
EXECUTIVE SUMMARY

PROJECT OBJECTIVES, PURPOSE, AND NEED

The Air Pollution Control District (APCD) and San Luis Obispo County Planning and Building Department (County) will serve as the lead agency and use the Environmental Impact Report (EIR) document as part of their decision-making process in permitting the Proposed Project.

The APCD and the County have determined that the Proposed Project needs environmental review in the form of an EIR pursuant to the California Environmental Quality Act (CEQA) instead of a categorical or statutory exemption, or a Negative Declaration. Under CEQA, “The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the Proposed Project, and to indicate the manner in which those significant effects can be mitigated or avoided” (PRC Section 21002.1[a]).

An EIR is the most comprehensive form of environmental documentation identified in CEQA and the CEQA Guidelines and provides the information needed to assess the environmental consequences of a Proposed Project. An EIR is intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a Proposed Project that has the potential to result in significant, adverse environmental impacts.

Pursuant to Section 15124(b) of the CEQA Guidelines, the description of the Proposed Project is to contain “a clearly written statement of objectives” that will aid the lead agency in developing a reasonable range of alternatives to evaluate in the EIR and will aid decision makers in preparing findings and, if necessary, a statement of overriding considerations. Project objectives should include the underlying purpose of the Project.

The applicant’s overall goal for the Project is to increase the daily maximum limit of crude oil throughput by 10 percent and process petroleum liquid under the definition of crude oil. This would be achieved through the following objectives:

- Operate the Santa Maria Refinery in accordance with all prevailing laws and regulations to maximize safety and protect the environment.
- Employ current technologies in an effort to reduce environmental impacts to less-than-significant levels.
- Provide a development project that is consistent with the major objectives of the County’s General Plan.
- Provide a development project that continues to meet the regulatory requirements and objectives of the San Luis Obispo County APCD.
- Provide a development project that meets the regulatory requirements and objectives of the Regional Water Control Board and continues to comply with the existing National Pollutant Discharge Elimination System permit.

- Continue the process of removing contaminated materials from the Project site to a designated disposal facility where they can be contained and controlled.
- Protect human and ecological receptors from exposure to potentially harmful substances.
- Minimize noise impacts to surrounding areas.
- Minimize traffic impacts to surrounding areas.

As the Lead Agency under CEQA, the APCD and the County are required to adopt a program for reporting and monitoring the implementation of mitigation measures for this Project, if it is approved, to ensure that the adopted mitigation measures are implemented as defined in this EIR.

BACKGROUND AND DESCRIPTION OF PROPOSED PROJECT

The ConocoPhillips Santa Maria Facility (SMF) was built on the Arroyo Grande mesa in southern San Luis Obispo County (SLOC) in 1955 (see Figure ES-1). The facility is surrounded by industrial, recreational, agricultural, and residential land and open space. The SMF operates 24 hours per day and 365 days per year, except when shut down for maintenance.

The SMF was previously owned by several companies, including Union Oil Company of California, Tosco, and Phillips Petroleum. Since 1955, the land use has been petroleum oil refining.

The SMF and the Rodeo Refinery, linked by a 200-mile pipeline, comprise the San Francisco Refinery (see Figure 2-2). The SMF mainly processes heavy, high-sulfur crude oil. Semi-refined liquid products from the SMF are sent by pipeline to the Rodeo Refinery for upgrading into finished petroleum products. Products leaving the SMF are: (1) semi-refined petroleum by pipeline; (2) solid petroleum coke by rail or haul truck; and (3) recovered sulfur by haul truck.

Figure ES-1 Proposed Project Location



The two changes included in this Proposed Project are:

- Increasing the permitted volume of processed crude oil; and
- The ability to process previously refined gas/oil petroleum liquid under the definition of crude oil.

