

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Addendum to the Final Environmental Impact Report for the Tesoro Los Angeles Refinery Integration and Compliance Project

October 2024

State Clearinghouse No. 2014091020

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[May 2017 Final EIR Certified on May 12, 2017]

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1.0 INTRODUCTION

Tesoro Refining & Marketing Company LLC (Tesoro) is currently proposing modifications to the ongoing Los Angeles Refinery Integration and Compliance Project (LARIC Project). The LARIC Project was implemented to integrate the existing Tesoro Los Angeles Refinery (now known as Marathon Los Angeles Refinery) – Wilmington Operations with the existing Carson Operations to become a more efficient operating entity, the Tesoro Los Angeles Refinery (Refinery). The Refinery includes: 1) the Wilmington Operations located at 2101 East Pacific Coast Highway in the Wilmington District of the City of Los Angeles (Wilmington Operations); and 2) the adjacent Carson Operations, which is located at 2350 East 223rd Street in the City of Carson (Carson Operations). The Carson Crude Terminal (CCT) is located adjacent to and immediately south of the Carson Operations at 24696 Wilmington Avenue, Carson, California, 90745.

The LARIC Project was also designed to: 1) comply with the federally-mandated Tier 3 gasoline specifications and with state and local regulations mandating air emission reductions; 2) reconfigure the combined Refinery complex that enabled shutting down the Wilmington Operations Fluidized Catalytic Cracking Unit (FCCU); 3) improve the gasoline-to-distillate production ratio from the integrated Refinery in order to expeditiously respond and adjust to ongoing changes in market demand for various types of petroleum products; and 4) optimize heat recovery by installing new heat exchangers and modifying specified units to minimize criteria pollutant and greenhouse gas (GHG) emissions. The environmental impacts of the LARIC Project were initially analyzed in the Final Environmental Impact Report (EIR) which was certified by South Coast Air Quality Management District (South Coast AQMD) on May 12, 2017 (referred to herein as the May 2017 Final EIR, State Clearinghouse (SCH) No. 2014091020) in accordance with the California Environmental Quality Act (CEQA).¹

The May 2017 Final EIR concluded that the LARIC Project would have significant impacts for the following environmental topic areas: air quality during construction, hazards and hazardous materials during operation, and traffic during construction which are discussed further in Section 6.0 of this Addendum. Feasible mitigation measures were identified that would mitigate impacts to air quality during construction, hazards and hazardous materials during operation, and traffic during construction; but impacts to air quality during construction and hazards and hazardous materials during operation would remain significant even after mitigation.

The LARIC Project was later modified in 2019. The 2019 modifications were comprised of: 1) the propane recovery project component from the Carson Operations Naphtha Isomerization Unit was relocated to the Carson Operations C3 Splitter Unit; 2) permit revision to increase the throughput of the Carson Operations Tank 35; and 3) permit revision to limit the hydrogen sulfide concentration of crude oils stored in the six new storage tanks at the CCT based on additional data used in the toxic air contaminants (TAC) speciation of crude oil. The environmental impacts of the 2019 revisions to the LARIC Project were analyzed in the October 2019 Addendum to the May

¹ South Coast AQMD, 2017, <http://www.aqmd.gov/home/research/documents-reports/lead-agency-permit-projects/lead-agency-ceqa-documents---permit-projects-2017>.

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2017 Final EIR which was certified by South Coast AQMD on November 12, 2019 (referred to herein as the October 2019 Addendum).²

Subsequent to the October 2019 Addendum, the proposed Title V permits associated with the updated project were circulated for a 30-day public comment period from November 16, 2019 to December 16, 2019. One comment letter was received on the proposed Title V permits which included questions regarding the worst-case consequence analysis relied on in Section 6.2.2 of the Addendum. Quest Consultants Inc. (Quest), a firm that specializes in process safety analysis, prepared the Worst-Case Consequence Analysis dated February 10, 2021 which was included in Appendix C of the May 2017 Final EIR along with two additional information memoranda which were included in Attachment H to Appendix G of the May 2017 Final EIR. Upon receiving the comment letter, the South Coast AQMD considered the comments and requested Quest to provide additional information regarding the Worst-Case Consequence Analysis. The memorandum from Quest, dated February 22, 2021, was included in the June 2021 Revised Addendum as Appendix F. To respond to the questions posed in the comment letter, the October 2019 Addendum was revised to include minor modifications to Section 6.2.2 for consistency with the May 2017 Final EIR and to incorporate the February 22, 2021 Quest memorandum into the June 2021 Revised Addendum as Appendix F. None of the minor modifications to the document altered the analysis or any conclusions reached in the May 2017 Final EIR or the October 2019 Addendum. The revisions to the October 2019 Addendum were published in the June 2021 Revised Addendum to the May 2017 Final EIR which was certified by South Coast AQMD on September 15, 2021 (referred to herein as the June 2021 Revised Addendum).³

The analysis in the 2019 and 2021 Addenda are effectively identical with the exception of the minor modifications to provide consistency in the hazards and hazardous materials analysis in the May 2017 Final EIR. Therefore, in this current Addendum, the October 2019 Addendum and June 2021 Revised Addendum will be referred to jointly as the 2019 and 2021 Addenda.

Tesoro is currently proposing additional modifications to the LARIC Project to address the need to decommission its aging Reservoir 502 (referred to as “Tank 502” in the May 2017 Final EIR) which is a 1.5-million-barrel concrete-lined, wooden-roof topped reservoir used to store gas oil that has been in service since the 1930s. Before Reservoir 502 can be taken out of service and its South Coast AQMD permit can be retired (Device ID 1105 in the Title V permit for Facility ID 174655), the gas oil will need to be stored elsewhere. Thus, to accommodate the storage of the gas oil, Tesoro is proposing a minor Title V Permit revision for the six new crude oil storage tanks at the CCT to add gas oil as a commodity that can be stored in three of the six new storage tanks. The construction and operation activities associated with the six new crude oil storage tanks were previously analyzed in the May 2017 Final EIR. South Coast AQMD has prepared this Addendum to evaluate these currently proposed modifications to the LARIC Project which will involve potential changes in emissions, both increases and reductions associated with proposing to allow

² South Coast AQMD, 2019, <http://www.aqmd.gov/docs/default-source/ceqa/documents/permit-projects/2019/oct2019addendumtomay2017finaleirfortesorolaric.pdf>.

³ South Coast AQMD, 2021, <http://www.aqmd.gov/docs/default-source/ceqa/documents/permit-projects/2021/tesoro-june-2021-revised-addendum.pdf>.

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three of the six new storage tanks at the CCT to store gas oil in addition to crude oil and the retirement of Reservoir 502, as detailed in Section 5.0 of this Addendum.

2.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT AND BASIS FOR DECISION TO PREPARE AN ADDENDUM

South Coast AQMD review and approval of the currently proposed modifications to the LARIC Project require a discretionary permitting action subject to CEQA. When the LARIC Project was originally proposed, the South Coast AQMD acted as CEQA Lead Agency because it was the public agency with the principal responsibility for approving the LARIC Project which had the potential to result in a significant effect on the environment. [Public Resources Code Section 21067]. At the time the LARIC Project was proposed, South Coast AQMD staff evaluated the potential environmental impacts associated with the construction and operation of the various components and identified potentially significant adverse impacts for the environmental topic areas of air quality impacts during construction, hazards and hazardous materials impacts during operation, and traffic impacts during construction. Thus, the South Coast AQMD prepared and certified the May 2017 Final EIR for the LARIC Project. Feasible mitigation measures to address the potentially significant adverse impacts were identified in the May 2017 Final EIR, which were made a condition of approval, and a Mitigation Monitoring and Reporting Plan (MMRP) was adopted for the LARIC Project. Findings were made and a Statement of Overriding Considerations was adopted by the South Coast AQMD.

The LARIC Project was later modified in 2019. The 2019 modifications were comprised of: 1) the propane recovery project component from the Carson Operations Naphtha Isomerization Unit was relocated to the Carson Operations C3 Splitter Unit; 2) a permit revision to increase the throughput of the Carson Operations Tank 35; and 3) a permit revision to limit the hydrogen sulfide concentration of crude oils stored in the six new storage tanks at the CCT based on additional data used in the toxic air contaminants speciation of crude oil. The environmental impacts of the 2019 revisions to the LARIC Project were analyzed in the October 2019 Addendum.

Subsequent to the October 2019 Addendum, the proposed Title V permits associated with the updated project were circulated for a 30-day public comment period from November 16, 2019 to December 16, 2019. One comment letter was received on the proposed Title V permits which included questions regarding the worst-case consequence analysis relied on in Section 6.2.2 of the Addendum. Quest Consultants Inc. (Quest), a firm that specializes in process safety analysis, prepared the Worst-Case Consequence Analysis dated February 10, 2021 which was included in Appendix C of the May 2017 Final EIR along with two additional information memoranda which were included in Attachment H to Appendix G of the May 2017 Final EIR. Upon receiving the comment letter, the South Coast AQMD considered the comments and requested Quest to provide additional information regarding the Worst-Case Consequence Analysis. This memorandum from Quest, dated February 22, 2021, was included in the Revised Addendum in new Appendix F. To respond to the questions in the comment letter, the October 2019 Addendum was revised to include minor modifications to Section 6.2.2 for consistency with the May 2017 Final EIR and to incorporate the February 22, 2021 Quest memorandum into the Revised Addendum as Appendix F. None of the minor modifications to the document altered the analysis or any conclusions reached in the May 2017 Final EIR or the October 2019 Addendum. The revisions to the October 2019 Addendum were published in the June 2021 Revised Addendum to the May 2017 Final EIR which was certified by South Coast AQMD on September 15, 2021. The analysis in the 2019 and

2021 Addenda are essentially identical with the exception of the minor modifications to provide consistency in the hazards and hazardous materials analysis in the May 2017 Final EIR, therefore, in this Addendum, the October 2019 Addendum and June 2021 Revised Addendum will be referred to jointly as 2019 and 2021 Addenda.

The currently proposed modifications are a modification to the previously approved LARIC Project that was evaluated in the May 2017 Final EIR, and later revised in the 2019 and 2021 Addenda; and is a “project” subject to CEQA. CEQA requires evaluation of the potential adverse environmental impacts of proposed projects and identification of feasible methods to reduce or avoid identified significant adverse environmental impacts of the project. However, CEQA Guidelines Section 15164(a) allows a lead agency to prepare an Addendum to a previously certified EIR if some changes or additions are necessary but none of the following conditions as described in CEQA Guidelines Section 15162 occur:

- Substantial changes which will require major revision of the previous CEQA document due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- Substantial changes, with respect to the circumstances under which the project is undertaken, which will require major revisions of the previous CEQA document due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or,
- New information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence at the time the previous CEQA document was certified as complete, such as:
 - The project will have one or more significant effects not discussed in the previous CEQA document;
 - Significant effects previously examined will be substantially more severe than shown in the previous CEQA document;
 - Identification of mitigation measures or alternatives previously found not to be feasible, but would in fact be feasible, and would substantially reduce one or more significant effects, but the project proponent declines to adopt the mitigation measure or alternatives; or
 - Identification of mitigation measures or alternatives which are considerably different from those analyzed in the previous CEQA document would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measure or alternative.

The currently proposed modifications to the LARIC Project seek to decommission Reservoir 502 and route the gas oil to be stored instead in three of the six new crude oil storage tanks at the CCT. The environmental impacts from constructing and operating the six new crude oil storage tanks at the CCT were previously analyzed in the May 2017 Final EIR while the 2019 and 2021 Addenda updated the speciation of the crude oil. Revising the permit to include gas oil as a commodity that can be stored in three of the six new storage tanks at the CCT does not require any physical modifications to the storage tanks.

The currently proposed modifications to the LARIC Project require a minor Title V Permit revision to allow gas oil, in addition to crude oil which was previously permitted, as a commodity to be stored in three of the six new storage tanks at the CCT in order to retire Reservoir 502 located at the Carson Operations portion of the Refinery. Impacts to Reservoir 502 as evaluated in the May 2017 Final EIR were based on a projected increase of utilization without requiring physical modifications. However, the current proposal to retire Reservoir 502 and utilize three of the six storage tanks at the CCT to have the flexibility store gas oil or crude oil, as needed, will require piping modifications within the Carson Operations at the Refinery that will change the environmental impacts previously analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda, but which are now analyzed in this Addendum.

To determine whether the conditions described in CEQA Guidelines Section 15162 have occurred, the effects of the proposed modifications to the LARIC Project were compared to the baseline or the existing setting of the environmental impacts of the original Project as initially reviewed and approved in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

After comparing the effects of the currently proposed modifications to the LARIC Project to the baseline, the analysis in Sections 6.0 and 7.0 of this Addendum indicate that only the environmental topic area of air quality, which includes TAC emissions, will be potentially affected by the currently proposed modifications to the LARIC Project. The LARIC Project as analyzed in the May 2017 Final EIR and as amended by the 2019 and 2021 Addenda identified: 1) significant adverse impacts to: a) air quality during construction, and b) hazards and hazardous materials during operation; 2) less than significant impacts to transportation and traffic after mitigation measures are imposed during construction; and 3) less than significant impacts to: a) air quality during operation, b) hydrology and water quality, c) noise, d) solid and hazardous waste, and d) transportation and traffic during operation.

As concluded in Section 6.0 of this Addendum, the currently proposed modifications to the LARIC Project do not change the conclusions reached in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda that significant adverse impacts are expected to occur for the topics of: 1) air quality during construction; and 2) hazards and hazardous materials during operation. Further, as explained in Subsections 6.2.1 and 6.2.2 of this Addendum, the currently proposed modifications to the LARIC Project will neither increase the severity of the significant adverse air quality impacts during construction and hazards and hazardous materials impacts during operation nor result in new significant adverse impacts to air quality and hazards and hazardous materials beyond those previously identified in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda. Moreover, should the proposed revisions to the LARIC project be implemented, the anticipated

impacts of hazards and hazardous materials from the six new storage tanks at the CCT are expected to either be the same or slightly less compared to those assessed in 2019 and 2021 Addenda because this assessment takes into account the difference in physical properties of gas oil as compared to crude oil (see Section 6.2.2). Also, decommissioning activities associated with the retirement of Reservoir 502 and piping tie-ins within the Carson Operations needed to implement the currently proposed modifications to the LARIC Project have been evaluated in Section 6.0 of this Addendum and the analysis demonstrates that no new significant adverse environmental impacts are expected and existing significant adverse environmental impacts will not be made substantially worse. Thus, only minor additions or changes are necessary to make the May 2017 Final EIR as amended by the 2019 and 2021 Addenda adequate for the currently proposed modifications to the LARIC Project.

The potential health impacts of the currently proposed modifications to the LARIC Project have been evaluated and determined to be less than significant. The evaluation of health risk impacts considered: 1) the storage of gas oil in the three of the six crude oil storage tanks at the CCT as compared to the storage of crude oil in all six of the storage tanks which were previously permitted; and 2) the retirement of Reservoir 502. The current health risk assessment (HRA) included the same updated meteorological data that was included in the 2019 and 2021 Addenda plus additional updates to the modeling software since the certification of the 2019 and 2021 Addenda. When a storage tank contains gas oil rather than crude oil, the associated health risk is reduced. This is because gas oil is an intermediate, partially-refined product which generates fewer emissions and contains fewer TACs compared to crude oil. As a result, the currently proposed modifications to the LARIC Project will not result in any new significant adverse health risk impacts or increase the severity of significant impacts previously identified in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

The analysis in Sections 6.0 and 7.0 of this Addendum indicates that the currently proposed revisions to the LARIC Project are not expected to trigger any conditions identified in CEQA Guidelines Section 15162 that would require the preparation of a subsequent EIR because: 1) the proposed revisions do not create any new significant adverse environmental impacts; 2) proposed revisions do not make substantially worse any existing significant adverse environmental impacts; and 3) only require minor additions or changes to make adequate the environmental analyses of the LARIC Project in the previous CEQA documents (i.e., the May 2017 Final EIR as amended by the 2019 and 2021 Addenda). Therefore, when considering the effects of the currently proposed revisions to the LARIC Project, the South Coast AQMD has determined that: 1) the currently proposed revisions to the LARIC Project are within the scope of what was previously analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda; and 2) an Addendum is the appropriate type of CEQA document to be prepared for evaluating potential environmental impacts.

The previous paragraphs provide the rationale to comply with CEQA Guidelines Section 15164(e) which requires a brief explanation supported by substantial evidence to be included in the Addendum about the reasoning behind the decision to not prepare a Subsequent EIR. Finally, pursuant to CEQA Guidelines Section 15164(c), “an addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration.”

3.0 CEQA DOCUMENTS PREPARED FOR THE LARIC PROJECT

This section provides summaries of the activities associated with the LARIC Project that were evaluated in CEQA documents, which are presented in sequential order. The CEQA documents can be obtained by contacting the South Coast AQMD's Public Information Center at (909) 396-2001 or they can be downloaded from the South Coast AQMD's CEQA Webpage at the weblinks presented in Section 9.0 – References.

September 2014 Notice of Preparation of an Environmental Impact Report and Initial Study (South Coast AQMD, 2014): A Notice of Preparation (NOP) and Initial Study (IS) for the LARIC Project were released for a 30-day public review and comment period from September 10, 2014, to October 10, 2014. The IS included a project description, project location, an environmental checklist, and a preliminary discussion of potential adverse environmental impacts. The NOP requested public agencies and other interested parties to comment on the scope and content of the environmental information to be evaluated in the Draft EIR. A public scoping meeting was held on September 24, 2014, and six written comments were received at the meeting. In addition, 87 comment letters were received during the comment period, which expressed support for the LARIC Project without raising any environmental concerns to be addressed in the EIR. The September 2014 NOP/IS along with comment letters and responses, are included in Appendix A of the May 2017 Final EIR.

March 2016 Draft EIR (South Coast AQMD, 2016): The Draft EIR was released for a 45-day public review and comment period from March 8, 2016, to April 22, 2016, which was extended twice for a total 94-day public comment period ending on June 10, 2016. The Draft EIR included a project description, a description of the existing environmental setting, a preliminary analysis of potential adverse environmental impacts for each environmental topic (including cumulative impacts) that could be adversely affected by the proposed project, mitigation measures, project alternatives, and all other relevant topics required by CEQA. The Draft EIR also included a copy of the September 2014 NOP/IS plus the comment letters and responses described above. The Draft EIR concluded that the LARIC Project may have: 1) significant adverse impacts on air quality during construction and hazards and hazardous materials during operation, even after implementing mitigation measures; 2) less than significant transportation and traffic impacts after implementing mitigation measures; and 3) less than significant hydrology and water quality, noise, and solid and hazardous waste impacts. Impacts to all other environmental topic areas were also concluded to be less than significant.

May 2017 Final EIR (South Coast AQMD, 2017): The Final EIR was prepared by revising the Draft EIR to update project information and present the responses to comments received on the Draft EIR. Of the 2,107 comment letters received relative to the Draft EIR, responses to only 302 of the comment letters received were prepared because the remainder of the comment letters either: 1) supported the LARIC Project and, as such, did not require response; 2) opposed the LARIC project without raising new issues; or 3) were received after the close of the comment period and did not raise new issues. The changes that were reflected in the Final EIR did not constitute significant new information relating to the environmental analysis or mitigation measures that were presented in the Draft EIR. The Final EIR was certified on May 12, 2017, along with

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Attachment 1: Findings, Statement of Overriding Considerations, and Mitigation, Monitoring, and Reporting Plan. For reference, the May 2017 Final EIR Chapter 1 – Introduction and Executive Summary is presented in Appendix A of this Addendum.

October 2019 Addendum to the Final EIR (South Coast AQMD, 2019): An Addendum, dated October 2019, was certified by South Coast AQMD on November 5, 2019. The October 2019 Addendum revised the May 2017 Final EIR to address the following three project components: 1) the propane recovery project component from the Carson Operations Naphtha Isomerization Unit was relocated to the Carson Operations C3 Splitter Unit; 2) the throughput of the Carson Operations Tank 35 was increased; and 3) the TAC speciation of crude oil for the six crude oil storage tanks at the CCT was updated with additional data. In addition, the construction schedule was updated.

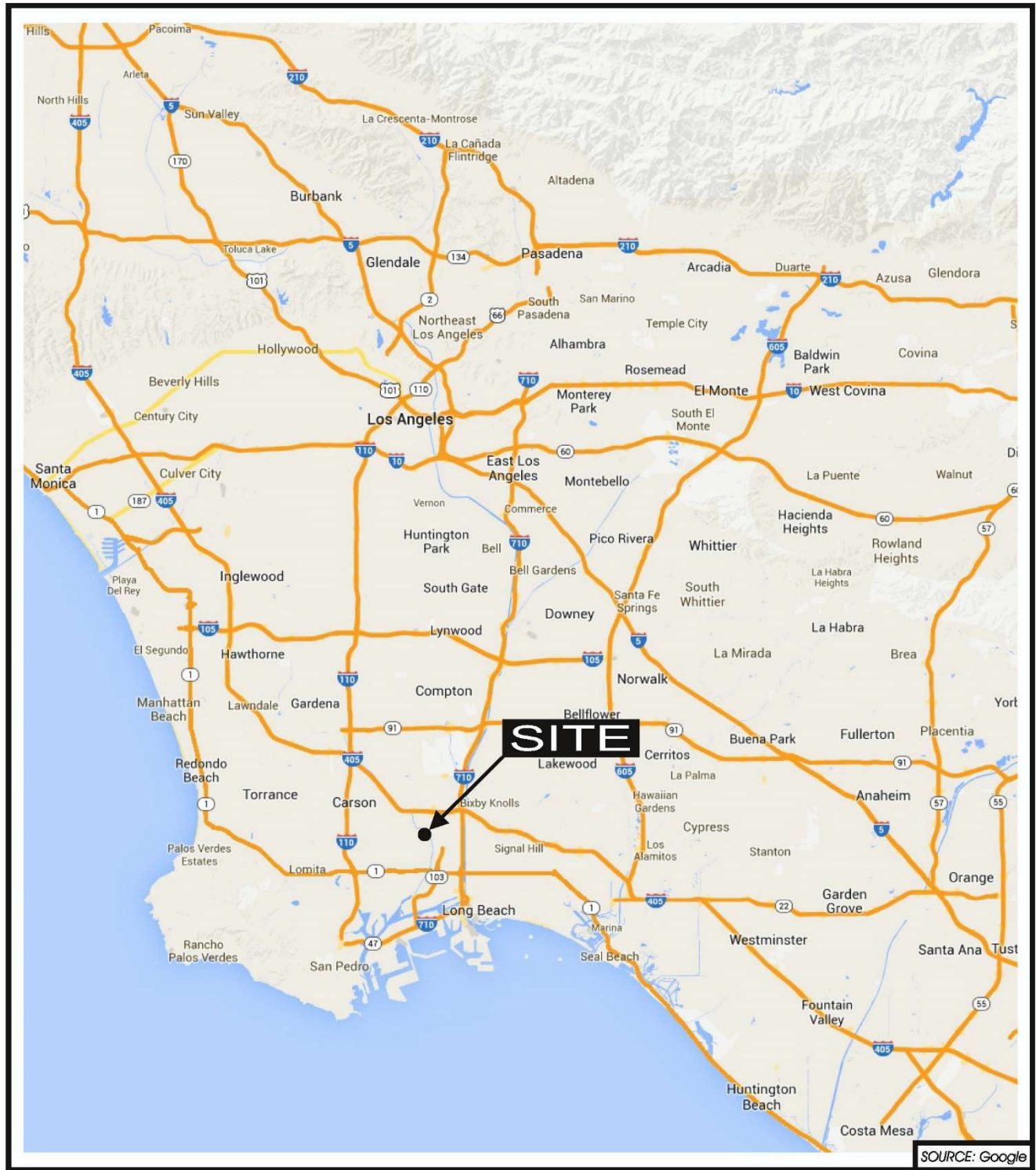
June 2021 Revised Addendum to the Final EIR (South Coast AQMD, 2021): The October 2019 Addendum was revised to address comments raised in one comment letter received during the 30-day public comment period (November 16, 2019 to December 16, 2019) for the proposed Title V Permit Revision. An Addendum, dated June 2021, was certified by South Coast AQMD on September 15, 2021. The June 2021 Revised Addendum included minor modifications to Section 6.2.2 for consistency with the May 2017 Final EIR and to incorporate a memorandum from Quest (see Appendix F of the June 2021 Revised Addendum). The memorandum from Quest provided additional information regarding the Worst-Case Consequence Analysis. None of the modifications to the LARIC Project in the June 2021 Revised Addendum altered any conclusions previously reached in the May 2017 Final EIR or the October 2019 Addendum.

