects. The extraction of crude oil, the storage in the current Project, the refining process, and the resultant burning of the oil will generate significant GHG emissions. The resultant GHG from the burning of the fossil fuels stored on the Project site constitute a cumulatively significant impact.

Dr. Fox concluded that the cumulative GHG impacts of the Project will be significant and remain unmitigated.[83] Dr. Fox cites to numerous Projects including two existing tanks being repurposed for Marathon, the LAX expansion that will collectively contribute significant GHG emissions resulting in a cumulatively significant GHG emissions impact associated with Project buildout and operation. Additionally, the Port of Long Beach recently completed the Gerald Desmond Bridge Replacement Project.[84] The Port is developing the Middle Harbor

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[79] CEQA Guidelines Appendix G.
[80] *Kings County Farm Bureau v City of Hanford* (1990) 221 Cal.App.3d 692, 720.
[81] *Id.*
[82] The California Air Resources Board for the State of California, Climate Change Scoping Plan: a Framework for Change (December 2008), https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/adopted_scoping_plan.pdf.
[83] Fox Comments, p. 10.
[84] Port of Long Beach, Gerald Desmond Bridge Replacement Project, https://polb.com/port-info/projects/#gerald-desmond-bridge-replacement-project.

Redevelopment Project over the next ten years.[85] Additionally the Port is developing the Pier B On-Dock Support Facility, and will develop an I-710 Corridor Project in the near future.[86] The GHG emissions contributed as a result of these Projects, in addition to the proposed Project, may constitute cumulatively significant GHG emissions impacts.

The GHG emissions from the Project are estimated to be 98.9 MTCO2e/yr.[87] the LAX expansion operational GHG emissions were estimated to increase by 12,258 MTCO2e/yr.[88] The other Projects listed above would further increase GHG emissions.[89] The cumulative increase in GHG emissions is greater than 12,358 MTCO2e/yr, which exceeds the SCAQMD GHG significance threshold of 10,000 MTCO2e/yr.[90] Dr. Fox concluded that cumulative GHG emissions are significant, such that an EIR must be prepared in accordance with CEQA.

The Project may result in cumulatively significant GHG emissions in conjunction with other past projects, current projects, and probable future projects. This potentially significant impact should be analyzed in an EIR. The court's reasoning in *Kings County Farm Bureau v. City of Hanford* should be applied in the present case. The court concluded that given the Project's small contribution of ozone would affect an area already beset by excess air pollution, the court required the city to assess whether, given the regional problem, the projects increased emissions would contribute to a significant environmental impact.[91] There, the court held:

> The relevant question to be addressed in an EIR is not the relative amount of precursors emitted by the project when compared with preexisting emissions, but whether any additional amount of precursor emissions should be

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[85] Port of Long Beach, Middle Harbor Redevelopment Project, https://polb.com/port-info/projects/#middle-harbor-redevelopment-project.
[86] Port of Long Beach, Pier B On-Dock Support Facility, https://polb.com/port-info/projects/#pier-b-on-dock-support-facility; Port of Long Beach, I-710 Corridor Project, https://polb.com/port-info/projects/#i-710-corridor-project.
[87] IS/ND, Table 4.8-1, p. 4-28.
[88] Fox Comments, p. 12.
[89] *Id.*
[90] *Id.*
[91] Dave Owen, *Climate Change and Environmental Assessment Law*, 33 Colum. J. Envtl. L. 57 (2008). Available at: http://repository.uchastings.edu/faculty_scholarship/1242 p. 91.

considered significant in light of the serious nature of the ozone problems in the air basin.[92]

Here, the GHG emissions resultant from this Project and other past projects, current projects, and probable future projects may potentially result in cumulatively significant GHG emissions. This impact must be analyzed and mitigated in an EIR.

IV. CONCLUSION

We respectfully request that the Council overturn the Board's approval of the Harbor Development Permit and approval of the IS/ND and require that an EIR be prepared in which all Project impacts are 1) properly analyzed using appropriate methodology, 2) in compliance with the disclosure and public participation requirements of CEQA, 3) and fully disclosed and mitigated before being circulated for the statutorily mandated public review and comment period.

Thank you for your consideration of SAFER CA's Appeal.

Sincerely,

Kelilah Federman

KDF:acp

[92] *Id.*

EXHIBIT A

Phyllis Fox, PhD, PE
745 White Pine Avenue
Rockledge, FL 32955

January 2, 2022

Kelilah D. Federman
Adams Broadwell Joseph & Cardozo
601 Gateway Blvd., Suite 1000
South San Francisco, CA 94080

Dear Ms. Federman:

I have reviewed the Port of Long Beach's staff report in response to the Appeal of the Adoption of the Initial Study/Negative Declaration for the World Oil Tank Installation Project ("POLB Appeal Response").[1] The POLB Appeal Response asserts that the comments on the Draft IS/ND are "fully addressed in the Final IS/ND, Chapter 8 – Responses to Comments."[2] This is incorrect. As I explained in my October 27, 2021 letter, the cited responses do not address any of my comments directly but only ABJC's summary of them or similar comments filed by others. These summaries and related comments differ in important details from my comments.[3] In fact, as I document below, the Project will result in a significant increase in operational VOC emissions, requiring mitigation. Further, the Project will result in a cumulatively considerable increase in VOC and greenhouse gas (GHG) emissions. Thus, an EIR must be prepared for this Project.

1. OPERATIONAL VOC EMISSIONS FROM TANKS ARE SIGNIFICANT

My comments demonstrate that tank VOC emissions are significant, requiring mitigation.[4] There are four sources of VOC emissions from tanks: (1) direct tank

[1] Port of Long Beach, Appeal of the Adoption of the Initial Study/Negative Declaration for the World Oil Tank Installation Project ("POLB Appeal Response"), January 4, 2022; http://longbeach.legistar.com/View.ashx?M=F&ID=10370391&GUID=C72AD8FB-8F34-414B-AA70-2BACFB0C3A22.

[2] POLB Appeal Response, pdf 5, citing Final Negative Declaration/Application Summary Report, World Oil Tank Installation Project, Port of Long Beach, September 2021 (9/2021 IS/ND).

[3] Letter from Phyllis Fox to Kendra Hartmann, ABJC, Re: Rebuttal to Responses to Comments on the Initial Study/Negative Declaration for the World Oil Terminal, Long Beach, California, October 27, 2021 (Fox 10/27/2021 Letter).

[4] Phyllis Fox, Comments on the Initial Study/Negative Declaration for the World Oil Terminal, Long Beach, California, November 20, 2020 (11/20/2020 Fox Comments).

emissions; (2) roof landing emissions; (3) tank degassing emissions; and (4) tank cleaning emissions. The IS/ND significantly underestimated the first source, and omitted the remaining three sources. The responses to comments in the 9/2021 IS/ND and the POLB Appeal Response do not address my comments on these three additional sources of tank emissions.

1.1. Direct Tank Emissions

I commented that VOC emissions from the new tanks were significantly underestimated because they were based on emission estimation procedures that are widely acknowledged to be inaccurate. The responses to comments on the Final IS/ND failed to respond to any of my comments on the significant underestimate in tank VOC emissions. Instead, it only responded superficially to SAFER CA's summaries of my comments or similar comments made by others. The responses entirely ignore my evidence that the methods relied on in the IS/ND to estimate VOC emissions from tanks significantly underestimate tank VOC emissions.[5] My evidence included 35 independent field monitoring studies, including a study conducted by the SCAQMD.[6]

The POLB Appeal Response asserts for the first time that the 35 studies that I cited documenting that tank VOC emissions are significantly underestimated by the methods used in the IS/ND are not substantial evidence:[7]

> SAFER CA's referenced demonstration studies and industry journal articles referred to as "substantial evidence" have not been vetted or approved by any regulatory agency, such as the South Coast Air Quality Management District (SCAQMD), for use in estimating potential future emissions from storage tanks or discreet fugitive sources, such as new petroleum tanks or for establishing thresholds of significance in CEQA analyses. This ground for appeal should be denied.

and[8]

> for those which the Port did not incorporate into the document. SAFER CA's technical expert's opinion that the impacts in the IS/ND are underestimated are primarily based on demonstration projects, such as the FluxSense Study, industry journal articles, or news articles that have not been vetted or approved by any regulatory agency, such as the South Coast Air Quality Management District (SCAQMD), and are not suited for emissions estimation or CEQA significance thresholds; nor are they approved for permitting or regulatory purposes. SAFER CA's comments on the Draft IS/ND and the

These are new, unsupported arguments that were not presented in the responses to comments.[9] They are incorrect. In fact, the methods used in the 35 studies that I cite

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[5] Tank VOC comments in 10/27/2021 Fox Letter, pp. 6-11. Responses to tank VOC comments in: Final Negative Declaration/Application Summary Report, World Oil Tank Installation Project, Port of Long Beach, September 2021 (9/21 IS/ND).[5]

[6] 11/20/2020 Fox Comments, Comment 3. Operational VOC Emissions are Significant.

