EXECUTIVE SUMMARY

This document is a Final Environmental Impact Report (FEIR) prepared in accordance with the California Environmental Quality Act (CEQA) and CEQA Guidelines to assess potential significant environmental impacts of a Proposed Oil Drilling and Production Project in the City of Hermosa Beach. The City of Hermosa Beach is the public agency with principal responsibility for review of the Proposed Project and is therefore the lead agency for preparation of the FEIR.

The decision to approve or deny E&B's Oil Drilling and Production Project and the Amendments associated with Oil Development will be made by the voters in Hermosa Beach, in accordance with a Settlement Agreement entered into by the City, the Applicant and Macpherson Oil Company. Decisions on relocation and design of the City Maintenance Yard will not be part of the ballot measure and will be considered by the Hermosa Beach Planning Commission and City Council, as necessary.

PROJECT BACKGROUND

The Wilmington-Torrance Oil Field was discovered in the Los Angeles Basin at the turn of the century. In 1919, the State of California granted to the City of Hermosa Beach, in trust, the tidelands within the Torrance Oil Field. Oil drilling increased in the Los Angeles Basin into the 1930s. The resulting issues related to the oil drilling practices of that time period caused the voters in several cities to pass ordinances banning oil drilling. In the City of Hermosa Beach, where many oil wells had been drilled (including Stinnett Oil Well No. 1 at the City Maintenance Yard), a citywide oil and gas drilling prohibition was passed in 1932.

In 1984, Ballot Measures P and Q were passed by the voters in the City of Hermosa Beach, granting exceptions to the drilling ban that authorized oil development on two City-owned parcels, the City Maintenance Yard and the South School site. Subsequently in 1985, the City adopted the Oil Code within the City's Zoning Ordinance (a component of the City's Municipal Code) that established terms and conditions governing oil drilling and development in the City, including the requirement for a Conditional Use Permit (CUP) for oil and gas production on the City-owned parcels.

In 1986, the City selected the Macpherson Oil Company (Macpherson) to develop an oil production facility to recover oil, gas, and other hydrocarbons from the City Maintenance Yard. Also in 1986, Macpherson and the City entered into a lease that provided Macpherson with the right to conduct oil and gas operations within the City. The original 1986 Lease was amended many times, with a 1992 amended Lease between Macpherson and the City setting forth the agreement under which the development of the project was slated to proceed (Oil and Gas Lease No. 2). Under the provisions of the Lease, the City applied to the California State Lands Commission to allow drilling for oil, gas, and other hydrocarbons in the tidelands area and for approval of the Lease which occurred in 1993.

The City prepared an Environmental Impact Report (EIR) for the Macpherson project that was certified on May 9, 1990 along with the City's Statement of Overriding Considerations. On that same date, the City Council adopted amendments to the Zoning Ordinance to make oil drilling a permitted use with a CUP in the Light Manufacturing (M-1) zone and to allow an exception to the 35-foot height limit requirement in the M-1 zone for a temporary period during drilling operations.

In 1995, Hermosa Beach voters approved Proposition E, which restored the ban on oil drilling in the City. The applicability of Proposition E to Macpherson's project was subsequently challenged in court and in 1998, the City Council voted to stop the oil project based on safety concerns.

E&B's proposed Oil Drilling and Production Project is the result of a 2012 Settlement Agreement between the City, E&B Natural Resources Management Corporation (Applicant), and Macpherson Oil Company (for itself and Windward Associates) ("Macpherson") to resolve a lawsuit by Macpherson Oil Company against the City regarding oil drilling at the site of the existing City Maintenance Yard at 555 6th Street. Macpherson was seeking in excess of $750 million in damages against the City for breach of its lease. The Settlement Agreement provided for the dismissal of the lawsuit, limited the City's potential liability, and provided the Applicant (Macpherson sold its interests to E&B Natural Resources Management Corporation) with the potential opportunity to proceed with the oil drilling project conducted from an urban drill site.

DESCRIPTION OF PROPOSED PROJECT

E&B Natural Resources Management Corporation (E&B), the Applicant, is proposing the E&B Oil Drilling & Production Project (Proposed Oil Project) on a 1.3 acre site located in the City of Hermosa Beach (City). The site for the Proposed Oil Project (Project Site), as shown in Figure ES.1, would be located at 555 6th Street, bounded on the east by Valley Drive and on the south by 6th Street, approximately seven blocks east of the beach and the Pacific Ocean. Oil and gas pipelines constructed and used by the Project would extend from the Project Site to one of four potential valve box locations for the oil line and to a Southern California Gas (SGE) metering station for the gas line. The Project Site is owned by the City and is currently used as the City (Public Works) Maintenance Yard. The Applicant has leased the Project Site from the City for the implementation of the Proposed Oil Project.

The Proposed Project is composed of two parts: 1) the relocation of the City Maintenance Yard (Proposed City Maintenance Yard Project); and 2) the development of an oil and gas facility on the current City Maintenance Yard site. In order to clear the current City Maintenance Yard site for the construction of the proposed oil and gas facility, the City Maintenance Yard would be temporarily relocated. If it is determined that the production of oil and gas on the Project Site would be economically viable, construction of the permanent City Maintenance Yard would be completed.

Figure ES.1 Proposed Project Location

Source: Project Application, Amendments and Appendices

Proposed Oil Project

The Applicant proposes the development of an onshore drilling and production facility site that would utilize directional drilling of 34 wells (30 oil wells, four wells for water disposal/injection) to access the oil and gas reserves in the tidelands (pursuant to a grant from the State of California to the City) and in an onshore area known as the uplands. Both of these areas are located within the Torrance Oil Field within the jurisdiction of the City. In addition, the Proposed Project would result in the installation of offsite underground pipelines for the transportation of the processed crude oil and gas from the Project Site to purchasers, extending through the Cities of Redondo Beach and Torrance. The Applicant proposes a laydown site for supply staging/storage within the basement level of the industrial building at 601 Cypress Avenue during the construction phases. The Applicant also proposes to construct a parking lot at 636 Cypress Avenue for use by some of its construction employees/contractors on weekdays and by the public at other times.

The Proposed Oil Project would occur in the following four phases:

- Phase 1: Site Preparation, including relocation of the City Maintenance Yard to the temporary facility;
- Phase 2: Drilling and Testing of three oil wells and one water disposal/injection well;
- Phase 3: Final Design and Construction of both the oil and gas facility and the permanent City Maintenance Yard; and
- Phase 4: Development and Operations, including drilling of the remaining wells over 30 months and re-drill of wells periodically through the life of the Project.

The Applicant proposes a facility designed for a maximum capacity of 8,000 barrels per day (bpd) of crude oil and 2.5 million standard cubic feet per day (scfd) of produced gas at completion of the drilling stage of the Proposed Oil Project in Phase 4. Prior to the initiation of each phase of the Proposed Oil Project, it would be required that plans be submitted by the Applicant to the City and other permitting authorities for review and approval. These would include coastal development permits, oil and gas well permits, demolition plans, grading plans, utility and electrical plans, cement/foundation plans, landscaping plans, street and ROW improvement/modification plans, and construction plans, amongst others.

Proposed City Maintenance Yard Project

The City Maintenance Yard is proposed to be relocated to a temporary facility to be established on the rear (westerly) portion of the City Hall site (1315 Valley Drive) prior to the initial phase of the Proposed Oil Project so that the maintenance operations could continue when the existing City Maintenance Yard is demolished as part of Proposed Oil Project activities. The construction of the permanent City Maintenance Yard would be undertaken on the site now occupied by Hermosa Self-Storage (552 11th Place) after the Applicant completes the testing phase of the Proposed Oil Project in Phase 2. The permanent City Maintenance Yard and the oil and gas facility on the Project Site would be constructed at the same time.

The permanent Proposed City Maintenance Yard Project has two options: a Parking Option, which would add a net 97 parking spaces with a below grade parking garage, and a No Added Parking Option, which would maintain the same amount of parking that is currently available.

Timeframe

It is estimated that it will take approximately 3.25 years from the commencement of the Proposed Project until the commencement of Phase 4, when the permanent oil and gas facility would be operational. Phase 1 would occur for approximately six months. Prior to Phase 1 activities, the temporary City Maintenance Yard would be installed.

Phase 2 would occur for approximately 12 months. The drill rig would operate continuously for 24 hours per day, seven days per week, until the appropriate depth and bottom-hole location for each well has been reached. It is estimated it would take approximately 30 days per well for four wells including installation, rigging and demobilizing of the drill rig at each well site for a total of 120 days for drilling activities; the actual drilling process would occur 24 hours a day.

If it is determined that the production of oil and gas on the Project Site would be economically viable, the Applicant would begin Phase 3 of the Proposed Oil Project and Phase 3 would occur for a period of approximately 14 months. This would include time for site remediation on the Project Site.

