

April 12, 2021

Eduardo T. De Mesa
Chief, Planning Division
U.S. Army Corps of Engineers
Los Angeles District
915 Wilshire boulevard, Suite 930
Los Angeles, CA 90017-3489

Dear Mr. De Mesa,

This letter is in response to your letter dated March 3, 2021 requesting South Coast AQMD to accommodate the anticipated emissions from the Port of Long Beach Deep Draft Navigation Project in the Air Quality Management Plan (AQMP)/State Implementation Plan (SIP) emissions budget for general conformity purposes.

The general conformity determination process is intended to demonstrate that a proposed Federal action will not: (1) cause or contribute to new violations of a national ambient air quality standard (NAAQS); (2) interfere with provisions in the applicable SIP for maintenance of any NAAQS; (3) increase the frequency or severity of existing violations of any standard; or (4) delay the timely attainment of any standard. As such, for general conformity determination, the proposed federal action needs to conform to the latest approved SIP/AQMP.

The South Coast Air Basin (Basin) is designated as an extreme non-attainment area for ozone, serious non-attainment for PM_{2.5} and maintenance area for Carbon Monoxide. In order to accommodate projects subject to general conformity requirements and to streamline the review process, general conformity budgets for NO_x and VOC emissions are established in the AQMP. The 2016 AQMP (<https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>), which is the latest plan approved by U.E. EPA, established set aside accounts to accommodate emissions subject to general conformity requirements. The set-aside accounts include 2 tons per day (tpd) or 730 tons per year (tpy) of NO_x and 0.5 tpd or 182.5 tpy of VOC each year starting in 2017 through 2030, and 0.5 tpd (182.5 tpy) of NO_x and 0.2 tpd (73 tpy) of VOC each year in 2031 and thereafter.

The anticipated emissions from the proposed project exceed the General Conformity de minimis thresholds of NO_x in the years 2025, 2026 and 2027 as indicated in Table 1, “Alternative 3 Emissions After Mitigation”, in your letter. These emissions are associated with construction

activities of Alternative 3 scenario, which is the preferred alternative scenario by U.S. Corps of Army Engineers. After the completion of project construction activities, no changes in net operational emissions are anticipated. Emissions from potential maintenance dredging in the future, if any, will be exempt from conformity applicability if the action has no emissions increase or the emissions increase is below de minimis threshold per 40 CFR 93.153(c)(2)(ix). Detailed method to calculate emissions included in the general conformity determination can be found at the Port of Long Beach Deep Draft Navigation Project¹.

South Coast AQMD staff has reviewed the proposed project emissions based on the information provided in your letter. Based on our review, we have determined that NOx emissions above de minimis thresholds can be accommodated within the general conformity budgets established in the 2016 AQMP. The emissions accommodated in the general conformity budgets for 2025, 2026 and 2027 are listed in Table 1 below.

Table 1. Proposed Project Emissions Accommodated in 2016 AQMP General Conformity Budgets (tons per year)

Pollutants	Emission Phase	2025	2026	2027
NOx	Construction	145.5	35.8	11.9

In addition to NOx emissions, NO2 emissions exceed the de minimis threshold in 2025. South Coast Air Basin was designated as a maintenance area for the 1971 annual NO2 NAAQS on July 24, 1998. However, twenty years after the effective date of redesignation to attainment, general conformity no longer applies unless a maintenance plan approved under CAA Section 175A specifies that conformity requirements apply for a longer time period. The approved maintenance plan for the Basin did not extend the maintenance plan period beyond 20 years from redesignation. Consequently, conformity requirements for NO2 ceased to apply after September 22, 2018. Therefore, no conformity requirement applies to the NO2 emissions from the proposed project.

In summary, based on our evaluation, the proposed project will conform to the latest EPA approved AQMP as the emissions from the project are accommodated within the AQMP's emissions budgets, and the proposed project is not expected to result in any new or additional violations of the NAAQS or impede the projected attainment of the NAAQS.

¹ Documents are available at <https://www.spl.usace.army.mil/Missions/Civil-Works/Projects-Studies/Port-of-Long-Beach-Deep-Draft-Navigation-Study>

Refer Table 5-19 for the amount of emissions subject to general conformity determination and Appendix for detailed methodology

If you have any questions, please contact me at (909) 396-2856 or srees@aqmd.gov or Sang-Mi Lee, Program Supervisor at (909)-396-3169 or slee@aqmd.gov.