[7] POLB Appeal Response, pdf 7.

[8] POLB Appeal Response, pdf 107.

demonstrating that the IS/ND tank VOC emissions are underestimated have been vetted and approved by regulatory agencies, including the SCAQMD, the U. S. EPA, the European Union (EU), and others. Further, these methods have been validated by EPA for use in monitoring VOC emissions from fugitive components, which are present on tanks and the connecting pipeline. Further, they are required by SCAQMD Rule 1180 for refinery fenceline monitoring, are used by the California Air Resources Board (CARB) to verify emission inventories based on AP-42 and other similar emission estimating procedures, and are required in the EU.

1.1.1. Remote Sensing Has Been Approved by Regulatory Agencies for Estimating Emissions

The 35 studies that I cite as documenting the underestimation of tank VOC emissions were based on remote sensing, in many cases to validate tank VOC emissions estimated by the TANKS model and AP-42, the methods used in the IS/ND to estimate tank VOC emissions. Contrary to the unsupported opinion in the POLB Appeal Response, remote sensing methods used in these studies have been validated by regulatory agencies and are used to determine compliance with emission limits.

First, the U.S. EPA reviewed tank VOC remote sensing studies in 2015 and compared them to emission estimates made using AP-42. The EPA concluded that "it is reasonable to conclude that long-term emissions rates can be reasonably estimated using the AP-42 emissions estimation methodology. It is also important to note that emissions during short time periods can be up to 10 times higher than the reported annual average emissions."[10] Since then, many studies have been conducted confirming the underestimate in VOC emissions from tanks using the TANKS model and AP-42, reviewed in my 11/20/2020 comments.

Second, the United Nations Economic Commission for Europe's Convention on Long-range Transboundary Air Pollution developed a remote sensing protocol to monitor VOC emissions from the refining and petrochemical industries (the Protocol). In response to this Protocol, the United Kingdom conducted a study at the Shell Stanlow Manufacturing Complex to improve the accuracy of the UK's VOC emissions for the refining and petrochemical industries. The UK study compared VOC emissions calculated using the American Petroleum Institute (API) procedures, which are the AP-42 tank VOC calculation methods, with VOC emissions measured by remote sensing using DIAL. The study concluded that VOC emissions from oil refinery storage tanks were underestimated by the AP-42 procedures. The reasons for the

[9] Final IS/ND, Chapter 8 – Responses to Comments.

[10] 11/20/2020 Fox Comments, p. 10, footnote 40.

underestimate include the use of a fixed fluid temperature, a single wind speed, failure to account for the varying height of the roof, and emissions from the film of liquid hydrocarbons on the tank walls that evaporate as the tanks are emptied.[11] These problems remain.

Third, Swedish authorities, on discovering discrepancies between AP-42 calculated and measured refinery emissions, including refinery tanks, now require the use of remote sensing methods in place of emission factors to estimate tank emissions. Since 1995, all five Swedish refineries report emissions based on continuous emission monitoring using either SOF or DIAL studies, performed at least once every 3 years,[12] recently reduced to once every 2 years.[13] Continuous emission monitoring was required in Sweden for refineries because studies documented that AP-42 underestimate refinery emissions, which include tanks:[14]

> When local Swedish environmental authorities saw the results of DIAL measurements at refineries in the late 1980's and early 1990's, they became skeptical of emissions estimating techniques based on EPA's AP-42 results. In 1992 they required all refineries to submit "measured" emissions. By 1995 they required the measured emissions to be obtained using DIAL, citing flaws with other analytical techniques. The DIAL measurements were required every 3 years. In the early 2000's testing began with SOF, a technique developed at Chalmers University in Sweden. By 2005 the Swedish authorities allowed either DIAL or SOF to be used, but also required the measurements to be taken annually. Currently all refiners in Sweden use SOF, because it is much cheaper than DIAL. There are advantages and disadvantages in both DIAL and SOF techniques which will be discussed later.

Fourth, the EPA has published a handbook on the optical and remote sensing methods used in the studies cited in my 11/20/2020 comments. This handbook specifically states that the remote sensing methods used in most of the 35 studies I cite in my 11/20/2020 comment can be used to determine compliance with ambient regulatory limits (which include the SCAQMD significance thresholds): "Quantitative emissions data from remote measurements may then be used for multiple purposes including possible development of emission factors, evaluation of exposure levels,

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[11] National Physical Laboratory, P. T. Woods and others, A Determination of the Emissions of Volatile Organic Compounds from Oil Refinery Storage Tanks, NPL Report DQM(A)96, October 1993, pp. 16-17; https://eprintspublications.npl.co.uk/1112/1/DQM96.pdf. See also: https://archive.epa.gov/region02/capp/web/pdf/tcc_dial_report_appendix_f.pdf.

[12] Alex Cuclis, Why Emission Factors Don't Work at Refineries and What to Do About It, Paper Presented at the Emissions Inventory Conference in Tampa, Florida, August 13-16, 2012, Exhibit 4 of 11/20/2020 Fox Comments. See also: https://www3.epa.gov/ttnchie1/conference/ei20/session7/acuclis.pdf.

[13] Marianne Ericsson and others, Establishing Refinery Emission Inventories – ORS Measurements or Permit Based Calculations, p. 2; https://racielive.aqrc.ucdavis.edu/sites/g/files/dgvnsk8021/files/inline-files/Marianne%20Ericsson_Establishing%20Refinery%20Emission%20Inventories%20-%20ORS%20Measurements%20or%20Permit%20Based%20Calculations.pdf.

[14] Cuclis, p. 6.

compliance with ambient regulatory limits, and identification of sources of air pollutions."[15]

Fifth, the European Union (EU) is transitioning from calculated to measured emissions starting in 2021 and has developed protocols to manage the perceived uncertainties.[16]

Finally, the EPA has formally recognized the use of the remote sensing methods used in the studies I cite to comply with federal regulations. The Project tanks and the supporting pipelines include "fugitive" components, including flanges, valves, and pumps.[17] These components "leak" VOCs. Leaks are conventionally identified manually using EPA Method 21. Leaks from these components are a major source of VOC emissions. Compliance with emissions from these components is determined under EPA regulations using manual "leak detection and repair" (LDAR) methods.[18] The EPA has thoroughly vetted and approved the use of remote sensing methods, used in the 35 studies I cite in my 11/20/2020 comments, to detect leaks from fugitive components, including those on tanks.[19,20,21]

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[15] U.S. EPA, EPA Handbook: Optical and Remote Sensing for Measurement and monitoring of Emissions Flux of Gases and Particulate Matter, August 2019, pdf 23 (emphasis added); https://www.epa.gov/sites/default/files/2018-08/documents/gd-52v.2.pdf.

[16] Marianne Ericsson and others, Establishing Refinery Emission Inventories – ORS Measurements or Permit Based Calculations; https://racielive.aqrc.ucdavis.edu/sites/g/files/dgvnsk8021/files/inline-files/Marianne%20Ericsson_Establishing%20Refinery%20Emission%20Inventories%20-%20ORS%20Measurements%20or%20Permit%20Based%20Calculations.pdf.

[17] See, e.g., 9/2021 IS/ND, p. 4-8, pdf 36 ("the new piping components (pumps, valves, etc.)…").

[18] Alternative Work Practice to Detect Leaks from Equipment, 73 FR 78199, December 22, 2008; https://www.govinfo.gov/content/pkg/FR-2008-12-22/pdf/E8-30196.pdf. See also: U.S. EPA, Leak Detection and Repair, A Best Practices Guide, 2021; https://www.epa.gov/sites/default/files/2014-02/documents/ldarguide.pdf.

[19] Federal Register Volume 73, No. 246 (73 FR 78199–78219) Alternative Work Practice to Detect Leaks from Equipment. 12/22/2008.

[20] T. L. Footer, J. M. DeWees, E. D. Thomas, B. C. Squier, C. D. Secrest, and A. P. Eisele. 2015. Performance Evaluations and Quality Validation System for Optical Gas Imaging Cameras ORS Handbook Section 2.0 Page 2-77 that Visualize Fugitive Hydrocarbon Gas Emissions. In Proceedings of the 108th Annual Conference of the Air & Waste Management Association. Raleigh, NC, June 25, 2015.

[21] D. Reese, C. Melvin, and W. Sadik. 2007. Smart LDAR: Pipe Dream or Potential Reality? Exxon Mobil Corporation. See also: https://www.arb.ca.gov/lists/com-attach/14-oilandgas2016-UTdWPFM7BSQCW1c4.pdf.