4.0 PROJECT LOCATION

As described in the May 2017 Final EIR, the LARIC Project will occur at the Refinery and the CCT which is approximately 950 contiguous acres in size and operates within the cities of Los Angeles (Wilmington District) and Carson, California. The Refinery includes: 1) the Wilmington Operations located at 2101 East Pacific Coast Highway in the Wilmington District under the jurisdiction of the City of Los Angeles; and 2) the adjacent Carson Operations located at 2350 East 223rd Street in the City of Carson. The CCT is located adjacent to and immediately south of the Carson Operations at 24696 Wilmington Avenue, Carson, California, 90745. Figure 1 depicts the regional location of the Refinery and Figure 2 provides a detailed Site Location Map of the Refinery and the CCT.

The currently proposed modifications to the LARIC Project seek to: 1) add gas oil as a commodity that can be stored in three of the six crude oil storage tanks at the CCT; and 2) retire Reservoir 502 at the Carson Operations, which is located north of the CCT. It is important to note that the currently proposed revisions to the LARIC Project will not affect any equipment or processes at the Wilmington Operations. Figure 3 depicts the location of the six crude oil storage tanks at the CCT and Reservoir 502.

ADDENDUM TO THE FINAL EIR FOR THE TESORO LOS ANGELES REFINERY INTEGRATION AND COMPLIANCE PROJECT



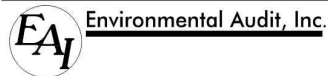
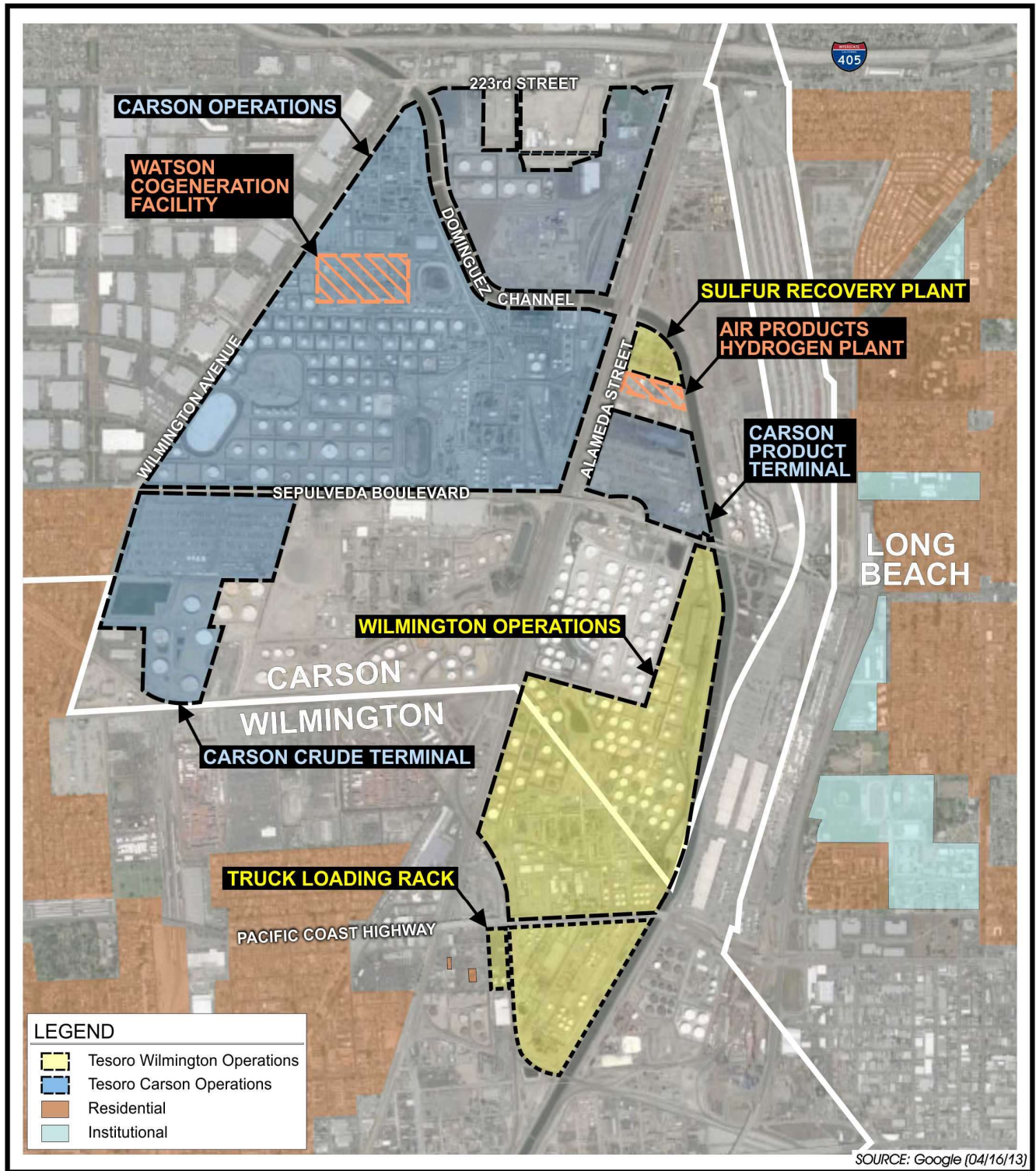
**FIGURE 1
REGIONAL MAP
TESORO LOS ANGELES REFINERY**



Project No. 2844

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ADDENDUM TO THE FINAL EIR FOR THE TESORO LOS ANGELES REFINERY INTEGRATION AND COMPLIANCE PROJECT



**FIGURE 2
SITE LOCATION MAP
TESORO LOS ANGELES REFINERY**

Project No. 2844
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ADDENDUM TO THE FINAL EIR FOR THE TESORO LOS ANGELES REFINERY INTEGRATION AND COMPLIANCE PROJECT

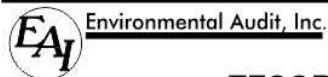
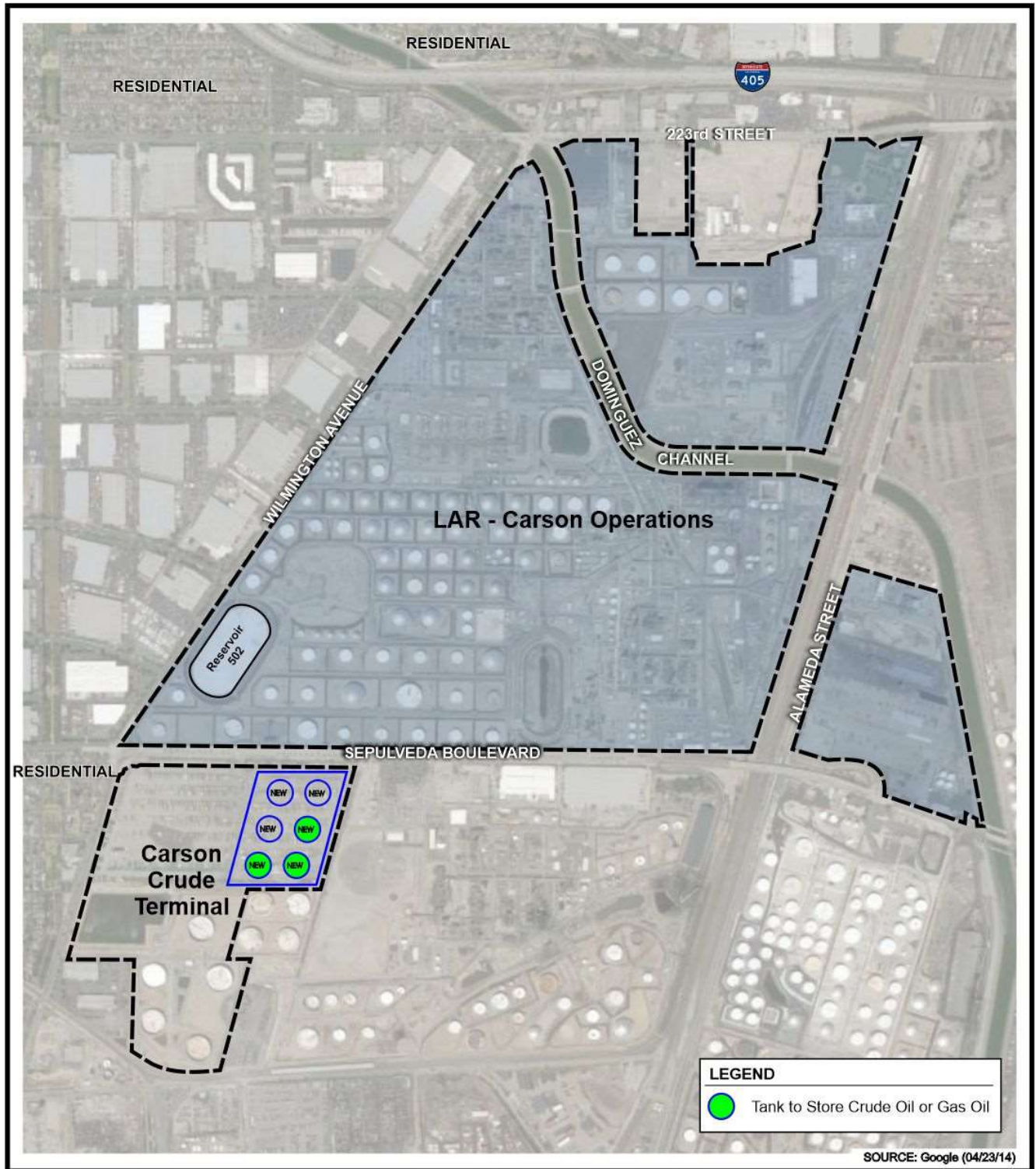


FIGURE 3
TESORO LOS ANGELES REFINERY - CARSON OPERATIONS
AND
TESORO LOGISTICS CARSON CRUDE TERMINAL



5.0 BACKGROUND AND PROJECT DESCRIPTION

Tesoro is currently proposing additional modifications to the LARIC Project to address the need to decommission its aging Reservoir 502 (referred to as “Tank 502” in the May 2017 Final EIR) which is a 1.5 million-barrel concrete-lined, wooden-roof topped reservoir used to store gas oil that has been in service since the 1930s. Before Reservoir 502 can be taken out of service and its South Coast AQMD permit retired (Device ID 1105 in the Title V permit for Facility ID 174655), the gas oil will need to be stored elsewhere. Thus, to accommodate the storage of the gas oil, Tesoro is proposing a minor Title V Permit revision for the six new crude oil storage tanks at the CCT to add gas oil as a commodity that can be stored in three of the six new storage tanks. Figure 3 shows which of the six new crude oil storage tanks at the CCT are intended to store gas oil. The construction and operation activities associated with the six new crude oil storage tanks were previously analyzed in the May 2017 Final EIR. While South Coast AQMD issued Permits to Construct for the six new crude oil storage tanks, construction of the storage tanks had been delayed and site preparation commenced in January 2024. However, the manifold tie-in to fill the new storage tanks with crude oil was installed in the pipeline that delivers crude oil to the CCT from Marine Terminal 1.

In the May 2017 Final EIR, Reservoir 502 was evaluated to have increased utilization as part of the process changes resulting from the shutdown of the Wilmington Operations fluidized catalytic cracking unit (FCCU); increased utilization was projected to cause an increase in emissions from Reservoir 502. However, by proposing to retire Reservoir 502 instead, the estimated emission increases would be eliminated if the currently proposed revisions to the LARIC Project are implemented.

While no additional construction would be needed to accommodate the storage of gas oil in lieu of crude oil in the three of the six storage tanks at the CCT, additional piping tie-ins to the existing piping system and existing pumps at the Carson Operations will be needed to reroute gas oil from Reservoir 502 to three of the six storage tanks at the CCT. In addition, Reservoir 502 will need to be emptied, robotically cleaned, and abandoned in place. Therefore, no demolition activities are expected to be required.

5.1 Updates to the Construction Schedule

The construction schedule for the LARIC Project was most recently updated in the 2019 and 2021 Addenda to indicate that the construction of the six new crude oil storage tanks at the CCT would commence in 2020 and work would continue through the end of 2023.

To date, the following summarizes the status of completion of these construction activities:

- Conduct further engineering and design analyses – 85 percent complete
- Conduct geotechnical investigations for foundation – 100 percent complete
- Order materials and equipment with long-lead times materials - pumps, motors, and valves – 100 percent complete;

ADDENDUM TO THE FINAL EIR FOR THE TESORO LOS ANGELES REFINERY INTEGRATION AND COMPLIANCE PROJECT

- Install tie-in for the six new crude oil storage tanks on the main crude oil pipeline from Marine Terminal 1 to the CCT – 100 percent complete;
- An application for a grading permit from the City of Carson was approved in December 2023; and
- Commence site preparation for foundations in January 2024.

While much progress has been made with constructing and implementing the LARIC Project, construction of the six new crude oil storage tanks at the CCT had been delayed. The construction activities and associated emissions of the six new crude oil storage tanks at the CCT, as evaluated in the May 2017 Final EIR, will remain unchanged as part of the currently proposed revisions to the LARIC Project; however, the timing when construction is expected to occur has been delayed. As such, construction of the six new crude oil storage tanks at the CCT is not expected to overlap with other construction activities associated with the LARIC Project components which were analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda. Instead, the construction will occur during operation of previous LARIC Project components.

The currently proposed modifications to the LARIC Project seeking to retire and decommission Reservoir 502 will require approximately six months of construction and will involve the following steps:

- Emptying the reservoir to the maximum extent possible;
- Using electric or battery-operated robotic equipment to collect any remaining gas oil and to clean the reservoir;
- Using electric or battery-operated robotic equipment to pressure wash the concrete-lining of the reservoir;
- Using up to 12 temporary storage tanks to hold, filter, and recycle water for the cleaning process; and
- Using other equipment to install new piping tie-ins to connect to the existing piping system and existing pumps at the Carson Operations in order to reroute gas oil from Reservoir 502 to three of the six storage tanks at the CCT.

The construction of the six new storage tanks at the CCT is expected to overlap with the piping tie-in activities at the Carson Operations. The piping tie-ins will be installed and operational once the three of the six new storage tanks at the CCT are operational.

The decommissioning of Reservoir 502 and the piping tie-ins at the Carson Operations are not expected to affect construction activities associated with the CCT storage tanks due to each occurring in distinct locations and CCT storage tanks are separated from the Carson Operations by Sepulveda Boulevard. Decommissioning will be timed to facilitate the rerouting of gas oil to the three storage tanks at CCT. Once decommissioning is complete, Tesoro will surrender the South Coast AQMD air permit for Reservoir 502.

6.0 IMPACT ANALYSIS

The following sections present a summary of the impact analyses contained in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda for the affected LARIC Project components plus the analysis of the currently proposed modifications to the LARIC Project.

As required by CEQA Guidelines Section 15125, the May 2017 Final EIR included a description of the physical environmental conditions, also referred to as the existing setting or baseline, within the vicinity of the LARIC Project as they existed at the time the September 2014 NOP/IS was published. Specifically, the baseline was identified in the May 2017 Final EIR as operating years 2012 and 2013, which were the two years prior to the publication of the September 2014 NOP/IS. Sections 4.2 through 4.8 of the May 2017 Final EIR considered all direct impacts (i.e., emissions associated with modifying existing units and installing the proposed new units), as well as indirect impacts (e.g., emissions associated with mobile sources) of the LARIC Project. All equipment potentially impacted by the LARIC Project (including upstream and downstream equipment) was also evaluated to determine if the LARIC Project would result in increased environmental impacts, even with the equipment operating within permit limits. Downstream effects were described in Section 4.1.2 of the May 2017 Final EIR.

The 2019 and 2021 Addenda adjusted emissions and health risk values from those published in the May 2017 Final EIR, but did not change the significance conclusions.

The following subsections summarize and compare the environmental impacts of the LARIC Project that were previously evaluated in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda to the currently proposed modifications.

6.1 Summary of Environmental Impacts in the May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

In accordance with CEQA, the September 2014 NOP/IS for the LARIC Project evaluated 17 environmental topic areas and determined that the LARIC Project would not result in significant adverse impacts for 11 of the 17 environmental topic areas in the South Coast AQMD's environmental checklist (e.g., aesthetics; agriculture and forestry resources; biological resources; cultural resources; energy; geology and soils; land use and planning; mineral resources; population and housing; public services; and recreation). The South Coast AQMD received 87 comment letters and six written comment cards from the public at the CEQA scoping meeting held relative to the September 2014 NOP/IS. None of the comments disputed the conclusions in the September 2014 NOP/IS that the 11 aforementioned environmental topic areas would not be significantly affected by the LARIC Project. Thus, the less than significant environmental topic areas were not required to be further analyzed in the May 2017 Final EIR but a summary of the analysis from the September 2014 NOP/IS was included in Section 4.10 of the May 2017 Final EIR.

The following six environmental topic areas were concluded in the September 2014 NOP/IS to have potentially significant impacts requiring further evaluation in the May 2017 Final EIR: air quality; hazards and hazardous materials; hydrology and water quality; noise; solid and hazardous

waste; and transportation and traffic. The May 2017 Final EIR concluded that the LARIC Project would result in:

- Less than significant adverse impacts without mitigation for the environmental topic areas of air quality during operations, hydrology and water quality, noise, and solid and hazardous waste;
- Less than significant adverse impacts after mitigation is applied for the environmental topic area of transportation and traffic (e.g., construction traffic); and
- Significant adverse impacts after mitigation is applied for the environmental topic areas of air quality during construction and hazards and hazardous materials during operation.

The May 2017 Final EIR concluded that the LARIC Project would result in the following significant unavoidable adverse impacts to:

- Air Quality During Construction: Project-specific and cumulatively considerable: a) volatile organic compound (VOC) and nitrogen oxide (NO_x) emissions in exceedance of regional significance thresholds during construction; and b) nitrogen dioxide (NO₂) concentrations above the localized significance threshold during construction were identified. Multiple mitigation measures were incorporated which included requirements such as the development of a construction management plan, electrification of equipment where feasible, and use of construction equipment having Tier 4 engines with limited exceptions.
- Hazards and Hazardous Materials During Operation: Project-specific and cumulatively considerable off-site impacts which could occur in the event of: a) a flash fire in the Carson Operations Naphtha Isomerization Unit; b) a pool fire in the area of the six new crude oil storage tanks at the CCT; c) a toxic cloud arising from the proposed Sulfuric Acid Regeneration Plant (SARP); or d) a flash fire associated with the Interconnecting Pipelines. One mitigation measure was incorporated which included early compliance with applicable hazardous material rules and regulations.

The 2019 and 2021 Addenda updated the air quality analysis and the associated health risk assessment to address the emissions changes associated with the modifications to the following project components: 1) the propane recovery project component from the Carson Operations Naphtha Isomerization Unit was relocated to the Carson Operations C3 Splitter Unit; 2) the throughput of Carson Operations Tank 35 was increased; 3) the TAC speciation of crude oil for the six crude oil storage tanks at the CCT was updated with additional data; and 4) the June 2021 Revised Addendum also clarified aspects of the hazards assessment without altering the conclusions reached in the May 2017 Final EIR as amended by the October 2019 Addendum. In addition, the construction schedule was updated.

6.2 Analysis of Impacts from the Currently Proposed Modifications to the LARIC Project

This Addendum includes an evaluation of the same 17 environmental topic areas identified in the South Coast AQMD's environmental checklist, and evaluated in the May 2017 Final EIR and the

2091 and 2021 Addenda. The analysis concludes that air quality is the only environmental topic area that would require minor changes to reflect the currently proposed modifications to the LARIC Project. A summary of the six environmental topic areas concluded in the September 2014 NOP/IS to have potentially significant impacts that were further evaluated in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda (i.e., air quality; hazards and hazardous materials; hydrology and water quality; noise; solid and hazardous waste; and, transportation and traffic) are provided in Subsections 6.2.1 through 6.2.6. The remaining 11 environmental topic areas that were evaluated in the September 2014 NOP/IS for the LARIC Project are examined in Section 7.0 of this Addendum. No potentially significant impacts to these 11 environmental topic areas are expected due to the currently proposed modifications to the LARIC Project.

6.2.1 Air Quality and Greenhouse Gases

The September 2014 NOP/IS determined that air quality impacts of the LARIC Project were potentially significant. Project-specific and cumulative adverse air quality impacts associated with increased emissions of air contaminants (criteria air pollutants, greenhouse gases (GHGs), and TACs) during the construction and operational phases of the LARIC Project were analyzed in the in Sections 4.2, 5.2.1, and 5.2.2 of the May 2017 Final EIR and in Section 6.2.1 of the 2019 and 2021 Addenda. Potential adverse health impacts to sensitive receptors were also analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda. The May 2017 Final EIR as amended by the 2019 and 2021 Addenda concluded that only air quality impacts during construction were potentially significant. Air quality impacts during construction and overlapping construction with operations that equal or exceed the South Coast AQMD Air Quality Significance Thresholds presented in Table 1 are considered to be potentially significant adverse air quality impacts.

6.2.1.1 Construction Emissions

6.2.1.1.1 Construction Emissions from the May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

The analysis of construction emissions in the May 2017 Final EIR was conservative when compared to updated peak construction emissions presented in Table 3 of the 2019 and 2021 Addenda. The peak construction emissions in the May 2017 Final EIR encompassed the previously approved modifications because no physical modifications were needed to increase the throughput to the Carson Operations Tank 35 or the change in the crude oil speciation for the CCT storage tanks. Additionally, less construction was needed for the relocation of the propane recovery to the C3 Splitter Unit.

Table 4.2-2 of the May 2017 Final EIR concluded that unmitigated VOC and NO_x emissions during construction were significant, and mitigation measures were imposed. The May 2017 Final EIR concluded that the peak construction emissions were expected to occur in Months 18, 20, and 25.