Phase 4 would occur for a period of approximately 30 to 35 years, the first 30 months of which would include the drilling of the remaining wells and re-drill of wells periodically through the life of the project. A 35-year period allowing for drilling into the tidelands and uplands and production is provided for under the existing Lease (Oil and Gas Lease No. 2).

Table ES.1 shows the overall project timeline.

Table ES.1 Proposed Project Schedule Summary

Phase		Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Temporary City Yard																									
Oil Project Phase 1																									
Oil Project Phase 2	Drill																								
	Test																								
Permanent City Yard																									
Oil Project Phase 3*																									
Oil Project Phase 4*	Drill																								
	Operate														Continuously for 30+ years										
	Re-drills														Average 30 days/year, max 150 days/yr**										

Note: * If the Test phase is determined to be successful, Phases 3 and 4 would occur. For construction only. Does not include permitting timeframe, which would occur in advance of construction for each phase.

PROJECT OBJECTIVES

Pursuant to Section 15124(b) of the California Environmental Quality Act (CEQA) Guidelines, the description of the Proposed Project is to contain "a clearly written statement of objectives" that would aid the lead agency in developing a reasonable range of alternatives to evaluate in the EIR and would aid decision makers in preparing findings and, if necessary, a statement of overriding considerations. The City is the lead CEQA agency which is preparing the EIR, considering the EIR for certification and placing the Proposed Project on the ballot. Project approvals will be made by the electorate of the City of Hermosa Beach

As part of the Project Application, the Applicant provided its stated objectives for the Proposed Oil Project, which consist of the following:

- Develop the Proposed Oil Project consistent with the 1993 Conditional Use Permit and the March 2, 2012 Settlement Agreement, with the utilization of directional drilling techniques from the Project Site, which is the current City Maintenance Yard;
- Maximize oil and gas production from the Torrance Oil Field within the City's jurisdiction, thereby maximizing the economic benefits to the City;
- Provide an oil and gas development project on the Project Site that utilizes the latest technology and operational advancements related to safety and production efficiency in order to provide a project that would be safe and would meet the applicable environmental requirements;
- Conduct construction and drilling activities on the Project Site incorporating technological advancements, operational practices, and design features related to air quality, odors, noise, hazards, and water quality to minimize the potential impacts on the adjacent community and the environment;
- Provide landscaping, hardscape, signage, lighting, and other design features to minimize the visual effects of the Proposed Oil Project on the adjacent community; and
- Implement operational practices and incorporate design features to provide safe vehicular ingress and egress during temporary construction activities and the ongoing operation of the Proposed Oil Project.

Pursuant to the March 2, 2012 Settlement Agreement between the City of Hermosa Beach, E&B, and Macpherson Oil Co., the City's primary objective is to comply with the California Environmental Quality Act and place on the ballot a measure allowing the City of Hermosa Beach electorate to decide whether or not to approve the Applicant's Proposed Oil Project and a Development Agreement to vest the Project so that, if approved, the Project cannot later be invalidated by a vote of the people.

In the event that voters approve the Proposed Oil Project, the City would need to relocate the City Maintenance Yard. Under those conditions, the City's objectives for relocation of the City Maintenance Yard would be to:

- Provide City Maintenance Yard facilities that support provision of high-quality City services in an integrated and cost-efficient manner;
- Consolidate City facilities and functions for maximum efficiency and flexibility;
- Minimize disruption of City functions during relocation of the City Maintenance Yard;

- Ensure the relocated City Maintenance Yard is compatible with surrounding uses; and
- Ensure there is no net loss of public and employee parking spaces as a result of both the Proposed Oil Project and the relocation of the City Maintenance Yard consistent with the Preferential Parking Program approved by the Coastal Commission.

PROPOSED PROJECT ENVIRONMENTAL IMPACTS AND MITIGATION

The Proposed Oil Project would generate potentially significant and unavoidable environmental impacts in the following areas:

- Aesthetics
- Air Quality
- Biology
- Hydrology
- Land Use
- Noise
- Recreation
- Safety and Risk of Upset

Each of these is briefly summarized below and is shown in Table ES.2.

Aesthetics

An 87-foot electric drill rig with three-sided acoustical shield would be installed at the Project Site at the beginning of Phase 2 for about 4 months, then during Phase 4 for 30 months, then periodically thereafter for re-drills for up to an maximum average of 30 days per year or a maximum of 150 days once every 5 years. The rig would introduce, primarily into the foreground and middleground environments, a visually dominant vertical feature which is distinct in form, mass, height, material and character from structures in the viewshed of locations which are considered to have high sensitivity. The effects of light, shade and shadow would produce contrasting geometric vertical planes and would project into a typically uniform (or otherwise naturally varied) sky backdrop.

Night views of the open (illuminated) side of the drill rig, with the pattern and scale of this illuminated feature, would be out of character with existing nighttime views. Similar to day time impacts, this vertical feature would project above the horizontal plane of the existing illuminated environment and would become a focal element. The duration of exposure, number of sensitive viewers, and nature of the visual change would result in impacts that would be significant.

During periods of Phase 4, the 110-foot workover rig could be present on site for up to 90 days per year. The open truss structure of the workover drill rig introduces a focal element of industrial character into viewsheds of primarily residential and light industrial character. The workover rig would not operate at night (after 6 pm).

Table ES.2 Proposed Oil Project - Significant Unavoidable Impacts Summary

Impact		Significant Unavoidable Impact?	
		Construction, Drilling Re-drilling	Operations
Aesthetics:	views of the drilling/workover rig	Yes	Yes/No*
	night lighting of the rig	Yes	No
Air Quality: odors		Yes	Yes
Biology: oil spills into the marine environment		Yes	Yes
Cultural		No	No
Energy		No	No
Environmental Justice		No	No
Fire Protection and Emergency Response		No	No
Geology		No	No
Hydrology: oil spills into the marine environment		Yes	Yes
Land use: incompatibility to adjacent uses		Yes	Yes
Noise:	noise impacts during drilling	No	No
	noise impacts during construction	Yes	No
Public Services		No	No
Recreation: oil spill impacts on recreational areas		Yes	Yes
Safety and Risk of Upset: risks from drilling		Yes	No
Transportation		No	No
Number of Significant and Unavoidable Impacts		**9**	**6/5***

Notes: a Yes with shading = significant impact that cannot be mitigated to less than significant. Impacts classified as less than significant or less than significant with mitigation are discussed within the main EIR document. *During Workovers significant unavoidable impacts would occur for aesthetics up to 90 days per year.

Mitigation measures include the selection of materials and lighting to minimize glare and reflectivity and the installation of a permanent 32-foot wall. Some of the impacts would be mitigable, but impacts would remain significant and unavoidable.

Impacts when the drill rig or workover rig are not present would be less than significant with mitigation.

Air Quality

Due to the close proximity of the site to neighbors, businesses and the public (within 100 feet of businesses, 160 feet of residences, 55 feet of the Greenbelt and 20 feet of the public sidewalks), numerous scenarios could cause odors offsite. These could include various maintenance activities such as line, tank or vessel openings; workovers removing well hole equipment (pumps or tubing), thereby exposing the well equipment to the atmosphere; minor accident scenarios; and drilling activities including muds handling that could cause short-duration, intermittent odors, or pump leaks. Because odor thresholds for certain compounds found in the oil and gas industry are very low, in the parts per billion range, release of these compounds can cause odor impacts offsite. Therefore, due to the close proximity of neighbors, odor impacts could impact surrounding areas and would be a significant impact.

Mitigation measures proposed to reduce the frequency of odor events include the implementation of systems that direct odor-causing releases to flare-type systems, the implementation of systems to notify operators when releases could or do occur, and the use of odor masking materials. Increased vigilance associated with SCAQMD Rule 1173 (related to controlling "leaker" components) can also reduce emissions from fugitive components, but impacts would remain significant and unavoidable.

Impacts related to construction and operational emissions, health risk and GHG would produce significant impacts but would be less than significant with mitigation.

Biology

Oil spills and ruptures from the installed pipelines could result due to geologic hazards, mechanical failure, structural failure, corrosion, or human error during operations. A spill of crude oil could spread through storm drains to the beach and potentially to the numerous sensitive habitats and species present in the Pacific Ocean. Oil spills and cleanup activities would potentially result in impacts to biological resources. Direct impacts on wildlife from oil spills include physical contact with the oil, ingestion of oil, and loss of food and critical nesting and foraging habitats.

Implementing the proposed mitigation measures, including developing emergency response plans with specific criteria, implementing infrastructure preventative maintenance, and conducting structural integrity tests and routine inspections, would reduce the likelihood and severity of potential oil spills and exposure impacts to sensitive biological resources, but impacts would remain significant and unavoidable.

The fully enclosed drain systems proposed by the Applicant would retain any spills at the Project Site on-site, therefore, potential spills at the Project Site would not produce a significant impact.