1.1.2. Remote Sensing Has Been Approved by the SCAQMD for Regulatory Purposes

Fourth, my 11/20/2020 comments on the underestimation of tank VOC emissions cite a report commissioned by the SCAQMD to monitor VOCs and HAP emissions from refinery tanks (the "FluxSense Report").[22] This study demonstrated that tank VOC emissions in the SCAQMD (estimated using the same methods as in the IS/ND) were underestimated by an average factor of 6.2 (2.7-12) and benzene by an average factor of 34 (3.2-202), compared to those reported to the SCAQMD in emission inventories[23] using the same methods used in the IS/ND to estimate tank emissions.

This 2017 FluxSense study, documenting the significant underestimation of tank VOC and benzene emissions in the SCAQMD, was based on a SCAQMD-commissioned 2015 FluxSense study. The 2015 FluxSense study evaluated the accuracy of the optical remote sensing methods used in many of the 35 studies I cite in my 11/20/2020 comments to measure VOC emissions from tanks and other stationary sources in the South Coast Air Basin. The 2015 FluxSense study was conducted to determine if remote sensing could be used to comply with SCAQMD Rule 1180.[24,25]

The 2015 FluxSense report, which demonstrated the accuracy of remote sensing for measuring refinery emissions, including from tanks, is the predecessor to the FluxSense Report that I cited in my comments as documenting a factor of 6.2 underestimate of VOC emissions and a factor of 34 underestimate of benzene emissions from tanks when calculated using the IS/ND's tank emission calculation methods. The SCAQMD adopted Rule 1180 on December 1, 2017, based in part on these two FluxSense reports, which clearly document the fact that the methods used to estimate tank emissions in the IS/ND significantly underestimate tank emissions.[26]

In sum, the agency responsible for issuing the air permit for the Project, the SCAQMD, evaluated the use of the remote sensing methods used in the 35 studies I cite in my comments to monitor emissions from petroleum refineries in preparation for the

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[22] FluxSense Report, Exhibit 11 to 11/20/2020 Fox Comments.

[23] FluxSense Report, Exhibit 11 to 11/20/2020 Fox Comments, Table 43, pdf 95.

[24] FluxSense, Using Solar Occultation Flux and Other Optical Remote Sensing Methods to Measure VOC Emissions from a Variety of Stationary Sources in the South Coast Air Basin, 2015. Final Report 14 September 2017; http://www.aqmd.gov/docs/default-source/fenceline_monitoring/project_2/fluxsense_project2_2015_final_report.pdf?sfvrsn=6

[25] SCAQMD, Rule 1180 Implementation Update, December 2019; http://www.aqmd.gov/docs/default-source/fenceline_monitoring/r1180_community_meeting_dec_2019_all_communities_final.pdf?sfvrsn=8

[26] SCAQMD, DRAFT Rule 1180 Community Air Monitoring Plan, 2019; http://www.aqmd.gov/docs/default-source/fenceline_monitroing/r1180_draft_community_monitoring_plan_final_111919.pdf?sfvrsn=8.

adoption of a refinery fenceline monitoring rule, Rule 1180.[27] Rule 1180[28] requires the use of remote sensing equipment to continuously monitor, record, and report air pollutant levels of VOC and HAPs from refineries included in the IS/ND health risk assessment.[29] The methods used to comply with Rule 1180 are the same methods used in the 35 studies that I cite in my comments.

1.1.3. Remote Sensing Is Used by the California Air Resources Board (CARB)

CARB has commissioned studies of emissions of VOCs, air toxics, and greenhouse gases at refineries, ports, oil and gas fields, and dairies using the same remote sensing methods that were used in most of the 35 studies I cite in my 11/20/2020 comments. The CARB-commissioned studies consistently demonstrate that standard emission estimating procedures underestimate emissions from refineries, tank farms, depots, and other sources when calculated with AP-42 and other generic emission factors.[30,31] These studies conclude, for example, that "Bay Area refinery and port NMVOC [non-methane VOCs] emissions were around 2.5 times higher than reported."[32]

1.1.4. Additional Studies Confirm My Comments

Additional studies have been conducted since I wrote my 11/20/2020 comments, such as the CARB commissioned remote sensing studies conducted to confirm reported emission inventories. In sum, FluxSense, the company that has conducted the majority

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[27] Johan Mellavist, FluxSense, Using Solar Occulatation Flux and other Optical Remote Sensing Methods to Measure VOC Emissions from a Variety of Stationary Sources in the South Coast Air Basin, 2015; http://www.aqmd.gov/docs/default-source/fenceline_monitoring/project_2/fluxsense_project2_2015_final_report.pdf?sfvrsn=6.

[28] Rule 1180. Refinery Fenceline and Community Air Monitoring, Adopted December 1, 2017; http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1180.pdf.

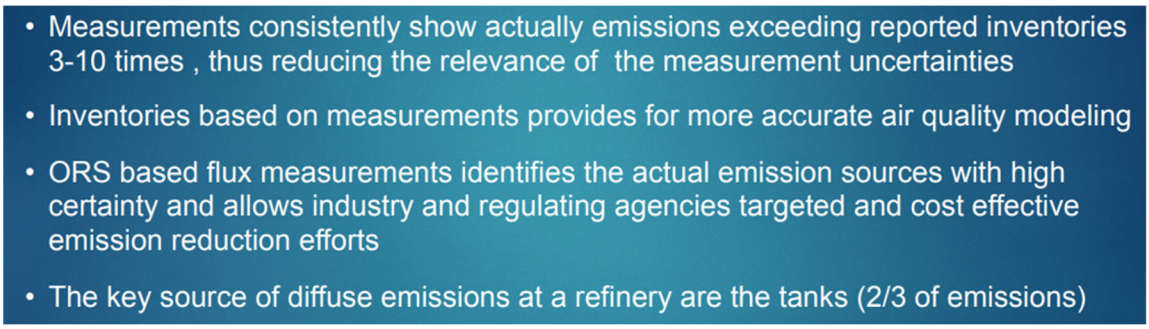
[29] Rule 1180, Section (d) and Table 1.

[30] FluxSense, Inc. Characterization of Air Toxics and Greenhouse Gas Emission Sources and Their Impacts on Community-Scale Air Quality Levels in Disadvantaged Communities; https://ww3.arb.ca.gov/research/single-project.php?row_id=67028. See also: http://ww2.arb.ca.gov/sites/default/files/2021-03/17RD021.pdf.

[31] Johan Mellqvist and others, Characterization of Air Toxics and Greenhouse Gas Emission Sources and Their Impacts on Community-Scale Air Quality Levels in Disadvantaged Communities, Final Report, March 2021; http://ww2.arb.ca.gov/sites/default/files/2021-03/17RD021.pdf.

[32] Johan Mellqvist and others, March 2021, p. 10.

of the studies that document underestimates of VOC emissions using AP-42 emission estimates has concluded as follows:[33]



1.2. Revised Tank Emissions Are Unsupported and Significant

The POLB Appeal Response explains that tank VOC emissions, originally estimated using the TANKS model, "….were re-estimated by the SCAQMD using current guidance in the U.S. EPA-approved AP-42 Emission Estimation Procedures for Floating Roof Tanks rather than the older U.S. EPA TANKS model used in the Draft IS/ND."[34] The 9/2021 IS/ND includes revised unmitigated maximum daily operational emission increases in Table 4.3-2 due to the Project.[35] The revised VOC emissions do not address my 11/20/2020 comments.

First, the TANKS model implements AP-42 so revising the emissions using the underlying equations (or an updated TANKS model) does not solve the underestimate problem. Further, my 11/20/2020 comments and other information in this letter document that AP-42, including the most recent revision, also significantly underestimate tank VOC emissions. In fact, the Port's re-estimation of tank VOC emissions increased them from 9.70 lb/day to 10.82 lb/day, an increase of only 1.12 lb/day. Thus, changing the method of estimating tank emissions (from an outdated version of the TANKS model to the most recent AP-42 update) does not address the factors of 1.5 to 132 (midpoint of 67) underestimate in VOC emissions that I document in my 11/20/2020 comments for tank VOC emissions based on both the TANKS model and AP-42. Further, it does not address the additional recent SCAQMD and CARB studies I review in this letter which likewise document the significant underestimate in VOC emissions when calculated using standard methods.[36] In sum, the POLB Appeal Response does not address my tank VOC underestimate comments.

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[33] Ericsson and other, p. 16.

[34] POLB Appeal Response, pdf 104.

[35] 9/2021 IS/ND, Table 4.3-2, pdf 39.

[36] 11/20/2020 Fox Comments, p. 18.

Second, the revised VOC emissions include an increase in tank fugitive VOC emissions from 9.70 lbs/day to 10.8 lbs/day, cited to four sources: SCAQMD 2019, SCAQMD 2021b, SCAQMD 2021c, and Yorke 2021.[37,38] These sources do not support the revised VOC emissions. SCAQMD 2019 is the SCAQMD's significance thresholds. SCAQMD 2021b is a May 28, 2021 email from the SCAQMD to Jennifer Blanchard, Port of Long Beach (POLB), responding generally to some questions posed by the applicant on the tank emission model, VOC offsets, H2S emissions, and other non-VOC related issues. SCAQMD 2021c is a June 16, 2021 email from the SCAQMD (Tom Liebel) to Jennifer Blanchard (POLB) confirming that the emission calculations were based on the current version of AP-42 (accessed May 2021). These references do not support the VOC emission calculations in Table 6.