Sincerely,

Sarah Rees

Sarah L. Rees, Ph.D.
Deputy Executive Officer
Planning, Rule Development & Area Sources
South Coast Air Quality Management District

Attachment:

Letter from U.S. Army Corps of Engineers dated March 3, 2021

cc: Tom Kelly, US EPA Region IX
Barbara Baird, South Coast AQMD
Zorik Pirveysian, South Coast AQMD
Sang-Mi Lee, South Coast AQMD
Jillian Wong, South Coast AQMD
Lijin Sun, South Coast AQMD

ZP:SL



**DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
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LOS ANGELES, CALIFORNIA 90017-3489**

April 9, 2021

Ms. Sang-Mi Lee
Program Supervisor
Air Quality Modeling/Emissions Inventory
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Dear Ms. Lee:

This letter concerns the United States Army Corps of Engineers (USACE), Port of Long Beach Deep Draft Navigation Project (proposed project) as it relates to the general conformity rule. Established under the Clean Air Act (CAA) section 176(c) [42 USC 7506(c)], the purpose of the general conformity rule is to ensure that actions taken by Federal agencies do not interfere with a state's plan to attain and maintain National Ambient Air Quality Standards (NAAQS). Under the general conformity rule, federal agencies must work with state and local governments, in nonattainment or maintenance areas, to ensure that federal actions conform to the established, applicable State Implementation Plan (SIP). To do so, the federal agency must either determine that the action is exempt from general conformity regulations or make a conformity determination consistent with the general conformity requirements.

The USACE, in conjunction with the Port of Long Beach (POLB), intends to dredge specific areas in the POLB as discussed in detail in the Integrated Feasibility Report and Draft Environmental Impact Statement and Environmental Impact Report (IFR). Per 40 CFR 93.152, USACE's federal authority would extend only to construction emissions associated with the proposed project. There would be no net changes in operational air emissions expected following completion of project construction activities. The only reasonably foreseeable activities extending beyond the construction period and subject to USACE authority would be maintenance dredging, which is exempt from conformity applicability per 40 CFR 93.153(c)(2)(ix). Hence, the USACE would have no continuing program responsibility for activities beyond construction.

Alternative 3¹ is the USACE's preferred project alternative. The USACE's federal actions include the General Navigation Features and Local Service Facilities within the USACE's regulatory purview. Based on the USACE's applicability analysis in the IFR, the total of direct and indirect emissions caused by the federal actions would exceed the applicability rates specified in 40 CFR 93.153(b) for nitrogen dioxide (NO₂), ozone (nitrogen oxides (NO_x) and volatile organic compounds (VOC) precursors), and carbon monoxide (CO), in construction years 2025, 2026, and 2027. Therefore, the USACE is required to have a general conformity determination for these three criteria pollutants.

The USACE can use one of several methods to show that the federal actions conform to the SIP. For actions where the direct and indirect emissions exceed the rates in 40 CFR 93.153(b), the federal action can include mitigation measures to offset the emission increases from the federal action or can show that the action will conform by meeting any of the following requirements:

- Showing that the net emission increases caused by an action are included in the SIP,
- documenting that the state agrees to include the emission increases in the SIP,
- offsetting the action's emissions in the same or nearby area of equal or greater classification, or
- providing an air quality modeling demonstration in some circumstances.

¹ Alternative 3 is composed of measures for liquid bulk vessels, container vessels, and the local service facilities, as identified below:

- General Navigation Features for Liquid Bulk Vessels
 - Deepen the entrance to the Main Channel (the Approach Channel through Queens Gate) from a project depth of -76 feet to -80 feet mean lower low water (MLLW)
 - Widen portions of the Main Channel (bend easing) to a depth of -76 feet MLLW
- General Navigation Features for Container Ships
 - Construct an approach channel and turning basin to Pier J South to a depth of -55 feet MLLW.
 - Deepen portions of the West Basin and West Basin Approach to a depth of -55 feet MLLW.
- Local Service Facilities to be constructed by the POLB
 - Deepen two additional locations within the harbor to a depth of -55 feet MLLW – the Pier J Slip, including berths J266-J270, and berth T140 on Pier T
 - Perform structural improvements on Pier J breakwaters at the entrance of the Pier J Slip to accommodate deepening of the Pier J Slip and Approach Channel to -55 feet MLLW.

Approximately 7.4 million cubic yards (mcy) of material would be dredged. Dredged material would be placed either at a nearshore placement site, a USEPA-designated ocean disposal site (LA-2 and/or LA-3), or a combination of the two. The nearshore placement site, approximately five miles from the project site, can accommodate about 2.5 mcy of dredged material. LA-2 and LA-3, approximately nine and 22 miles, respectively, from the project site, have an annual disposal volume limit of 1.0 and 2.5 mcy, respectively, from all sources. It is assumed that 0.9 mcy for LA-2 and 2.2 mcy for LA-3 is available for use by this proposed project each year.