Hydrology

As described under Biology, a release from the pipeline between the Project Site and Prospect Avenue, near the corner of Herondo Street and Valley Drive, could produce a worst-case oil spill of 16,799 gallons that could drain directly into subsurface soils and/or to the ocean through storm drains. Mitigation measures, in addition to those listed for Biology, include spill training, the required spill control equipment, the installation of a check valve into the crude oil pipeline at Herondo Street and the installation of an oil separator in storm drain systems of Herondo Street. These mitigation measures would reduce the frequency or severity of an oil spill reaching the ocean, but impacts would remain significant and unavoidable.

Land Use

The drilling, construction, and potential future operations would be in close proximity to land uses zoned as open space (parks, baseball fields and the Greenbelt) and residential. Proposed Oil Project activities during all phases may generate significant noise, odor and visual impacts that

would be incompatible with these adjacent land uses. Mitigation measures are proposed to reduce these impacts in the respective issue areas, but impacts would remain significant and unavoidable.

Noise

The predicted noise impact of demolition and construction activities in Phase 1 and 3 of the Proposed Oil Project is significant at many of the neighboring sensitive uses. The most significant impacts occur during the construction phase, when Project-related noise is expected to result in an increase in daytime noise levels over existing noise levels at the homes to the northwest and west of the Project Site.

Predicted noise impacts during the Phase 2 and Phase 4 drilling stages and during Phase 4 re-drills are significant along the entire perimeter of the Project Site. Mitigation measures include increasing the height of walls (where allowable by code), adding additional noise protection, and essentially not allowing drilling late at night, would reduce impacts to less than significant with mitigation.

Noise levels when drilling is not occurring during Phase 2 and 4 would be less than significant. During re-drills, noise levels would be the same as those during drilling.

Noise levels during the construction of the Proposed City Maintenance Yard, both the temporary and permanent sites, would also exceed the noise thresholds. Noise mitigation includes the use of noise barriers, but impacts would remain significant and unavoidable.

Noise levels during the operations of the Proposed City Maintenance Yard would be less than significant with mitigation.

Recreation

During a rain event, a potential oil spill from the oil pipeline along Valley Drive or at the intersection of Valley Drive and Herondo Street could drain directly into storm drains and flow to the ocean. Even without rains, the capacity of the storm drains is such that an oil spill could still reach the ocean, depending on the arrangement of sand at the mouth of the ocean discharge. An oil spill along the coastline could affect beach areas, leading to beach closures and boating restrictions in contaminated areas during and potentially after cleanup. Public perception of the recreational quality of the areas beaches (Hermosa, Manhattan, Redondo, etc) could also be affected, causing a reduction in beach recreational activities for a substantial period of time.

Mitigation measures previously discussed under Hydrology and Biology would further reduce the frequency and severity of an oil spill reaching the ocean, but impacts would remain significant and unavoidable.

Safety and Risk of Blowout

The potential for a blowout resulting from drilling into potentially pressurized areas within drilled reservoirs presents a significant offsite risk. Although it is not known at this time which reservoir areas, if any, are pressurized to the extent that pressures could produce a blowout, historical data from drilling in Redondo Beach indicates that such potential does exist. Pressurization once the wells are placed into production (after drilling) would last for only a short period of time (estimated at 30 days based on the Redondo Beach wells), but could still result in a blowout during drilling. The Applicant indicated in their Application that wells would be pressurized for a short period after drilling.

Mitigation includes the installation of back-flow prevent devices on the gas pipeline, minimization of the ability of equipment to ignite a spill of crude oil at the Project Site, and timely and thorough audits. Impacts would remain significant and unavoidable.

Impacts when drilling is not occurring would be less than significant with mitigation.

ALTERNATIVES TO PROPOSED PROJECT

CEQA requires that an EIR identify feasible alternatives that will avoid or substantially lessen the significant effects of the Project. In accordance with State CEQA Guidelines Section 15126.6(d) this Environmental Impact Report (EIR) provides sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project and the other alternatives. It should be noted that assumptions made regarding the alternatives' descriptions could differ from actual proposals, and the alternatives analyses are not presented to a project-level of detail.

The alternatives considered for evaluation in this EIR include:

- No Project Alternative;
- Drilling from the AES Site;
- Oil Development with Reduced Wells;
- Oil Development with Reduced Timeframe;
- Use of Existing Pipelines; and
- Phase 1 Permanent Yard Construction.

Each of these is summarized below.

No Project Alternative

Under the No Project Alternative, the Proposed Project would not be built, and the City Maintenance Yard would remain in its existing location without development of a new maintenance yard. There would also be no removal of contaminated soil and site cleanup.

Therefore, impacts associated with the Proposed Project construction and development would not occur, and the area would remain in its current condition. No impacts from the Proposed Project would occur.

Drilling from the AES Site

Under this alternative, the drilling and processing facilities would be located at the AES site located in north-western Redondo Beach on the site of the existing power generating facility. The facility could potentially utilize existing pipelines, or new pipelines could be installed, similarly to the Proposed Project. Pipeline connections along Valley Drive would no longer need to be installed.

Reduced Wells Alternative

Under this alternative, fewer wells would be drilled, and less crude oil and gas would be produced. Drilling would be limited to approximately 1 year only.

Reduced Timeframe Alternative

Under this alternative, the same number of wells would be drilled and the same rate of crude oil and gas would be produced as under the Proposed Oil Project, but only over an allowed 10 year timeframe. At the conclusion of the 10 year period, all equipment would be removed from the site, and the site would be restored.

Existing Pipelines Alternative

Under this alternative, existing pipelines along 190th Street would be utilized instead of installing new pipelines. Pipelines would still need to be constructed along Valley Drive. Construction and operations at the Project Site would remain the same as under the Proposed Project.

Phase 1 City Maintenance Yard Construction

Under this alternative, the permanent Proposed City Maintenance Yard would be constructed prior to Phase 1 at the location currently in use by the Beach Cities Self Storage facility. The temporary maintenance yard located adjacent to the Beach Cities Self Storage facility and City Hall would not be constructed.

COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES

Under the No Project Alternative, no development of the oil and gas resources would occur. There would be no drilling and no construction at the Project Site or along Pipeline routes. The City Maintenance Yard would not be relocated and rebuilt. None of the impacts associated with

the Proposed Project would occur. No new impacts would occur under the No Project Alternative. Tables ES.2 and ES.3 summarize the comparison.

The AES Site Alternative has environmental advantages over the Proposed Project primarily because it would be farther from residential and commercial/light industrial locations. This reduces the severity of impact to aesthetics, air quality and safety and risk of upset. This alternative would eliminate the following significant and unavoidable impacts:

- Aesthetics: views of the drilling rig;
- Aesthetics: glare from the drilling rig and operational facilities; and
- Safety and Risk of Upset: drilling releases and impacts from drilling releases.

In addition, the severity of some Class I impacts would be reduced, including those to air quality, hydrology, land use and recreation.

The Reduced Wells Alternative has environmental advantages over the Proposed Project primarily because it would reduce the duration of some impacts. This would reduce the severity of impacts in the areas of aesthetics, air quality and odors, noise and safety and risk of upset due to the reduced amount of time that drilling would occur. This alternative would not eliminate any significant and unavoidable Class I impacts.

The Reduced Timeframe Alternative has environmental advantages over the Proposed Project primarily because it would reduce the duration of some impacts. This would reduce the severity of impact in the areas of aesthetics, air quality and odors, noise and safety and risk of upset due to the reduced amount of time that impacts would occur. This alternative would not eliminate any significant and unavoidable Class I impacts.

The Existing Pipelines Alternative has environmental advantages over the Proposed Project because it would reduce the need to construct pipelines along area streets or within the SCE ROW. This would reduce traffic and circulation impacts and would reduce air emissions resulting from construction activities. However, neither of these impacts is significant and unavoidable, and this alternative would not eliminate any significant and unavoidable impacts. This alternative would, however, increase the oil spill frequency along the pipeline from Valley Drive eastward, where it would tie into the existing pipeline, because older pipelines have a higher failure rate. This would increase the severity of impact to hydrology and biology due to oil spills, which is currently a significant and unavoidable Class I impact under the Proposed Project.

The Phase 1 City Maintenance Yard Construction Alternative has advantages over the Proposed Project, as it would reduce the need to construct a temporary City Maintenance Yard. This would reduce severity of impacts to air quality, transportation and traffic, cultural resources, fire protection, hydrology and water impacts during the temporary site construction activities. However, none of these impacts are significant and unavoidable. The construction of a permanent City Maintenance Yard before Phase 1 would decrease the severity of construction noise impacts by decreasing the duration of construction activities around the Beach Cities Self Storage site and City Hall by 9 months. These noise impacts are significant and unavoidable

Class I impacts. It would also eliminate the operational noise impacts on City Hall and residences to the west of the temporary City Maintenance Yard site.