TABLE 1
South Coast AQMD Air Quality Significance Thresholds

Mass Daily Thresholds^(a)		
Pollutant	Construction^(b)	Operation^(c)
NO_x	100 lb/day	55 lb/day
VOC	75 lb/day	55 lb/day
PM₁₀	150 lb/day	150 lb/day
PM_{2.5}	55 lb/day	55 lb/day
SO_x	150 lb/day	150 lb/day
CO	550 lb/day	550 lb/day
Lead	3 lb/day	3 lb/day
Toxic Air Contaminants, Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Chronic and Acute Hazard Index ≥ 1.0 (project increment) Cancer Burden ≥ 0.5 excess cancer cases (in areas ≥ 1 in 1 million)	
Odor	Project creates an odor nuisance pursuant to South Coast AQMD Rule 402	
GHG	10,000 MT/yr CO ₂ eq for industrial facilities	
Ambient Air Quality for Criteria Pollutants^(d)		
NO₂ 1-hour average annual average	In attainment; significant if project causes or contributes to an exceedance of any standard: 0.18 ppm (state) and 0.100 (federal) ^(e) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM₁₀ 24-hour annual average	10.4 $\mu\text{g}/\text{m}^3$ (construction) ^(f) and 2.5 $\mu\text{g}/\text{m}^3$ (operation) 1.0 $\mu\text{g}/\text{m}^3$	
PM_{2.5} 24-hour average	10.4 $\mu\text{g}/\text{m}^3$ (construction) ^(f) and 2.5 $\mu\text{g}/\text{m}^3$ (operation)	
SO₂ 1-hour average 24-hour average	0.25 ppm (state) and 0.075 ppm (federal – 99 th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 $\mu\text{g}/\text{m}^3$ (state)	
CO 1-hour average 8-hour average	In attainment; significant if project causes or contributes to an exceedance of any standard: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day average Rolling 3-month average	1.5 $\mu\text{g}/\text{m}^3$ (state) 0.15 $\mu\text{g}/\text{m}^3$ (federal)	

- a) Source: South Coast AQMD CEQA Handbook (South Coast AQMD, 1993, Revised March 2023)
- b) Construction thresholds apply to both the SCAB and Coachella Valley (Salton Sea and Mojave Desert Air Basin)
- c) For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.
- d) Ambient air quality thresholds for criteria pollutants based on South Coast AQMD Rule 1303, Table A-2 unless otherwise stated.
- e) The federal threshold has not been adopted for general use yet by South Coast AQMD, but as it is a federal requirement for permits being issued for this project.
- f) Ambient air quality threshold based on South Coast AQMD Rule 403.
- KEY: ppm = parts per million; $\mu\text{g}/\text{m}^3$ = microgram per cubic meter; lb/day = pounds per day; MT/yr CO₂eq = metric tons per year of CO₂ equivalents, \geq greater than or equal to, $>$ greater than

With the updates made to the construction schedule in the 2019 and 2021 Addenda, the occurrence of peak construction emissions shifted from Months 18, 20, and 25, to Month 7 for NO_x, sulfur oxides (SO_x), and particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀),

Month 11 for fine particulate matter (PM2.5) and carbon monoxide (CO), and Month 40 for VOC. However, the updated unmitigated peak daily construction emissions reflected in the 2019 and 2021 Addenda were fewer than the unmitigated peak daily construction emissions presented in the May 2017 Final EIR with the peak daily VOC emissions at less than significant levels and the peak daily NOx emissions remaining at significant levels (see Table 2). Construction of the LARIC Project commenced in June 2017 (over 80 months ago); therefore, Months 7 and 11 of construction have already occurred. Peak construction VOC emissions are primarily related to painting of the storage tanks at the CCT, which in the 2019 and 2021 Addenda were expected to occur in Month 40. The delay in construction of the storage tanks at CCT has shifted the peak VOC emissions to month 120.

TABLE 2
Tesoro Los Angeles Refinery LARIC Project
Unmitigated Peak Daily Construction Emissions
Including the Updates Made in the 2019 and 2021 Addenda^(a)
(lb/day)

ACTIVITY	VOC	CO	NOx	SOx	PM10	PM2.5^(b)
Construction Equipment	6.45	233.67	242.41	0.59	14.04	15.63
Vehicle Emissions	0.34	83.64	154.96	0.44	30.42	8.53
Fugitive Dust From Construction ^(c)	--	--	--	--	2.36	0.68
Fugitive Road Dust ^(c)	--	--	--	--	3.80	0.80
Architectural Coating	62.25	--	--	--	--	--
Total Emissions^(d)	69.04	317.31	397.37	1.03	50.62	25.64
Construction Significance Threshold	75	550	100	150	150	55
Significant?	No	No	Yes	No	No	No

Source: Table 3 of the 2019 and 2021 Addenda

- (a) Peak emissions for NOx, SOx, and PM10 were predicted to occur in Month 7 (which has already occurred) while Peak CO and PM2.5 emissions were predicted to occur during Month 11 (which also has already occurred). Peak VOC were predicted to occur during Month 40. See Appendix B of the 2019 and 2021 Addenda for detailed calculations.
- (b) PM2.5 is determined using the methodology in South Coast AQMD, 2006.
- (c) Assumes the application of water three times per day.
- (d) The emissions in this table may differ slightly from those in Appendix B of the 2019 and 2021 Addenda due to rounding.

6.2.1.1.2 Construction Emissions from the Currently Proposed Modifications to the LARIC Project

The currently proposed modifications to the LARIC Project seek to add gas oil as a commodity to be stored in three of the six new crude oil storage tanks at the CCT without requiring an update to the construction schedule or the amount of construction activities and associated emissions from building the six new storage tanks. Piping tie-ins at the Carson Operations of the Refinery will be needed to retire Reservoir 502. The construction of the six new storage tanks at the CCT is expected to overlap with the Reservoir 502 decommissioning and piping tie-in activities, which will increase the amount of construction emissions associated with currently proposed

modifications to the LARIC Project compared to the original construction emissions associated with the six new crude oil storage tanks at the CCT.

The proposed decommissioning and retirement of Reservoir 502 will require approximately six months of construction activities which will occur during the construction of the six new storage tanks at the CCT and will involve the following steps:

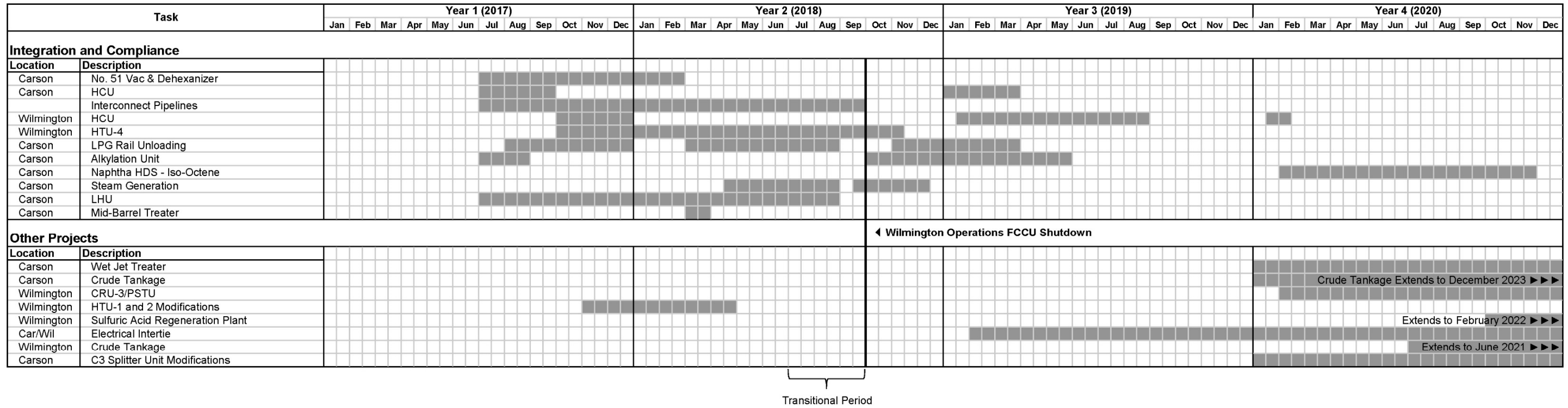
- Emptying the reservoir to the maximum extent possible;
- Using electric or battery-operated robotic equipment to collect any remaining gas oil and to clean the reservoir;
- Using electric or battery-operated robotic equipment to pressure wash the concrete-lining;
- Using up to 12 temporary storage tanks to hold, filter, and recycle water for the cleaning process; and
- Using other equipment to install new piping tie-ins to connect to the existing piping system and existing pumps at the Carson Operations in order to reroute gas oil from Reservoir 502 to three of the six storage tanks at the CCT.

It is important to note that the decommissioning and retirement of Reservoir 502 does not require demolition of the reservoir.

Figure 5 in the 2019 and 2021 Addenda (provided in this Addendum as Figure 4) shows seven other LARIC Project components (i.e., Wilmington HCU, Carson Naphtha HDS – Iso-Octene, Wilmington CRU-3 PSTU, Wilmington HTU-1 and HTU-2 Modifications, Wilmington Sulfuric Acid Regeneration Plant, Wilmington Crude Tankage, Carson C3 Splitter Unit Modifications, and the Electrical Intertie) were expected to be under construction when the six storage tanks at the CCT were expected to be constructed in the 2020 through 2023 timeframe, which were not expected to occur in the peak construction months for CO, NO_x, SO_x, PM₁₀ or PM_{2.5}. The construction of the Electrical Intertie and the six storage tanks at the CCT were expected to overlap for 12 months. As shown in Figure 5 of this Addendum, only the construction of the Electrical Intertie is expected to be under construction when the currently proposed modifications to the LARIC Project will be implemented, now with less overlap (i.e., eight months instead of 12 months). Figure 5 also presents the status of the LARIC Project components at this time. Due to the changing business climate caused by the global pandemic, some LARIC Project components have been delayed or deferred.

With the exception of VOC emissions, peak construction emissions have already occurred during construction activities associated with the shutdown of the Wilmington Operations FCCU, which occurred in October 2018. As previously explained, the peak VOC emissions during construction were anticipated to occur in Month 40, which coincides with the painting of the six new crude oil storage tanks which has yet to occur. The delayed construction of the six new crude oil storage tanks at the CCT will shift the peak VOC emissions from Month 40 to when the painting of these storage tanks will occur during construction (Month 120). Moreover, the construction activities associated with the piping tie-ins, which are expected to occur during the construction of the storage tank and after completion of the Electrical Intertie (about Month 100) are not expected to

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Note: Carson FCCU Modifications are operational changes only and have no construction schedule.
 Transitional Period is the 90-day period prior to the shutdown of the Wilmington Operations FCCU.

FIGURE 4
REVISED CONSTRUCTION SCHEDULE
TESORO LOS ANGELES REFINERY
AS PRESENTED IN THE 2019 and 2021 ADDENDA

ADDENDUM TO THE FINAL EIR FOR THE TESORO LOS ANGELES REFINERY INTEGRATION AND COMPLIANCE PROJECT

Task	Year 1 (2017)												Year 2 (2018)												Year 3 (2019)												Year 4 (2020)												Year 5 (2021)												Year 6 (2022)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Integration and Compliance																																																																										
Status	Location	Description																																																																								
Completed	Carson	No. 51 Vac & Dehexanizer																																																																								
Completed	Carson	HCU																																																																								
Completed		Interconnect Pipelines																																																																								
Completed	Wilmington	HCU																																																																								
Completed	Wilmington	HTU-4																																																																								
Completed	Carson	LPG Rail Unloading																																																																								
Completed	Carson	Alkylation Unit																																																																								
Deferred	Carson	Naphtha HDS - Iso-Octene																																																																								
Completed	Carson	Steam Generation																																																																								
Completed	Carson	LHU																																																																								
Completed	Carson	Mid-Barrel Treater																																																																								
Other Projects			<div style="text-align: center;"> ↓ Wilmington Operations FCCU Shutdown </div>																																																																							
Deferred	Carson	Wet Jet Treater																																																																								
In Progress	Carson	Crude Tankage																																																																								
Planned	Carson	Reservoir 502 Decommissioning and Piping Tie-Ins																																																																								
Deferred	Wilmington	CRU-3/PSTU																																																																								
Deferred	Wilmington	HTU-1 and 2 Modifications																																																																								
Deferred	Wilmington	Sulfuric Acid Regeneration Plant																																																																								
In Progress	Car/Wil	Electrical Intertie																																																																								
Deferred	Wilmington	Crude Tankage																																																																								
In Progress	Carson	C3 Splitter Unit Modifications																																																																								

Transitional Period

Task	Year 7 (2023)												Year 8 (2024)												Year 9 (2025)												Year 10 (2026)												Year 11 (2027)												Year 12 (2028)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Integration and Compliance																																																																										
Status	Location	Description																																																																								
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Deferred	Wilmington	CRU-3/PSTU																																																																								
Deferred	Wilmington	HTU-1 and 2 Modifications																																																																								
Deferred	Wilmington	Sulfuric Acid Regeneration Plant																																																																								
In Progress	Car/Wil	Electrical Intertie																																																																								
Deferred	Wilmington	Crude Tankage																																																																								
In Progress	Carson	C3 Splitter Unit Modifications																																																																								

Note: Carson FCCU Modifications are operational changes only and have no construction schedule.
 Transitional Period is the 90-day period prior to the shutdown of the Wilmington Operations FCCU.

**FIGURE 5
 CURRENT REVISED CONSTRUCTION SCHEDULE
 TESORO LOS ANGELES REFINERY**

overlap with the painting of the six new crude oil storage tanks at the CCT; therefore, the peak daily VOC construction emissions will not change.

Further, no new peak day for CO, NO_x, SO_x, PM₁₀, and PM_{2.5} emissions is expected because the original construction schedule in the May 2017 Final EIR previously assumed that construction of the six new crude oil storage tanks at the CCT would occur concurrently with the construction of seven other LARIC Project components (i.e., Wilmington HCU, Carson Naphtha HDS – Iso-Octene, Wilmington CRU-3 PSTU, Wilmington HTU-1 and HTU-2 Modifications, Wilmington Sulfuric Acid Regeneration Plant, Wilmington Crude Tankage, Carson C3 Splitter Unit Modifications, and the Electrical Intertie) and were not occurring during the peak timeframe. Since construction of the Electrical Intertie is the only other project component under construction during the first eight months of expected construction schedule for the six new crude oil storage tanks at the CCT, there will be fewer overlapping construction activities.

Table 3 presents a comparison of the construction emissions for the Electrical Intertie and the currently proposed activities not previously analyzed (i.e., the piping tie-ins, and the decommissioning equipment delivery and pickup). As shown in Table 3, the peak daily emissions associated with constructing the Electrical Intertie, as analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda, are greater than the peak daily emissions associated with constructing the piping tie-ins and the decommissioning equipment delivery and pickup, as currently proposed. In addition, the construction associated with the Electrical Intertie will be completed prior to the construction of the piping tie-ins, so no additional overlapping construction activities will occur.

TABLE 3
Tesoro Los Angeles Refinery LARIC Project
Unmitigated Peak Construction Emissions
Comparison of Constructing the Electrical Intertie and Piping Tie-Ins
(lb/day)

ACTIVITY	VOC	CO	NO_x	SO_x	PM₁₀	PM_{2.5}^(a)
Electrical Intertie ^(b)	4.44	40.54	34.84	0.28	2.66	1.59
Currently Proposed Piping Tie-Ins	1.38	12.53	10.40	0.17	1.75	0.71
Equipment Delivery and Pickup for Decommissioning of Reservoir 502	0.48	0.01	0.52	0.01	0.42	0.01
Difference in Emissions ^(c)	-2.58	-27.99	-23.91	-0.10	-0.49	-0.87

^(a) PM_{2.5} is determined using the methodology in South Coast AQMD, 2006.

^(b) Included in the overall construction calculations in Appendix B-1 of the May 2017 Final EIR. See Appendix B of this Addendum for detailed calculations.

^(c) Negative numbers represent fewer emissions. Conservatively assumes that the decommissioning of Reservoir 502 and the Piping Tie-Ins occur concurrently. See Appendix B of this Addendum for detailed calculations.

The construction of the storage tanks at the CCT was expected to occur after the peak construction months for CO, NO_x, SO_x, PM₁₀ and PM_{2.5} and peak VOC emissions were expected to occur during painting of the storage tanks at the CCT, which will remain the peak VOC emissions for the LARIC project. Table 4 presents the peak construction emissions as presented in the 2019 and

2021 Addenda as well as the maximum construction emissions expected during the construction of the storage tanks at CCT with all overlapping projects including the Electrical Intertie as presented in the 2019 and 2021 Addenda. Table 4 also presents the months in which those peak and maximum values were expected to occur. For the time period when the storage tanks at the CCT are under construction, the maximum emissions occur in Months 39 and 40 when the Electrical Intertie is also under construction. Since the Electrical Intertie project will be completed before the Reservoir 502 decommissioning and piping tie-in activities commence, as shown in Table 3, emissions during the Reservoir 502 decommissioning and piping tie-in activities will be less than the maximum emissions during the concurrent construction of the storage tanks at the CCT and the Electrical Intertie.

**TABLE 4
Comparison in the Change in Emissions during the
Construction Period for the Storage Tanks at CCT
(lb/day)**

ACTIVITY	VOC	CO	NOx	SOx	PM10	PM2.5
Peak Construction Emissions as Reported in the 2019 and 2021 Addenda ⁽¹⁾	69.03	317.3	397.38	1.03	50.62	25.64
Month	40	11	7	7	7	11
Maximum Construction Emissions during the Storage Tanks Construction Period as Reported in the 2019 and 2021 Addenda ⁽²⁾⁽³⁾	69.03	124.40	119.92	0.36	16.16	8.53
Month	40	39	39	39	39	39

(1) See Table 2.

(2) From South Coast AQMD, 2021, Appendix B, page B-2.

(3) The currently proposed modifications have less overlapping construction and the piping tie-ins generate fewer emissions than the electrical intertie emissions as shown in Table 3, which would make the 2019 and 2021 Addenda emissions conservatively representative of the currently proposed modifications.

Thus, the peak daily emissions from overlapping construction of the six new crude oil storage tanks at the CCT with the piping tie-ins be less than the peak daily emissions that were previously analyzed in the 2019 and 2021 Addenda. Further, as shown in Table 4, the peak daily construction emissions for the currently proposed revisions to the LARIC Project are fewer than the previously disclosed peak daily construction emissions that have already occurred. Therefore, the peak daily construction emissions as presented in the 2019 and 2021 Addenda will not need to change and conservatively represent the peak daily construction emissions from the currently proposed modifications to the LARIC Project. Thus, the currently proposed modifications to the LARIC Project do not: 1) change the conclusions reached in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda; or 2) make a significant impact substantially more severe.

6.2.1.1.3 Localized Construction Air Quality Impacts in the May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

The May 2017 Final EIR evaluated the localized air quality impacts of construction emissions in its Table 4.2-3. The localized construction impacts were concluded to be significant for the federal 1-hour NO₂ ambient air quality standard. The Project modifications approved in the 2019 and 2021 Addenda were evaluated for localized construction (Localized Significance Threshold (LST) Analysis) and the resulting emissions were fewer than those presented in the May 2017 Final EIR, but remained significant for the federal 1-hour NO₂ ambient air quality standard. The peak construction emissions for NO_x occurred in Month 7. The results of the LST Analysis from the 2019 and 2021 Addenda are presented in Table 5.

TABLE 5
Tesoro Los Angeles Refinery LARIC Project
Results of Localized Construction Air Quality Impact Analysis
Including the Updates Made in the 2019 and 2021 Addenda

Criteria Pollutant	Averaging Period	Modeled GLC (µg/m ³)	Background GLC (µg/m ³) ^(a)	Total GLC (µg/m ³)	Most Stringent Air Quality Standard (µg/m ³) ^(b)	Exceeds Significance Threshold?
CO	1-hour	99.39	4,196.6	4,296.0	23,000	No
	8-hour	25.89	2,646.5	2,672.4	10,000	No
NO ₂ ^(c)	1-hour	110.48	253.2	363.7	339	Yes
	1-hour (Federal)	82.33 ^(d)	133.83 ^(e)	216.2	188	Yes
	Annual	1.15	38.6	39.7	57	No
PM ₁₀	24-hour	1.14	--	--	10.4	No
	Annual	0.12	--	--	1	No
PM _{2.5}	24-hour	1.14	--	--	10.4	No
	Annual	0.12	--	--	1	No

GLC = ground-level concentration

µg/m³ = micrograms per cubic meter

^(a) South Coastal LA County years 2014-2016 Stations 033 and 072 (the three most recent years).

^(b) South Coast AQMD Localized Significance Thresholds. For PM₁₀ and PM_{2.5}, project comparison to incremental change. CO and NO₂ values converted from ppm values in Table 1 of this Addendum. The ambient air quality standards are state standards unless distinguished as federal.

^(c) Impacts from air dispersion modeling are reported as using the ambient ratio method.

^(d) The federal 1-hour NO₂ standard is the 3-year average of the 98th percentile. The modeled GLC used highest 98th percentile per year.

^(e) 98th percentile background NO₂ value from the South Coast AQMD.

6.2.1.1.4 Localized Construction Air Quality Impacts from the Currently Proposed Revisions to the LARIC Project

Construction of the currently proposed modifications to the LARIC Project are expected to overlap with construction of the Electrical Intertie Project previously analyzed in the May 2017 Final EIR

as amended by the 2019 and 2021 Addenda, followed by the piping tie-ins, which have fewer construction emissions than the Electrical Intertie. The six new storage tanks at the CCT were previously analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda. The peak NO_x emissions and the associated NO₂ concentration have already occurred in Month 7. Further, as explained in Section 6.2.1.1.2, NO_x emissions from the currently proposed project modifications to the LARIC Project are less than the 2017 LARIC Project peak NO_x emissions as a result of the currently proposed modifications to the LARIC Project would not create a new peak. Therefore, the currently proposed modifications to the LARIC Project do not change the conclusion of the May 2017 Final EIR as amended by the 2019 and 2021 Addenda, or increase the severity of impacts identified in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

6.2.1.2 Operational Emissions

6.2.1.2.1 May 2017 Final EIR Criteria Pollutant Emission Impacts as Amended by the 2019 and 2021 Addenda

The May 2017 Final EIR estimated that implementation of the LARIC Project would result in reductions of operational CO emissions and less than significant increases of operational VOC, NO_x, SO_x, PM₁₀, and PM_{2.5} emissions (see Table 4.2-4 from the May 2017 Final EIR which is presented in this Addendum as Table 6). In accordance with New Source Review requirements in Regulation XIII, emission reduction credits (ERCs) were required to be supplied in order to offset the VOC emission increases. Tesoro was expected to apply for emission credits from the reduction in PM₁₀ and PM_{2.5} emissions, and expected to retain RECLAIM trading credits (RTCs) from the reduction in NO_x and SO_x emissions. The analysis in the May 2017 Final EIR concluded that the operational emissions of criteria air pollutants would be less than significant. The emission increases of NO_x, SO_x, PM₁₀, and PM_{2.5} are exclusively from mobile sources. While there are large decreases of localized emissions expected from stationary sources, these decreases are not creditable on a regional basis because Tesoro is expected to retain RTCs and ERCs that may be sold or used to offset future emission increases elsewhere. Therefore, the regional benefits are expected to be minimal.

The May 2017 Final EIR presented potential emission reductions that could occur from improved efficiency of offloading crude oil from marine vessels and transferring it to the six new storage tanks at CCT (see Appendix G, Section G0-2.6). The objective of the new storage tanks was to provide increased storage capacity to enable the offloading of the entire, large volume of crude oil cargo from marine vessels that currently call at Marine Terminal 1 (e.g., Suezmax with approximately one million barrel capacity, and Very Large Crude Carrier (VLCC) with approximately 1.5 to 2 million barrel capacity) during one visit, rather than: 1) off-loading only a portion of crude oil from the marine vessel; 2) sending the marine vessel to anchorage which would generate emissions from maneuvering and auxiliary (i.e., hoteling) activities and waiting until enough crude oil is processed at the LARIC Refinery to make room for the remainder of the marine vessel's cargo; and 3) returning the marine vessel from anchorage to offload the remainder of the cargo at Marine Terminal 1. Having the six new storage tanks for this purpose would enhance efficiency of operations as a business matter, and also provide environmentally beneficial marine

vessel emissions reductions and associated impacts. However, while the potential emission reductions were discussed, the impact analysis in Section 4.2 of the May 2017 Final EIR (see the significance determination presented in Table 4.2-4) did not take credit for these emission reduction benefits. The 2019 and 2021 Addenda did not alter the analysis or conclusions in the May 2017 Final EIR.