As part of the USACE's analysis in the IFR, the USACE considered the following mitigation measures to reduce construction-related emissions:

- *MM-AQ-1. Electric clamshell dredge.* The use of an electric clamshell dredge shall be required for project clamshell dredging activities during the entire construction period of the project.
- *MM-AQ-2. Construction-Related Harbor Craft.* Construction-related harbor craft (tugboats, crew boats, and survey boats) with Category 1 or Category 2 marine engines shall meet USEPA Tier 3 emission standards for marine engines. In addition, the construction contractor shall require all construction-related tugboats that home fleet in the San Pedro Bay Ports: 1) to shut down their main engines; and 2) to refrain from using auxiliary engines while at dock and instead use electrical shore power, if feasible.
- *MM-AQ-3: Off-Road Construction Equipment.* Self-propelled, diesel-fueled off-road construction equipment 25 horsepower or greater shall meet United States Environmental Protection Agency (USEPA)/California Air Resources Board (CARB) Tier 4 emission standards for non-road equipment.

Table 1 presents the mitigated annual construction emissions associated with Alternative 3 (this information can be found in Section 5.5.5 and Table 5-19 in the Draft IFR). The table shows that NO₂ and ozone (NO_x precursor) emissions would be reduced but would remain above the applicability rates. All other pollutants would be reduced to below the applicability rates. All methods, input/output data and emissions before and after the application of above mitigation measures were made available to public as part of the Draft IFR distributed publicly on October 21, 2019, and still available for download at:

<https://www.spl.usace.army.mil/Missions/Civil-Works/Projects-Studies/Port-of-Long-Beach-Deep-Draft-Navigation-Study/>.

Table 1. Alternative 3 Emissions After Mitigation

Source Category	Ozone (NO _x precursor)					
	PM ₁₀	PM _{2.5}	NO ₂	CO	Ozone (VOC precursor)	
2024						
Offroad Construction Equipment	0.0	0.0	0.1	0.1	0.2	0.0
Onroad Construction Vehicles	0.0	0.0	0.0	0.0	0.1	0.0
Fugitive Emissions	0.0	0.0	0.0	0.0	0.0	0.0
Marine Equipment	0.1	0.1	2.7	2.7	2.2	0.2
Total Construction Year 2024	0.2	0.1	2.8	2.8	2.4	0.2
Conformity Determination						
Applicability Rate	100	100	10	100	100	10
Equal or Exceed Applicability Rate?	No	No	No	No	No	No

Source Category	PM ₁₀	PM _{2.5}	Ozone (NOx precursor)	NO ₂	CO	Ozone (VOC precursor)
2025						
Offroad Construction Equipment	0.0	0.0	0.0	0.0	0.0	0.0
Onroad Construction Vehicles	0.0	0.0	0.0	0.0	0.0	0.0
Fugitive Emissions	0.0	0.0	0.0	0.0	0.0	0.0
Marine Equipment	7.6	6.7	145.5	145.5	86.9	8.1
Total Construction Year 2025	7.6	6.7	145.5	145.5	86.9	8.1
Conformity Determination						
Applicability Rate	100	100	10	100	100	10
Equal or Exceed Applicability Rate?	No	No	Yes	Yes	No	No
2026						
Offroad Construction Equipment	0.0	0.0	0.0	0.0	0.0	0.0
Onroad Construction Vehicles	0.0	0.0	0.0	0.0	0.0	0.0
Fugitive Emissions	0.0	0.0	0.0	0.0	0.0	0.0
Marine Equipment	1.7	1.5	35.8	35.8	27.4	2.0
Total Construction Year 2026	1.7	1.5	35.8	35.8	27.4	2.0
Conformity Determination						
Applicability Rate	100	100	10	100	100	10
Equal or Exceed Applicability Rate?	No	No	Yes	No	No	No
2027						
Offroad Construction Equipment	0.0	0.0	0.0	0.0	0.0	0.0
Onroad Construction Vehicles	0.0	0.0	0.0	0.0	0.0	0.0
Fugitive Emissions	0.0	0.0	0.0	0.0	0.0	0.0
Marine Equipment	0.6	0.5	11.9	11.9	9.1	0.7
Total Construction Year 2027	0.6	0.5	11.9	11.9	9.1	0.7
Conformity Determination						
Applicability Rate	100	100	10	100	100	10
Equal or Exceed Applicability Rate?	No	No	Yes	No	No	No

Notes:

Tons per day for each year are based on the number of construction days in each year of the proposed project (i.e., 365 days in each year 2024 through 2026, and 113 days in year 2027), per Table 5-19 of IFR.