Table ES.3 Proposed Project Versus Alternatives - Significant Unavoidable Impacts Only

Impact	Proposed Project		No Project Alternative	AES Site Alternative		Reduced Wells Alternative		Reduced Timing Alternative	
	Construction, Drilling Re-drilling	Operations		Construction, Drilling Re-drilling	Operations	Construction, Drilling Re-drilling	Operations	Construction, Drilling Re-drilling	Operations
1. Aesthetics: views of the drilling/workover rig	Y	Y/N*			Y/N*	Y↓	Y/N*	Y↓	Y/N*
2. Aesthetics: night lighting of the rig	Y					Y↓		Y↓	
3. Air Quality: odors	Y	Y		Y↓	Y↓	Y↓	Y	Y↓	Y↓
4. Biology: oil spills into the marine environment	Y	Y		Y↓	Y↓	Y↓	Y↓	Y↓	Y↓
5. Hydrology: oil spills into the environment	Y	Y		Y↓	Y↓	Y↓	Y↓	Y↓	Y↓
6. Land use: incompatibility to adjacent uses	Y	Y		Y↓	Y↓	Y↓	Y	Y↓	Y↓
7. Noise: noise impacts during construction	Y			Y↓		Y		Y	
8. Recreation: spill impacts on recreational areas	Y	Y		Y↓	Y↓	Y↓	Y↓	Y↓	Y↓
9. Safety and Risk of Upset: risks from drilling	Y					Y↓		Y↓	
Number of Significant Impacts	**9**	**6/5***	**Zero**	**6**	**6/5*↓**	**9↓**	**6/5*↓**	**9↓**	**6/5*↓**

Shaded = significant impact that cannot be mitigated to less than significant. ↓ indicates significant and unavoidable but less severity, ↑ indicates significant and unavoidable but greater severity. *During Workovers significant unavoidable impacts would occur for aesthetics up to 90 days per year.

Table ES.4 Proposed Project Versus Project Component Alternatives - Significant Unavoidable Impacts Only

Impact	Proposed Project		City Maintenance Yard Phase 1		Existing Pipeline	
	Construction, Drilling Re-drilling	Operations	Construction, Drilling Re-drilling	Operations	Construction, Drilling Re-drilling	Operations
1. Aesthetics: views of the drilling/workover rig	Y	Y/N*	Y	Y/N*	Y	Y/N*
2. Aesthetics: night lighting of the rig	Y		Y		Y	
3. Air Quality: odors	Y	Y	Y	Y	Y	Y
4. Biology: oil spills into the marine environment	Y	Y	Y	Y	Y↑	Y↑
5. Hydrology: oil spills into the environment	Y	Y	Y	Y	Y↑	Y↑
6. Land use: incompatibility to adjacent uses	Y	Y	Y	Y	Y	Y
7. Noise: noise impacts during construction	Y		Y↓		Y↓	
8. Recreation: spill impacts on recreational areas	Y	Y	Y	Y	Y↑	Y↑
9. Risk of Upset: risks from drilling	Y		Y		Y	
Number of Significant Impacts	**9**	**6/5***	**9↓**	**6/5***	**9↑**	**6/5*↑**

Shaded = significant impact that cannot be mitigated to less than significant. ↓ indicates significant and unavoidable but less severity, ↑ indicates significant and unavoidable but greater severity. *During Workovers significant unavoidable impacts would occur for aesthetics up to 90 days per year..

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The Proposed Project has been designed by the Applicant in an effort to minimize the number and significance of impacts and still meet the objectives of the Project. Alternatives include options for an alternative site, operations, pipeline, and phasing, allowing for a selection of different Project components and, consequently, a different mix of impacts.

The No Project Alternative would produce the fewest number of significant impacts and would therefore be environmentally superior. As required by CEQA Guidelines Section 15126.6 [e][2], if the No Project Alternative is environmentally superior, then the EIR shall designate the next best alternative as the Environmentally Superior Alternative. The AES Site Alternative reduces the greatest number of the Proposed Project's significant and unavoidable impacts to less than significant with mitigation. Therefore, the AES Site Alternative is the Environmentally Superior Alternative. Use of the AES site, however, presents a number of potential issues related to City of Redondo Beach Charter Article 27 and would most likely require a vote of the people of Redondo Beach and a re-zoning in order to move forward. However, these barriers are similar to those under the Proposed Project and are therefore not considered to pose greater challenges where the proponent cannot reasonably acquire, control or otherwise have access to the alternative site.

The AES Site Alternative would achieve most of the Applicant's objectives in regard to maximizing oil and gas production, utilizing the latest technologies and technological advances, minimizing visual effects and providing safe vehicular ingress and egress. As the 1993 CUP and the Settlement Agreement are both associated with the specific Project Site within the City of Hermosa Beach Maintenance Yard, the objective to develop a project that is consistent with the CUP and Settlement Agreement would not be specifically met under this alternative.

The Phase 1 City Maintenance Yard Construction Alternative is advantageous over the use of a temporary City Maintenance Yard, primarily because it would reduce the significance of impacts to noise and air quality. The elimination of a temporary City Maintenance Yard would eliminate a potentially significant and unavoidable impact to noise. Therefore, the Phase 1 City Maintenance Yard construction alternative would be environmentally superior over the Proposed Project.

Under the AES Site Alternative, the City Maintenance Yard would not need to be moved, as the drilling site would be located at the AES site.

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. For this Project, controversy is due to the sensitive nature of coastal resources, the potential for safety impacts to the local population, and the fact that oil and gas development in the City does not currently exist.

The Proposed Project would introduce oil drilling and oil and gas production and transportation to an area that does not currently have this type of development. Some people in local communities do not want the Project to move forward, as exemplified by organizations opposing the Project such as *Stop Hermosa Beach Oil, Heal the Bay,* and other environmental groups. The Project has generated a high level of public interest and controversy (see Appendix H, Notice of Preparation and Comments). Areas of controversy highlighted in comments on the Notice of Preparation include:

- The development of oil and gas in the City is not allowed by the current land use plans and zoning ordinance;
- Safety and risk of upset and the impacts on nearby residences and businesses;
- Noise, odor, and air quality issues from oil and gas development proximate to residential areas;
- Aesthetics and views of the drilling rig;
- Geology and subsidence;
- Climate change and the use of fossil fuels;
- Oil spills and the effects on biology;
- Noise from the Project;
- Settlement agreement costs;
- Potential impacts to coastal and recreational resources; and

- Potential impacts to tourism as a main economic resource to the City.

Table Summary of Impacts and Mitigation Measures for the Proposed Project and Alternatives

Table ES-5 Summary of Environmental Impacts for the Proposed Project

Impact Class I = Significant adverse impact that remains significant after mitigation.
II = Significant adverse impact that can be eliminated or reduced below an issue's significance criteria.
III = Adverse impact that does not meet or exceed an issue's significance criteria.
IV = Beneficial impact.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
Section 4.1 Aesthetics and Visual Resources			
AE.1	The Proposed Oil Project during the drilling phases (drilling or re-drilling) or with a workover rig present has the potential to cause a substantial degradation to the character and quality of the existing site and its surroundings, including designated scenic highways and vistas.	I	AE-1a Material choice of electrical drill rig acoustical shroud shall be of neutral sky color which is selected for its ability to reduce visual impact, in coordination with and approval by the City Community Development Director. AE-1b The sound attenuation wall shall be replaced by a permanent wall with design features installed at the end of Phase 3. The intent is to provide stability of views and opportunities for positive visual elements that partially mitigate the visual presence of the walls from the Hermosa Greenbelt and other sensitive views in the immediate Project vicinity. The permanent wall shall be allowed to be provided in lieu of the 16-foot block wall. Landscape design shall be allowed to be adjusted to respond to façade articulations, though quantities and densities shall be maintained. The permanent wall shall be designed with architectural features in coordination with and approval of the City Community Development Director.
AE.2	The Proposed Oil Project when no rig is present has the potential to cause a substantial degradation to the character and quality of the existing site and its surroundings.	II	AE-2a Design of the sound attenuation wall exterior façade shall be required to include design articulations that are complementary to the character, scale, and quality of the surrounding environment. The intent is to mitigate the visual impact of the wall from the Hermosa Greenbelt and other sensitive views in the immediate project vicinity. The following measures of success shall be met: 1) Articulations of façade decrease scale and proportion of mass into smaller increments that more closely resemble those of adjacent buildings; and 2) Colors, detailing and material use are varied to a level consistent with existing visual environment. AE-2b Planting area growth medium shall be capable of supporting the long term health and growth of the landscape design. Requirements shall be: 1) Demonstrated free of debris and construction waste (asphalt, concrete, etc) to a minimum depth of 3 feet within all planted areas. Wall footings