The first change, for the County Planning and Building permit, would increase the daily maximum limit of crude oil throughput by 10 percent, from 44,500 bpd to 48,950 bpd. Additionally, for the APCD permit, the 12-month rolling average of crude throughput would increase from 16,220,600 bpy to 17,866,750 bpy. While the County's permit is based on a daily maximum and the APCD's permit is based on twelve-month rolling average, these volume limits are the same.

The Proposed Project would potentially cause changes at the SMF, including:

- An increase in materials and volumes of crude oil delivered to and shipped via pipeline from the Santa Maria Pump Station to the SMF;
- An increased volume of products leaving the SMF for the Rodeo Refinery via pipeline;
- An increased volume of green coke and sulfur production; and
- An increase in shipments leaving the facility by either truck or railcar.

The Proposed Project would not involve any construction or additions to the SMF plot plan.

The current Department of Planning and Building permit limit of 44,500 bpd was evaluated in a CEQA document in a negative declaration in 1990. Therefore, all operations at the Refinery under the current Department of Planning and Building permit limit of 44,500 bpd would be covered by a CEQA analysis and the permit level of 44,500 bpd is considered the baseline for this analysis.

PROPOSED PROJECT ENVIRONMENTAL IMPACTS AND MITIGATION

The Proposed Project would generate potentially significant environmental impacts in air quality, noise, land use, and water resources. Significant and unavoidable impacts would remain in air quality.

Air Quality

Significant and unavoidable impacts to air quality would occur during operational activities at the refinery and offsite because the Project would generate emissions that would increase greenhouse gases (GHG) emissions and exceed the SLOC APCD thresholds. Although mitigation measures would not reduce the impacts to a less than significant level, the operator would install low-NOx burners on a sufficient number of the heaters and implement a program to increase efficiency of the Refinery stationary combustion devices to maintain GHG emission to less than the APCD interim thresholds of 10,000 metric tonnes increase over permitted GHG emissions.

Impacts to air quality that are less than significant with mitigation would occur during operational activities. Operational activities at the Project Site would also create odor events and emit toxic materials. Mitigation measures for these impacts include ensuring operator compliance with all SLOC APCD regulations and developing an Odor Control Plan.

Public Safety and Hazardous Materials

There are no significant and unavoidable impacts to public safety and hazardous materials. An impact to Public Safety and Hazardous Materials that is less than significant with mitigation was identified as a result of existing groundwater contamination related to the coke pile. Any increased coke production would exacerbate this groundwater contamination and thereby produce a significant impact. The Mitigation for this impact would require that any additional coke produced shall be deposited in lined areas or other equivalent measures to prevent any additional groundwater contamination. Impacts to public safety and hazardous materials that are less than significant include risk to the public associated with accidental releases of hazardous materials from the SMF processing operations and transportation vehicles. No mitigation measures are required for these impacts.

Noise and Vibration

There are no significant and unavoidable impacts to noise and vibration. An impact to noise and vibration that is less than significant with mitigation includes increased noise levels due to increased operational activities. Mitigation for this impact includes installing a sound wall between the noise sources and residences as close to the pumping operations as feasible to reduce noise levels at the property line to less than 50 dBA. Additional barrier walls shall be installed as deemed necessary by in-field measurements.

Public Services

There are no significant and unavoidable impacts to public services or impacts that are less than significant with mitigation. Impacts to public services that are less than significant include an increase in the use of electricity and fossil fuels, as well as increased wastewater and solid waste generation. No mitigation measures are required for these impacts.

Land Use and Policy Consistency Analysis

There are no significant and unavoidable impacts to land use and policy consistency analysis. Impacts to land use and policy consistency analysis that are less than significant with mitigation include noise, emissions, and odors from increased operational activities. Mitigation measures for these impacts include implementing related mitigation measures from other sections, including noise and vibration, and air quality.

Transportation and Circulation

There are no significant and unavoidable impacts to transportation and circulation or impacts that are less than significant only with mitigation. Impacts to transportation and circulation that are less than significant include an increase of traffic on local roads and the freeway. No mitigation measures are required for this impact.