The final citation to Yorke 2021 is the Application for Permit to Construct/Permit to Operate – Two Additional Petroleum Storage Tanks (ATC Application).[39] The emission calculations supporting the VOC emissions in the 9/2021 IS/ND Table 4.3-2 are in Appendix B of this Application. However, Appendix B is BLANK in the version of this Application that was produced to my client. Thus, the record before the Port of Long Beach does not contain any support for the Project's operational VOC emissions. This is a serious omission as the record contains substantial evidence documenting that Project VOC emissions are significantly underestimated and are highly significant, requiring mitigation and the preparation of an EIR.

The calculations supporting the tank VOC emissions are complex and cannot be reviewed without the supporting unlocked Excel spreadsheet(s) and TANK model or AP-42 equations inputs and outputs. The supporting calculations were requested in Public Records Act (PRA) requests to the Port, but were not produced. Thus, there is no basis for concluding that tank VOC emissions have been correctly calculated and revised to address my comments.[40] Further, if the calculations are based on the most recent version of AP-42, rather than the TANKS model, they still do not address my comments, which demonstrate that the TANKS model and AP-42 both significantly underestimate tank VOC emissions.

The FluxSense study of tanks commissioned by the SCAQMD documented an average underestimation in VOCs of 6.2 for tanks in the SCAQMD, where the Project is

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[37] Ibid.

[38] 9/2021 IS/ND, pdf 115, 116.

[39] York Engineering, LLC, Ribost Terminal LLC, SCAQMD Facility ID: 111238, Application for Permit to Construct/Permit to Operate – Two Additional Petroleum Storage Tanks, February 2021 (ATC Application). Exhibit 1.

[40] 11/20/2020 Fox Comments.

located. Assuming a factor of 6.2 underestimate, tank VOC emissions would increase from 10.82 lb/day to 67.1 lb/day. The SCAQMD operational VOC significance threshold is 55 lb/day[41] (incorrectly reported in the 9/2021 IS/ND as 75 lb/day, which is the construction VOC significance threshold). Corrected tank VOC emissions alone exceed the operational significance threshold of 55 lb/day. Thus, Project VOC emissions are significant, requiring mitigation.

1.3. Other Sources of Tank Emissions

My 11/20/2021 comments identified three sources of tank emissions that are excluded by the methods used in the IS/ND: (1) roof landing emissions; (2) degassing emissions; and (3) cleaning emissions. These are major sources of tank VOC emissions. While they do not occur every day, based on my extensive experience in the refining industry, when they do occur, they alone could exceed the SCAQMD VOC significance threshold, which is expressed in lb/day.

I have not found any response to these comments in the record before the Port of Long Beach. The words "roof landing" and "degassing" do not occur in the POLB Appeal Response. The word "cleaning" occurs,[42] but not in response to my comments. Further, the 9/21 IS/ND responses to comments do not estimate these emissions and include them in operational VOC emissions. Instead, it asserts that these emissions occur with a very low frequency (approximately every 10 years) and that they must comply with SCAQMD Rule 1149.[43] No support is provided for the asserted every 10 year roof landing, degassing, and cleaning events. Regardless, this does not excuse the Port of Long Beach from including these emissions in its estimate of Project VOC emissions because the significance thresholds are based on pounds per day.

2. CONSTRUCTION EMISSIONS ARE SIGNIFICANT, REQUIRING FORMAL MITIGATION, NOT A SPECIAL CONDITION

The amount of pollution from construction equipment is categorized using a system of "engine tiers." The higher the tier, the lower the emissions.[44] I commented that construction NOx, ROG, and PM10 emissions would be significant unless

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[41] SCAQMD, South Coast AQMD Air Quality Significance Thresholds, April 2019; http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

[42] POLB Appeal Response, pdf 134.

[43] 9/2021 IS/ND, pdf 332.

[44] See, e.g., DieselNet, Emission Standards: Nonroad Diesel Engines; https://dieselnet.com/standards/us/nonroad.php. See also: DieselNet, Emission Standards, Nonroad Diesel Engines; https://dieselnet.com/standards/us/nonroad.php#tier4.

enforceable mitigation were imposed to require "Tier 4 Final" engines.[45] The response to this comment in SFERCA-24 asserts that the "fleet average off-road equipment and fleet average on-road vehicles in the CalEEMod, approximately equivalent to Tier 3, were assumed.[46] Further, in response to a PRA requesting all CalEEMod files, an Excel spreadsheet was provided summarizing the input assumptions. This spreadsheet indicates that "Tier 4 Final" construction equipment was assumed in the CalEEMod analysis of construction emissions.[47] Tier 4 Final engines have the lowest emissions.[48]

The engine tier regulations apply to equipment manufacturers, not equipment users. California Air Resources Board (CARB) regulations governing construction fleets (engine users) have a longer timeframe, allowing phasing-in of higher tier equipment and/or upgrades to existing, lower-tiered construction equipment to Tier-4-equivalent best available control technology ("BACT") over a number of years.[49] For example, Tier 2 equipment was not required to be added to construction fleets until 2014; Tier 3 equipment was not required to be added to large and medium-sized fleets until 2018, and is not required to be added to small fleets until 2023; and older equipment may still be in operation even after the phase-in deadlines.[50]

As a result, off-road construction fleets may continue to offer lower tiered construction equipment for many years, and construction fleets/off-road engine users are not currently required to use or provide exclusively Tier 3 or Tier 4 equipment for construction projects in California.[51] Thus, regardless of the assumed tiers in the IS/ND's emissions modeling, the IS/ND does not contain an enforceable condition requiring the Applicant's construction contractor to use either Tier 3 or Tier 4 Final engines, as assumed in the CalEEMod analysis. Without a binding mitigation measure

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[45] 11/20/2020 Fox Comments, Comment 2.1.

[46] Response to Comment SFERCA-24.

[47] 11/20/2020 Fox Comments, Comment 2, p. 3.

[48] CARB, Non-road Diesel Engine Certification Tier Chart, available at https://ww2.arb.ca.gov/resources/documents/non-road-diesel-engine-certification-tier-chart.

[49] See CARB In-Use Off Road Diesel-Fueled Fleets Regulation Overview, , available at https://ww2.arb.ca.gov/sites/default/files/classic/msprog/ordiesel/faq/overview_fact_sheet_dec_2010-final.pdf.

[50] *Id*. at pp. 4-5; 13 Cal. Code Regs. § 2449(d)(6).

[51] CARB regulations require operational off-road vehicles used at California ports (mobile cargo handling equipment) to have Tier 4 engines. 13 Cal. Code Regs. § 2479(e); see also https://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/wilmington/handouts-may9-2019.pdf?sfvrsn=8, at p. 9. However, this regulation does not apply to off-road construction equipment.

or condition of approval specifically requiring Tier 3 or Tier 4 Final engines, the applicant is not obligated to use either of them for this Project.

Instead of requiring enforceable mitigation, the 9/2021 IS/ND proposes Special Condition AQ-1: Non-Road Engine Emissions standard. This is not enforceable mitigation. This condition requires that "…all construction equipment meet the United States Environmental Protection Agency Tier 4 non-road engine standards."[52] The IS/ND further explains that as "…the unmitigated emissions are below the SCAQMD emissions significance thresholds no emissions mitigation is required and Special Condition AQ-1 is not identified as a CEQA mitigation measure…"[53] This is inadequate to assure construction emissions are not significant for two reasons.

First, the IS/ND modeled construction emissions assuming Tier 4 Final engines, not Tier 4 engines.[54] The NOx emissions from Tier 4 Final engines are lower than the NOx emissions from Tier 4 engines.[55] Thus, the IS/ND's emission calculations include only mitigated emissions, and not unmitigated emissions, which would exceed SCAQMD thresholds if lower tier construction equipment is used. The IS/ND's statement that "no emissions mitigation is required" because unmitigated emissions are below SCAQMD thresholds is therefore unsupported. The only way to ensure that construction emissions are below SCAQMD thresholds is with mitigation. Special Condition AQ-1 must be revised to require all Tier 4 Final engines.

Second, Special Condition AQ-1 is not enforceable, as documented below. Without enforceable mitigation, my comments demonstrate that construction emissions could be significant. The tier of the engine in construction equipment determines the emissions. Earlier versions of the Project's CalEEMod construction analysis specifically identified Tier 4 engines as "mitigation."[56]

The engine tier standards apply to new equipment that equipment manufacturers must comply with, not construction contractors. Equipment

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[52] 9/2021 IS/ND, p. 4-9, pdf 37.