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
			shall be designed to limit encroachment into planted areas; 2) Soils analysis report shall be conducted by a certified soil scientist. Report shall include recommendations to meet the intent of this mitigation measure; and 3) If soils are determined to be unsuitable to support plant growth, they shall be amended or removed/replaced to meet requirements of soils analysis for plant pallette selected. AE-2c Vine plantings where used shall meet the following conditions: 1) be self-attaching or structure supported; 2) have demonstrated success in the City; 3) be planted at a density to achieve full coverage at maturity; 4) be planted at a minimum 5 gallon size; and 5) be required on the visible portion of the west wall at the temporary parking facility. AE-2d All trees shall be required to be a minimum of 20' in height at installation and meet the American Standard for Nursery Stock (ANSI Z60.1-2004). If a tree species alternate is proposed, it shall be required to be an equal to the species proposed in the Project Application in the following characteristics: 1) Dense evergreen with similar form and habit; 2) Probability of achieving a minimum of 35-40 feet at maturity; and 3) Comply with Municipal Code Chapter 8.60 and 8.56.
AE.3	The Pipeline project has the potential to cause a substantial degradation to the character and quality of the existing site and its surroundings.	II	AE-3a Pipeline alignments and valve box locations shall be designed to avoid the removal or modification of trees, hedgerows, and/or large shrubs to the extent feasible. AE-3b If landscaped areas, streetscapes, plazas and/or parklands are required to be temporarily disturbed, they shall be restored to their previous condition following completion of construction. Avoidance of disturbance shall be the preferred option, especially where landscape elements act to screen views (hedges, large shrubs, etc) or where they act as community gateways (Redondo Beach at Hwy-1). AE-3c Block color/s selection and pattern (if applicable) shall be complementary to adjacent buildings. A buffer of shrubs and vines shall be planted to match the existing character and quality of the adjacent properties.
AE.4	The Proposed Oil Project with the drill rig has the potential to create a new source of light or glare that would adversely affect nighttime views in the area.	I	AE-4a Final acoustical cover material selection shall be required to be fully opaque. Fully opaque shall be defined as completely blocking all light from passing through its surface. The exterior finish shall be low reflectivity and not capable of producing glare. AE-4b Colors and finishes of equipment and surfaces within the soundwall (including the interior face of the soundwall, the interior face of the drill rig acoustical cover, and the physical structure of the drill rig within the acoustical shield) shall have a reflectivity rating of 0.3 or lower. AE-4c All proposed site lighting fixtures associated with the drilling activities shall demonstrate compliance with the mandatory B-U-G ratings for area lighting as required by CalGreen mandatory measures in the 7/1/2012 supplement. The Lighting Zone used to demonstrate compliance shall be LZ-2.
AE.5	The Proposed Oil Project area lighting has the potential to	II	AE-5a Colors and finishes of surfaces within the facility, including the interior face of the soundwall, ground materials (darker or asphalt), wall paints and equipment paints to the extent feasible shall have a low reflectivity rating of 0.3 or lower to reduce the potential for glow.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
	create a new source of light or glare that would adversely affect day or nighttime views in the area.		AE-5b Final sound wall material/s selection/s (including gates) shall be fully opaque. Fully opaque shall be defined as completely blocking all light from passing through its surface. The exterior finish shall be low reflectivity and not capable of producing glare. AE-5c All proposed site lighting, including fixtures outside the wall, shall be fully shielded. Fully shielded shall be defined as: A luminaire constructed and installed in such a manner that all light emitted by the luminaire, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal plane through the luminaire's lowest light-emitting part (IES/IDA, 2011). AE-5d The LZ-2 parameters of the Model Lighting Ordinance (IES/IDA, 2011) shall be used to demonstrate that maximum vertical illuminance for the site are not exceeded. For site lighting inside the wall, Table B allowances shall be used. Lighting outside the wall at site entrances shall not exceed that of existing street lighting, which produces a maximum of 1 footcandle. For the purposes of measuring vertical illumination, the plane of the property line shall be extended to an elevation equal to the height of the electric drilling rig. AE-5e All proposed site lighting fixtures shall demonstrate compliance with the mandatory B-U-G ratings for area lighting as required by CalGreen mandatory measures in the 7/1/2012 supplement. The Lighting Zone used to demonstrate compliance shall be LZ-2.
AE.6	The Pipeline Project has the potential to create a new source of light or glare that would adversely affect views in the area.	II	AE-6a Any proposed metering station site lighting shall be fully shielded and shall incorporate permanent features (shields, hoods, etc.) shall incorporate permanent features which prevent light spillage beyond the property line. AE-6b Light levels and quantities of fixtures shall not exceed that which is needed for security and safety.
AE.7	The Proposed City Maintenance Yard Project has the potential to cause a substantial degradation to the character and quality of the existing site and its surroundings. *(Applicable to the Proposed City Maintenance Yard*	II	AE-7a The materials, colors and finishes at the Proposed City Maintenance Yard Project shall be of comparable quality, character and level of architectural detail to those of adjacent structures. AE-7b The landscape design at the Proposed City Maintenance Yard Project shall be of comparable quality and character to that of the surrounding visual environment. Incorporation of evergreen trees, shrubs, groundcovers and vines are recommended for their ability to provide additional screening capacity of operations areas. AE-7c The operations yard area of the proposed City Maintenance Yard Project shall be required to have a 6-foot minimum screen wall around its perimeter (where building masses do not otherwise define the perimeter). Additional vertical screening at Asset Disposal and Washdown/Dump areas shall be employed through either increased screen wall height and/or landscape design.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
	Project)		
AE.8	The Proposed Maintenance Yard Project has the potential to create a new source of light or glare that would adversely affect views in the area. *(Applicable to the Proposed City Maintenance Yard Project)*	II	AE-8a All proposed site lighting shall be fully shielded and shall incorporate permanent features which prevent light spillage beyond the property line. AE-8b Light levels and quantities of fixtures at the Proposed City Maintenance Yard Project shall not exceed that which is needed for security. AE-8c All proposed site lighting fixtures shall demonstrate compliance with the mandatory B-U-G ratings for area lighting as required by CalGreen mandatory measures in the 7/1/2012 supplement. The Lighting Zone used to demonstrate compliance shall be LZ-2.
Section 4.2 Air Quality and GHG's			
AQ.1	Construction activities would generate NOx and PM emissions that exceed South Coast Air Quality Management District thresholds. *(Also applicable to the Proposed City Maintenance Yard Project)*	II	AQ-1a The Applicant shall submit and implement a Fugitive Dust Control Plan that includes SCAQMD mitigations for fugitive dust mitigation, according to Rule 403, and SCAQMD CEQA Guidelines. Fugitive dust mitigation measures in the plan shall include the following (this mitigation is applicable to both the Proposed Oil Project and the Proposed City Maintenance Yard Project): - Apply water every 3 hours to disturbed areas and unpaved roads within a construction site (61 percent reduction). - Require minimum soil moisture of 12 percent for earthmoving, by using a moveable sprinkler system or water truck. Moisture content can be verified by lab sample or moisture probe (69 percent reduction). - Limit onsite vehicle speeds on unpaved roads to 15 mph and posting of speed limits. - All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches (91 percent reduction). - Install gravel bed trackout apron (3 inches deep, 25 feet long, 12 feet wide per lane, and edged by rock berm or row of stakes) to reduce mud and dirt trackout from unpaved truck exit routes (46 to 80 percent reduction). - Water storage piles by hand or apply cover when wind events are declared, according to SCAQMD Rule 403 when instantaneous wind speeds exceed 25 miles per hour (90 percent reduction). - Appoint a construction relations officer to act as a community liaison concerning onsite construction issues, such as dust generation. AQ-1b The Applicant shall implement a NOx reduction program including the following, or equivalent, measures to the satisfaction of the SCAQMD (this mitigation is applicable to both the Proposed Oil Project and the Proposed City Maintenance Yard Project):

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
			- All off-road construction equipment shall be tuned and maintained according to manufacturers' specifications. - Any temporary electric power shall be obtained from the electrical grid, rather than portable diesel or gasoline generators. - All off-road diesel construction equipment with greater than 100-horsepower engines shall meet Tier 3 NOx requirements. - Limit onsite truck idling to less than 5 minutes. - A copy of the certified tier specification, best available control technology documentation, or the CARB or SCAQMD operating permit for each piece of equipment shall be provided to the City and SCAQMD when each piece of equipment is mobilized.
AQ.2	Construction activities would generate emissions from contaminated soil excavation.	III	None
AQ.3	Regional Impacts: Operational activities would generate emissions that exceed South Coast Air Quality Management District VOC and NOx regional thresholds.	II	AQ-3a The Applicant shall limit flaring during Phase 4 to a total of 5 hours per day at the full flaring capacity (or to an equivalent volume of flared gas) during all emergency or routine flaring events in order to ensure that NOx emissions are reduced below the thresholds. Lower NOx emission combustors or other equivalent measures can also be used to satisfy the requirement. AQ-3b The Applicant shall implement methods to reduce the off-gassing of muds by at least 90 percent through the installation of fully enclosed mud pit areas with vapor control (either through carbon canisters or vapor recovery) and/or the use of mud degassing units routed to vapor control systems. The Applicant shall monitor the muds vapor immediately above the muds exit point from the wellbore and at other areas above the mud pits where muds may be exposed to the atmosphere in order to ensure that hydrocarbon vapors are captured at the minimum rate of 90 percent.
AQ.4	Local Impacts: Operational activities would generate PM emissions that exceed South Coast Air Quality Management District local thresholds.	II	AQ-4 The Applicant shall limit the microturbine PM emissions to 0.0035 lbs/mmbtu, or an equivalent reduction in the number and/or size of the microturbines, in order to reduce emissions to below the localized thresholds. The City shall be responsible for ensuring that the applicant will be subject to permit conditions that limit emissions from the set of microturbines, not just individual permit units.
AQ.5	Operational activities could	I	AQ-5a The Applicant shall at all times have a gas buster and SCAQMD-approved portable flare at the site and connected for immediate use to circulate out and combust any gas encountered during