The analysis in the 2019 and 2021 Addenda indicated a combination of reduced operational emissions from fugitive VOC emissions by replacing the Naphtha Isomerization Unit modifications with the C3 Splitter Unit modifications, and increased VOC emissions from the proposed throughput increase for Carson Operations Tank 35. Nonetheless, the net overall effect of operational VOC emissions did not change the less than significant determination made in the May 2017 Final EIR. Table 6 shows the overall operational emissions as amended by the 2019 and 2021 Addenda.

6.2.1.2.2 Criteria Pollutant Emissions from Currently Proposed Modifications to the LARIC Project

The changes to the emissions of criteria air pollutants due to the currently proposed modifications to the LARIC Project are shown in Table 7. The proposed modifications to the LARIC Project seek to revise the air permits for three of the six new crude oil storage tanks at the CCT so that they will be capable of containing either crude oil or gas oil. While either commodity could be stored in these three storage tanks, the analysis in this Addendum is based on the emissions that would occur when storing crude oil because the emissions are greater than for gas oil and thus, represent the worst-case emissions during operation. For this reason, the Table 7 line-item referring to the Carson Crude Oil Storage Tanks shows no change in emissions although gas oil will be stored in three of the six new crude oil storage tanks at the CCT.

Table 8 provides a comparison of crude oil and gas oil operational emissions from a single storage tank (see Appendix C of this Addendum for detailed emission calculations) and shows that VOC emissions are greater for crude oil than gas oil. Thus, as depicted in Table 7, no change to the peak day operational emission calculations is necessary. Additionally, the fugitive emissions associated with the piping tie-ins for the six new crude oil storage tanks at the CCT tank farm are expected to be the same as the existing piping configuration because the number of piping tie-ins fugitive components is expected to be similar to the existing number of fugitive components associated with Reservoir 502 that will be taken out of service when Reservoir 502 is decommissioned.

**TABLE 6
Tesoro Los Angeles Refinery LARIC Project
Summary of Operational Emissions
as Amended by the 2019 and 2021 Addenda**

Sources	Emissions (lb/day)					
	VOC	CO	NOx	SOx	PM10	PM2.5 ^(a)
Direct Emission Impacts from Stationary Sources						
Wilmington DCU H-100 Heater Duty Bump ^(b)	-0.43	-5.14	-171.03	86.69	-0.98	-0.98
Wilmington HCU H-300/301 Heater Duty Bump ^(c)	10.10	49.75	4.67	-14.98	10.79	10.79
SARP Process Air Heater	3.27	16.37	6.99	0.28	3.51	3.51
SARP Decomp. Furnace	6.88	34.39	2.45	0.59	7.37	7.37
SARP Converter Heater	0.82	4.09	1.75	0.07	0.88	0.88
SARP Process Vent	--	--	--	31.12	6.00 ^(d)	6.00 ^(d)
Wilmington Tanks	141.64	--	--	--	--	--
Wilmington Fugitive Emissions:						
CRU 3	10.24	--	--	--	--	--
Crude Tanks	3.61	--	--	--	--	--
HCU	20.69	--	--	--	--	--
HTU-1	3.50	--	--	--	--	--
HTU-2	3.80	--	--	--	--	--
HTU-4	6.32	--	--	--	--	--
Interconnect Piping	37.20					
PSTU	15.44	--	--	--	--	--
Sulfuric Acid Plant ^(e)	--	--	--	--	--	--
Wilmington FCCU Shutdown ^(f)						
Wilmington FCCU and CO Boiler	-290.46	-909.62	-343.31	-387.50	-121.30	-121.30
Wilmington Heaters H2, H3/H4, and H5	-10.74	-49.36	-226.28	-28.87	-49.88	-49.88
Wilmington Startup Heater	-0.16	-0.81	-3.00	-0.01	-0.17	-0.17
Wilmington Fugitive Components	-17.60	--	--	--	--	--
Carson No. 51 Vacuum Unit Heater	32.85	233.85	32.72	1.80	45.49	45.49
Carson Naphtha HDS ULNB Conversion	1.73	10.23	1.87	0.64	5.56	5.56
Carson Crude Oil Storage Tanks	112.51	--	--	--	--	--
Carson Fugitive Emissions:						
No. 51 Vacuum Unit	11.74	--	--	--	--	--
Alkylation	18.88	--	--	--	--	--
Crude Tanks	43.05	--	--	--	--	--
Carson HCU Mods	6.77	--	--	--	--	--
Interconnect Piping	27.22	--	--	--	--	--
Carson LHU Mods	14.34	--	--	--	--	--
Carson LPG Railcar Unload	26.85	--	--	--	--	--
Carson Mid Barrel Distillate Treater	2.15	--	--	--	--	--
Carson C3 Splitter Unit	0.83	--	--	--	--	--

**ADDENDUM TO THE FINAL EIR FOR THE TESORO LOS ANGELES REFINERY INTEGRATION
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TABLE 6 (continued)

Sources	Emissions (lb/day)					
	VOC	CO	NO _x	SO _x	PM10	PM2.5 ^(a)
Carson NHDS Mods	15.21	--	--	--	--	--
Carson Wet Jet Treater	50.45	--	--	--	--	--
Tank 35	7.89	--	--	--	--	--
Subtotal, Direct Stationary Source Emissions	316.59	-616.25	-693.17	-310.17	-92.73	-92.73
Indirect Emission Impacts from Stationary Sources						
Wilmington DCU Heater H-101	0.83	4.36	19.00	7.58	0.83	0.83
Wilmington HTU #3 Heaters H-30 and H-21/22	2.20	3.14	20.56	3.86	2.56	2.56
Wilmington CRU Heaters H-501A/B, H-502, H-503/504, and H-510	0.23	1.55	1.75	0.65	0.74	0.74
Wilmington Boilers 7, 8, 9, and 10	1.26	0.74	24.00	6.14	3.78	3.78
Wilmington SRP Boilers H-1601/1602	0.02	0.01	0.11	0.04	0.05	0.05
Wilmington SRP Incinerators F-704 and F-754	0.02	0.08	0.76	25.32	0.04	0.04
Wilmington Existing Tanks 80044, 80074, 80211, 80215, and 80217	4.12	--	--	--	--	--
Carson FCCU ^(g)	--	--	--	--	--	--
Carson HC Heater R-1	1.77	1.04	18.00	4.61	5.38	5.38
Carson HC Heater R-2	2.36	1.38	14.40	9.81	7.18	7.18
Carson LHU Heater	0.62	0.36	6.00	1.50	1.87	1.87
Carson Existing Tanks 14, 31, 62, 63, 64, 502, and 959	64.35	--	--	--	--	--
Watson Cogen Facility	4.15	4.50	20.60	2.50	9.85	9.85
Subtotal, Indirect Stationary Source Emissions	81.93	17.16	125.18	62.01	32.28	32.28
Mobile Sources^{(h)(i)}						
Vehicle Emissions ^(j)	0.20	0.79	2.98	<0.01	0.22	0.05
Rail Emissions – On-Site Maneuvering	0.66	2.01	11.65	<0.01	0.25	0.24
Rail Emissions – In Basin Transiting	1.20	7.60	25.80	<0.01	0.70	0.60
Subtotal, Mobile Source Emissions	2.06	10.40	40.43	<0.01	1.17	0.89
Total Project Emissions	400.58	-588.69	-527.56	-248.15	-59.28	-59.56
Required Regulation XIII Compliance^(k)	-316.59	--	--	--	--	--
Prior Regulation XIII Compliance^(l)	-41.62	--	--	--	-9.85	-9.85
Expected ERCs^(m)	--	--	--	--	70.30	70.30
Expected RTCs to be Retained⁽ⁿ⁾	--	--	567.99	248.16	--	--
Total Project Emissions after Regulation XIII Compliance and ERC Generation^(o)	42.37	-588.69	40.43	<0.01	1.17	0.89
Significance Threshold During Operation	55	550	55	150	150	55
Significant?	No	No	No	No	No	No

TABLE 6 (concluded)

Note: Negative numbers represent emission reductions.

- (a) PM10 emissions are assumed to be 100 percent PM2.5 emissions for stationary combustion sources.
- (b) Negative numbers represent emission reductions as a result of permit limits imposed, which will reduce emissions to less than historically achieved.
- (c) SOx emission reductions are expected due to fuel switch from refinery fuel gas to natural gas, which contains less sulfur.
- (d) Corrects omission from Table 4.2-4 of the May 2017 Final EIR. The PM10 was reported in Appendix B-3 of the May 2017 Final EIR, but not included in the summary table in Chapter 4 (Table 6 of the 2019 and 2021 Addenda).
- (e) No fugitive VOC emissions are expected from the Sulfuric Acid Plant.
- (f) Based on actual historical emissions.
- (g) Peak daily emissions are not expected to change, but increased utilization will affect annual emissions.
- (h) Peak daily marine vessel emissions do not change as a result of the LARIC Project.
- (i) On-road mobile source emissions represent vehicle trips only within the jurisdiction of the South Coast AQMD. On-road mobile source emissions projected to occur outside of the South Coast AQMD's area of jurisdiction are provided in Subsection 4.2.2.2.2 of the May 2017 Final EIR.
- (j) Corrects omission from Table 4.2-4 of the May 2017 Final EIR. The on-site emissions were reported in Appendix B-3 of the May 2017 Final EIR, but were not included with the off-site emissions in the summary table in Chapter 4 (Table 6 of the 2019 and 2021 Addenda).
- (k) Regulation XIII compliance requires offsetting the direct stationary source emissions increases from the LARIC Project. Indirect stationary source emission increases have been previously evaluated and already comply with Regulation XIII – New Source Review.
- (l) Some indirect sources (i.e., Carson Tanks 14, 502, and 959, Wilmington H-101, and Carson R-2) have previously undergone new source review, so offset requirements have already been met. Additionally, direct source Tank 35 has undergone prior new source review.
- (m) ERCs for emission reductions are expected to be generated for PM10. Because PM2.5 is a subset of what comprises PM10, ERCs cannot be issued for PM2.5.
- (n) Localized emission reductions of SOx and NOx will result from the LARIC Project. Tesoro will retain RTCs from retiring the Wilmington Operations FCCU for operation of its Los Angeles Refinery. This entry reflects mathematical corrections to the totals originally presented in May 2017 Final EIR.
- (o) Regulation XIII compliance applied to the less than significant determination reduces the VOC and PM10 emissions from stationary sources. Mobile sources are not subject to Regulation XIII or RECLAIM offset requirements.

**TABLE 7
Tesoro Los Angeles Refinery LARIC Project
Summary of Operational Emissions as Amended by the 2019 and 2021 Addenda
Including the Currently Proposed Modifications**

Sources	Emissions (lb/day)					
	VOC	CO	NOx	SOx	PM10	PM2.5 ^(a)
Direct Emission Impacts from Stationary Sources						
Wilmington DCU H-100 Heater Duty Bump ^(b)	-0.43	-5.14	-171.03	86.69	-0.98	-0.98
Wilmington HCU H-300/301 Heater Duty Bump ^(c)	10.10	49.75	4.67	-14.98	10.79	10.79
SARP Process Air Heater	3.27	16.37	6.99	0.28	3.51	3.51
SARP Decomp. Furnace	6.88	34.39	2.45	0.59	7.37	7.37
SARP Converter Heater	0.82	4.09	1.75	0.07	0.88	0.88
SARP Process Vent	--	--	--	31.12	6.00 ^(d)	6.00 ^(d)
Wilmington Tanks	141.64	--	--	--	--	--
Wilmington Fugitive Emissions:						
CRU 3	10.24	--	--	--	--	--
Crude Tanks	3.61	--	--	--	--	--
HCU	20.69	--	--	--	--	--
HTU-1	3.50	--	--	--	--	--
HTU-2	3.80	--	--	--	--	--
HTU-4	6.32	--	--	--	--	--
Interconnect Piping	37.20					
PSTU	15.44	--	--	--	--	--
Sulfuric Acid Plant ^(e)	--	--	--	--	--	--
Wilmington FCCU Shutdown ^(f)						
Wilmington FCCU and CO Boiler	-290.46	-909.62	-343.31	-387.50	-121.30	-121.30
Wilmington Heaters H2, H3/H4, and H5	-10.74	-49.36	-226.28	-28.87	-49.88	-49.88
Wilmington Startup Heater	-0.16	-0.81	-3.00	-0.01	-0.17	-0.17
Wilmington Fugitive Components	-17.60	--	--	--	--	--
Carson No. 51 Vacuum Unit Heater	32.85	233.85	32.72	1.80	45.49	45.49
Carson Naphtha HDS ULNB Conversion	1.73	10.23	1.87	0.64	5.56	5.56
Carson Crude Oil Storage Tanks	112.51	--	--	--	--	--
Carson Fugitive Emissions:						
No. 51 Vacuum Unit	11.74	--	--	--	--	--
Alkylation	18.88	--	--	--	--	--
Crude Tanks	43.05	--	--	--	--	--
Carson HCU Mods	6.77	--	--	--	--	--
Interconnect Piping	27.22	--	--	--	--	--
Carson LHU Mods	14.34	--	--	--	--	--
Carson LPG Railcar Unload	26.85	--	--	--	--	--
Carson Mid Barrel Distillate Treater	2.15	--	--	--	--	--
Carson C3 Splitter Unit	0.83	--	--	--	--	--

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TABLE 7 (continued)

Sources	Emissions (lb/day)					
	VOC	CO	NO _x	SO _x	PM10	PM2.5 ^(a)
Carson NHDS Mods	15.21	--	--	--	--	--
Carson Wet Jet Treater	50.45	--	--	--	--	--
Tank 35	7.89	--	--	--	--	--
Subtotal, Direct Stationary Source Emissions	316.59	-616.25	-693.17	-310.17	-92.73	-92.73
Indirect Emission Impacts from Stationary Sources						
Wilmington DCU Heater H-101	0.83	4.36	19.00	7.58	0.83	0.83
Wilmington HTU #3 Heaters H-30 and H-21/22	2.20	3.14	20.56	3.86	2.56	2.56
Wilmington CRU Heaters H-501A/B, H-502, H-503/504, and H-510	0.23	1.55	1.75	0.65	0.74	0.74
Wilmington Boilers 7, 8, 9, and 10	1.26	0.74	24.00	6.14	3.78	3.78
Wilmington SRP Boilers H-1601/1602	0.02	0.01	0.11	0.04	0.05	0.05
Wilmington SRP Incinerators F-704 and F-754	0.02	0.08	0.76	25.32	0.04	0.04
Wilmington Existing Tanks 80044, 80074, 80211, 80215, and 80217	4.12	--	--	--	--	--
Carson FCCU ^(g)	--	--	--	--	--	--
Carson HC Heater R-1	1.77	1.04	18.00	4.61	5.38	5.38
Carson HC Heater R-2	2.36	1.38	14.40	9.81	7.18	7.18
Carson LHU Heater	0.62	0.36	6.00	1.50	1.87	1.87
Carson Existing Tanks 14, 31, 62, 63, 64, and 959 ^(h)	37.76	--	--	--	--	--
Retirement of Reservoir 502 ^(h)	-37.06					
Watson Cogen Facility	4.15	4.50	20.60	2.50	9.85	9.85
Subtotal, Indirect Stationary Source Emissions	18.28	17.16	125.18	62.01	32.28	32.28
Mobile Sources^(g)						
Vehicle Emissions ^(k)	0.20	0.79	2.98	<0.01	0.22	0.05
Rail Emissions – On-Site Maneuvering	0.66	2.01	11.65	<0.01	0.25	0.24
Rail Emissions – In Basin Transiting	1.20	7.60	25.80	<0.01	0.70	0.60
Subtotal, Mobile Source Emissions	2.06	10.40	40.43	<0.01	1.17	0.89
Total Project Emissions	336.93	-588.69	-527.56	-248.15	-59.28	-59.56
Required Regulation XIII Compliance^(l)	-316.59	--	--	--	--	--
Prior Regulation XIII Compliance^(m)	-41.62	--	--	--	-9.85	-9.85
Expected ERCs⁽ⁿ⁾	--	--	--	--	70.30	70.30
Expected RTCs to be Retained^(o)	--	--	567.99	248.16	--	--
Total Project Emissions after Regulation XIII Compliance and ERC Generation^(p)	-21.28	-588.69	40.43	<0.01	1.17	0.89
Significance Threshold During Operation	55	550	55	150	150	55
Significant?	No	No	No	No	No	No

TABLE 7 (concluded)

Note: Negative numbers represent emission reductions.

- (a) PM10 emissions are assumed to be 100 percent PM2.5 emissions for stationary combustion sources.
- (b) Negative numbers represent emission reductions as a result of permit limits imposed, which will reduce emissions to less than what was historically achieved.
- (c) SOx emission reductions are expected due to a fuel switch from refinery fuel gas to natural gas, which contains less sulfur.
- (d) Corrects omission from Table 4.2-4 of the May 2017 Final EIR. The PM10 was reported in Appendix B-3 of the May 2017 Final EIR, but not included in the summary table in Chapter 4 (Table 6 of the 2019 and 2021 Addenda).
- (e) No fugitive VOC emissions are expected from the Sulfuric Acid Plant.
- (f) Based on actual historical emissions.
- (g) Peak daily emissions are not expected to change, but increased utilization will affect annual emissions.
- (h) Adjusted to reflect the removal of the increased utilization emissions and the existing emissions associated with the retirement of Reservoir 502 (an overall reduction of 63.65 lb/day). Detailed calculations for the adjustment are presented in Appendix C of this Addendum. Additionally, the fugitive components associated with the retirement of Reservoir 502 are expected to be replaced by the Piping Tie-in fugitive components resulting in no change in fugitive emissions.
- (i) Peak daily marine vessel emissions do not change as a result of the proposed modifications to the LARIC Project.
- (j) On-road mobile source emissions represent vehicle trips only within the jurisdiction of the South Coast AQMD. On-road mobile source emissions projected to occur outside of the South Coast AQMD’s area of jurisdiction are provided in Subsection 4.2.2.2.2 of the May 2017 Final EIR.
- (k) Corrects omission from Table 4.2-4 of the May 2017 Final EIR. The on-site emissions were reported in Appendix B-3 of the May 2017 Final EIR, but not included with the off-site emissions in the summary table in Chapter 4 (Table 6 of the 2019 and 2021 Addenda).
- (l) Regulation XIII compliance requires offsetting the project direct stationary source emissions increases. Indirect stationary source emissions increases have been previously offset to comply with Regulation XIII – New Source Review.
- (m) Some indirect sources (i.e., Carson Tanks 14, 502, and 959, Wilmington H-101, and Carson R-2) have undergone prior new source review and do not require additional offsets. Additionally, direct source Tank 35 has undergone prior new source review and does not require additional offsets.
- (n) ERCs for emission reductions are expected to be generated for PM10. No credits are issued for PM2.5 because it is a constituent of PM10.
- (o) Localized reductions of SOx and NOx emissions will result from the LARIC Project. Tesoro will retain RTCs from retiring the Wilmington Operations FCCU for operation of its Los Angeles Refinery. This entry reflects mathematical corrections to the totals originally presented in May 2017 Final EIR.
- (p) Regulation XIII compliance required and therefore applied to significance determination, which reduces the VOC and PM10 emissions from stationary sources to less than significant. Mobile sources are not subject to Regulation XIII or RECLAIM offset requirements.

TABLE 8

**Tesoro Los Angeles Refinery LARIC Project
Comparison of Operational Emissions for Storing Crude Oil and Gas Oil
in One Domed External Floating Roof Storage Tank at CCT**

Emission Source	VOC Emissions from Crude Oil Storage (lb/day) ^(a)	VOC Emissions from Gas Oil Storage (lb/day)
Rim Seal Loss	1.86	0.08
Withdrawal Loss	11.72	3.14
Fitting Loss	2.58	0.11
Total Emissions	16.15	3.32

- (a) The emissions for the comparison in this table are calculated using the updated AP-42 methodology that replaced the U.S. EPA Tanks 4.09D model. The emissions for the Carson Crude Oil Storage Tanks shown in Table 7 were calculated prior to the update in the methodology and conservatively represent the potential emissions from the six new crude oil storage tanks at the CCT. Therefore, the emissions for crude oil storage presented in this table are less than that what is presented in Table 7 on a per tank basis. See Appendix C of this Addendum for detailed emission calculations which are based on annual average emissions.

The summary of emissions from the May 2017 Final EIR as amended by the 2019 and 2021 Addenda as presented in Table 6 of this Addendum includes the incremental increase in emissions from increased utilization of existing storage tanks at the Carson Operations (i.e., Tanks 14, 31, 62, 63, 64, and 959 including Reservoir 502). The currently proposed revisions to the LARIC Project seek to decommission and retire Reservoir 502, which would eliminate the emissions analyzed in the May 2017 Final EIR, which were unchanged in the 2019 and 2021 Addenda, for increased utilization plus the existing (pre-project) emissions from the on-going operation of Reservoir 502. The existing emissions for Reservoir 502 as analyzed in May 2017 Final EIR were the average of the 2012 and 2013 reported annual emissions, which is 37.06 pounds per day (lb/day). It is important to note that only the incremental increase of VOC emissions is reflected in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda; the existing emissions are considered baseline and would continue to be emitted. Table 9 details the emissions adjustment to Table 7 from decommissioning and retiring Reservoir 502 (i.e., 37.06 lb/day) and the removal of the increased utilization emissions (i.e., 26.59 lb/day).

TABLE 9
Tesoro Los Angeles Refinery LARIC Project
Operational Emission Impacts from Decommissioning and Retiring Reservoir 502

Scenario	VOC Emissions (lb/day)
May 2017 Final EIR	
Existing Emissions (Baseline) 2-Year Average Emissions	37.06
Post-Project Emissions Due to Increased Utilization	63.65
Net Increase included in May 2017 Final EIR, Table 4.2-2	26.59
Currently Proposed Modifications	
Elimination of Existing Emissions	-37.06
Elimination of Increased Utilization Emissions	-26.59
Net Emission Reductions as a Result of the Currently Proposed Modifications to the LARIC Project	-63.65

See Appendix C of this Addendum for detailed emission calculations.

As part of decommissioning Reservoir 502, water will be utilized for cleaning purposes and this water will need to be routed to up to 12 temporary storage tanks to hold, filter, and recycle water for the cleaning process. The temporary storage tanks are rented, transportable, South Coast AQMD-permitted equipment that are supplied by the vendor with carbon canisters and do not require construction activities (e.g., foundations, excavation, etc.). VOC emissions from routing the cleaning water to temporary storage tanks will be vented to carbon. The carbon canisters used to control the temporary storage tank emissions are managed accordingly while onsite, and, once spent and at the completion of the project, the carbon canisters are sent back to the supplier for

regeneration and reuse. The short-term emissions from the temporary storage tanks are expected to be 0.4 lb/day (see Appendix C for detailed calculations). However, by decommissioning Reservoir 502, 12.9 lb/day of VOC emissions, referred to as working losses, will be eliminated. In addition, as the surface of Reservoir 502 is cleaned, the standing losses will decrease from 24.2 lb/day of VOC to zero at the completion of the cleanout. Appendix C of this Addendum contains details of the calculations. Therefore, no increase in VOC emissions is anticipated from the temporary storage tanks associated with the cleanout of Reservoir 502 during decommissioning.