[53] 9/2021 IS/ND, p. 4-10, pdf 38.

[54] 11/20/2020 Fox Comments, Comment 2, p. 3.

[55] CARB, Non-road Diesel Engine Certification Tier Chart; https://ww2.arb.ca.gov/resources/documents/non-road-diesel-engine-certification-tier-chart; CARB, CARB Strategies for Reducing Emissions from Off-Road Construction Equipment, January 27, 2021, pdf 5; http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/printer-friendly-combined-construction-carb-amp-aqmp-presentations-01-27-21.pdf?sfvrsn=8.

[56] PRA Response, POLB Followup, File: 20180914_Aspen_RIBOST_CalEEMod input file_ATT 2.XLS;, which is CalEEMod Version: CalEEMod.2016.3.2, Rune: 8/21/2019 tab "tblConstEquipMitigation".

manufacturers can no longer produce off-road equipment with lower engine tiers, e.g., Tier 3 or Tier 4 engine, based on a phase-in schedule. Thus, the availability of existing Tier 4 engines will decline over the horizon of this Project's construction.

Lower tier equipment is cheaper than newer tier equipment. An applicant will select the cheapest equipment that can perform a task. The documents I reviewed are silent on the availability of Tier 4 (and Tier 4 Final) engines for the equipment required to construct this project. In general, Tier 4 construction equipment availability is limited. Further, Tier 4 equipment is more expensive than lower tier equipment. Thus, unless this special condition is made enforceable, there is no guarantee that the Applicant will comply. Failure to comply could result in significant NOx, ROG, and PM10 construction emissions. I recommend that the following conditions be imposed:

(1) Include the Tier 4 Final requirement in all bid documents, purchase orders, and contracts;

(2) Successful contractor(s) must be required to demonstrate the ability to supply Tier 4 Final equipment prior to any ground disturbing and construction activities;

(3) A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each unit of equipment;

(4) Written construction documents by the construction contractor(s) that ensure compliance with Tier 4 Final standards; and

(5) Regular inspections of all construction equipment tiers by a licensed independent contractor, e.g., a licensed professional civil or mechanical engineer.[57]

It is reasonably feasible that Tier 4 Final construction equipment may not be available for all required equipment when it is needed. In this event, before using non-compliant construction equipment, the Project representative or contractor must:

1. Demonstrate that the use of non-compliant construction equipment will not result in a significant impact. This demonstration must be based on emission calculations with written findings supported by substantial evidence that is approved by the Port.

[57] See, for example, Lijin Sun, J.D., SCAQMD, Comments on Mitigated Negative Declaration (MND) for the Proposed ENV-2018-6903;10810 West Vanowen Street Project, July 10, 2019; http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2019/july/LAC190702-08.pdf?sfvrsn=8.

2. Adopt alternative strategies to the use of Tier 4 Final, which may include the reduction in the number and/or horsepower rating of construction equipment, limiting the number of daily construction haul truck trips to and from the Project site, using cleaner vehicle fuel, and/or limiting the number of individual construction project phases occurring simultaneously.

3. Retrofit or repower lower tier equipment to meet Tier 4 Final standards by, for example, using equipment that has been retrofit with diesel particulate traps or selective catalytic reduction (SCR).[58]

In sum, construction NOx emissions are significant, unsupported, and unmitigated. Rather than admit that Tier 4 engines must be required to mitigate significant construction NOx emissions, the IS/ND imposes a "special condition" requiring Tier 4 final engines. This "special condition" is mitigation, requiring preparation of an IS/MND or EIR.

3. CUMULATIVE VOC AND GHG IMPACTS ARE SIGNIFICANT

Mandatory findings of significance are required if a project has impacts that are individually limited but cumulatively considerable. As defined by Section 15065 of the CEQA Guidelines, "cumulatively considerable means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects."[59]

The IS/ND concluded that all cumulative impacts were less than significant without identifying any cumulative projects or conducting a cumulative impact analysis.[60] Instead, the 9/2021 IS/ND asserts that the Project's operational air quality and GHG impacts are not "cumulatively considerable" because "The proposed Project, as well as all other current projects (e.g., similar ongoing or reasonably foreseeable future construction projects) in the region, would comply with applicable SCAQMD standards, recommendations, and regulations, which are designed to limit air quality impacts within its jurisdiction, as well as State laws. As such, all potential cumulative impacts regarding air quality and greenhouse gas emissions would be limited and

[58] See, e.g., CARB, Off-Road Vehicle Research; https://ww2.arb.ca.gov/resources/documents/off-road-equipment-research.

[59] CEQA Guidelines §15065(a)(3).

[60] See, e.g., 9/2021 IS/ND, p. 4-68, pdf 96.

minimized."[61] As I noted in my 11/20/2020 comments, this violates both CEQA and SCAQMD guidance.

Under CEQA, "[c]umulative impacts refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."[62] "The individual effects may be changes resulting from a single project or a number of separate projects."[63] Further, "the cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."[64] According to CEQA Guidelines Section 15064, compliance with a significance threshold "does not relieve a lead agency of the obligation to consider substantial evidence indicating the project's environmental effects may still be significant." [65]

Thus, while the Project's construction air quality impacts are individually minor and operational air quality impacts for all pollutants but VOCs (Comment 1) are individually minor, they are cumulatively significant when considered with other reasonably foreseeable projects. Further, while the Project's GHG construction and operational impacts are individually minor, they are cumulatively significant when considered with other reasonably forseeable projects.

The SCAQMD, where the Project is located, has provided guidance on an acceptable approach to address cumulative air quality impacts. This guidance states: "As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR … Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable."[66] Comment 1 documents that VOC emissions from Project operation are significant. Thus, under the SCAQMD guidance, VOC emissions are *per se* cumulatively significant, requiring the preparation of an EIR.

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[61] Ibid.

[62] CEQA Guidelines §15355.

[63] CEQA Guidelines §15355(a).

[64] CEQA Guidelines §15355(b).

[65] CEQA Guidelines §15064(b)(2).

[66] SCAQMD, White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution, Appendix D – Cumulative Impact Analysis Requirements Pursuant to CEQA, August 2003.

Greenhouse gas (GHG) emissions are also cumulatively significant when considered together with other cumulative project in the general area. Some of the cumulative projects include:

- Repurposed existing tanks
- LAX expansion[67]
- Projects under review and/or certified by the Port of Los Angeles including:[68]
    1. Pier B On-Dock Rail Support Facility
    2. Middle Harbor Terminal Redevelopment Project

All of the emissions from these and other nearby projects will be released into the same air basin, adversely affecting air quality in the vicinity of the Project.

The Project's operational GHG emissions were estimated to be 98.9 MTCO2e/yr.[69] The LAX expansion operational GHG emissions were estimated to increase by 12,258 MTCO2e/yr.[70] The other projects listed supra would also cumulatively increase GHG emissions. The cumulative increase in GHG emissions is greater than 12,358 MTCO2e/yr,[71] which exceeds the SCAQMD GHG significance threshold of 10,000 MTCO2e/yr.[72] Thus, cumulative GHG emissions are significant, requiring the preparation of an EIR.

[67] City of Los Angeles, Final Environmental Impact Report (Final EIR), Airfield & Terminal Modernization Project, August 2021; https://www.lawa.org/atmp/documents. .

[68] The Port of Los Angeles, Projects Under Environmental Review and Projects Certified by the Board of Harbor Commissioners; https://www.portoflosangeles.org/environment/environmental-documents.

[69] 9/2021 IS/ND, Table 4.8-1, p. 4-28, pdf 56.

[70] LAX FEIR, Table 6, p. F2-24, pdf 40.

[71] Cumulative increase in GHG emissions due to Project plus LAX expansion = 98.9 + 12,259 = 12,358 MTCO2e/yr.

[72] SCAQMD, South Coast AQMD Air Quality Significance Thresholds; http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

In sum, the Project will result in significant, unmitigated operational VOC emissions and significant cumulative VOC and GHG emissions, requiring the preparation of an EIR.

Sincerely,

Phyllis Fox, PhD, PE

RIBOST TERMINAL, LLC.

1405 Pier "C" Street, Long Beach, CA 90802

SCAQMD Facility ID: 111238

February 2021

Prepared by:

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Application for Permit to Construct/Permit to Operate – Two Additional Petroleum Storage Tanks

Permit to Construct/Permit to Operate: Two Additional Petroleum Storage Tanks

Prepared for:

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1405 Pier "C" Street
Long Beach, CA
90802

SCAQMD Facility ID: 111238

February 2021

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Permit to Construct/Permit to Operate Two (2) Additional Petroleum Storage Tanks

1.0 INTRODUCTION

Ribost Terminal, LLC. (Ribost), SCAQMD Facility ID 111238, is submitting this application request for a Permit to Construct (PTC) and subsequent Permit to Operate (PTO) for two (2) proposed new internal floating roof petroleum storage tanks which will be operated by the Ribost facility located on Pier C in Long Beach, California. Each tank will be capable of storing 25,000 barrels of petroleum products, will be capable of transferring to and from existing product lines and an existing truck rack, and will be capable of receiving from an existing crude oil pipeline from upstream oil production facilities operated in Long Beach.