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
	generate emissions that produce offsite odor impacts.		drilling. The flare shall be capable of recording the volume of gas that is flared. The operator shall report any flared gas from drilling to the Hermosa Beach Fire Chief and the SCAQMD. AQ-5b The Applicant shall install a compressor seal vent collection system. In the event of a seal leak, vapors shall be collected and sent to the vapor recovery system or flare for destruction. AQ-5c The Applicant shall develop and implement an Odor Minimization Plan, submitted to and approved by the City and the SCAQMD. The Odor Minimization Plan shall address reducing the frequency from potential sources of odors from all site equipment, including wells and drilling operations, temporary operations such as truck loading, and measures to reduce or eliminate these odors (e.g., containment, design modifications, carbon canisters). The Plan shall address issues such as facility information, buffer zones, signs with contact information, logs of odor complaints, the protocol for handling odor complaints and odor release investigations and methods instituted to prevent a re-occurrence. The Plan shall require that all odor complaints and issues be immediately communicated to the City and that the City shall have the authority to implement and enforce contingency measures to ensure that any nuisance odors from the facility are eliminated. AQ-5d The Applicant shall develop and implement an Air Monitoring Plan. The Plan shall provide for the monitoring of total hydrocarbon vapors and hydrogen sulfide and total hydrocarbon vapors at all perimeter locations of the facility as well as at strategic locations near processing equipment. At all times during operations, drilling, redrilling and workover operations, the Operator shall maintain monitoring equipment that shall monitor and digitally record the levels of hydrogen sulfide and total hydrocarbon vapors. Such monitors shall provide automatic alarms that are audible and visible to the Operator of the drilling equipment, and gas plant, and shall be triggered by the detection of hydrogen sulfide or total hydrocarbon vapors. Alarm points shall be set at a maximum of 5 and 10 ppm H_2S and 500 and 1,000 ppm hydrocarbons, with the higher level requiring shut-down of drilling or plant operations and the lower level requiring notification to appropriate agencies, including the Hermosa Beach Fire Department and SCAQMD. A meteorological station to monitor wind speed and direction under the guidance and specification of the SCAQMD shall be installed at the site. The Air Monitoring Plan shall be reviewed and approved by the City and the SCAQMD. AQ-5e The Applicant shall use an odor suppressant spray system on the mud shaker tables, and shall install carbon capture canisters on all tanks (permanent and portable) that are not equipped with vapor recovery, containing potentially odiferous materials (for example; the mud baker-type tanks) for all drilling operations so that no odor can be detected at the closest receptor. AQ-5f The fugitive component leak detection program under Rule 1173 shall utilize a Leak Detection and Reporting (LDAR) level of monthly detections with an action level of 100ppm, the installation of bellows valves where applicable (valves 2 inches or smaller) and the use of IR cameras or equivalent during monthly detections to ensure that leaking components are minimized at the facility.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
AQ.6	Potential operations and drilling at the Project Site would increase greenhouse gas emissions.	II	AQ-6 The Applicant shall provide credits for all GHG emissions generated above the threshold of 10,000 MTCO2e per year. A GHG Reporting and Reduction Plan shall be submitted to the SCAQMD and the City detailing the measures to be implemented to achieve the required reductions, updated annually, and shall include specifications on the protocol, vintage, and registry for any offsite mitigation. The following mitigation credits shall not require prior City or SCAQMD approval: 1. Credits generated within Los Angeles County per an approved SCAQMD protocol; 2. Credits generated within the State of California per an approved SCAQMD protocol; 3. Credits that are generated and verified under the CAPCOA GHG Rx program; 4. Credits that are generated and verified under the voluntary SCAQMD Regulation XXVII; 5. Verified credits registered with the Climate Action Reserve or the American Carbon Registry. In addition, independently verified GHG credits available through other carbon registries that follow specific protocols may be eligible for offsite mitigation, subject to review and prior approval by the City and the SCAQMD. The general criteria for acceptable credits include: • Real: emission reduction must have actually occurred, as the result of a project yielding quantifiable and verifiable reductions or removals. • Additional/Surplus: an emission reduction cannot be required by a law, rule, or other requirement. • Quantifiable: reductions must be quantifiable through tools or tests that are reliable, based on applicable methodologies, and recorded with adequate documentation. • Verifiable: The action taken to produce credits can be audited and there is sufficient evidence to show that the reduction occurred and was quantified correctly. • Enforceable: An enforcement mechanism must exist to ensure that the reduction project is implemented correctly. • Permanent: Emission reductions or removals must continue to occur for the expected life of the reduction project. Operational/drilling GHG emissions from stationary and mobile sources shall be quantified and reported to the City and to the SCAQMD annually. Emissions reporting will follow the same reporting format and procedures as required by the Mandatory Reporting Rule.
AQ.7	Potential operations and drilling at the Project Site would emit toxic air contaminants.	II	AQ-7a All diesel equipment used at the site shall meet EPA Tier 3 emission requirements and be equipped with a CARB Level 3 diesel particulate filter to reduce Diesel PM emissions. Workover rigs operated at the project site shall have cumulative total DPM emissions below 1.5 lbs/year or shall utilize electric drive/sources. AQ-7b Vapor recovery on crude oil tanks shall achieve a minimum of 99 percent recovery of fugitive emissions.
Section 4.3 Biological Resources			
BIO.1	Pipeline installation	II	BIO-1: To minimize potential impacts to nesting native bird species, and in compliance with the

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
	near potential avian breeding habitat has the potential to impact non-listed sensitive species including avian species protected by the Migratory Bird Treaty Act.		federal Migratory Bird Treaty Act and Sections 3503, 3503.5, or 3513 of the California Fish and Wildlife Code, initial vegetation removal/trimming shall be done outside the breeding season (breeding season is defined herein as January 15 through August 31 for raptors and February 15 through August 31 for all non- raptor species). If vegetation removal/trimming must be completed during this period, then surveys for nesting birds must be conducted by a qualified, City-approved Biologist, within 3 days prior to vegetation removal or other construction-related disturbances. If nesting birds are observed within the project area, then a minimum 100-foot buffer from any non-raptor species and 500 foot buffer from any raptor nest would be established and maintained for the duration of vegetation removal/trimming activities or until nestlings fledge from the nest.
BIO.2	A rupture or leak from oil Pipelines has the potential to result in a substantial adverse effect on native species and habitats, sensitive species, and biologically important habitats associated with the Pacific Ocean.	I	BIO-2: The Applicant shall submit for City approval and shall implement an Emergency Response Plan that would, in compliance with the California State Oil Spill Contingency Plan (CDFW, OSPR 2014), address protection of biological resources and possible revegetation of any areas disturbed during an oil spill or cleanup activities. The Emergency Response Plan shall, at a minimum, include specific measures to avoid impacts to native vegetation and wildlife habitats, plant and animal species, and environmentally sensitive habitat areas during response and cleanup operations. The Emergency Response Plan shall include provisions for containment and cleanup measures and responsibilities. The plan shall contain: Definition of the authorities, responsibilities, duties of all entities involved in oil removal operations, and methods of emergency action agency coordination during and after an oil spill; Agreements and statements from all resource agencies involved in an oil response and removal operation; Procedures and frequencies for regular monitoring and inspections of pipelines and facilities; Procedures for early detection and timely notification of an oil discharge; A description of the necessary onsite equipment and details on the placement of the material required to quickly control, contain, and remove any discharged oil; Assurance that full resource capability is known and can be committed following a discharge; A description of sensitive biological resources in the SMB that should be prioritized for clean-up activities in the case of an oil spill into the marine environment; Actions for after discovery and notification of a discharge; Procedures to facilitate recovery of damages and enforcement measures. The Emergency Response Plan shall be approved by the California Department of Fish and Wildlife (CDFW) Office of Spill Prevention and Response (OSPR). When habitat disturbance cannot be avoided, the Emergency Response Action Plan shall provide stipulations for development and implementation of site-specific habitat