While no increase in VOC emissions is expected from the currently proposed modifications to the LARIC Project, any operational increases of VOC emissions from stationary sources are required to comply with Regulation XIII - New Source Review. As such, VOC ERCs are required to be provided by the project proponent to offset emission increases, so that net zero emissions will result. With the decommissioning and retirement of Reservoir 502, VOC emissions will be reduced by 37.1 lb/day (see Table 9). Therefore, the projected increases in VOC emissions after implementation of the currently proposed modifications to the LARIC Project (as presented in Table 7) are less than what was analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda (reported in Table 6). Mobile source emissions are not subject to Regulation XIII or RECLAIM offset requirements. Therefore, the overall regional emission impacts from implementing the LARIC Project are from mobile source emissions. The localized emission impacts will be reduced, but these decreases are not creditable on a regional basis because Tesoro is expected to retain RTCs and ERCs that may be sold or used to offset future emission increases elsewhere. It should be noted that Tesoro voluntarily will not apply for VOC ERCs from the retirement of Reservoir 502 because of the complexity of securing VOC ERCs from the old, non-BACT equipment (per Regulation XIII, discounting to BACT would occur, which reduces the potential availability of VOC ERCs).

Enabling three of the six CCT storage tanks to contain either crude oil or gas oil will facilitate the retirement of Reservoir 502 while still allowing for the efficiency benefits of unloading crude oil described in the May 2017 Final EIR. Gas oil is anticipated to be stored in up to three of the six new storage tanks, which will continue to allow for improved unloading of crude oil from Marine Terminal 1 as described in May 2017 Final EIR. The total available gas oil volume of Reservoir 502 will be replaced with the three CCT storage tanks that would be capable of storing gas oil in addition to crude oil. The remaining three storage tanks will continue to be dedicated to crude oil storage for a total of 1.5 million barrels of storage capacity, which is the capacity of a marine vessel that typically offloads at Marine Terminal 1.

In addition, the CCT has five existing storage tanks that are dedicated to crude oil storage with a combined storage capacity of approximately two million barrels. Crude oils vary in properties (e.g., sulfur content, carbon chain fractions, acidity, density, etc.) and are stored based on the similarities in those properties. When being transferred for processing, the various crude oils are blended to meet the refinery specifications. Because these existing storage tanks operate with varying amounts of different crude oils in them at any given time (i.e., they are not completely empty unless undergoing maintenance), the existing five storage tanks did not provide sufficient available capacity to store multiple crude oils with varying properties, which limited the volume of crude that could be offloaded in a given delivery. The additional six new storage tanks would

continue to meet the objective of providing the capability to streamline offloading of crude oil from the marine vessel. When any of the three storage tanks are in gas oil service, however, the option for storing crude oils with different properties would be reduced to the three new storage tanks in dedicated crude oil service, the existing five storage tanks, and the remainder of the new storage tanks that are capable of storing either crude oil or gas oil that are not actively storing gas oil. When three of the six new tanks that could store either crude oil or gas oil are in crude oil service, there would be no change to the potential benefits described in the May 2017 Final EIR. Therefore, using three of the six new storage tanks for gas oil storage will not eliminate the improved operational efficiency of unloading 1.5 to 2 million barrel-capacity marine vessels, but restricts flexibility of only the number of different crude oils that could be stored at CCT.

The currently proposed modifications to the LARIC Project do not change the significance conclusion in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

6.2.1.2.3 May 2017 Final EIR Interim Operations Scenario Evaluation as Amended by the 2019 and 2021 Addenda

The May 2017 Final EIR presented emissions from an interim operations scenario to address the implementation of some project components (e.g., Wilmington Operations HCU and Carson HCU Mods, LHU Mods) occurring prior to the shutdown of the Wilmington Operations FCCU (see Table 4.2-5 from the May 2017 Final EIR and presented in this Addendum as Table 10). Emissions during the interim operations scenario were expected to occur for up to approximately one year until the Wilmington Operation FCCU was to be shutdown, at which time, emission reductions would occur. No significant air quality impacts were identified from the interim operations.

The 2019 and 2021 Addenda did not alter the analysis or conclusions in the May 2017 Final EIR relative to the interim operations scenario because the implementation of the modifications that were analyzed in these Addenda occurred after the time period between the LARIC Project approval in May 2017 and the Wilmington Operations FCCU shutdown which occurred in October 2018 (i.e., the interim operating period).

6.2.1.2.4 Currently Proposed Modifications to the LARIC Project Relative to the Interim Scenario Evaluation

The Wilmington Operations FCCU shutdown occurred in October 2018. Therefore, none of the currently proposed modifications to the LARIC Project would occur during the time period between the LARIC Project approval and the Wilmington Operations FCCU shutdown (i.e., the interim operating period, which occurred in October 2018). Thus, the currently proposed modifications to the LARIC Project have no impact on the interim operating period air quality analysis that was presented in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda, and do not change the significance conclusion or make a significant impact substantially more severe.

TABLE 10

**Tesoro Los Angeles Refinery LARIC Project
Summary of Interim Operations Scenario
as Presented in the May 2017 Final EIR**

Sources	Emissions (lb/day)					
	VOC	CO	NOx	SOx	PM10	PM2.5 ^(a)
Direct Emission Impacts from Stationary Sources						
Wilmington DCU H-100 Heater Duty Bump ^(b)	-0.43	-5.14	-171.03	86.69	-0.98	-0.98
Wilmington Fugitive Emissions:						
HCU	20.69	--	--	--	--	--
Carson Fugitive Emissions:						
Carson HCU Mods	6.77	--	--	--	--	--
Carson LHU Mods	14.34	--	--	--	--	--
Carson Mid Barrel Distillate Treater	2.15	--	--	--	--	--
Subtotal, Direct Stationary Source Emissions	43.52	-5.14	-171.03	86.69	-0.98	-0.98
Indirect Emission Impacts from Stationary Sources						
Wilmington DCU Heater H-101	0.83	4.36	19.00	7.58	0.83	0.83
Wilmington HTU #3 Heaters H-30 and H-21/22	2.20	3.14	20.56	3.86	2.56	2.56
Wilmington CRU Heaters H-501A/B, H-502, H-503/504, and H-510	0.23	1.55	1.75	0.65	0.74	0.74
Wilmington Boilers 7, 8, 9, and 10	1.26	0.74	24.00	6.14	3.78	3.78
Wilmington SRP Boilers H-1601/1602	0.02	0.01	0.11	0.04	0.05	0.05
Wilmington SRP Incinerators F-704 and F-754	0.02	0.08	0.76	25.32	0.04	0.04
Wilmington Existing Tanks 80044, 80074, 80211, 80215, and 80217	4.12	--	--	--	--	--
Carson LHU Heater	0.62	0.36	6.00	1.50	1.87	1.87
Subtotal, Indirect Stationary Source Emissions	9.30	10.24	72.18	45.09	9.87	9.87
Total Project Emissions	52.82	5.10	-98.85	131.78	8.89	8.89
Required Regulation XIII Compliance^(c)	-43.52	--	--	--	--	--
Prior Regulation XIII Compliance^(d)	-0.83	--	--	--	--	--
Total Project Emissions after Regulation XIII Compliance	8.47	5.10	-98.85	131.78	8.89	8.89
Significance Threshold During Operation	55	550	55	150	150	55
Significant?	No	No	No	No	No	No

Note: Negative numbers represent emission reductions.

(a) PM10 emissions are assumed to be 100 percent PM2.5 emissions for stationary combustion sources.

(b) Negative numbers represent emission reductions as a result of permit limits imposed, which will reduce emissions to less than historically achieved.

(c) Regulation XIII compliance requires offsetting the project direct stationary source emissions increases. Indirect stationary source emission increases have been previously offset to comply with Regulation XIII – New Source Review.

(d) Indirect source Wilmington H-101 has undergone prior new source review.

Source: May 2017 Final EIR, Table 4.2-5

6.2.1.2.5 May 2017 Final EIR 90-Day Transitional Period Evaluation as Amended by the 2019 and 2021 Addenda

The May 2017 Final EIR analyzed the 90-day transitional period when LARIC Project components would become operational to facilitate the shutdown of the Wilmington Operations FCCU and on-going construction would occur concurrently. Table 4.3-6 of the May 2017 Final EIR presented the emissions associated with 90-day transitional period using the peak construction emissions from the transitional period combined with the operational emissions associated with LARIC Project components (presented in this Addendum as Table 11). The 90-day transitional period was concluded that significant amounts of VOC and NO_x emissions would occur during construction. Mitigation measures were imposed to lessen the construction emission impacts and for specific stationary sources during the 90-day transitional period.

The 2019 and 2021 Addenda did not alter the analysis or conclusions in the May 2017 Final EIR relative to the 90-day transitional period because the 90-day transitional period occurred in 2018 prior to the 2019 and 2021 Addenda.

6.2.1.2.6 Currently Proposed Modifications to the LARIC Project Relative to the 90-Day Transitional Period Evaluation

The Wilmington Operations FCCU shutdown occurred in October 2018. Therefore, none of the currently proposed modifications to the LARIC Project would occur during the 90-day time period prior to the shutdown (i.e., the 90-day transitional period). Thus, the currently proposed modifications to the LARIC Project have no impact on the transitional period air quality analysis that was presented in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda, do not change the conclusion of significant VOC and NO_x construction emissions, and do not make this significant impact substantially more severe.

6.2.1.2.7 Impacts to Ambient Air Quality as Analyzed in the May 2017 Final EIR and Revised by the 2019 and 2021 Addenda

The May 2017 Final EIR included an ambient air analysis for operational activities. Table 4.2-12 of the May 2017 Final EIR presented the results of ambient air quality modeling (presented in this Addendum as Table 12). No significant impacts to ambient air quality from operations were expected from implementation of the LARIC Project.

The 2019 and 2021 Addenda only affected VOC emissions and therefore, did not alter Table 4.2-12 (criteria pollutants air quality modeling) or the conclusions in the May 2017 Final EIR (re criteria pollutants). There is no ambient air quality standard for VOC emissions. Therefore, VOC emissions are not modeled in an ambient air quality analysis.

TABLE 11

**Tesoro Los Angeles Refinery LARIC Project
Construction and Interim Operations Scenario During the 90-Day Transitional Period
Operational Emissions Summary
as Presented in the May 2017 Final EIR**

Sources	Emissions (lb/day)					
	VOC	CO	NO _x	SO _x	PM10	PM2.5 ^(a)
CONSTRUCTION EMISSIONS						
Maximum Construction Emissions during Transitional Period^(b)	52.38	488.48	575.73	1.41	68.55	38.67
TRANSITIONAL PERIOD OPERATIONAL EMISSIONS						
Emissions from Interim Operations^(c)	8.47	5.10	-98.85	131.78	8.89	8.89
Direct Emission Impacts from Stationary Sources^(d)						
Wilmington Fugitive Emissions:						
Interconnect Piping ^(e)	13.02	--	--	--	--	--
Carson Fugitive Emissions:						
Interconnect Piping ^(e)	9.53	--	--	--	--	--
Carson LPG Railcar Unload	26.85	--	--	--	--	--
Carson NHDS Mods	15.21	--	--	--	--	--
Subtotal, Direct Stationary Source Emissions	64.61	--	--	--	--	--
Indirect Emission Impacts from Stationary Sources						
Carson Existing Tanks 31 ,62 63, and 64	36.92	--	--	--	--	--
Subtotal, Indirect Stationary Source Emissions	36.92	--	--	--	--	--
Mobile Sources						
Rail Emissions – On-Site Maneuvering	0.66	2.01	11.65	<0.01	0.25	0.24
Rail Emissions – In Basin Transiting	1.20	7.60	25.80	<0.01	0.70	0.60
Subtotal, Mobile Source Emissions	1.86	9.61	37.45	<0.01	0.95	0.84
Total Construction and Transitional Period Project Emissions	164.24	503.19	514.33	133.19	78.39	48.40
Required Regulation XIII Compliance^(f)	-64.61	--	--	--	--	--
Total Project Emissions after Regulation XIII Compliance	99.63	503.19	514.83	133.19	79.39	48.40
Significance Threshold During Operation^(g)	55	550	55	150	150	55
Significant?	Yes	No	Yes	No	No	No

(a) PM10 emissions are assumed to be 100 percent PM2.5 emissions for stationary combustion sources.

(b) The projected peak construction emissions during the transitional period are expected to occur in Month 18 (See Appendix B-1 of the May 2017 Final EIR Construction Emission Summary).

(c) From Table 10.

(d) The unmitigated construction emissions combined with the transitional period of operational emissions are expected to occur for the 90 days prior to the Wilmington Operations FCCU shutdown. At which time, emission reductions will occur (see Table 6).

(e) The emissions associated with the interconnecting piping have been reduced to reflect that prior to the shutdown of the Wilmington Operations FCCU only two pipes will be operational.

(f) Regulation XIII compliance requires offsetting the project direct stationary source emissions increases. Indirect stationary source emissions increases comply with Regulation XIII – New Source Review.

(g) When construction activities occur concurrently with project operation, the operational significance threshold is applied.

Source: May 2017 Final EIR, Table 4.2-6

TABLE 12
Tesoro Los Angeles Refinery
LARIC Project Results of Criteria Pollutants Air Quality Modeling
as Presented in the May 2017 Final EIR

Criteria Pollutant	Averaging Period	Modeled GLC ($\mu\text{g}/\text{m}^3$)	Background GLC. ($\mu\text{g}/\text{m}^3$) ^(a)	Total GLC ($\mu\text{g}/\text{m}^3$)	Most Stringent Air Quality Standard ($\mu\text{g}/\text{m}^3$) ^(b)	Exceeds Significance Threshold?
CO	1-hour	11.2	4,809.0	4,820.2	23,000	No
	8-hour	5.1	2,977.0	2,982.1	10,000	No
NO ₂ ^(c)	1-hour	48.5	255.5	304.0	339	No
	1-hour (Fed.) ^(d)	40.8	146.3 ^(e)	187.1	188	No
	Annual	2.1	47.6	49.7	57	No
SO ₂	1-hour	6.5	64.9	71.4	655	No
	1-hour (Fed.) ^(f)	6.5	40.0	46.6	196	No
	24-hour	0.6	64.9	65.5	105	No
PM10	24-hour	0.42	--	--	2.5	No
	Annual	0.52	--	--	1.0	No
PM2.5	24-hour	0.42	--	--	2.5	No

GLC = ground-level concentration

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

- (a) South Coastal LA County 3 years 2012-2014. Maximum value of the three years was used, except concentrations used to compare with federal standards were averages.
- (b) South Coast AQMD Air Quality Significance Thresholds. For PM10 and PM2.5, project comparison to incremental change. Standards are state standards unless distinguished as Federal. CO and NO₂ values converted from ppm values in Table 1 of this Addendum.
- (c) Impacts from air dispersion model are reported as NO_x. NO₂ converted from NO_x by using default factor of 0.8 for hourly and 0.75 for annual, per 9/30/2014 Memorandum from R Chris Owen and Roger Brode, U.S. EPA Air Quality Modeling Group, to Regional Air Division Directors re: Clarification on the Use of AERMOD Dispersion Modeling for Demonstrating Compliance with the NO₂ NAAQ.
- (d) Federal standard is the 98th percentile concentration, averaged over three years.
- (e) 98th percentile background NO₂ value from the South Coast AQMD.
- (f) Federal standard is the 99th percentile concentration, averaged over three years.

Source: May 2017 Final EIR, Table 4.2-12

6.2.1.2.8 Impacts to Ambient Air Quality Relative to the Currently Proposed Modifications to the LARIC Project

The currently proposed modifications to the LARIC Project affect operational fugitive VOC emissions only; the CO, NO₂, SO₂, PM10, and PM2.5 emissions modeled in the May 2017 Final EIR remain unchanged. Thus, the ambient air quality modeling for CO, NO₂, SO₂, PM10, and PM2.5 is not affected by the currently proposed modifications to the LARIC Project. Therefore, the currently proposed modifications to the LARIC Project do not change the conclusion of less than significance in the May 2017 Final EIR, do not create new significant impacts, and do not make significant impacts substantially more severe.

6.2.1.2.9 Toxic Air Contaminant Impacts Analyzed in the May 2017 Final EIR and Revised by the 2019 and 2021 Addenda

The May 2017 Final EIR included an HRA for operational emissions associated with the LARIC Project. In the response to comments to the Draft EIR, the May 2017 Final EIR included a supplemental HRA focused on the health impacts of the construction and operational activities of the LARIC Project (see May 2017 Final EIR, Appendix H, Table 1). In all three scenarios: operation, construction, and combined construction and operation, the resulting health risk impacts of the LARIC Project were concluded to be less than significant.

The 2019 and 2021 Addenda adjusted the HRA presented in the May 2017 Final EIR by adjusting the emissions changes from the previously approved modifications and updating the meteorological data set to the most currently available. Table 13 summarizes the results of the revisions to the HRA presented in the 2019 and 2021 Addenda. The projected maximum impact locations are shown in Figure 4. The results of the update to the HRA in the 2019 and 2021 Addenda did not change the significance determinations made in the May 2017 Final EIR, did not create a new significant impact, or make a significant impact substantially more severe.

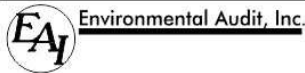
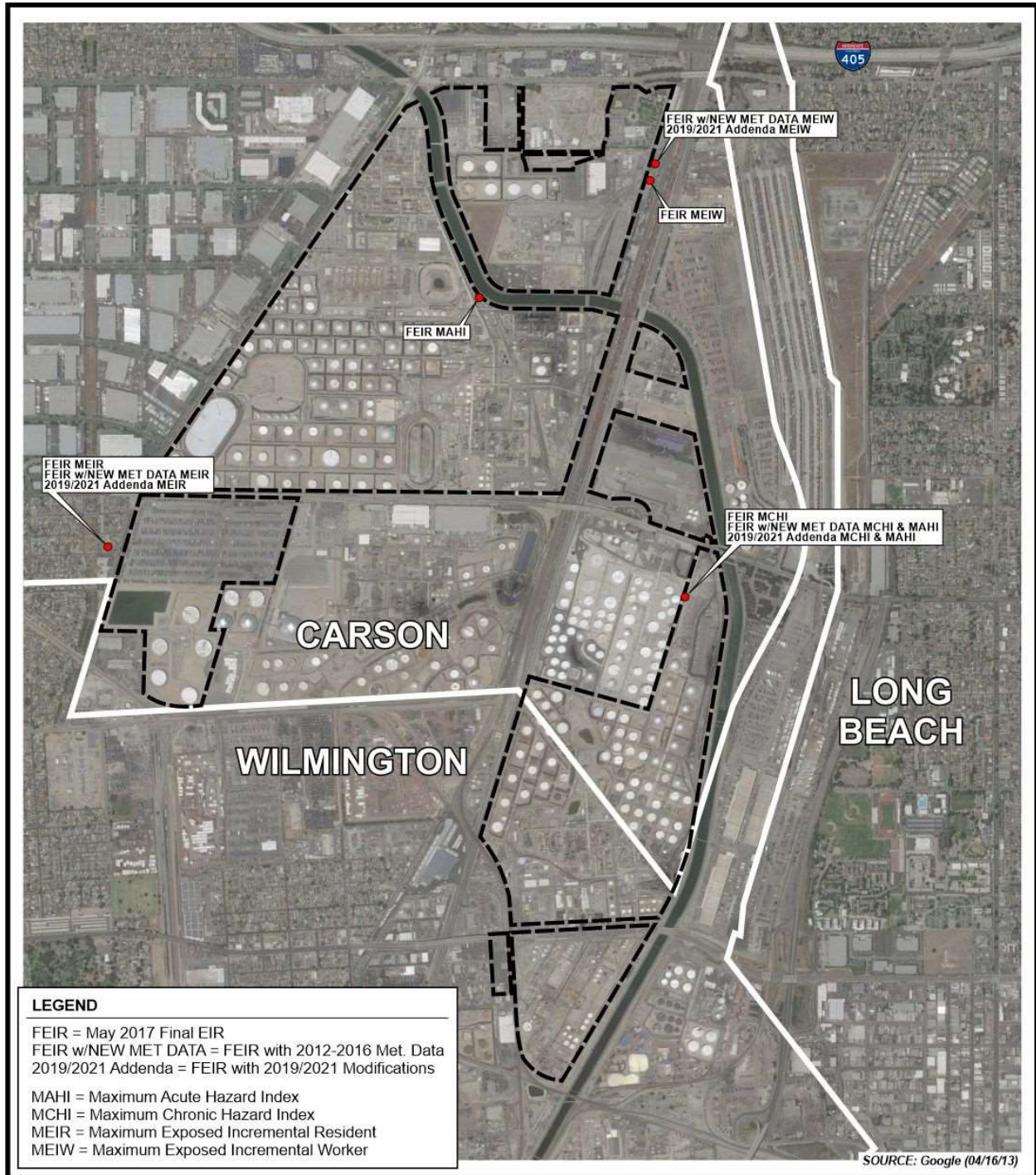
TABLE 13
Tesoro Los Angeles Refinery LARIC Project
Comparison of Results of Health Risk Modeling
Including the 2019 and 2021 Addenda Modifications
Using Different Meteorological Data Sets

Location	Significance Threshold	LARIC Project in the May 2017 Final EIR using 2006-2011 met data	Original LARIC Project using 2012-2016 met data ^(a)	LARIC Project with the 2019 and 2021 Addenda Modifications using 2012-2016 met data	Incremental Change	Exceeds Significance Threshold?
Cancer Risk (per million)						
Residential Receptor	10	3.7	2.8	2.9	0.1	No
Offsite Workplace Receptor	10	9.3	7.0	7.0	<0.1	No
Sensitive Receptor	10	2.1	2.4	2.4	<0.1	No
Chronic Hazard Index						
Offsite Workplace Receptor	1	0.106	0.078	0.085	0.007	No
Acute Hazard Index						
Offsite Workplace Receptor	1	0.052	0.076	0.076	<0.001	No

(a) Only the meteorological data was changed to show that effect independently of the 2019 and 2021 Addenda modifications to the LARIC Project.

Source: 2019 and 2021 Addenda, Table 12.

ADDENDUM TO THE FINAL EIR FOR THE TESORO LOS ANGELES REFINERY INTEGRATION AND COMPLIANCE PROJECT



**FIGURE 6
 TESORO LOS ANGELES REFINERY
 RECEPTOR LOCATIONS MAP**

Project No. 3294
 N:\3294\Receptor Locations Map (rev.2024-01).cdr

6.2.1.2.10 Toxic Air Contaminant Impacts for the Currently Proposed Modifications to the LARIC Project

The currently proposed modifications to the LARIC Project have the potential to alter the TAC emission estimates that were evaluated in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda. In addition, the modeling software has been updated since the certification of the 2019 and 2021 Addenda. Therefore, new health risk modeling was performed for the entire LARIC Project updated with the potential changes in TAC emissions from the currently proposed modifications (see Appendix D of this Addendum for detailed calculations).

Table 14 presents the previous HRA results from the 2019 and 2021 Addenda, the updated HRA results for the 2019 and 2021 Addenda using the new version of the software, the updated HRA results for decommissioning and retiring Reservoir 502 when the CCT storage tanks are storing crude oil, and the updated HRA results of decommissioning and retiring Reservoir 502 when the three CCT storage tanks are storing crude oil and three are storing gas oil.