This application package contains the information necessary for the SCAQMD to process and approve these applications, including facility information (Section 1.0), process and equipment descriptions (Section 2.0), emission estimates (Section 3.0), and rule applicability and compliance determinations (Section 4.0). Application forms and supporting information are provided in the appendices.

1.1 Facility Information

Facility information is included in Table 1-1

Table 1-1: Facility Contact Information

Applicant's Name:	Ribost Terminal, LLC
Facility ID:	111238
Equipment Location:	1405 Pier "C" Street Long Beach, CA 90802
Mailing Address:	9301 Garfield Avenue South Gate, CA 90280
Responsible Official: **Title:** **Telephone Number:**	Jeff Baxter Executive Vice President, Operations (562) 928-7000
Contact: **Title:** **Telephone Number:**	David Chetkowski Environmental Manager (562) 928-7000 ext. 2329

The Ribost facility is located in an industrial area of Long Beach. The tanks will be located at the Ribost terminal facility in Pier C. The two new storage tanks will be located in the north-west portion of the facility boundary. The nearest school is located approximately 3,145 feet southeast of this location. The facility is surrounded by other commercial business to the south and west of the facility location. As such, the nearest commercial facility is located approximately 275 feet from the facility location. An aerial photo depicting the Ribost facility and the surrounding area is provided in Figure 1-1. A more detailed visual of where the proposed two tanks will be built within the facility boundary is provided in Figure 1-2.

Figure 1-1: Map of Facility

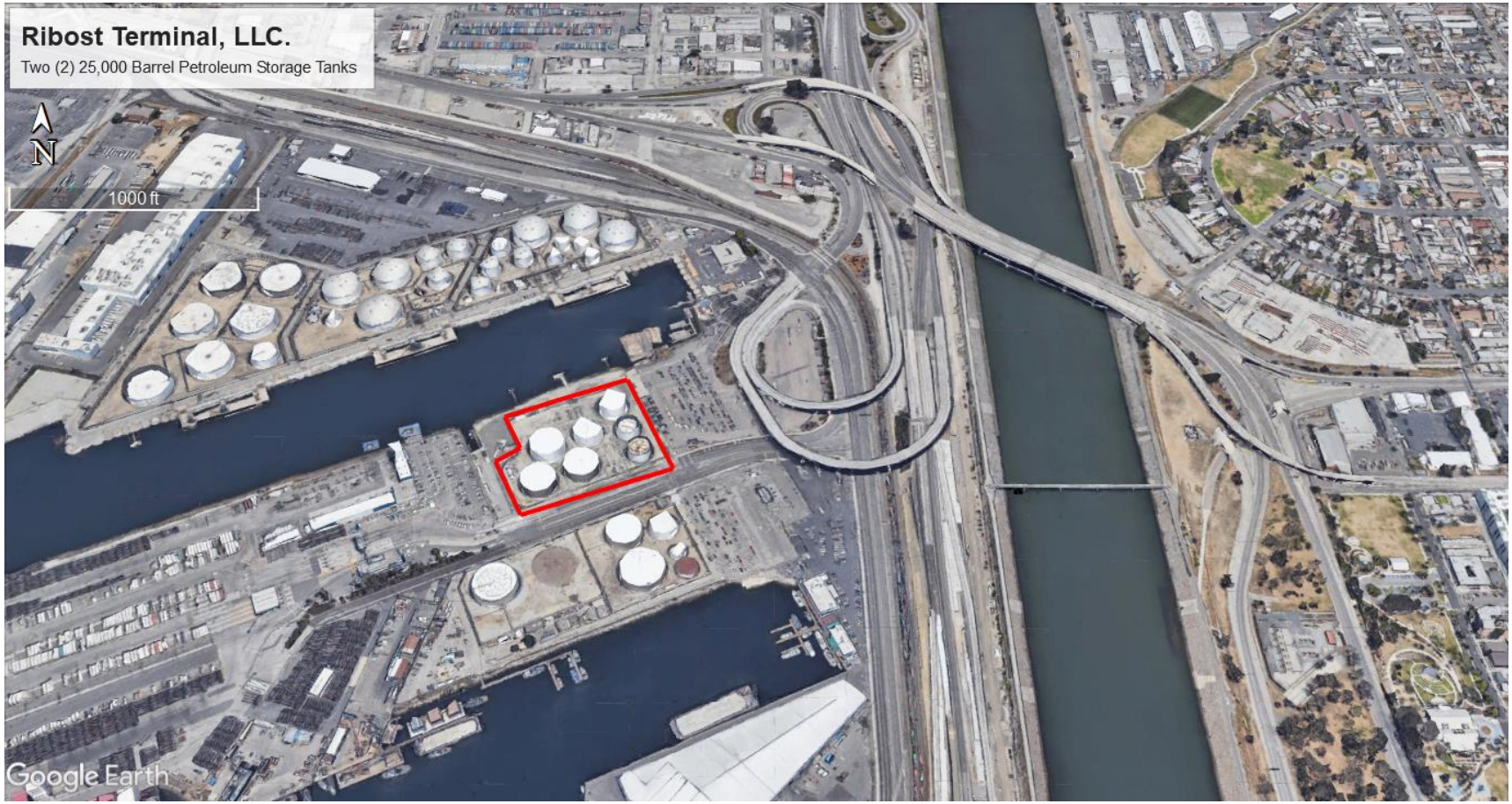
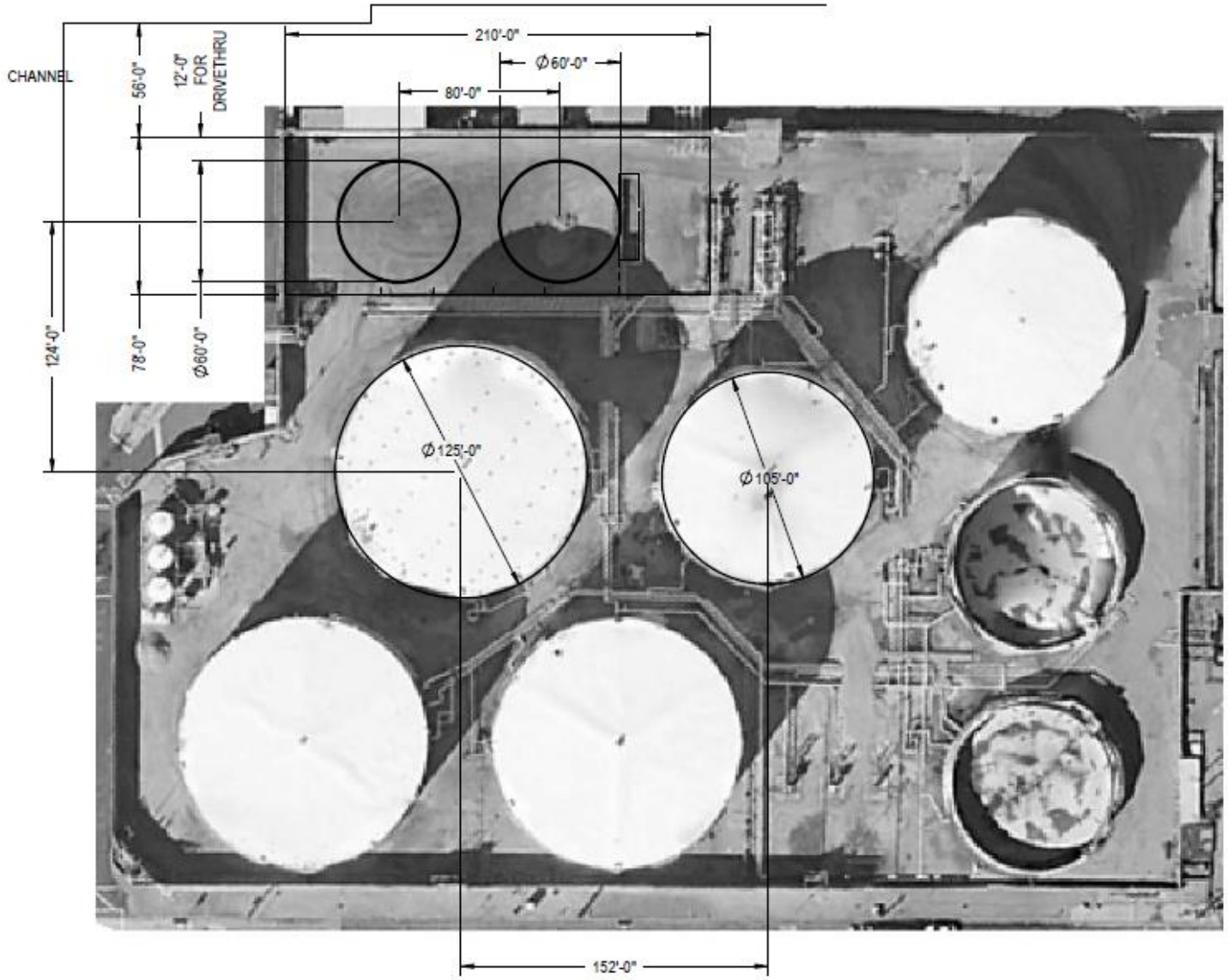


Figure 1-2: Location of Tanks within Facility Boundary



1.2 Proposed Permit Actions

Ribost is requesting a PTC/PTO for the two (2) 25,000-barrel internal floating roof petroleum storage tanks to be installed within the existing terminal facility location. The facility is not a Title V or RECLAIM facility. A list of application forms provided with this application is provided in Table 1-2. The application forms are provided in Appendix A.