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
			restoration plans and other site-specific and species-specific measures appropriate for mitigating impacts to local populations of special-status wildlife species and to restore native plant and animal communities to pre-spill conditions. Access and egress points, staging areas, and material stockpile areas that avoid specific habitat areas shall be identified. The Emergency Response Action Plan shall include species- and site-specific procedures for collection, transportation and treatment of oiled wildlife. The Emergency Response Plan shall be approved by the City prior to commencing any construction activities.
Section 4.4 Cultural Resources			
CR.1	The Project has the potential to cause a substantial adverse change in the significance of an historical resource, such as the furnace remnant due to building demolition.	II	CR-1 Prior to beginning demolition of the existing City Maintenance Yard Building, guidelines shall be developed for the careful exposure of extant elements of the historic brick and mortar furnace. Once exposed, detailed documentation of the furnace shall be undertaken. Documentation shall be guided by the Historic American Engineering Record (HAER) standards. This documentation shall include production of high quality 35-mm photographs and plan drawings of building elements exposed, including but not limited to, a floor plan, any character-defining building features, and elevation drawings. All work carried out pursuant to the recordation of the furnace building shall be conducted by, or under the direct supervision of a person or persons meeting, at a minimum, the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-39 as revised in 1994) as an architectural historian. A written report detailing the HAER-like documentation shall be provided to the City upon completion the work. This report shall be produced on archivally stable materials and filed with the Hermosa Beach Historical Society.
CR.2	The Project has the potential to cause a substantial adverse change in the significance of an historical resource through indirect impacts to the Hermosa Beach City Hall Complex *(Applicable to the Proposed City*	II	CR-2a The design of the New City Maintenance Yard Building shall be compatible in design, styling, material, and massing of the adjacent City Hall complex. The building design should not attempt to replicate the New Formalist style, but it shall not conflict or contrast with the existing building style. The buildings constructed in the New City Maintenance Yard shall be no more than two stories high. They shall not overpower or overshadow the existing building complex. CR-2b The landscaping associated with the proposed New City Maintenance Yard shall replicate the planting types surrounding the City Civic buildings, to the extent possible, in order to blend the new construction into the existing Complex. The final design of both the new building and landscape should be developed in consultation with an historic architect or architectural historian who meets Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-39 as revised in 1994).

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
	Maintenance Yard Project)		
CR.3	A substantial adverse change in the significance of an archaeological resource, such as dump deposits, due to ground disturbance and over excavation.	II	CR-3a Prior to any ground-disturbing activities or building removal within the Proposed Project sites, an Archaeological Monitoring Plan shall be developed by a qualified archaeologist with provision for review and input by concerned Native Americans and approval by the City. The Plan will also address worker safety during building demolition and ground disturbing activities and during the implementation of the Remedial Action Plan.The Plan is to include provisions for archaeological and Native American monitoring, detailed documentation of all early twentieth-century artifact-bearing deposits exposed during ground-disturbing site work, and development of a clear collection policy for both prehistoric and historic artifacts, subsequent artifact analysis, reporting of findings, and disposition and/or curation of any significant artifacts recovered. All reports of findings shall be filed with to SCCIC. *(Also applicable to the Proposed City Maintenance Yard Project)* CR-3b Any significant archaeological deposits remaining in the area of the previous City of Hermosa Beach Dump following over-excavation at the Proposed Oil Development Project site must be protected in place. Stabilization and covering of these archaeological deposits shall be monitored by a qualified historical archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-39 as revised in 1994).
CR.4	Directly or indirectly destroy a unique paleontological resource or unique geological feature.	II	CR-4 Should Project-related excavations be designed to exceed 45 feet in depth at the City Dump, or depths greater than 15 feet along the pipelines, or otherwise be shown to have the potential to impact intact San Pedro Sand deposits as described above, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) shall be developed by a qualified paleontologist in consultation with the City and implemented prior to or during Project-related ground disturbing activities. The Plan will also address worker safety during building demolition and ground disturbing activities and during the implementation of the Remedial Action Plan.
CR.5	The Project could have a substantial impact if it results in the disturbance of any human remains, including those interred outside of a formal cemetery. *(Also applicable to the Proposed City Maintenance Yard Project)*	II	CR-5 Ground-disturbing activities in the area of the discovery shall immediately be halted or redirected. A temporary construction exclusion zone shall be established surrounding the site to allow for further examination and treatment of the find. A City representative shall immediately notify the Los Angeles County Coroner's office by telephone. By law, the Coroner will determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission who will appoint the Most Likely Descendent (MLD). Additionally, if the remains are determined to be Native American, a plan will be developed regarding the treatment of human remains and associated burial objects and the plan will be implemented under the direction of the MLD.
Section 4.5 Energy and Mineral Resources			

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
No Impacts Identified			
Section 4.6 Fire Protection and Emergency Response			
FP.1	Oil development activities at the site could be deficient in water supplies, detection systems, access or emergency response.	II	FP-1a The Applicant shall ensure adequate (3,000-5,000 gpm) water supplies are available from the existing water lines and hydrant system, by extending the 8 inch water main or some other source for water supplies that provides sufficient water supply rates, pressure and duration to comply with codes, standards and requirements of the LACFD and the HBFD. Installation of a fire pump, or installation of a piping connection to area water mains that can supply the flows, may be required to ensure the appropriate water flow and pressure requirements. The Applicant shall ensure that all area hydrants and water supplies are tested annually as to the NFPA standards for water flows and pressures, and shall ensure that the results are reported to the City of Hermosa Beach and the Hermosa Beach Fire Department. FP-1b The Applicant shall coordinate with the HBFD to integrate a community alert notification system for the proposed project into the City's existing alert system to automatically notify area residences and businesses in the event of an emergency at the project site that would require residents to take shelter or take other protective actions. The Applicant shall implement programs to ensure that all immediate neighbors are provide ample opportunity to participate in the notification system. FP-1c The Applicant shall fund an additional FTE position at the HBFD, or equivalent, for personnel with specific capabilities in inspection and code compliance associated with oil and gas production facilities. This arrangement shall be to the satisfaction of the HBFD. FP-1d The Applicant shall develop emergency response plans addressing the facility's fire-fighting capabilities pursuant to the most recent NFPA requirements, Los Angeles County Fire Code, LACFD, California Code of Regulation, and API requirements, in coordination with and to the satisfaction of the LACFD and the City of Hermosa Beach Fire Department. These plans shall include, but not be limited to, fire monitor placement, water capabilities, fire detection capabilities, fire foam requirements, facility condition relating to fire-fighting ease and prevention, and measures to reduce impacts to sensitive resources. The plan should also address coordination with local emergency responders and area schools and daycare facilities. FP-1e The Applicant shall ensure that the emergency response planning includes development of evacuation plans of neighbors for an emergency scenario at the facility,. The plan shall be reviewed by the LACFD, HBFD and the City annually and updated as needed. The relevant portions of the plan shall be distributed to the public utilizing a method determined by the reviewing Agencies. FP-1f The Applicant shall ensure and make funding available to 1) upgrade the dispatch system and procedures within Hermosa/Torrance/Redondo to implement a CAD-to-CAD system to improve dispatch times; and 2) extend the mutual aid agreements to become automatic aid agreements between the Hermosa Beach Fire Department, Redondo Beach Fire Department and the Torrance

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
			Fire Department and to include the Torrance HAZMAT unit, or provide for funding to provide additional equipment and to train a sufficient number of Hermosa Beach, Redondo Beach and/or Manhattan Beach Emergency Response personnel to provide first response HAZMAT capabilities. FP-1g The Applicant shall ensure, during Phase 2 and Phase 4, that the site shall have sufficient water containment capabilities, as per guidance and approval of the Fire Department. Area storm drains along 6th Street and Cypress Avenue shall be equipped with flapper-type valves to enable the closure of the storm drain system in the event of potential overflow.
FP.2	Oil development activities at the site could be deficient in equipment spacing pursuant to applicable codes and standards.	II	FP-2a The Applicant shall ensure that design and construction comply with applicable codes and standards for equipment spacing, particularly those related to flare location and distances to public areas and distances from well drilling equipment to buildings. If this cannot be achieved, additional requirements shall include the construction of thermal radiation barriers or insulation on the crude oil tanks, installation of thermal barriers/walls around the flare stack, increasing the height of the flare stack during drilling, relocation of the flare stack, providing thermal radiation modeling to estimate the impacts of equipment on the crude tanks and process piping and public areas and the design and construction of blast walls as per API 752. Fire rated barriers shall be established, as per LACFD requirements, to ensure that all buildings within 100 feet of well drilling would be protected from thermal radiation. Thermal assessments shall be completed to ensure that the thermal radiation from the flare is within acceptable levels (as per API RP 521) and does not produce damage to other equipment or nearby walls/soundwalls. The design and construction compliance status shall be verified by third-party audits under the direction of the City. FP-2b Fire protection measures specific to the crude oil containment system shall be provided, including the installation of manual fire foam systems with automatic detection and notification (to both the operators and the HBFD) capable of foaming in the perimeter of the crude oil containment system, wellhead area and the area immediately adjacent to combustion or spark producing equipment within or immediately adjacent to the crude oil containment area. The system shall be capable of being remotely activated from a safe location in the event of a crude oil fire. The highest level electrical classification achievable shall be designated for all equipment located within the crude oil containment and wellhead area.
FP.3	The temporary City Maintenance Yard Facilities could interfere with the Fire Department response activities. *(Applicable to the Proposed City*	II	FP-3 The City Public Works Department shall coordinate with the Fire Department to ensure that fire trucks have adequate access to and from the fire station, and that the temporary City Maintenance Yard does not inhibit the ability of the Fire Department to respond to emergencies. This may require the elimination of some parking along Bard Street to ensure adequate room for fire truck turn-arounds, or other measures. Public Works shall incorporate the potential loss of parking into their parking plan.