During a December 1, 2020, conference call, the South Coast Air Quality Management District (SCAQMD) raised a concern that the NOx and NO₂ emissions in Table 1 were the same and suggested that the USACE consider recalculating NO₂ emissions to account for the fraction of NO₂ in NOx exhaust. Although the USACE recognizes NOx consists of both NO and NO₂, and that NO₂ emissions are initially low in exhaust at the tailpipe, it is conservative and common industry practice to assume that most NO in NOx exhaust is rapidly converted to NO₂. The SCAQMD's Localized

Significance Threshold methodology assumes that although initially only 5 percent of the emitted NO_x is NO₂, within 500 meters downwind all NO is converted to NO₂. During a December 15, 2020, conference call between the SCAQMD and iLanco Environmental, LLC, the POLB's air quality contractor, it is the USACE's understanding that the SCAQMD discussed amongst their groups whether it was appropriate to assume that NO_x and NO₂ emissions are equal and decided that this approach is appropriate.

The USACE recognizes that the SCAQMD's NO_x set-aside conformity budget was primarily established to streamline determinations for ozone conformity. Notwithstanding, NO₂ is the only component of NO_x that directly drives tropospheric ozone formation. If the SCAQMD can find that a certain NO_x budget would not interfere with reaching ozone attainment, it seems reasonable to assume that the same NO_x budget would also not interfere with maintaining NO₂ attainment.

Additionally, the South Coast Air Basin (SCAB) has been in attainment of the NO₂ standard for many years and has been designated as "maintenance" since 1998. It is possible that the SCAB may be moved to "attainment" since it has been in maintenance status for over ten years. It is our understanding that USEPA's clarification is needed for this determination in which case there would be no need for a NO₂ demonstration of conformity. We respectfully request that the SCAQMD advise us on the SCAB's "maintenance" vs "attainment" designation for purposes of determining conformity.

During the December 1, 2020, conference call, the SCAQMD raised concerns regarding future operational emissions in the POLB and emissions levels associated with Tier 2 hopper dredges. Regarding future operational emissions, alternatives evaluated in the IFR would result only in construction activities (i.e., both land-based construction and dredging) that would affect air quality within the POLB and surrounding region. While the action alternatives may accommodate changes in the vessel fleet calling at the POLB, they would not increase cargo or liquid bulk throughput. Therefore, operational emissions have not been assessed in the IFR.

Reducing inefficiencies would allow current fleet vessels to arrive fully loaded and to avoid delays associated with tide riding, lightering, or traffic conflicts (for liquid bulk vessels). Throughput at the POLB is limited by backland storage areas, which are constrained and at capacity. While the proposed project would not result in larger vessels calling at the POLB beyond those that currently call at the POLB and those that have previously been forecasted, the efficiencies afforded by accommodating these larger vessels fully loaded with no operational restrictions would in turn reduce the total number of vessels calling at the POLB over time. The objective of the proposed project is to improve conditions for vessel operations and safety, and to accommodate the existing large vessels that call at the POLB with fewer restrictions as they come online. Appendix E of the IFR includes projected fleet forecasts for the POLB for all alternatives, including the no action alternative that were used for the economic evaluation of project benefits. Ship sizes and expected numbers calling on the POLB

are discussed in this appendix. Attention is called to Tables 4-8 and 4-9 for details. A summary table (Table 2) is provided here to illustrate the expected decrease in ship calls for the proposed project.

Table 2. Expected Decrease in Ship Calls for the Proposed Project

Year	Alternative	Container Vessel Calls	Tanker Calls
2021	Current	1,278	932
2030	No Action	1,494	916
2030	Proposed Project	1,444	908
2040	No Action	1,724	912
2040	Proposed Project	1,643	903

Container vessel calls are expected to go up for all alternatives from 2021 to 2030 and from 2030 to 2040. Tanker calls are expected to decrease slightly over the same time period, although there is a slight increase from 2030 to 2040. However, fewer container vessel calls are projected for the years 2030 and 2040 with the proposed project for the same years as the no action alternative. There are 50 fewer container vessels and 8 fewer tanker vessels projected to call at the POLB for the proposed project as compared to future without project conditions (no action alternative) for 2030. Furthermore, there are 81 fewer container vessels and 9 fewer tanker vessels projected to call at the POLB for the proposed project as compared to future without project conditions (no action alternative) for 2040.