TABLE 14
Tesoro Los Angeles Refinery LARIC Project
Comparison of 2019 and 2021 Addenda Health Risk Results to the Currently Proposed Modifications to the LARIC Project

Receptor	2021 modeling results	2023 modeling results		
	May 2017 Final EIR with Previously Approved Modifications	May 2017 Final EIR with Previously Approved Modifications and Updated Software	Updated with the Retirement of Reservoir 502 with 6 CCT Tanks Storing Crude Oil	Updated with the Retirement of Reservoir 502 with 3 CCT Tanks Storing Crude Oil & 3 CCT Storing Gas Oil
Maximum Cancer Risk (per million)				
Residential Receptor	2.9	3.0	3.0	2.2
Offsite Workplace Receptor	7.0	6.9	6.9	6.9
Sensitive Receptor	2.4	2.2	2.2	2.0
Maximum Chronic Risk				
Residential Receptor	0.024	0.023	0.023	0.023
Offsite Workplace Receptor	0.085	0.073	0.073	0.073
Sensitive Receptor	0.019	0.019	0.019	0.019
Maximum Acute Risk				
Residential Receptor	0.04	0.039	0.039	0.032
Offsite Workplace Receptor	0.076	0.075	0.075	0.075
Sensitive Receptor	0.009	0.008	0.008	0.008

The locations where the projected maximum impacts will occur do not change as a result of the currently proposed modifications to the LARIC Project and remain as shown in Figure 4. The modeling results for currently proposed modifications to the LARIC Project using the same updated software show no change to the residential cancer risk when all CCT storage tanks are storing crude oil and a decrease of 0.8 per million when three of the six storage tanks at the CCT contain gas oil instead of crude oil. The modeling results of the software update show a 0.1 increase in the residential cancer risk and no change or slight reductions for all other receptors and indices for the approved HRA prepared for the 2019 and 2021 Addenda. Therefore, the health risks associated with the currently proposed modifications to the LARIC Project remain less than significant. The update to the HRA did not change the less than significant conclusions made in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda, do not create a new significant impact, and do not make a significant impact substantially more severe.

6.2.1.3 Cumulative Air Quality Impacts

6.2.1.3.1 Construction Impacts

Section 5.2.1.2 of the May 2017 Final EIR concluded that the cumulative air quality impacts associated with the construction phase of the LARIC Project would exceed the air quality significance thresholds for VOC and NO_x. Therefore, the cumulative air quality construction impacts were considered significant. Since CO, SO_x, PM₁₀, and PM_{2.5} construction emissions were not expected to exceed their respective project-specific thresholds, they were not considered to be cumulatively considerable and, therefore, would not contribute to cumulative construction air quality impacts.

The currently proposed modifications to the LARIC Project do not change the construction air quality significance determinations from the May 2017 Final EIR (see Sections 6.2.1.1.1 and 6.2.1.1.2 of this Addendum). Therefore, no change to the cumulative construction impacts is expected.

6.2.1.3.2 Operational Impacts

Section 5.2.1.3 of the May 2017 Final EIR concluded that the cumulative air quality impacts associated with the operational phase of the LARIC Project was not cumulatively considerable and would not contribute to the cumulative operational impacts for CO, VOC, NO_x, SO_x, PM₁₀, and PM_{2.5}. The 2019 and 2021 Addenda did not change the significance conclusions in the May 2017 Final EIR for operational air quality impacts and cumulative air quality impacts during operation.

The currently proposed modifications to the LARIC Project do not change the less than significant conclusion made in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda (see Sections 6.2.1.2.1 and 6.2.1.2.2 of this Addendum) for operational air quality impacts and, therefore, do not change the cumulative operational air quality less than significant conclusion in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

6.2.1.3.3 Toxic Air Contaminants

Section 5.2.1.4 of the May 2017 Final EIR concluded that the cumulative impacts of TAC emissions associated with the LARIC Project were less than the significance criteria for cancer risk of 10 per one million and less than the significance criteria for both hazard indices of 1.0. Therefore, significant adverse cumulative TAC impacts were not expected from the LARIC Project. The 2019 and 2021 Addenda did not change the less than significant conclusion in the May 2017 Final EIR for TAC impacts.

As presented in Tables 13 and 14 of this Addendum, the currently proposed modifications to the LARIC Project do not substantially alter the HRA results from those reported in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda (see Section 6.2.1.2.10 and Table 14 of this Addendum) and do not change the less than significant conclusions for TACs in the May 2017 Final EIR. Therefore, the currently proposed modifications to the LARIC Project do not alter the cumulative TAC impacts, which are less than significant.

6.2.1.3.4 Greenhouse Gas Emissions

An evaluation of greenhouse gas (GHG) emissions, as presented in Section 5.2.2 of the May 2017 Final EIR, estimated an increase of construction emissions of 772 metric tons per year of carbon dioxide equivalents (CO₂eq) as amortized over 30 years, and a decrease in operational GHG emissions of 68,947 metric tons per year CO₂eq. When construction and operational GHG emissions are considered together, the net GHG emissions from the LARIC Project were expected to decrease by 68,175 metric tons per year CO₂eq. However, the Refinery is subject to AB32 Cap and Trade which results in an allowance that offsets the reduction to result in an emissions-neutral GHG impact. Therefore, the GHG emissions impact was less than significant.

The 2019 and 2021 Addenda reduced the 30-year amortized GHG emissions during construction from 772 metric tons per year to 610 metric tons per year CO₂eq but did not change the operational GHG emissions presented in the May 2017 Final EIR. The reduction in construction GHG emissions was attributed to fewer construction activities needed to implement the Carson Operations C3 Splitter Unit modifications in lieu of the Carson Operations Naphtha Isomerization Unit modifications. The currently proposed modifications to the LARIC Project include additional construction for the piping tie-ins for six new crude oil storage tanks at the CCT and the decommissioning of Reservoir 502, which will result in an additional 12.6 metric tons per year CO₂eq as amortizing over 30 years. Thus, the currently proposed revisions to the LARIC Project would increase the amortized construction GHG emissions from 610 metric tons per year CO₂eq from the 2019 and 2021 Addenda to 622.6 metric tons per year CO₂eq, which remains less than significant. Therefore, the currently proposed modifications to the LARIC Project will result in fewer GHG emissions than those presented in the May 2017 Final EIR (i.e., 772 metric tons per year CO₂eq) such that the conclusion of less than significant GHG impacts will not change.

6.2.1.4 Mitigation Measures

The May 2017 Final EIR included the following eight construction mitigation measures (A-1 through A-8) to reduce the construction emissions impacts because the VOC and NO_x emissions during construction exceeded the South Coast AQMD air quality significance thresholds:

- Require development and implementation of a construction management program,
- Minimize the use of diesel-powered equipment through the use of electric or alternative-fueled equipment where available,
- Limit on-road truck and off-road equipment idling,
- Require equipment maintenance,
- Use electric welders instead of gas or diesel welders where electricity is available,
- Use on-site electricity rather than temporary power generators where electricity is available,
- Require use of Tier 4 engines on construction equipment greater than 50 hp unless unavailable, then use equipment with Tier 3 engines, and
- Prohibit the use of air pollutant emitting construction equipment on days with a first stage smog alert.

The May 2017 Final EIR also included one operational mitigation measure (A-9) to reduce NO_x operational emissions during concurrent construction activities. The operational mitigation measure required Tesoro to replace the SCR catalyst early (i.e., before the end of its useful life) for three specified units (i.e., Carson Operations Hydrogen Plant #2, Wilmington Operations HGU-2, and Carson Operations CTG Unit 91) according to a schedule established in the May 2017 Final EIR. The SCR catalyst replacements were completed by year-end in 2017 and resulted in concurrent reductions of operational NO_x emissions during the construction period. The 2019 and 2021 Addenda did not change the significant impact conclusion in the May 2017 Final EIR and, therefore, no additional mitigation measures were required. Similarly, the currently proposed modifications to the LARIC Project do not change the significant impact conclusions in the May 2017 Final EIR, and, therefore, no additional air quality mitigation measures are required.

6.2.1.5 Air Quality and Greenhouse Gases Conclusion

As detailed in the previous subsections, the currently proposed modifications to the LARIC Project do not create new significant impacts or make significant impacts substantially more severe, nor do the currently proposed modifications to the LARIC Project change the significance conclusions in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

6.2.2 Hazards and Hazardous Materials

The September 2014 NOP/IS determined that the LARIC Project has the potential to generate significant adverse hazards and hazardous materials impacts. The hazards and hazardous materials impacts from the LARIC Project are discussed in this section.

Impacts associated with hazards will be considered significant if any of the following occur:

- Non-compliance with any applicable design code or regulation.
- Non-conformance to National Fire Protection Association standards.
- Non-conformance to regulations or generally accepted industry practices related to operating policies and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.
- Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.
- Exposure to radiant heat exposures in excess of 1,600 British Thermal Units (Btu)/(hr-ft²) (the level that creates second degree burns on unprotected skin).
- Overpressure exposure that exceeds one pound per square inch (gauge) (psig) (the level that would result in partial demolition of houses).
- Flash fire hazard zones that exceed the lower flammable limit (LFL) (the level that would result in a flash fire in the event a flammable vapor cloud was ignited).

The significance criteria used in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda also applies to this Addendum.

6.2.2.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

The potential hazards and hazardous materials impacts of the LARIC Project were analyzed in Section 4.3 of the May 2017 Final EIR. The Carson Operations Naphtha Isomerization Unit, the new crude oil storage tanks, the SARP, and the Interconnecting Pipelines were determined to pose potentially significant off-site hazards. Mitigation measure HHM-1 was imposed to require an evaluation of, and early compliance with, regulatory requirements related to process safety and accident prevention. The analysis identified construction hazards from disturbing areas with existing soil contamination during excavation activities, and these hazards were concluded to have less than significant impacts. The 2019 and 2021 Addenda determined that the relocation of propane recovery to the C3 Splitter would lessen the size of the hazard impact zone that would extend offsite and that the hazard zone presented in the May 2017 Final EIR overestimated the potential hazard impact from the proposed Carson Operations C3 Splitter Unit modifications.

The 2019 and 2021 Addenda also clarified the analysis related to the hazards analysis associated with a pool fire, which was the worst-case hazard associated with the CCT storage tanks. Specifically, hazard impacts associated with storage tanks are evaluated based on the maximum volume of the storage tank, the properties of the materials stored in the storage tank, and the dimensions of the primary containment (i.e., tanks). These characteristics are used to evaluate the primary hazard of a fire of the pool of material within the tank (i.e., pool fire). In the case of a storage tank fire, the radius of the hazard impact zone (also referred to as vulnerability zone) is determined by the dimensions of the liquid pool, the properties of the material, and meteorological conditions. Thus, hazard impacts from a pool fire are not influenced by throughput. Additionally, the TAC speciation adjustment for the crude oil to be stored in the CCT storage tanks did not affect the crude oil properties used in the hazard analysis. Therefore, the CCT revised TAC speciation for crude oil did not change the significant impacts or make the significant impacts substantially more severe.

6.2.2.2 Currently Proposed Modifications to the LARIC Project

The currently proposed modification to add gas oil as a commodity to be stored in three of the CCT storage tanks does not alter the CCT storage tanks hazards analysis, and the proposed modification to retire Reservoir 502 eliminates the existing hazards from Reservoir 502.

Hazard impacts associated with storage tanks are evaluated based on the maximum volume of the storage tank, the properties of the materials stored in the storage tank, and the dimensions of the primary containment (i.e., tanks). These characteristics are used to evaluate the primary hazard of a fire of the pool of material within the tank (i.e., pool fire). In the case of a storage tank fire, the radius of the hazard impact zone is determined by the dimensions of the liquid pool, the properties of the material, and meteorological conditions.

No construction activities are required to the CCT storage tanks to accommodate the currently proposed modifications to the LARIC Project to add gas oil as a commodity that can be stored in three of the six CCT storage tanks. The hazard analysis presented in the May 2017 Final EIR would not be affected by the addition of gas oil storage. The hazard analysis for the CCT storage tanks is based on the maximum volume of the storage tank, the properties of the materials stored in the storage tank, and the dimensions of the primary containment (i.e., tank dimensions). The properties of gas oil that influence the hazard radius are the higher molecular weight and a lower vapor pressure. Based on these properties, Quest Consultants, the firm that specializes in hazard consequence analysis and prepared the consequence analysis in May 2017 Final EIR as amended by the 2019 and 2021 Addenda, determined that when the tanks are storing gas oil, the hazard impact radius would be 330 feet (see Appendix E for further details), which is a slightly smaller fire radiation hazard zone than determined in the May 2017 Final EIR of 340 feet (see May 2017 Final EIR Table 4.3-2 presented here as Table 15). Because the storage tanks will be capable of storing either crude oil or gas oil, and gas oil storage produces a slightly smaller hazard radius than crude oil, the hazard radius presented in Table 4.3-2 of the May 2017 Final EIR does not change. Therefore, the hazard analysis presented in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda is representative of the currently proposed modifications to the LARIC Project.

Thus, the currently proposed modifications to the LARIC Project to the CCT storage tanks do not change the significant impacts or make the significant impacts substantially more severe.

The May 2017 Final EIR hazard analysis did not evaluate increased utilization of unaltered equipment because there would be no change in the hazard impacts from the existing conditions. Therefore, no specific hazard analysis was conducted for Reservoir 502. The existing hazard impact zone associated with Reservoir 502 is shown in Figure 7, which is updated from Figure 4.3-1 of the May 2017 Final EIR. The currently proposed modifications to the LARIC Project would remove Reservoir 502 and its associated hazard impact zone.

The piping tie-ins are expected to have the same hazard distance as the Interconnecting Pipelines presented in the May 2017 Final EIR Table 4.3-2 (as shown in Table 15, a length of 380 feet) because the Interconnecting Pipelines included a pipeline for gas oil. The currently proposed piping tie-ins will be located to the east of Reservoir 502 in the Carson Operations tank farm between existing tanks and piping which are located approximately 750 feet from the property line. Therefore, the piping tie-ins do not create a new off-site hazard and no change to the hazard impacts disclosed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda is necessary.

The temporary storage tanks used during the cleanout of Reservoir 502 will be located approximately 150 feet east of Reservoir 502, which is approximately 800 feet from the property line, and will contain a mixture of water and gas oil. As detailed in Appendix E, the hazard distance for Reservoir 502 is 590 feet from the centerline of the Reservoir. The hazards associated with these temporary storage tanks will be similar to or less than Reservoir 502 but will be located farther from the property line. For context, the western side of Reservoir 502 is located approximately 100 feet from the property boundary while the temporary storage tanks would be located at a minimum of approximately 800 feet from the property boundary. Therefore, the temporary storage tanks do not create a new off-site hazard such that no change to the hazard impacts disclosed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda is necessary.

TABLE 15

**Tesoro Los Angeles Refinery LARIC Project
Maximum Hazard Distance for Maximum Credible Events in Each Process Unit
as Presented in the May 2017 Final EIR ^(a)**

Unit	Injury Threshold	Distance to Hazard (feet)		Hazard (Projected/ Existing)
		Projected	Existing	
Carson Operations				
51 Vacuum Unit	LFL	150	155	Flash Fire
Alkylation Unit	LFL	360	585	Flash Fire
HCU	30 ppm	1245	1250	Toxic (H ₂ S)
Mid-Barrel Distillate Treater	1,600 Btu/(hr-ft ²)/30 ppm	275	400	Torch Fire/ Toxic (H ₂ S)
Naphtha HDS	LFL	865	1035	Flash Fire
Naphtha Isomerization	LFL	665	530	Flash Fire*
LHU	LFL	600	585	Flash Fire
Wet Jet Treater	LFL	205	DNCE ^(b)	Flash Fire
New Crude Tanks	1,600 Btu/(hr-ft ²)	340	DNCE	Pool Fire*
Wilmington Operations				
FCCU	Hazards eliminated due to unit shutdown			
HTU-1/2	LFL	1170	1065	Flash Fire
HTU-4	Modifications do not affect hazard zone			
CRU-3	30 ppm	1595	2190	Toxic (H ₂ S)
PSTU	30 ppm	1085	2190 ^(c)	Toxic (H ₂ S)
HCU	LFL	1320	1450	Flash Fire
SARP	3 ppm	1905	DNCE	Toxic (SO ₂)*
Replace Crude Tanks	1,600 Btu/(hr-ft ²)	265	190	Pool Fire
Replace pipeline ^(d)	1,600 Btu/(hr-ft ²)	120	70	Pool Fire
Other				
Interconnecting Pipelines	LFL	380	DNCE	Flash Fire*
LPG Rail Car Unloading	1,600 Btu/(hr-ft ²)	1,700	1,700	BLEVE Fireball

(a) See Appendix C of the May 2017 Final EIR for further details on the maximum credible events.

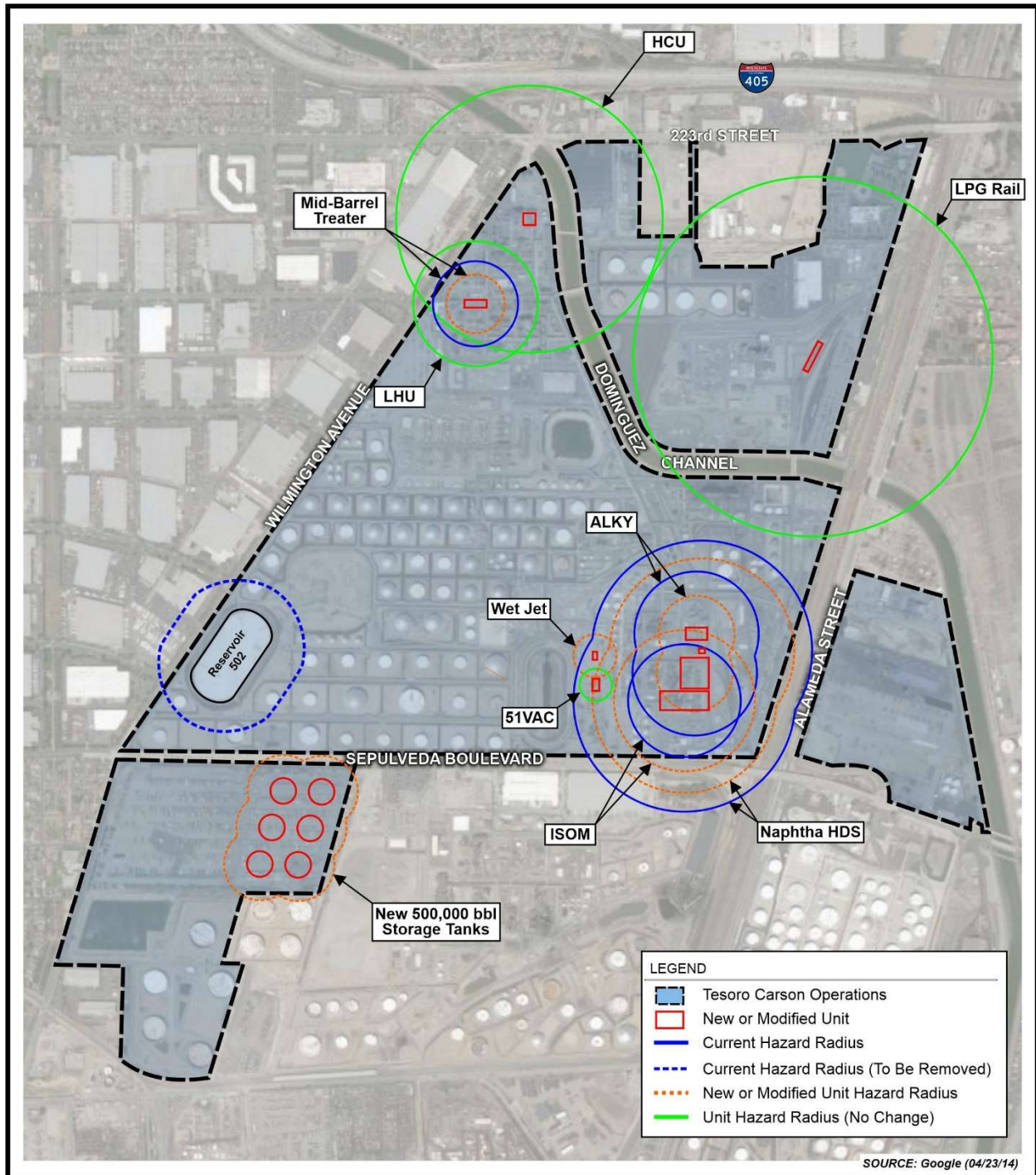
(b) DNCE: The hazard does not currently exist.

(c) Existing hazard in the CRU3.

(d) Replace 12-inch pipeline was not the maximum impact for pipelines but has been added for clarity.

* Potentially Significant Hazard Impact

Source: May 2017 Final EIR, Table 4.3-2



Environmental Audit, Inc.

0 ~1,335' N

FIGURE 7
CARSON OPERATIONS VULNERABILITY ZONES
TESORO LOS ANGELES REFINERY

The excavation activities for the CCT storage tanks are not affected by the addition of gas oil storage because no change to the construction of the new storage tanks is needed to accommodate the storage of gas oil in lieu of crude oil. The retirement of Reservoir 502 means that it will be abandoned in place, thus, no demolition or excavation activities will be expected. Installation of the piping tie-ins is expected to require small footings for the piping supports which can be accomplished without conducting extensive excavation activities. The hazards associated with encountering contaminated soil are expected to be the same as any excavation activities within the Carson Operations tank farm associated with the pipeline modifications depicted in the May 2017 Final EIR Figure 4.3-3. Therefore, no change in the hazards associated with excavation of contaminated soil is expected.

The hazards impacts from the currently proposed modifications to the LARIC Project are expected to be the same as or less than the hazard impacts analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda. Thus, the significance conclusion made in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda conservatively addresses the hazard impacts associated with the currently proposed modifications to the LARIC Project. The currently proposed modifications to the LARIC Project would not create new significance hazard impacts or make a significant hazard impact substantially more severe.

6.2.2.3 Cumulative Hazard Impacts

6.2.2.3.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

Section 5.2.3 of the May 2017 Final EIR concluded that the cumulative hazards and hazardous materials impacts associated with the construction phase of the LARIC Project would not generate significant impacts. Therefore, the cumulative construction hazards and hazardous materials impacts were less than significant.

Section 5.2.3 of the May 2017 Final EIR also concluded that the cumulative hazards and hazardous materials impacts associated with the operations of the LARIC Project were cumulatively considerable and cumulatively significant. No additional feasible mitigation measures beyond what was required in the May 2017 Final EIR for the project hazards was identified or imposed.

The 2019 and 2021 Addenda clarified aspects of the hazards assessment but did not alter the conclusions from the May 2017 Final EIR.

6.2.2.3.2 Currently Proposed Modifications to the LARIC Project

As detailed in Section 6.2.2.2, the currently proposed modifications to the LARIC Project do not change the construction hazard impacts because the changes are the same or less than the hazard impacts presented in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda. No new off-site hazards that would be considered significant were identified. Therefore, no change to the significance conclusion for construction hazards and hazardous materials is expected as a result of implementation of the currently proposed modifications to the LARIC Project.

Further, the currently proposed modifications to the LARIC Project do not change the LARIC Project operational hazard impacts for the CCT storage tanks because as discussed in Section 6.2.2.2, the hazard impact zone for gas oil storage is less than the hazard impact zone for crude oil storage. Therefore, the hazard impact zone remains as presented in the May 2017 Final EIR, and would potentially lessen the hazard impacts; however, the hazard impacts are expected to remain significant. The three other LARIC Project components that were determined to have significant impacts (i.e., the C3 Splitter Modifications in the 2019 and 2021 Addenda that replaced the Naphtha Isomerization Unit Modifications in the May 2017 Final EIR, SARP, and Interconnecting Pipelines) would continue to have the same potentially significant hazard impacts and cumulatively significant hazard impacts after implementation of the currently proposed modifications to the LARIC Project. Therefore, the operational hazard impacts would remain significant and the cumulative hazard impacts would also remain significant as analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

6.2.3 Hydrology and Water Quality

The September 2014 NOP/IS for the LARIC Project determined that the hydrology and water quality impacts of the LARIC Project were potentially significant for water supply. The potential adverse impacts of the LARIC Project on water supply were evaluated in the May 2017 Final EIR. The September 2014 NOP/IS also concluded that the LARIC Project would have less than significant impacts to water quality including wastewater generation. However, to provide a complete understanding of the water supply and wastewater discharge relationship, a discussion of the LARIC Project wastewater impacts was provided along with the analysis of water supply impacts in the May 2017 Final EIR. The potential adverse impacts of the currently proposed modifications to the LARIC Project on water supply and wastewater treatment facilities are evaluated in this subsection.