Water Resources

There are no significant and unavoidable impacts to water resources. An impact to water resources that is less than significant with mitigation includes an impact to the current and future availability of groundwater for other users during severe drought years, including agriculture and residential users, as a result of the Proposed Project's one-percent increase in water usage. The mitigation measure for this impact includes developing a Water Management Plan.

ALTERNATIVES TO THE PROPOSED PROJECT

A wide range of alternatives was considered for evaluation in this EIR (see Section 5.0, Alternatives Analysis). Those alternatives were screened based on feasibility and their ability to result in fewer environmental impacts than the Proposed Project. From this screening, a list of alternatives was selected to be compared to the Proposed Project. Section 6.0, Comparison of Proposed Project and Alternatives, evaluated the impacts associated with the selected alternatives, which are summarized in the following sections.

Seven alternatives were evaluated in the screening analysis, including:

- No Project Alternative;
- Reduced Refinery Throughput Increase;
- Increased Rail Transport;
- Santa Maria Refinery Truck Unloading;
- Summit Pump Station Truck Unloading;
- Orcutt Pump Station Truck Unloading; and
- Alternative Transportation Routes.

Only three alternatives were analyzed fully, which included the No Project Alternative, the Summit Pump Station Truck Unloading, and one alternative transportation route.

No Project Alternative

With the No Project Alternative, the throughput increase and the importing of previously refined oil would not occur at the Santa Maria Refinery. Under the No Project Alternative, no new activity would take place at the Santa Maria Refinery.

Summit Pump Station Truck Unloading

Under this alternative, the majority of the 10 percent increase in crude oil needed for the throughput increase would come from the Arroyo Grande and San Ardo Oil Fields north of the Refinery. The crude oil would be unloaded by truck at the Summit Pump Station rather than at the Santa Maria Pump Station. Crude oil unloaded at the Summit Pump Station would then be transferred via pipeline to the Santa Maria Refinery.

Southbound Route Alternative

Under this alternative, southbound US Highway 101 would be accessed via Orcutt as opposed to Santa Maria under the Proposed Project.

COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES

The CEQA Guidelines (Section 15126.6 [d]) require that an EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project. The Guidelines (Section 15126.6 [e][2]) further state, in part, that “if the environmentally superior alternative is the ‘No Project Alternative,’ the EIR shall also identify an environmentally superior alternative among the other alternatives.”

The following discussion compares impacts associated with the Proposed Project with those associated with the No Project Alternative and the other alternatives. These impacts are identified as a result of the analysis provided in Chapter 4.0, Environmental Analysis, and Section 6.0. An alternative would be considered superior to the Proposed Project if there would be a reduction in impact classification. In cases where the impact from an alternative is in the same class as for the Proposed Project, differences in severity of the impact are analyzed.

No Project Alternative

With the No Project Alternative, the throughput increase and the importing of previously refined oil would not occur at the Santa Maria Refinery. Under the No Project Alternative, no new activity would take place at the Santa Maria Refinery. None of the impacts associated with the Proposed Project would occur. No new impacts would occur under the No Project Alternative.

Summit Pump Station Truck Unloading

The Summit Pump Station Truck Unloading alternative has advantages over the Proposed Project because it would reduce air emissions from trucks transporting crude oil from northern oil fields, such as Arroyo Grande and San Ardo. The Summit Pump Station is farther north than the Santa Maria Pump Station and, therefore, the distance from these northern fields to the Summit Pump Station is less than the distance to the Santa Maria Pump Station. The impact to air emissions would be marginally less severe. However, potential crude production from the proposed Excelaron field in Huasna Valley might be transported through the Santa Maria Pump Station en route to the Santa Maria Refinery.

The disadvantages of this alternative over the Proposed Project include increased odor issues at the Summit Pump Station and residences in the vicinity. There would also be an increased risk of crude oil fires at the Summit Pump Station that could impact nearby vegetation and residences. This would be a significant impact. Noise impacts at the Summit Pump Station and surrounding residences would be more severe since truck trips and subsequent unloading would generate vehicle-related noise.