Table 1-2**: Summary of Requested Permit Actions and Application Forms**

Device	Form	Title
Tank 1 (TK-1): 25,000 Barrel Petroleum Storage Tank	400-A	Application for Permit or Plan Approval
	400-E-18	Storage Tank
Tank 2 (TK-2): 25,000 Barrel Petroleum Storage Tank	400-A	Application for Permit or Plan Approval
	400-E-18	Storage Tank
Project	400-CEQA	California Environmental Quality Act (CEQA) Applicability

1.3 Application Preparation

This permit application was prepared by Nick Molzahn and Shirley Pearson of Yorke Engineering, LLC. Contact information is provided in Table 1-4.

Table 1-3: Application Preparers

Nick Molzahn	
Yorke Engineering, LLC	
Cellular:	(415) 897-6203
Email:	NMolzahn@YorkeEngr.com
Shirley Pearson, PE, CPP	
Yorke Engineering, LLC	
Work:	(949) 248-8490
Email:	SPearson@YorkeEngr.com

2.0 PROCESS AND EQUIPMENT DESCRIPTION

2.1 Process Description

The proposed project is to build two (2) additional 25,000-barrel storage tanks at the Ribost terminal facility and to integrate these tanks into all existing product transfer capabilities already existing at the facility. The new tanks will be able to transfer products to and from existing pipelines and also receive petroleum products from upstream oil production facilities also located in Long Beach, CA.

The new tanks will be designed in accordance with API-650 standards and South Coast Air Quality Management District (SCAQMD) Rule 463 for Class I or Class II liquids with RVP up to 10.0 psi. These standards will require key design features such as a ringwall foundation, closed roof with internal floating roof (IFR), foam protection to the vapor space, and corrosion and cathodic protection systems.

The capacity of the new tanks is intended to maximize the storage capacity to existing physical boundaries, which at present are 1) proximity to adjacent tanks, 2) peripheral access for emergency and utility vehicles, and 3) geotechnical conditions that may limit the height of the tanks. The proposed project will consist of two 60 foot diameter x 56 foot high tanks with approximately 500 barrels per foot (bbl/ft) capacity up to 50 feet working height.

2.2 Operating Schedule

Ribost can operate up to 24 hours per day, 7 days per week, and 365 days per year. The operating schedule is summarized in Table 2-1.

Table 2-1: Operating Schedule

Operating Parameter	Average	Maximum
Hours/Day	24	24
Days/Week	7	7
Days/Year	365	365
Weeks/Year	52	52

3.0 EMISSIONS

Emissions were calculated based on a product profile of RVP 10.0 psi available in the TANKS 4.09d (TANKS) program. Details of the tank fittings were provided by the facility and used to calculate accurate emissions from the tank. Where necessary, custom fittings were created in TANKS to align with the latest AP-42, Chapter 7.1 emission factors, specifically for ladder-slotted guidepole combinations. A final fitting detail can be provided to SCAQMD upon construction of the tank.

Fugitive emissions were estimated per SCAQMD "Guidelines for Reporting VOC Emissions from Component Leaks", using the Correlation Equation (Method 2)[1] with a screening value of 500 ppm. Component counts and calculations are shown in Appendix B.

Table 3-1 shows the parameters used to define the tank in the TANKS program.

Table 3-1: TANKS Parameters

Parameter	Value	Comments
Tank Dimensions		
Shell Height (ft)	56	
Diameter (ft)	60	
Maximum Liquid Height (ft)	50	
Average Liquid Height (ft)	50	
Turnovers/yr	Varies	
Net Throughput (gal/yr)	37,800,000 (75,000 bbl./month)	
Paint Characteristics		
Internal Shell Condition	Light Rust	
Shell Color/Shade	White/White (D)	
Shell Condition	Good	
Roof Color/Shade	White/White (D)	
Roof Condition	Good	
Rim Seal System		
Primary Seal	Liquid-mounted Mechanical Shoe	Required Per Rule 463 and BACT
Secondary Seal	Rim-mounted	
Deck Characteristics		
Deck Type	Welded	
Deck Fitting Category	Detailed	Bolted, Gasketed Deck Fittings Refer to Form E-18 for details
Meteorological Data		
Location	Long Beach, CA	
Product		
Description	Petroleum Distillates	RVP Pressure: Gasoline (RVP 10)

[1] https://www.aqmd.gov/docs/default-source/planning/annual-emission-reporting/guidelreportvocemiscomleaks.pdf?sfvrsn=15

Table 3-2: Summary of VOC Emissions

Criteria Pollutant	AHU/MHU (lb/hr)	AHC/MHC (lb/hr)	MDU/MDC (lb/day)	AA (lb/yr)	30DA (lb/day)
Tank 1	1.42E-01	1.42E-01	3.41E+00	1,245.17	3.41
Tank 2	1.42E-01	1.42E-01	3.41E+00	1,245.17	3.41
Fugitive Emissions	8.91E-02	8.91E-02	2.14E+00	780.93	2.14
Total	**3.73E-01**	**3.73E-01**	**8.96E+00**	**3,271.27**	**8.96**

TANKS Losses (lb/yr) = Working Losses (lb/yr) + Breathing Losses (lb/yr)

For VOC:

AA (lb/year) = TANKS Losses (lb/year)
MDC (lb/year) = AHC/MHC (lb/hr) x 24
MDU (lb/day) = AHU/MHU (lb/hr) x 24
AHC/MHC (lb/hr) = AHU/MHU (lb/hr) = AA (lb/yr) / 8,760

3.1 TAC Emissions from the Storage Tanks

The storage tanks are designed to store petroleum products with RVP up to 10 psia, including atmospheric gas oil (AGO), heavy vacuum gas oil (HVGO), light vacuum gas oil (LVGO), fuel oil, crude oil, gasoline, and petroleum distillates. The product vapor pressure was compared to the data available in Chapter 7: Liquid Storage Tanks, AP-42, Fifth Edition, Volume 1. Another comparative analysis was taken from the toxic speciation data tables available in the SCAQMD Supplemental Instructions for Liquid Organic Storage Tanks which is a guideline document for calculating emissions for Annual Emissions Reporting (AER). Toxic speciation data is available for various gasoline and crude products except for residual oil. In the absence of this information, Yorke identified toxic data that best corresponds to the product with vapor pressure closest to the contents of the tank. Hydrogen sulfide emissions were calculated based on an assay of the stored crude oil; the contents which would have the highest hydrogen sulfide emissions.

As such, the crude oil speciation table was used to calculate toxic emissions from the storage tank. Table 3-3 provides a summary of the toxic emission associated with the operation of the two internal floating roof tanks.

Table 3-3: Summary of Toxic Emissions (Aggregate Emissions from Two Tanks)

Chemical	Rule 1401	CAS No.	Liquid Percentage (%)	MHU (lbs/hr)	MHC (lbs/hr)	MAC (lbs/yr)
Hexane (-n)	Yes	110543	0.40%	1.49E-03	1.49E-03	13.09
Benzene	Yes	71432	0.60%	2.24E-03	2.24E-03	19.63
Isooctane	No	26635643	0.10%	3.73E-04	3.73E-04	3.27
Toluene	Yes	108883	1.00%	3.73E-03	3.73E-03	32.71
Ethylbenzene	Yes	100414	0.40%	1.49E-03	1.49E-03	13.09
Xylenes	Yes	1330207	1.40%	5.23E-03	5.23E-03	45.80
Isopropyl Benzene	No	98828	0.10%	3.73E-04	3.73E-04	3.27
1,2,4 - Trimethylbenzene	No	95636	0.33%	1.23E-03	1.23E-03	10.80
Cyclohexane	No	110827	0.70%	2.61E-03	2.61E-03	22.90
Hydrogen Sulfide	Yes	7783064	0.00035%	1.31E-06	1.31E-06	0.01

Details of the criteria and toxic emissions which were calculated are provided in Appendix B of this application.