Regarding hopper dredge emissions, the areas that are proposed for hopper dredges are unsuitable for dredging by the electric clamshell for two reasons. First, is the distance between the on-land transformer and the dredge location. The distance is impracticable for efficient operations and safety as this would require placing the electric power cable through the busy ship traffic lane at Queen's Gate. The tether to the shoreline would need to be at least 1 mile long at the closest point all the way up to 4 plus miles to dredge at the "daylight" location of the entrance channel, and this would be crossing the major thoroughfare through the Queen's Gate. The second reason is the depth of the dredge cut. Dredging from -70 feet MLLW to -80 feet MLLW is inefficient for a clamshell dredge due to the depth of water. A hopper dredge keeps its drag head continuously on the ocean floor while dredging while a clamshell must repeatedly go up and down through the water column leading to extended time for each cycle and increased loss of sediments from the clamshell while transiting the water column. The clamshell would also have a significantly lower production rate to the hopper due to the proposed dredging depths. It is about 1/3 of the hopper daily production rate in optimal conditions, and with the proposed depths, this would decrease even more. This would increase the proposed project timeline by 1-2 years.

Sediments in the Approach Channel (where the hopper dredge would operate) are sandy and thus suitable for nearshore placement. This allows the hopper dredge to

operate more efficiently by using a shortened transit from dredge site to the nearshore placement site, as opposed to a transit from the dredge site to the ocean disposal site. Reduced transit times results in a longer dredging period per day for the hopper dredge.

POLB staff reached out to their contacts in the U.S. dredging industry as well as conducted an on-line search to find information on hopper dredges with Tier 3 or better engines. There are only two USACE-owned dredges stationed on the west coast of the U.S. Both are Tier 2 equipped. The *Yaquina* is unable to reach the depths needed for the proposed project and is unsuitable. The *Essayons* could reach the required depths, if modified. There currently are no privately-owned hopper dredges stationed on the west coast. Regarding the international market, these are not available for operation in the U.S. market. There has not been any indication that changes will be made to the Jones Act, Public Law 66-261, to allow non-U.S. constructed, owned and crewed vessels to operate in U.S. waters.

We appreciate the SCAQMD staff's recommendation during our conference call on December 1, 2020, for the USACE to include a requirement for the hopper dredge to be equipped with Tier 3/4 engines as a mitigation measure for the proposed project. The use of Tier 3/4 engines is not a regulatory requirement in effect for the SCAB now or at the estimated time of construction. We are unable to accommodate such a mitigation measure under our current contracting standards. We may consider it in the future if available, feasible, and consistent with competition in contracting.

According to 40 CFR 93.161, the state or local agency responsible for implementing and enforcing the SIP can develop and adopt an emissions budget to be used for demonstrating conformity under 40 CFR 93.158(a)(1). The SCAQMD's 2016 Air Quality Management Plan (AQMP) addresses general conformity budgets beginning on page VI-D-1 of Appendix VI and on pages 111-2-85 through 111-2-88 of Appendix III. To streamline the general conformity process for federal projects and to facilitate general conformity determinations, the 2016 AQMP establishes VOC and NO_x general conformity budgets of 2.0 tons per day (tpd) of NO_x and 0.5 tpd of VOC on an annual basis from 2017 to 2030, and budgets of 0.5 tpd of NO_x and 0.2 tpd VOC in 2031. These general conformity budgets are included in the "set-aside" account added to baseline emissions in tables 9, 10 and 11 in section 111.D.2.c of this document. The general conformity budgets in the 2016 AQMP are not set aside for specific facilities per se but were developed in the anticipation of the construction and operation of certain development projects in the South Coast Air Basin that are expected over the next decade. Under the 2016 AQMP, emissions from general conformity projects are tracked by the SCAQMD's tracking system and debited from this set-aside budget on a first-come-first-served basis until the budget has been exhausted. The USEPA approved the general conformity budgets in the 2016 AQMP on October 1, 2019.

Federal agencies can use these budgets to demonstrate that their federal actions conform to the SIP through a letter from the State and SCAQMD confirming that the federal actions emissions are accounted for in the SIP's general conformity

budgets. The USACE requests the SCAQMD provide written confirmation that the federal actions emissions of 146 tons NO_x, 36 tons NO_x and 12 tons NO_x in years 2025, 2026, and 2027, respectively, are accounted for in the SIPs general conformity budget, which would be used by the USACE to demonstrate conformity under 40 CFR 93.158(a)(1).

If you have questions, please contact Mr. Larry Smith, Project Environmental Coordinator, at (213) 452-3846 or by email at lawrence.j.smith@usace.army.mil.

Sincerely,

Eduardo T. De Mesa
Chief, Planning Division