Southbound Route Alternative

The Southbound Route Alternative has advantages over the Proposed Project because it would reduce air emissions from trucks transporting solid petroleum coke and recovered sulfur from the SMF southbound to customers outside of San Luis Obispo County by avoiding traffic congestion along Main Street in Santa Maria. However, since the route is a similar distance, impacts to air quality would be similar.

This alternative does not have any significant disadvantages over the Proposed Project.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The Proposed Project has been specifically designed to reduce the number of impacts to the lowest level possible and still obtain the objectives of the Project. The alternatives include an alternative site for truck unloading and an alternative southbound access route that could provide reduce impacts, although not significantly.

The No Project Alternative would be the environmentally superior alternative since it would not generate any impacts. However, the No Project Alternative would not meet any of the objectives of the Proposed Project. CEQA requires that if the environmentally superior alternative is the No Project Alternative, then the next most environmentally preferred alternative must also be identified.

The Summit Pump Station Truck Unloading Alternative has the advantages of reducing air emissions, but air emissions would remain significant. The disadvantages include the impacts on nearby residences of odor, fire, toxic emissions, noise, and transportation, although none of these impacts would be significant after mitigation. These disadvantages outweigh the benefits of reduced air emissions. Therefore, this alternative has not been selected as the environmentally superior alternative.

The Southbound Route Alternative has the advantage over the Highway 166 route for southbound traffic since the alternative would avoid a partially impacted intersection within Santa Maria. The Applicant could specify their preferences for this route in contracts with trucking companies and contractors.

Therefore, the Proposed Project with use of the Southbound Route Alternative is the Environmentally Preferred Alternative.

KNOWN AREAS OF CONTROVERSY OR UNRESOLVED ISSUES

According to Section 15123 of the CEQA Guidelines, the EIR shall identify “*areas of controversy known to the Lead Agency including issues raised by agencies and the public.*” All proposals related to the development and transportation of oil and gas reserves in urban areas generate controversy and receive a high level of public scrutiny. This is due to the sensitive nature of the surrounding area and the potential for safety impacts to the local population.

The Proposed Project has generated some level of public interest and controversy (see Appendix B, Notice of Preparation, Comments, and Responses). Areas of controversy highlighted in comments on the Notice of Preparation include:

- The level of traffic generated by the Project that could impact residential areas; and
- Noise, odor, and air quality issues from operational activities proximate to residential areas.

Table ES-1 Summary of Impacts and Mitigation Measures for the Proposed Project

**Less Than Significant With Mitigation Impacts
Impacts That Can Be Mitigated To Less Than Significant Levels**

(Impacts that must be addressed in Findings that the mitigation measures would reduce the level of impact to insignificant in accordance with Section 15091 State CEQA Guidelines.)