4.0 RULE COMPLIANCE EVALUATION

This section provides a review of the applicable requirements and describes how the equipment and emissions will comply with applicable standards.

4.1 Regulation II – Permits

4.1.1 Rule 212, Standards for Approving Permits and Issuing Public Notice

The proposed equipment is not located within 1,000 feet of a K-12 school. The estimated VOC emissions from additional two tanks do not exceed the thresholds identified in Rule 212 (g). The Maximum Individual Cancer Risk (MICR) is expected to be below 1 in a million. Therefore, public notice is not required for this application.

Table 4-1: Rule 212 Public Notice Evaluation

Pollutant	Daily Emissions (lbs/day)	Rule 212 Notification Threshold	Notification Required? (Yes/No)
Total VOC's	8.96	30	No

4.2 Regulation III - Fees, Rule 301, Permit Fees

The application processing fees were determined using Rule 301 and are summarized in Table 4-2.

Table 4-2: Application Processing Fees

Equipment/ Item	Rule 301 Table IA/IB Description	Schedule	Proposed Permit Action	Fee
Storage Tank (TK-1)	Storage Tank, Fixed Roof with Internal Floater	C, FY 2020-2021	Permit Processing	$4,659.33
Storage Tank (TK-2)	Storage Tank, Fixed Roof with Internal Floater	C, FY 2020-2021	Permit Processing (Identical)	$2,329.67
			Total	**$6,989.00**

4.3 Regulation IV - Prohibitions

4.3.1 Rule 401, Visible Emissions

The internal floating roof tanks are expected to operate without visible emissions. Compliance with Rule 401 is expected.

4.3.2 Rule 402, Nuisance

No nuisance odor is expected as a result of additional tanks operating at the terminal facility.

4.3.3 Rule 463 – Organic Liquid Storage

This rule applies to any above-ground stationary tank with a capacity of 75,000 liters (19,815 gallons) or greater used for storage of organic liquids, and any above-ground tank with a capacity between 950 liters (251 gallons) and 75,000 liters (19,815 gallons) used for storage of gasoline.

Rule 463 applies to the two additional petroleum storage tanks. Best Available Control Technology (BACT) for liquid storage tanks that operate with internal floating roofs (IFR) requires Category A Tank Seals and compliance with Rule 463. Category A primary seals as identified within the rule are either: 1) Liquid mounted multiple wipers with drip curtain and weight or 2) Liquid mounted mechanical shoe. Secondary seals for Category A seals are identified as having multiple wipers. Tank roof requirements for internal floating roof tanks are identified in section (c)(2)(B) of the rule. For IFR tanks installed after June 1, 1984, tanks are required to have a single liquid mounted primary seal or a primary and secondary seal.

Based on the project description, the IFR storage tanks are to be constructed to comply with Rule 463 and will have a single liquid mounted mechanical shoe primary seal as well as a rim mounted secondary seal. Compliance with other requirements, as identified within the rule, is expected. Compliance with Rule 463 is expected.

4.4 Regulation IX – Standards for Performance for New Stationary Sources (NSPS)

4.4.1 40 CFR Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984

This federal standard applies to storage vessels that have a capacity greater than or equal to 151 cubic meters (950 barrels) storing a liquid with maximum true vapor pressure greater than 3.5 kilopascals (0.51 psia). Based on the specifications of the tanks that are to be built, the facility is subject to the requirements in Subpart Kb. Inspection and recordkeeping requirements specified within the rule are expected and compliance is expected.

4.5 Regulation XI – Source-Specific Standards

4.5.1 Rule 1149, Storage Tank and Pipeline Cleaning and Degassing

The purpose of this rule is to reduce VOCs and toxics emissions from roof landings, cleaning, maintenance, testing, repair and removal of storage tanks and pipelines. This rule applies to the cleaning and degassing of a pipeline opened to atmosphere outside the boundaries of a facility, stationary tank, reservoir, or other container, storing or last used to store VOCs. Compliance with Rule 1149 is expected.

4.5.2 Rule 1173 – Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Refineries and Chemical Plant

This rule is intended to control VOC leaks from components and releases from atmospheric process pressure relief devices (PRDs). This rule applies to components at refineries, chemical plants, lubricating oil and grease re-refiners, terminals, oil and gas production fields, natural gas processing plants and pipeline transfer stations.

Final count of fugitive emissions after the construction of the two tanks and other modified valves, fittings, and headers will be inventoried. Overall, an increase in fugitive emissions from the facility are expected to be minimal and continued compliance with Rule 1173 is expected after the construction of the two tanks.

4.6 Regulation XIII - New Source Review; Rule 1303, Requirements

4.6.1 Rule 1303(a) – Best Available Control Technology (BACT)

> *"The Executive Officer or designee shall deny the Permit to Construct for any relocation or for any new or modified source which results in an emission increase of any nonattainment air contaminant, any ozone depleting compound, or ammonia, unless BACT is employed for the new or relocated source or for the actual modification to an existing source."*

BACT for liquid storage tanks with internal floating roofs requires Category A Seals and compliance with Rule 463. Rule 463 defines Category "A" seals are seals approved by the Executive Officer as most effective in the control of VOCs and are deemed Best Available Control Technology (BACT) according to the criteria set forth in Attachment A - "Floating Roof Tank Seal Categories." Section (c)(2)(B) of Rule 463 requires IFR tanks installed after June 1, 1984 to have a single liquid mounted primary seal or a primary and secondary seal. Based on the project description, the IFR storage tanks are to be constructed to comply with Rule 463 and will have a single liquid mounted mechanical shoe primary seal. A rim-mounted secondary seal will also be added as a feature of both tanks. Compliance with other requirements, as identified within the rule, is expected. Compliance with Rule 463 is expected and as such, compliance with BACT is also expected.

4.6.2 Rule 1303 (b)(1) – Modeling

The Executive Officer or designee shall, except as Rule 1304 applies, deny the permit to construct for any new or modified source which results in a net emissions increase of any nonattainment air contaminant at a facility, unless the applicant substantiates with modeling that the modification will not cause a violation, or make significantly worse an existing violation according to Appendix A or other analysis approved by the Executive Officer or designee, of any state or national ambient air quality standards at any receptor location in the District. The additional two petroleum storage tanks do not emit quantities of emissions equaling or exceeding the non-combustion thresholds listed in Table A-1 of Rule 1304; therefore, modeling is not required.

4.6.3 Rule 1303 (b)(2) – Emission Offsets

The Executive Officer of designee shall, except as Rule 1304 applies, deny the permit to construct for any new or modified source which results in a net emissions increase of any nonattainment air contaminant at a facility, unless the applicant offsets the emission increased by either Emission Reduction Credits (ERCs) approved pursuant to Rule 1309, or application from the Priority Reserve in accordance with provisions of Rule 1309.1 or allocations from the Offset Budget in accordance with the provisions of Rule 1309.2.

Yorke utilized SCAQMD Facility Information Detail (FIND) database to evaluate previous annually reported criteria pollutant emissions from Calendar Year (CY) 2019. In CY 2019, the facility VOC emissions were reported as 3.314 tons per year (tons/year). Emissions from the two additional storage tanks are projected to add approximately 1.64 tons of VOC emissions per year. As a result, the post modification emissions from the facility are projected to be over 4 tons of VOC emissions per year and the facility is required to provide offsets for the project. Ribost will work with SCAQMD permitting personnel to ensure the

appropriate amount of offset emissions are provided prior to the construction of the storage tanks. Compliance with Rule 1303 (b)(2) is expected.

4.7 Regulation XIV - Toxics and Other Non-Criteria Pollutants

4.7.1 Rule 1401, New Source Review for Air Toxics

Rule 1401 applies to new, relocated, and modified permit units. Based on the toxic speciation data for crude oil, toxic emissions were calculated for both tanks. For compounds that are identified in Rule 1401, a Health Risk Assessment (HRA) was completed using the District's risk tool. Results from the HRA indicate that toxic emissions are below cancer risk thresholds for residential and commercial receptors. The toxic emissions associated with the tank passed based on results from the Tier II evaluation. Therefore, New Source Review for Toxics is not triggered, and compliance is expected.

A copy of the HRA completed is provided in Appendix D of this application package.

4.8 California Environmental Quality Act (CEQA)

A Form 400-CEQA is provided in Appendix A.

APPENDIX A – SCHEDULE OF APPLICATION FORMS

Device	Form	Title
Tank A: 25,000 Barrel Petroleum Storage Tank	400-A	Application for Permit or Plan Approval
	400-E-18	Storage Tank
Tank B: 25,000 Barrel Petroleum Storage Tank	400-A	Application for Permit or Plan Approval
	400-E-18	Storage Tank
Project	400-CEQA	California Environmental Quality Act (CEQA) Applicability

APPENDIX B – EMISSION CALCULATIONS

APPENDIX C – HEALTH RISK ASSESSMENT

APPENDIX D – EQUIPMENT SPECIFICATIONS