The impacts on hydrology and water quality would be considered significant if the following occurs:

Water Demand:

- The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use more than 262,820 gallons per day of potable water.
- The project increases demand for water by more than five million gallons per day.

Water Quality:

- The project will cause degradation or depletion of ground water resources substantially affecting current or future uses.
- The project will cause the degradation of surface water substantially affecting current or future uses.

- The project will result in a violation of NPDES permit requirements.
- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.

6.2.3.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

Section 4.4 of the May 2017 Final EIR concluded that the LARIC Project was expected to increase water use for construction (i.e., 10,000 gallons per day (gpd) associated with dust suppression activities and up to 30,000 gpd for hydrostatic testing all new pipelines) by about 40,000 gpd, which is less than the significance threshold for water demand. The wastewater discharge treatment facilities during construction were concluded to be sufficient to meet the added project needs. Therefore, the impact to water supply and wastewater treatment facilities during construction would be less than significant.

Section 4.4 of the May 2017 Final EIR concluded that the LARIC Project was expected to increase the operational water demand of the Refinery by approximately 110,160 gpd, which is less the significance threshold. The LARIC Project was expected to decrease wastewater generation by 79,344 gpd. Therefore, no significant hydrology and water quality impacts were identified in the May 2017 Final EIR.

The 2019 and 2021 Addenda did not alter the analysis or conclusions in the May 2017 Final EIR.

6.2.3.2 Currently Proposed Modifications to the LARIC Project

The currently proposed modifications to the LARIC Project are not expected to increase the water demand estimates presented in the May 2017 Final EIR during construction because the currently proposed modifications to the LARIC Project, including the piping tie-ins, do not increase earth movement that would require water for dust suppression. The currently proposed modification to allow the gas oil as an additional commodity to be stored in three of the six CCT storage tanks does not involve additional construction activities. The retirement of Reservoir 502 is expected to require a total of approximately seven million gallons of water for high pressure washing the concrete over a six-month period (approximately 25,000 gpd). The pressure washing of the reservoir is not expected to occur concurrently with the construction activities associated with water demand in the May 2017 Final EIR because the Interconnecting Pipelines have already been constructed. The daily water demand of 25,000 gpd for the currently proposed modifications to the LARIC Project is less than the daily water demand disclosed in the May 2017 Final EIR of 40,000 gpd. Therefore, the construction water use analyzed in the May 2017 Final EIR represents the estimated water use for the LARIC Project with the currently proposed modifications to the LARIC Project and will remain less than significant.

The currently proposed modifications to the LARIC Project are not expected to change the water demand during operation of the LARIC Project because the currently proposed modifications to the LARIC Project do not require additional water not previously analyzed. The May 2017 Final

EIR included water demand for the potential periodic (i.e., once every 20 years) hydrotesting of the CCT storage tanks. The inclusion of gas oil as a commodity to be stored in the CCT storage tanks would not alter the inspection/hydrotesting schedule. Therefore, the operational water use analyzed in the May 2017 Final EIR represents the estimated water use for the LARIC Project with the currently proposed modifications to the LARIC Project. It was determined that water demand impacts would be less than significant in Section 4.4 of the May 2017 Final EIR. The currently proposed modifications to the LARIC Project will not change the conclusions in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda regarding water demand. The currently proposed modifications to the LARIC Project would not create new significant hydrology and water quality impacts, or make significant hydrology and water quality impacts substantially more severe.

6.2.3.3 Cumulative Hydrology and Water Quality Impacts

6.2.3.3.1 May 2017 Final EIR

Section 5.2.4 of the May 2017 Final EIR concluded that the cumulative water demand and water quality impacts from the LARIC Project were less than significant.

6.2.3.3.2 Currently Proposed Modifications to the LARIC Project

The currently proposed modifications to the LARIC Project do not change the water demand or water quality impacts analyzed in the May 2017 Final EIR. Therefore, the currently proposed modifications to the LARIC Project do not change the less than significant determination made in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda for cumulative water demand or water quality impacts.

6.2.4 Noise

The September 2014 NOP/IS determined that the LARIC Project has the potential to generate significant adverse noise impacts during construction and operation. Potential noise impacts associated with the LARIC Project construction and operational activities were evaluated in the May 2017 Final EIR (see Section 4.5 of the May 2017 Final EIR).

Sensitive noise receptors in the vicinity of the LARIC Project fall within three jurisdictions: the Wilmington District of the City of Los Angeles, the City of Carson, and the City of Long Beach (see Figure 3.5-2 of the May 2017 Final EIR). The significance thresholds used for this noise analysis relied on the Los Angeles CEQA Thresholds Guide (City of Los Angeles, 2006) and the vibration significance criterion from the Federal Transit Administration (FTA) Vibration Impact Criteria for General Assessment, which sets acceptability limits for vibration in buildings (including residential structures.)

A project would have a significant adverse noise or vibration impact under the following circumstances:

- Construction of the proposed project would have a significant noise impact if construction noise levels exceed the local noise ordinances, or if the noise ordinance is currently exceeded, if ambient Community Noise Exposure Levels (CNEL) would be increased by 3.0 A-weighted noise measurement in decibels (dBA) or more at a noise sensitive receptor during the construction period.
- Operation of the proposed project would have a significant noise impact if proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, ambient CNEL noise levels would be increased by 3.0 dBA or more at a noise sensitive receptor.
- Construction and operation of the proposed project would have a significant vibration impact if ground vibration levels for residential structures would exceed 72 vibration decibels (VdB) for frequent events (70+ vibration events), 75 VdB for occasional events (30-70 events), and/or 80 VdB for infrequent events (30 or fewer events), the acceptability limits prescribed by the FTA.

The local noise ordinances were summarized in Subsection 3.5.3 of the May 2017 Final EIR for the jurisdictions in which the LARIC Project is located (i.e., the cities of Carson and Los Angeles). In order to provide a conservative analysis of noise impacts, noise impacts were considered significant if there would be an increase of 3.0 dBA or more during construction or operational activities, where the 3.0 dBA increase is the amount allowed by the noise ordinances.

6.2.4.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

Construction noise and vibration impacts were analyzed in Section 4.5 of the May 2017 Final EIR which concluded that the impacts were less than 3 dBA and less than 72 VdB, respectively from the LARIC Project. Therefore, the expected construction noise and vibration impacts were determined to be less than significant.

The 2019 and 2021 Addenda did not alter the analysis or conclusions in the May 2017 Final EIR.

6.2.4.2 Currently Proposed Modifications to the LARIC Project

No physical modifications to the three new storage tanks at the CCT are needed to add gas oil as a commodity to be stored. To retire Reservoir 502, it will be emptied, robotically cleaned, and abandoned in place. Piping tie-ins within the Carson Operations will be needed to reroute gas oil from Reservoir 502 to an existing pipeline connected to the CCT. The suite of construction equipment that will be used to install the piping tie-ins is similar to the equipment that was previously analyzed in the May 2017 Final EIR; however, fewer construction equipment will be required for the currently proposed modifications to the LARIC Project. Similarly, the number of construction worker vehicles and delivery trucks associated with the currently proposed modifications will be fewer than was previously analyzed in the May 2017 Final EIR. Further construction activities would occur within the tank farm located farther from the Refinery property line.

Noise travels from a source to a receptor predominantly through the air and the noise level at the receptor is attenuated by sound divergence (i.e., typically reduces six dB per doubling of the distance). Additional noise attenuation is accomplished through absorption/diffusion (i.e., portion of the sound energy is absorbed by the ground) and shielding (e.g., terrain, barriers, buildings, or other objects) (FTA, 2018). Therefore, the farther a receptor is from a noise source, the lower the noise level at the receptor.

The nearest residential area to the CCT and Reservoir 502 is located to the west of Wilmington Avenue, south of Sepulveda Boulevard, approximately 1,300 feet west of the six new storage tanks at the CCT. Noise modeling results in the vicinity of the nearest residences (location #4) were included in Table 4.5-2 of the May 2017 Final EIR, which showed an increase of less than 1.0 dBA. The currently proposed modifications to the LARIC Project will occur approximately 1,000 feet farther from the nearest residences with intervening structures, which will provide noise shielding as described in the previous paragraph. Since sound decreases with distance from the source and since fewer construction equipment will be needed to install the piping tie-ins, noise at the nearest residence will be less for the currently proposed modifications to the LARIC Project than what was evaluated in the May 2017 Final EIR. The emptying of Reservoir 502 will use the existing pumps, so no new noise sources will be employed. Degassing activities will occur at the temporary tanks equipped with carbon, which does not generate additional noise. Reservoir 502, is below-grade, and will be cleaned inside with high pressure washers. Noise from operating the high-pressure washers varies with an average of 90 dB at three feet from the source. Assuming a six dB reduction per doubling distance, the noise level at 1,100 feet (the approximate distance from Reservoir 502 to the nearest residence) is expected to be 39.4 dB, which is less than the modeled noise levels in the May 2017 Final EIR (47.2 – 59.0 dB). Therefore, the May 2017 Final EIR noise analysis conservatively represents the noise impacts from cleaning Reservoir 502.

The noise and vibration analyses presented in Section 4.5 of the May 2017 Final EIR are conservative and are considered representative of the potential noise and vibration impacts from the currently proposed modifications to the LARIC Project. As such, the currently proposed modifications to the LARIC Project do not change the conclusion of less than significant construction noise and vibration impacts in the May 2017 Final EIR. The construction noise and vibration impacts will remain less than significant.

Storing gas oil in the three new storage tanks at the CCT will not generate additional noise. Once retired, Reservoir 502 will not generate noise. No new noise sources (e.g., pumps) will be expected once the piping tie-ins are installed and operational. Therefore, the noise and vibration analyses presented in the May 2017 Final EIR are conservative and representative of the currently proposed modifications to the LARIC Project. As such, the currently proposed modifications to the LARIC Project do not change the conclusion of less than significant operational noise and vibration impacts in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda. The operational noise and vibration impacts will remain less than significant. The currently proposed modifications to the LARIC Project would not create new significant noise impacts, or make significant noise impacts substantially more severe.

6.2.4.3 Cumulative Noise Impacts

6.2.4.3.1 May 2017 Final EIR

The cumulative analysis in the May 2017 Final EIR of the noise impacts from the LARIC Project were not determined to be cumulatively considerable and would not contribute to a significant adverse cumulative construction noise or operational noise impacts.

6.2.4.3.2 Currently Proposed Modifications to the LARIC Project

The May 2017 Final EIR noise and vibration analyses encompass the currently proposed modifications to the LARIC Project and are representative of the expected impacts. Therefore, no change to the cumulative noise impacts will occur from implementation of the currently proposed modifications to the LARIC Project. The cumulative noise impacts from construction and operation of the currently proposed modifications to the LARIC Project will remain less than significant.

6.2.5 Solid and Hazardous Waste

The September 2014 NOP/IS determined that construction and operation of the LARIC Project could generate potentially significant adverse solid and hazardous waste impacts. Therefore, Section 4.6 of the May 2017 Final EIR addressed the potential solid and hazardous waste impacts associated with the LARIC Project.

A project would have a significant impact on solid and hazardous waste if it would:

- Result in an increase in solid or hazardous waste generation due to project operations that would exceed the capacity of existing solid or hazardous waste handling and disposal facilities.

6.2.5.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

Section 4.6 of the May 2017 Final EIR evaluated construction and operational impacts of the LARIC Project on solid waste and hazardous waste. The May 2017 Final EIR concluded that there would be a less than significant increase in the generation of non-hazardous and hazardous wastes associated with the construction of the LARIC Project.

Section 4.6 of the May 2017 Final EIR also concluded that there would be a less than significant increase in the generation of non-hazardous and hazardous wastes associated with the operation of the LARIC Project.

The 2019 and 2021 Addenda did not alter the analysis or conclusions in the May 2017 Final EIR.

6.2.5.2 Currently Proposed Modifications to the LARIC Project

The proposed addition of gas oil to be stored in three of the six CCT storage tanks will not involve physical modifications. The retirement of Reservoir 502 is not expected to generate solid and hazardous waste debris because the reservoir will be cleaned and retired in place, and no demolition will occur. The cleaning will be accomplished by robotic equipment and the use of temporary storage tanks to filter the material to separate the liquid from the solids. The liquids will be routed to the appropriate storage tank for use in refining, the solids will be routed to the coker for processing, and the spent carbon canisters used to control the VOC emissions from the temporary storage tanks will be returned to the supplier for regeneration and reuse. Thus, no offsite waste disposal is expected. The piping tie-ins will require small footings for piping supports and approximately 100 cubic yards of soil are expected to be excavated in preparation for the footings. The estimated volume of excavated soil for the LARIC Project was 290,148 cubic yards (see the May 2017 Final EIR Table 4.6-1). An additional 100 cubic yards is relatively minimal, representing an increase of approximately 0.03 percent from what was analyzed in the May 2017 Final EIR, and thus, is within the estimating accuracy for the storage tank projects (reported in thousands of pounds). The currently proposed modifications to the LARIC Project are not expected to increase the amount of solid or hazardous waste generated during construction and will be managed in the same manner (i.e., used onsite or disposed of offsite depending on the characteristics) as described Section 4.6.2 of the May 2017 Final EIR (see pages 4-85 through 4-87 of the May 2017 Final EIR). The currently proposed modifications to the LARIC Project do not involve the removal of any existing structures, and the project area has been previously graded. Therefore, the solid and hazardous waste generation associated with construction analyzed in the May 2017 Final EIR conservatively represents the solid and hazardous waste generation with the currently proposed modifications to the LARIC Project. The May 2017 Final EIR determined construction solid and hazardous waste impacts to be less than significant. The currently proposed modifications to the LARIC Project will not change the conclusions in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

The currently proposed modifications to the LARIC Project are not expected to change the amount of solid or hazardous waste generated for disposal during operation. The proposed addition of gas oil storage in three of the six CCT storage tanks, the retirement of Reservoir 502, and the piping tie-ins do not involve operational activities that generate any additional solid or hazardous waste. Process tanks are taken out of service and cleaned as required by regulation or when maintenance is required, but the current proposal to store gas oil is not expected to increase the need for tank cleaning that may generate solid waste. Solids produced from tank cleaning including the CCT storage tanks are expected to be processed at the Refinery. Since no additional solid or hazardous waste is expected to be generated, the currently proposed modifications do not change the analysis of the operational solid and hazardous waste generation analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda. The May 2017 Final EIR as amended by the 2019 and 2021 Addenda determined operational solid and hazardous waste impacts to be less than significant. The currently proposed modifications to the LARIC Project will not change the conclusions in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda. The currently proposed modifications to the LARIC Project would not create new significant solid and hazardous waste impacts, or make significant solid and hazardous waste impacts substantially more severe.

6.2.5.3 Cumulative Solid and Hazardous Waste Impacts

6.2.5.3.1 May 2017 Final EIR

The cumulative solid and hazardous waste impacts from the LARIC Project were determined to be not cumulatively considerable, and would not contribute to significant adverse cumulative construction solid and hazardous waste or operational solid and hazardous waste impacts from other cumulative projects.

6.2.5.3.2 Currently Proposed Modifications to the LARIC Project

The May 2017 Final EIR solid and hazardous waste analyses encompass the currently proposed modifications to the LARIC Project and are representative of the expected impacts. Therefore, no change to the cumulative analysis for solid and hazardous waste impacts will occur from implementing the currently proposed modifications to the LARIC Project. The cumulative solid and hazardous waste impacts from construction and operation of the currently proposed modifications to the LARIC Project will remain less than significant.

6.2.6 Transportation and Traffic

The September 2014 NOP/IS concluded that the traffic and parking impacts associated with the construction phase of the LARIC Project were potentially significant and would be evaluated in the Draft EIR. The other transportation and traffic issues were determined to be less than significant and did not require additional environmental review. Potential traffic impacts associated with the LARIC Project construction activities were evaluated in Section 4.7 of the May 2017 Final EIR.

The LARIC Project occurs at the Refinery. For intersections under City of Los Angeles and Carson jurisdictions, a project's impacts on transportation and traffic would be considered significant if any of the following significance criteria occurs (using the Intersection Capacity Utilization methodology):

- Peak period levels on major arterials are disrupted to a point where the Level of Service (LOS) is reduced to D, E, or F for more than one month.
- An intersection's volume to capacity (Vehicle/Capacity) ratio increases by 0.02 (two percent) or more when the LOS is already D, E, or F.

For freeway ramp intersections, a project's impacts on transportation and traffic would be considered significant if the following significance criteria occur (using the Highway Capacity Manual methodology):

- Peak period levels on major arterials are disrupted to a point where the LOS is reduced to D, E, or F for more than one month.

The following significance thresholds apply to all portions of a project, regardless of the jurisdiction:

- The project conflicts with applicable policies, plans or programs establishing measures of effectiveness, thereby decreasing the performance or safety of any mode of transportation.
- A major roadway is closed to all through traffic and no alternate route is available.
- The demand for parking facilities is substantially increased.

In 2020, after the certification of the May 2017 Final EIR, the CEQA Guidelines were modified to use vehicles miles traveled (VMT) analysis in lieu of the LOS analysis when evaluating transportation and traffic impacts. . In addition, the implementation guidance provided in the Technical Guidance on Evaluating Transportation Impacts in CEQA⁴ published by OPR on how to conduct a VMT analysis focused on the type of land uses and the potential change in VMT of passenger vehicles.

Nonetheless, when preparing an Addendum to a previously certified CEQA document, as is the case here, the significance criteria applied in the Addendum should remain the same as what was relied upon for the original analysis so as to present an apples-to-apples comparison. Therefore, this Addendum presents the impacts of the LOS analysis of the currently proposed modifications to the LARIC Project. Moreover, when examining and comparing the effects of currently proposed modifications to the LARIC Project analyzed in the May 2017 Final EIR, it is worth noting that implementation of the currently proposed modifications would not affect the VMT of passenger vehicles.

6.2.6.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

Peak construction activities would require about 1,060 construction workers on a peak day and the traffic analysis in the May 2017 Final EIR determined that one intersection (Interstate 405/Wilmington Avenue Southbound Ramps prior to the completion of the Interstate 405/Wilmington Avenue Interchange project) could potentially be significantly impacted by this volume of traffic during the construction phase of the LARIC Project. Therefore, the construction activities associated with the LARIC Project were determined to result in significant adverse traffic impacts.

Operational phase traffic to the Refinery was determined to be less than significant in the September 2014 NOP/IS.

Mitigation Measure TT-1, which required a traffic management plan that restricted access to the Refinery to routes avoiding the Interstate 405/Wilmington Avenue Southbound Ramps, was adopted and the traffic impacts of the LARIC Project during construction were mitigated to less

⁴ State of California, Governor's Office of Planning and Research, Technical Advisory on Evaluating Transportation Impact in CEQA, December 2018, available at https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

than significant. The Interstate 405/Wilmington Avenue Interchange project was completed in December 2019; thus, mitigation measure TT-1 is no longer applicable.

The 2019 and 2021 Addenda did not alter the analysis or conclusions in the May 2017 Final EIR.

6.2.6.2 Currently Proposed Modifications to the LARIC Project

The currently proposed modifications to the LARIC Project are not expected to impact transportation and traffic during construction for several reasons. First, the intersection of Interstate 405 and Wilmington Avenue, which was under construction at the time the May 2017 Final EIR was being prepared, has been completed. Second, the construction of the piping tie-ins was not previously evaluated in the May 2017 Final EIR and the level of effort to install the piping tie-ins is less than the peak daily construction impacts that were previously evaluated in the May 2017 Final EIR. Third, the delivery of the 12 temporary storage tanks for use during the cleanout of Reservoir 502 will be spread across the day, are expected to be delivered outside of morning and afternoon commute hours, and will occur after the peak construction month. Finally, the peak construction month for the LARIC Project occurred in November 2017, so the construction of the currently proposed piping tie-ins is not expected to occur during peak construction activities. Therefore, the construction transportation and traffic analyzed in the May 2017 Final EIR conservatively includes the transportation and traffic expected to occur with the currently proposed modifications to the LARIC Project.

The currently proposed modifications to the LARIC Project are not expected to impact transportation and traffic during operation because none of the currently proposed modifications to the LARIC Project involve operational activities that generate any additional products or waste that would require transportation reliant on mobile sources. The storage of gas oil in three of the six storage tanks at the CCT does not increase the Refinery's ability to store gas oil because Reservoir 502, which has the capacity equivalent to the three CCT storage tanks (i.e., 1.5 million barrels), will be removed from service. Additionally, with the shutdown of the Wilmington Operation FCCU (a major user of gas oil), gas oil demand at the Refinery has been reduced. Thus, the need for imported gas oil, which occurred regularly prior to the approval of the LARIC Project, has been reduced. Therefore, the operational transportation and traffic impacts analyzed in the May 2017 Final EIR include the transportation and traffic impacts expected to occur with the currently proposed modifications to the LARIC Project.

The May 2017 Final EIR determined LARIC Project transportation and traffic impacts during construction to be less than significant after Mitigation Measure TT-1 was imposed. The currently proposed modifications to the LARIC Project will not change the conclusions in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda. The currently proposed modifications to the LARIC Project would not create new significant transportation and traffic impacts, or make significant transportation and traffic impacts substantially more severe.

6.2.6.3 Cumulative Transportation and Traffic Impacts

6.2.6.3.1 May 2017 Final EIR

The cumulative transportation and traffic impacts from the LARIC Project were determined to be not cumulatively considerable and would not contribute to a significant adverse cumulative construction transportation and traffic or operational transportation and traffic impacts.

6.2.6.3.2 Currently Proposed Modifications to the LARIC Project

The May 2017 Final EIR transportation and traffic analysis includes the currently proposed modifications to the LARIC Project and is representative of the expected impacts. Therefore, no change to the cumulative transportation and traffic impacts will occur from implementation of the currently proposed modifications to the LARIC Project. The cumulative transportation and traffic impacts from construction and operation of the currently proposed modifications to the LARIC Project will remain less than significant.

7.0 POTENTIAL ENVIRONMENTAL IMPACTS IN SEPTEMBER 2014 NOP/IS FOUND TO BE NOT SIGNIFICANT

This section discusses the remaining 11 environmental topic areas found not to be potentially significantly affected by the LARIC Project in the September 2014 NOP/IS and the May 2017 Final EIR as amended by the 2019 and 2021 Addenda, and as a result of the currently proposed modifications to the LARIC Project. The effect of the currently proposed modifications to the LARIC Project on the conclusions relating to each of these environmental topic areas is discussed in the following sections.

The proposed addition of gas oil to be stored in three of the six storage tanks at the CCT does not involve physical modifications. The retirement of Reservoir 502 will require cleaning and degassing but not demolition because it will be abandoned in place. However, the installation of piping tie-ins to route the gas oil to the three new storage tanks will require some construction but the construction impacts are not at a level that would change the significance determinations (i.e., no impact or less than significant impact) reached in the May 2017 Final EIR. The currently proposed modifications to the LARIC Project are not expected to create new significant impacts or worsen the potential less than significant impacts for the environmental topic areas discussed in this section.