Impact #	Impact	Recommended Mitigation Measures
4.1 Air Quality		
AQ.1	Operational activities at the refinery and offsite would generate emissions that exceed SLOC APCD thresholds.	<p>AQ-1.1 Prior to issuance of the updated permit and increase in Refinery throughput, the Applicant shall install low-NOx burners on the crude heater, coker heater and boilers B504/505, or utilize an equivalent method, to reduce the NOx emissions to less than the APCD thresholds.</p> <p>AQ-1.2. To the extent feasible, all trucks under contract to the SMF shall meet EPA 2010 or 2007 model year NOx and PM emission requirements and a preference for the use of rail over trucks for the transportation of coke shall be implemented to the extent feasible in order to reduce offsite emissions. Annual truck trips associated with refinery operations and their associated model year and emissions shall be submitted to the APCD annually.</p> <p>AQ-1.3. Prior to issuance of the updated permit, if emissions cannot be mitigated below significance thresholds through implementation of mitigation measures AQ-1.1 and AQ-1.2, then off-site mitigation will be required as per APCD guidance in the CEQA Handbook.</p>
AQ.2	Operational activities could increase the frequency or duration of odor events.	<p>AQ-2 The Applicant shall prepare and submit an Odor Control Plan, which shall be approved by the APCD prior to the issuance of a revised permit. The Odor Control Plan shall identify all potential sources of odors at the Refinery. The plan shall detail how odors will be controlled at each odor source and the mechanism in place in the event of an upset or breakdown, as well as design methods to reduce odors, including redundancy of equipment (e.g., pumps and VRU compressors) or reductions in fuel gas sulfur content. Area monitoring shall be discussed. The Plan shall also include a complaint monitoring and reporting section and include a hotline number for individuals to call in case of a complaint.</p>
AQ.3	Operational activities could increase GHG emissions.	<p>AQ-3 The Applicant shall implement a program to increase efficiency of the Refinery stationary combustion devices to maintain GHG emissions less than the APCD interim thresholds (10,000 metric tonnes per year) over the emissions associated with the current permitted throughput. In addition to increasing stationary equipment efficiency, additional measures may include the use of more efficient model year trucks or alternative fueled vehicles for hauling vehicles. If after all applicable measures have been implemented, emissions are still over the thresholds, then offsite mitigation will be required. The off-site mitigation measures shall be approved by the APCD prior to permit issuance.</p>

Table ES-1 Summary of Impacts and Mitigation Measures for the Proposed Project**Less Than Significant With Mitigation Impacts****Impacts That Can Be Mitigated To Less Than Significant Levels**

(Impacts that must be addressed in Findings that the mitigation measures would reduce the level of impact to insignificant in accordance with Section 15091 State CEQA Guidelines.)

Impact #	Impact	Recommended Mitigation Measures
4.2 Public Safety and Hazardous Materials		
PSHM.3	The Proposed Project could introduce contamination to groundwater through exacerbation of existing contamination issues	PSHM-3 Prior to issuance of the updated permit and increase in Refinery throughput, the Applicant shall ensure that any additional coke produced shall be deposited in lined areas or other equivalent measures to prevent any additional groundwater contamination, as per consultation with the RWQCB.
4.3 Noise and Vibration		
N.1	Operation increases at the Refinery could increase noise levels in the area.	N-1 The Applicant shall, at the Santa Margarita Pump Station, install a sound wall constructed of barrier pads between the noise sources and residences, as close to the pumping operations as feasible, to reduce noise levels at the property line to less than 50 dBA. Additional barrier walls shall be installed as deemed necessary by in-field measurements. Installation of the sound wall shall be verified by County Planning and Building prior to the issuance of the permit/authorization to proceed.
4.5 Land Use Policy and Consistency Analysis		
LU.1	Noise from throughput increase operations would be incompatible with the adjacent land uses.	Implement mitigation measures N-1.
LU.2	Emissions and odors from operations could be incompatible with adjacent land uses.	Implement mitigation measure AQ-2.

Table ES-1 Summary of Impacts and Mitigation Measures for the Proposed Project

Less Than Significant With Mitigation Impacts

Impacts That Can Be Mitigated To Less Than Significant Levels

(Impacts that must be addressed in Findings that the mitigation measures would reduce the level of impact to insignificant in accordance with Section 15091 State CEQA Guidelines.)

Impact #	Impact	Recommended Mitigation Measures
4.7 Water Resources		
WR.1	The Proposed Project one percent increase in water usage may impact the current and future availability of groundwater for other users, including agricultural and residential users.	<p>WR-1 The Applicant shall develop a Water Management Plan, which shall include best management practices and water conservation measures, including the use of reclaimed water and surface runoff retention basin water for Refinery uses, dust suppression, and landscaping uses, as available. The Applicant shall make changes to the Water Management Plan if requested by the County Director of Planning. The Water Management Plan shall include implementation of measures consistent with the Nipomo Mesa Management Area Water Shortage Conditions and Response Plan. The plan shall provide guidelines on managing all future water use during severe drought years. Once it is determined that a severe drought condition exists, restricted (drought) water usage measures shall remain in effect until it is shown satisfactorily to the County that the severe drought condition no longer exists. This plan shall include:</p> <ul style="list-style-type: none"> - Designs for and implementation of modification of the existing facility, to re-use the existing water. The SMF currently implements two systems to treat runoff and water used during operations. The water could be further treated and re-used as part of additional conservation activities. Additional plans and reports would be required for the treatment activities. - Identification of general measures available to reduce water usage for Refinery Operations. - Other measures as appropriate to offset the increased use of water related to the Proposed Project during severe drought conditions, which may include purchase of water rights from other users, conservation efforts, use of reclaimed water, or additional water treatment and reuse as needed.
WR.3	The Proposed Project may have significant impacts on water quality.	<p>WR-3.1 Ensure that any additional increased process water is treated by the wastewater treatment system in conformance with the NPDES Permit.</p> <p>WR-3.2 Existing spill management precautions shall be amended as needed to mitigate an increased spill size due to the increased amount of crude oil processing as reviewed and approved by San Luis Obispo County Planning and Building and San Luis Obispo County Water Resources Division.</p>

Table ES-2 Summary of Impacts and Mitigation Measures for the Proposed Project**Less Than Significant Impacts****Impacts That Are Insignificant**

(Impacts that must be addressed in a “statement of overriding consideration” if the Project is approved in accordance with Sections 15091 and 15093 of the State CEQA Guidelines.)

Impact #	Impact	Recommended Mitigation Measures
4.1 Air Quality		
AQ.4	Potential increased operations at the refinery would emit air-borne toxic materials.	None required.
4.2 Public Safety and Hazardous Materials		
PSHM.1	The Proposed Project could introduce risk to the public associated with accidental releases of hazardous materials from the SMF processing operations.	None required.
PSHM.2	The Proposed Project could introduce risk to the public associated with the transportation of SMF product along local and area roadways.	None required.
4.3 Noise and Vibration		
N.2	Traffic increases on area roadways near the Refinery could increase noise levels in the area.	None required.
4.4 Public Services		
PS.1	Increased throughput and operations at the Santa Maria Facility would produce increased wastewater.	None required beyond existing National Pollutant Discharge Elimination System permit requirements.
PS.2	Santa Maria throughput increase operations would generate increased solid wastes.	None required.

Table ES-2 Summary of Impacts and Mitigation Measures for the Proposed Project

Less Than Significant Impacts

Impacts That Are Insignificant

(Impacts that must be addressed in a “statement of overriding consideration” if the Project is approved in accordance with Sections 15091 and 15093 of the State CEQA Guidelines.)

Impact #	Impact	Recommended Mitigation Measures
PS.3	Impacts from increased electricity consumption at the Santa Maria Facility due to throughput increase operations.	None required.
PS.4	Increased fossil fuel consumption and production (diesel, gasoline, and natural gas) at the Santa Maria Facility could thereby decrease availability.	None required.
PS.5	Throughput increase at the site could impact fire protection and emergency response.	None required.
4.6 Transportation and Circulation		
TR.1	Traffic associated with the Proposed Project would increase traffic on local roads and the freeway.	TR-1 Within 30 days of permit approval, the applicant shall pay South County Area 2 Road Impact Fees to the Department of Public Works for the proposed .78 peak hour trip increase in accordance with the latest adopted fee schedule. In addition, after the Willow Road/Highway 101 interchange is completed, the applicant shall end the use of both their northbound and eastbound truck routes, as identified in this document, and shall use the Willow Road Interchange instead.
4.7 Water Resources		
WR.2	The Proposed Project increase in groundwater pumping of onsite wells may exceed sustained pumping capacities of existing wells and drawdown onsite wells and wells on neighboring properties.	None required.