At the time the NOP/IS for the LARIC Project was circulated for public review and comment, and following the certification of the May 2017 Final EIR, the environmental checklist did not include tribal cultural resources or wildfires as specific environmental topics. However, the CEQA Guidelines have since been updated to include these specific topics. Tribal cultural resources were previously included under Section IV - Cultural Resources (see Section 7.4). Wildland fires were previously addressed in Section VIII - Hazards and Hazardous Materials, in question g. It should be noted that the Refinery is not located in an area of wildfires and therefore no impacts related to wildfires were expected. The currently proposed modifications are confined within the Refinery premises and would not alter the conclusion regarding wildfire impacts.

7.1 Aesthetics

7.1.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

As discussed in the September 2014 NOP/IS and the May 2017 Final EIR, the LARIC Project is zoned for industrial use. The existing Refinery configuration will not appear substantially different after implementation of the LARIC Project. There are no scenic vistas in the vicinity of the LARIC Project. New structures that will be built as the result of the LARIC Project are largely of similar height or smaller than existing structures. Some structures are higher than existing adjacent units; however, the overall visual characteristics of the integrated Refinery are expected to be the same or similar to the existing configuration at the Refinery.

Additionally, no significant light or glare was anticipated from the LARIC Project. Therefore, the LARIC Project was not expected to have significant aesthetics impacts.

The 2019 and 2021 Addenda analyzed the relocation of propane recovery from one unit to another but those activities would not be visible from outside the Refinery. Therefore, the 2019 and 2021 Addenda did not alter the analysis or change the conclusions from the May 2017 Final EIR.

7.1.2 Currently Proposed Modifications to the LARIC Project

The proposal to allow gas oil to be stored in three of the six storage tanks at the CCT does not involve physical modifications. The retirement of Reservoir 502 will require cleaning and degassing which will occur inside the Refinery, east of the Reservoir, and will not be visible from outside the Refinery due to the interior location of the activities and privacy fencing at the Refinery boundary. In addition, Reservoir 502 will be abandoned in place after the cleaning and degassing is completed, so its general appearance will not change relative to baseline conditions. The activities to install piping tie-ins to route the gas oil to the three new storage tanks will occur close to ground-level within the existing Carson Operations tank farm and are obscured from view by intervening storage tanks and the perimeter privacy fencing. Thus, the proposed modifications are not expected to be discernible from the existing equipment. Therefore, the aesthetic impacts are expected to be the same as previously analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

The currently proposed modifications to the LARIC Project will not cause significant adverse impacts to aesthetics or change the conclusions in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

7.2 Agricultural and Forestry Resources

7.2.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

As discussed in the September 2014 NOP/IS and the May 2017 Final EIR, the LARIC Project is located in a heavy industrial zoned area and there are no agricultural or forest resources, such as, food crops grown for commercial purposes, located in or near the vicinity of the Refinery. Except for the construction of the Interconnecting Pipelines and Electrical Intertie Project components, the LARIC Project would not involve construction or operation outside of the existing boundaries of the integrated Refinery. As such, no farmland or forest resources would be converted to non-agricultural use and the LARIC Project would not conflict with agricultural land uses, Williamson Act contracts, or forest resources. Therefore, no significant impacts on agricultural or forest resources are expected from the LARIC Project.

The 2019 and 2021 Addenda did not alter the analysis or change the conclusions from the May 2017 Final EIR.

7.2.2 Currently Proposed Modifications to the LARIC Project

The currently proposed modifications to the LARIC Project only affect existing equipment within the existing Refinery and do not involve any construction outside the existing boundaries of the Carson Operations and CCT, so no agricultural or forest resources will be affected. No existing

agricultural or forest land will be converted to non-agricultural land uses. Further, the currently proposed modifications to the LARIC Project will not conflict with a Williamson Act contract. Therefore, the agricultural and forestry resources impacts are expected to be the same as previously analyzed in the May 2017 Final EIR.

The currently proposed modifications to the LARIC Project will not cause significant adverse impacts to agricultural and forestry resources or change the conclusions from the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

7.3 Biological Resources

7.3.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

As discussed in the September 2014 NOP/IS and the May 2017 Final EIR, the LARIC Project would be located in a heavy industrial zoned area and, with the exception of the construction of the Interconnecting Pipelines and Electrical Intertie Project components, would be within the boundaries of the existing Refinery. The area has already been graded and developed and the area is devoid of vegetation and wildlife, with the exception of landscape vegetation near the administration buildings. As such, no plant species or other biological resources (riparian habitats, wetlands, or migratory corridors), or conflict with ordinances or conservation plans would be adversely affected by the LARIC Project. Therefore, no significant impacts on biological resources are expected from the LARIC Project.

The 2019 and 2021 Addenda relocated the propane recovery activities from one unit to another but did not alter the analysis or change the conclusions reached in the May 2017 Final EIR.

7.3.2 Currently Proposed Modifications to the LARIC Project

The currently proposed modifications to the LARIC Project would occur within the confines of the Refinery and the CCT, which are devoid of vegetation and wildlife. As such, none of the currently proposed modifications to the LARIC Project would be expected to have new potential adverse impacts on biological resources or make the biological resource impacts previously analyzed in the May 2017 Final EIR worse.

Therefore, the currently proposed modifications to the LARIC Project will not cause significant adverse impacts to biological resources or change the conclusions from the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

7.4.1 Cultural Resources

7.4.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

As discussed in the September 2014 NOP/IS and the May 2017 Final EIR, the buildings, structures, and equipment associated with the LARIC Project were not listed on registers of historic resources, and did not meet any of the eligibility criteria as cultural resources. The entire active portions of

the Wilmington and Carson Operations have been previously graded and developed. LARIC Project activities will occur in areas of the integrated Refinery and CCT where the ground surface has already been disturbed, within or adjacent to existing refining and other units. This past disturbance reduces the likelihood that previously unknown cultural resources will be encountered. Further, the Refinery site does not contain known paleontological resources and, thus, the LARIC Project also is not expected to impact any sites of paleontological value. It was concluded that the LARIC Project would not cause significant adverse impacts to cultural resources.

The 2019 and 2021 Addenda did not alter the analysis or change the conclusions from the May 2017 Final EIR.

During the public comment period for the Draft EIR, the South Coast AQMD consulted with the Tribal Administrator of the Tongva Ancestral Territorial Tribal Nation. No issues were raised that would change the conclusion in the September 2014 NOP/IS that impacts on cultural resources were considered less than significant.

7.4.2 Currently Proposed Modifications to the LARIC Project

CEQA Guidelines Section 15064.5(3) states that, “generally, a resource shall be considered “historically significant” if the resource meets the criteria for listing in the California Register of Historical Resources including the following:

- A) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- B) Is associated with the lives of persons important in our past;
- C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
- D) Has yielded or may be likely to yield information important in prehistory or history.”

Generally, resources (buildings, structures, equipment) that are less than 50 years old are excluded from listing in the National Register of Historic Places unless they can be shown to be exceptionally important. The currently proposed modifications to the LARIC Project do not involve the removal of any existing structures and the areas have been previously graded. The currently proposed modifications to the LARIC Project do not involve grading outside areas that were analyzed in the May 2017 Final EIR. Implementing the currently proposed modifications to the LARIC Project would not change the determination that no significant impacts to cultural resources would occur due to the LARIC Project.

Cultural resources have not been encountered unexpectedly during ground disturbance associated with construction related to the LARIC Project, so the standard protective measures included in the May 2017 Final EIR were not employed. Further, the Refinery does not contain known

paleontological resources and thus the LARIC Project, including the 2019 and 2021 Addenda modifications and the currently proposed modifications, are not expected to impact any sites of paleontological value. No significant adverse impacts to cultural resources are expected. Standard protective measures will be implemented if any cultural resources are encountered.

The currently proposed modifications to the LARIC Project will not cause significant adverse impacts to cultural resources or change the conclusions from the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

7.5 Energy

7.5.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

As discussed in the September 2014 NOP/IS and the May 2017 Final EIR, the LARIC Project was not expected to conflict with any adopted energy conservation plan or existing energy standard. There are no known energy conservation plans or existing energy standards that would apply to either the existing Wilmington and Carson Operations or the LARIC Project, as it primarily involves new and modified equipment that will allow the Refinery to operate more efficiently. Electricity for the Carson Operations is provided by the existing Watson Cogeneration Facility. The Watson Cogeneration Facility produces excess electricity that it sells to Southern California Edison. Under the LARIC Project, the amount of electricity that would be sold would be reduced and used to provide the electricity requirements associated with the LARIC Project. Therefore, no significant adverse impacts on electricity production were expected as a result of the LARIC Project.

As evaluated in the September 2014 NOP/IS, construction of the LARIC Project was estimated to require about 64,000 gallons of diesel fuel per year. In 2011, the Los Angeles region used 4,892 million gallons of gasoline and 281 million gallons of diesel. The fuel associated with construction of the entire project represents less than one percent of the total annual demand in the Los Angeles region, is a negligible fraction of the total use of fuel in California, and was not considered to be a wasteful use of fuel. Therefore, less than significant adverse energy impacts were expected during the construction period. Additionally, no additional permanent employees were anticipated to be needed to operate the Refinery once construction of the LARIC Project is completed, so no additional demand for gasoline fuel was expected.

The 2019 and 2021 Addenda did not alter the analysis or conclusions in the May 2017 Final EIR.

7.5.2 Currently Proposed Modifications to the LARIC Project

The proposal to allow gas oil to be stored in three of the six storage tanks at the CCT does not involve physical modifications. The retirement of Reservoir 502 will require cleaning and degassing which will occur inside the tank. In addition, Reservoir 502 will be abandoned in place so no demolition activities will occur. However, the activities to install piping tie-ins to route the gas oil to the three new storage tanks will require construction occurring over a six-month period, which is expected to use up to approximately 1,000 gallons of diesel, which would increase the

diesel fuel use by approximately 1.5 percent of the volume estimated in the September 2014 NOP/IS (i.e., total fuel use of 65,000 gallons instead of the 64,000 gallons analyzed in the 2014 NOP/IS). The percentage of diesel fuel use by the Project remains at 0.023 percent because the additional 1,000 gallons of diesel fuel does not change the small percentage (0.023 percent) when compared to the total fuel use in the State, which is orders of magnitude greater than the Project's initial diesel use or the additional diesel use. Therefore, the potential increase in diesel fuel use is a negligible fraction of the total fuel use in California and remains less than the significance threshold of one percent of the available supply.

Electricity demand is not expected to increase because no new pumps or other electrical equipment are proposed. Therefore, no substantial change in energy use is expected from the currently proposed modifications to the LARIC Project, and the analysis presented in the May 2017 Final EIR conservatively represents the energy demand of the currently proposed modifications to the LARIC Project. Thus, the conclusions in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda would not change and energy impacts would remain less than significant.

The currently proposed modifications to the LARIC Project will not cause significant adverse impacts to energy or change the conclusions in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

7.6 Geology and Soils

7.6.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

As discussed in the September 2014 NOP/IS and the May 2017 Final EIR, the LARIC Project would be constructed in an area of known seismic activity. The most significant potential geologic hazard is estimated to be seismic shaking from future earthquakes generated by active or potentially active faults in the region. Past experience indicates that there has not been any substantial damage, structural or otherwise, to the Wilmington and Carson Operations as a result of earthquakes. No faults or fault-related features are known to exist at the Refinery. The closest fault zone to the Refinery is the Newport-Inglewood Fault Zone, which is located approximately 1.5 to 2.0 miles northeast of the Refinery.

New and modified equipment, which included piping modifications and structures at the Refinery associated with the LARIC Project, will require building permits from the City of Los Angeles and the City of Carson, as applicable. Issuance of building permits from the local authority will assure compliance with the California Building Code requirements, which include requirements for building within seismic hazard zones. No significant adverse impacts from seismic hazards are expected since the LARIC Project will be required to comply with the California Building Codes, including those addressing seismic effects.

The LARIC Project would not alter the exposure of people or property to geological hazards such as earthquakes, landslides, mudslides, ground failure, or other natural hazards. As a result, substantial exposure of people or structures to the risk of loss, injury, or death involving the rupture of an earthquake fault, seismic ground shaking, ground failure, or landslides is not anticipated.

The 2019 and 2021 Addenda did not alter the analysis or conclusions in the May 2017 Final EIR.

7.6.2 Currently Proposed Modifications to the LARIC Project

The currently proposed modifications to the LARIC Project require piping tie-ins similar to those included in the LARIC Project as proposed in the May 2017 Final EIR. The piping tie-ins require the same footings as the piping tie-ins included in the LARIC Project as proposed in the May 2017 Final EIR. Therefore, the currently proposed modifications to the LARIC Project would not result in any changes to geology and soils impacts that were evaluated in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

The currently proposed modifications to the LARIC Project will not alter the conclusions from the May 2017 Final EIR as amended by the 2019 and 2021 Addenda and no significant adverse impacts to geology and soils are expected.

7.7 Land Use and Planning

7.7.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

As discussed in the September 2014 NOP/IS and the May 2017 Final EIR, the LARIC Project includes improvements and modifications within an existing industrial facility zoned for heavy industrial uses. The construction and operation of the LARIC Project will occur primarily within the confines of the existing Wilmington and Carson Operations, except for the Interconnecting Pipelines and Electrical Intertie construction that will occur off-site, but also in the heavy industrial use zone. As a result, no component of the LARIC Project would result in physically dividing any established communities, but will continue the use of the site as a Refinery.

The LARIC Project is consistent with the heavy industrial land use designation of the Refinery and no land use or planning requirements would be altered by the LARIC Project. Therefore, present or planned land uses in the region would not be affected as a result of the LARIC Project. No significant adverse land use or planning impacts are expected from the implementation of the LARIC Project.

The 2019 and 2021 Addenda did not alter the analysis or conclusions in the May 2017 Final EIR.

7.7.2 Currently Proposed Modifications to the LARIC Project

The currently proposed modifications to the LARIC Project will occur within the confines of the Carson Operations and the CCT, and do not divide an established community. The currently proposed modifications to the LARIC Project are consistent with the activities and uses currently ongoing at the Refinery and CCT, and would not require a zoning or land use change. The construction and operation of six new storage tanks at the CCT have been approved through a Conditional Use Permit from the City of Carson and the currently proposed modifications to the LARIC Project would not require an additional land-use approval. As such, the currently proposed modifications to the LARIC Project are not expected to have significant adverse impacts on land

use. Therefore, the land use and planning impacts are expected to be the same as previously analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

The currently proposed modifications to the LARIC Project will not alter the conclusions from the May 2017 Final EIR as amended by the 2019 and 2021 Addenda, and no significant adverse impacts to land use and planning are expected.

7.8 Mineral Resources

7.8.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

As discussed in the September 2014 NOP/IS and the May 2017 Final EIR, construction and operation of the LARIC Project would occur entirely within the boundaries of the existing Refinery and adjacent industrial areas, all of which are zoned for heavy industrial uses. According to online data from the California Geologic Energy Management Division (CalGEM), which was formerly known as the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), there are no oil wells (active or abandoned) located within the confines of the LARIC Project. The nearest oil and gas wells are located adjacent to the southwestern property line and are either idle or abandoned wells in the Wilmington Oil Field. Thus, the LARIC Project would not affect the availability of known crude oil or other mineral resources and no other known mineral resources are expected to be required for the LARIC Project.

There are no provisions of the LARIC Project that would result in the loss of availability of a known mineral resource of value to the region and the residents of the State of California, such as aggregate, coal, clay, shale, etc., or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Thus, no significant impacts to mineral resources are expected.

The 2019 and 2021 Addenda did not alter the analysis or conclusions in the May 2017 Final EIR.

7.8.2 Currently Proposed Modifications to the LARIC Project

There are no known mineral resources currently on the Refinery property. Therefore, the currently proposed modifications to the LARIC Project will not be located on a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Furthermore, the currently proposed modifications to the LARIC Project will not result in the loss of availability of a known mineral resource (i.e., aggregate, coal, clay, shale, etc.) that would be of value to the region and the residents of the State of California. No significant adverse impacts to mineral resources are expected due to the currently proposed modifications to the LARIC Project. Therefore, the mineral resource impacts are expected to be the same as previously analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

The currently proposed modifications to the LARIC Project will not alter the conclusions from the May 2017 Final EIR as amended by the 2019 and 2021 Addenda, and no significant adverse impacts to mineral resources are expected.

7.9 Population and Housing

7.9.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

As discussed in the September 2014 NOP/IS and the May 2017 Final EIR, construction and operational activities associated with the LARIC Project are not expected to involve the relocation of individuals, adversely impact housing or commercial facilities, or change the distribution of the population in the region. The analysis estimated that as many as 1,060 construction workers are expected to be needed during peak construction activities for the LARIC Project and most of the workers are expected to come from the large labor pool in southern California (over five million workers). No increase in the permanent number of workers at the Refinery is expected following the construction phase of the LARIC Project and no operational impacts to population and housing are expected. The LARIC Project is not expected to affect population growth, directly or indirectly induce the construction of single- or multiple-family units, or require the displacement of people or housing elsewhere in the region.

The 2019 and 2021 Addenda did not alter the analysis or conclusions in the May 2017 Final EIR.

7.9.2 Currently Proposed Modifications to the LARIC Project

The currently proposed modifications to the LARIC Project involve six months of construction with 10 construction workers daily, which is for a shorter period of time relying on fewer than the peak number of construction workers previously analyzed in the May 2017 Final EIR (i.e., 1060 construction workers). The May 2017 Final EIR determined that no additional housing was necessary for construction workers because they were expected to be drawn from the local pool of workers. Since only 10 construction workers are needed for the currently proposed modifications to the LARIC Project, they are also expected to be drawn for the local pool of workers and no additional housing is needed. Construction activities for the currently proposed modifications to the LARIC Project will not involve the relocation of individuals, impact housing or commercial facilities, or change the distribution of the population because the currently proposed modifications to the LARIC Project would occur completely within the boundaries of the existing Refinery. No displacement of existing housing or people will occur and the currently proposed modifications to the LARIC Project would not change the less than significant determination in the May 2017 Final EIR.

Additionally, no new operational employees will be needed as a result of the currently proposed modifications to the LARIC Project. Therefore, the population and housing impacts are expected to be the same as previously analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

The currently proposed modifications to the LARIC Project will not alter the conclusions from the May 2017 Final EIR as amended by the 2019 and 2021 Addenda, and no significant adverse impacts to population and housing are expected.

7.10 Public Services

7.10.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

As discussed in the September 2014 NOP/IS and the May 2017 Final EIR, the LARIC Project would not substantially change the load on the Refinery's firefighting and emergency response resources and would not be expected to create the need for additional fire protection services or resources by Tesoro or the City of Carson or the City of Los Angeles.

Both the Wilmington and Carson Operations maintain their own emergency response teams to respond to emergencies. Each Operation maintains a fully-trained, 24-hour emergency response team and equipment to protect against flammable and combustible materials. The LARIC Project is not expected to increase the need or demand for additional services from the fire department above current levels because on-site firefighting and emergency response capabilities and personnel will be maintained and are expected to be able to continue to respond to potential emergencies in the future, while maintaining acceptable service ratios, response times, or other performance objectives.

The existing Wilmington and Carson Operations have security departments that provide 24-hour protective services for people and property within the fenced boundaries of each facility. The LARIC Project is not expected to require additional staffing at the security department as the security needs at the integrated Refinery are not expected to change. Thus, no additional or altered police protection would be required for the LARIC Project once it becomes operational.

As previously discussed in Section 7.9.1, the LARIC Project is not expected to induce population growth in any way. The existing labor pool in southern California is expected to be sufficient to fulfill the labor requirements for construction of the LARIC Project. There would be no increase in population and, therefore, there would be no need for physically altered government facilities. Thus, no significant impacts on public resources are expected.

The 2019 and 2021 Addenda did not alter the analysis or conclusions in the May 2017 Final EIR.

7.10.2 Currently Proposed Modifications to the LARIC Project

The proposal to allow gas oil to be stored in three of the six storage tanks at the CCT does not involve physical modifications. Further, the CCT is already serviced by on-site emergency response teams. Reservoir 502 will be cleaned and abandoned in place within the existing tank farm that is already serviced by on-site emergency response teams. In addition, the activities to install piping tie-ins to route the gas oil to the three new storage tanks will involve six months of construction within the existing tank farm that is already serviced by on-site emergency response teams. The currently proposed modifications to the LARIC Project will not alter the existing on-site emergency response requirements or capabilities nor increase the requirements for additional or altered fire protection. No additional fire response capabilities are expected for the currently proposed physical modifications because they occur in an existing facility.

The currently proposed modifications to the LARIC Project occur within the boundaries of the Refinery and CCT, which is already equipped with 24-hour security, fencing, and controlled access. Thus, no additional or altered police protection is required for the currently proposed modifications to the LARIC Project.

The currently proposed modifications to the LARIC Project are not expected to increase the number of long-term staff at the Refinery. Therefore, no impacts are expected to schools, parks, or other public facilities, such as government services, as a result of implementing the currently proposed modifications to the LARIC Project.

No significant adverse impacts to public services are expected from the currently proposed modifications to the LARIC Project. Therefore, the analysis presented in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda conservatively represents the currently proposed modifications to the LARIC Project. Therefore, the public services impacts are expected to be the same as previously analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

The currently proposed modifications to the LARIC Project will not alter the conclusions from the May 2017 Final EIR as amended by the 2019 and 2021 Addenda, and no significant adverse impacts to public services are expected.

7.11 Recreation

7.11.1 May 2017 Final EIR as Amended by the 2019 and 2021 Addenda

As discussed in the September 2014 NOP/IS and the May 2017 Final EIR and summarized in Section 7.9 of this Addendum, the LARIC Project is expected to draw from the existing construction labor pool and no permanent workers are expected. Therefore, implementation of the LARIC Project is not expected to increase the demand for neighborhood or regional parks or other recreational facilities and it would not adversely affect existing recreational facilities.

Additionally, the LARIC Project does not include new recreational facilities or require expansion of existing recreational facilities and, thus, would not have an adverse physical effect on recreation resources. Therefore, the recreation impacts are expected to be the same as previously analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

The currently proposed modifications to the LARIC Project will not alter the conclusions from the May 2017 Final EIR as amended by the 2019 and 2021 Addenda, and no significant adverse impacts to recreation are expected.

7.11.2 Currently Proposed Modifications to the LARIC Project

As previously discussed in Section 7.9 of this Addendum, the existing labor pool in southern California is sufficient to fulfill the labor requirements of the LARIC Project and no additional housing is required for the currently proposed modifications to the LARIC Project. The operation

of the currently proposed modifications to the LARIC Project will not require additional workers above the levels estimated in the May 2017 Final EIR. Therefore, there would be no significant changes in population densities resulting from the currently proposed modifications to the LARIC Project, and thus, no increase in the use of existing neighborhood and regional parks or other recreational facilities.

The currently proposed modifications to the LARIC Project do not include recreational facilities or require the construction or expansion of existing recreational facilities. No significant adverse impacts to recreational facilities are expected. Therefore, the analysis presented in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda conservatively represents the currently proposed modifications to the LARIC Project.

The currently proposed modifications to the LARIC Project will not alter the conclusions from the May 2017 Final EIR as amended by the 2019 and 2021 Addenda and will not cause significant adverse impacts to recreation.

8.0 CONCLUSIONS

As explained in Sections 6.0 and 7.0 of this Addendum, the analysis of the currently proposed modifications to the LARIC Project indicate that no new significant adverse impacts would be created for any environmental areas analyzed in the May 2017 Final EIR as amended by the 2019 and 2021 Addenda, nor would the modifications make substantially worse any existing significant adverse impacts. Based on the environmental analysis prepared for the currently proposed modifications to the LARIC Project, the South Coast AQMD has quantitatively and qualitatively demonstrated that the currently proposed modifications to the LARIC Project qualify for an Addendum to the previously certified May 2017 Final EIR as amended by the 2019 and 2021 Addenda.

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