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	Maintenance Yard Project)		
Section 4.7 Geological Resources/Soils			
GEO.1	The Proposed Project would potentially expose people and structures to seismically induced ground shaking.	II	GEO-1a In coordination with the Caltech Seismological Laboratory, the Applicant shall install an accelerometer at the Project Site to determine site-specific ground accelerations as a result of any seismic event in the region (Los Angeles/Orange County and offshore waters of the Santa Monica Bay and San Pedro Channel). The drilling operator shall cease operations and inspect all onsite oil field-related pipelines, storage tanks, and other infrastructure following any seismic event that exceeds a ground acceleration at the Project Site of 13 percent of gravity (0.13 g). The drilling operator shall not reinstitute operations at the Project Site and associated pipelines until it can be determined that all oil field infrastructure is structurally sound. GEO-1b All seismic related recommendations provided by NMG Geotechnical (2012) shall be incorporated into the Proposed Oil Project design. These measures shall include, but not be limited to the following: - Drilled-in-place piles or cast-in-drilled-hole piles shall be constructed for foundations in the landfill area, i.e., northeast Project Site, to reduce seismically induced settlement. - Ground improvement techniques, including high pressure grout injection, i.e., compaction grouting, shall be used in the landfill area to reduce seismically induced settlement and allow construction of conventional shallow foundations. - Seismic design criteria for horizontal and vertical accelerations, identified in Tables 10 and 11 of the geotechnical report, shall be used during Proposed Project design (including incorporation of updated seismic design criteria from the 2013 California Building Code). - During Phase 1, the upper 2 to 4 feet of soil in the vicinity of the proposed well cellars shall be excavated and replaced with compacted fill. In addition, the basement under the maintenance building shall be removed and filled in with compacted fill. - During Phase 3, the eastern portion of the site shall be excavated approximately 7 feet deeper than the majority of the proposed building pad, with a minimum of 3 feet of overexcavation below design grades, and recompacted to provide a uniform fill blanket below proposed tanks, compressors, and other equipment. - Asphalt pavement and underlying subgrade soils shall be designed to accommodate the proposed drill rig. - Positive surface drainage shall be provided to direct runoff away from slopes and structures and toward suitable drainage devices. Ponding of water on structural pads shall not be allowed. GEO-1c A Registered Civil Engineer and Certified Engineering Geologist shall complete a geotechnical investigation specific to the Proposed City Maintenance Yard Project structures. All geotechnical recommendations provided in the report shall be followed during grading and construction at the site. The geotechnical evaluation shall include, but not be limited to, an

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			estimation of both vertical and horizontal anticipated peak ground accelerations.
GEO.2	Wastewater injection would potentially induce seismicity in the vicinity of the Proposed Project.	II	GEO-2a Injection pressures associated with wastewater injection shall not exceed reservoir fracture pressures as specified in California Code of Regulations Title 14, Division 2, Section 1724.10, and as approved by the California Division of Oil, Gas, and Geothermal Resources. GEO-2b In coordination with the Caltech Seismological Laboratory, the Applicant shall install an accelerometer at the Project Site to determine site-specific ground accelerations as a result of any seismic event in the region (Los Angeles/Orange County and offshore waters of the Santa Monica Bay and San Pedro Channel). Readings from the accelerometer shall be recorded at the Oil Field and transmitted in real-time to the Caltech Seismological Laboratory. The drilling operator shall cease operations and inspect all onsite oil field-related pipelines, storage tanks, and other infrastructure following any seismic event that exceeds ground acceleration at the Project Site of 13 percent of gravity (0.13 g). The drilling operator shall not reinstitute operations at the Project Site and associated pipelines until it can be determined that all oil field infrastructure is structurally sound. GEO-2c In the event that monitoring indicates that Proposed Oil Project-induced seismicity is occurring, wastewater injection operations shall be adjusted to alleviate such seismicity. The drilling operator shall first receive approval from the California Division of Oil, Gas, and Geothermal Resources prior to any change (increase) in the injection operations.
GEO.3	The Proposed Project is not located in an area at risk of landslides/mudflows; defined as areas with slopes greater than 10 percent.	II	GEO-3 All slope stability related recommendations provided by NMG Geotechnical (2012) shall be incorporated into the Proposed Oil Project design. Temporary excavations shall be stabilized per the latest edition of Cal/OSHA requirements for loose sands, including shoring or laying back of trench walls. Shoring along the northern perimeter of the Project Site shall be designed by an experienced structural engineer due to the proximity to existing buildings that must be protected from potential settlement and lateral movements.
GEO.4	The Proposed Oil Project would potentially result in ground subsidence from oil and gas withdrawal.	II	GEO-4a Prior to approval of the first drilling permit, the Applicant shall have submitted and the City of Hermosa Beach and the California Coastal Commission shall have approved a Subsidence Monitoring and Avoidance Program, for both onshore and offshore areas. The onshore monitoring plan shall be completed throughout the life of this Project, in accordance with Appendix A, Subsidence Monitoring Program, of the Subsidence and Induced Seismicity Technical Report, E&B Oil Development Project (Geosyntec Consultants 2012), included as Appendix F of this EIR. The offshore monitoring plan shall be completed throughout the life of this Project in

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			accordance with the Offshore Subsidence Monitoring Program and Possible Mitigation Measures, Hermosa Beach, California (Coastal Environments 1998), included as Appendix F of this EIR. The latter shall be updated, as applicable, to reflect advances in science since 1998. In addition, Section 7.6, Mitigation of Onshore Subsidence, of the latter report, shall not be applied to this mitigation measure, as the onshore monitoring program would be completed in accordance with the Geosyntec Consultants (2012) report. GEO-4b The Subsidence Monitoring Program shall include: Ground elevation survey methodologies with high vertical resolution, including onshore surface elevations and offshore bathymetric elevations; Prior to Phase II drilling, establishment of a network of onshore and offshore survey or subsidence monitoring locations, including continuous GPS stations, GPS benchmarks, and tautly anchored offshore monitoring points, positioned within the City, outside the City, and in offshore areas, that are sufficiently spaced to draw conclusions about subsidence within the zone of influence of the Project; Because subsidence can occur for a variety of reasons, establishment of control points outside the zone of influence to allow differentiation of possible subsidence effects related to other activities; Use of InSAR imagery technology to evaluate regional subsidence patterns both within and beyond the proposed oil field; Sufficient monitoring frequency to establish trends in subsidence in order to distinguish background ground movement from any subsidence caused by proposed oil field operations; Reservoir monitoring, including documentation of produced fluid volume (oil, gas and water) and reservoir pressures at similar frequency to ground elevation measurements; Reporting requirements; and Action levels, as specified in the onshore and offshore subsidence monitoring reports. Surveying for both vertical and horizontal ground movement shall be completed along the perimeter and throughout the interior of the oil field, including both onshore and offshore areas, utilizing Global Positioning System technology in combination with a network of ground stations. The onshore continuous monitoring GPS stations shall include: Hermosa Beach Pier. The pier will serve as the furthest offshore point in the onshore monitoring program. Longfellow Outfall. This Outfall is larger and more structurally stable than some of the other outfalls along the City's coast. King Harbor Jetty. This location was selected to achieve a distribution of continuous monitoring points along the coast of Hermosa Beach. This will help provide a limited regional picture of the subsidence between survey events. GEO-4c An onshore and offshore baseline subsidence report shall be completed and made available to the City of Hermosa Beach and the California Coastal Commission at least two months

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			and no more than six months prior to planned commencement of Phase II drilling operations. Subsidence monitoring reports shall be completed annually and the results shall be forwarded to the California Coastal Commission and the City of Hermosa Beach for review, no more than one month following the end of each annual monitoring cycle. In addition, results shall be forwarded to the adjoining City of Redondo Beach and City of Manhattan Beach. GEO-4d In the event that the Global Position System monitoring indicates that significant subsidence, as defined by the onshore and offshore subsidence monitoring reports described in GEO-4a, is occurring in and/or around the Proposed Project area, wastewater or water reinjection operations shall be increased to alleviate such subsidence. The Applicant shall coordinate with the California Division of Oil, Gas and Geothermal Resources, which will approve increased levels of wastewater or water reinjection operations in accordance with the approved Subsidence Monitoring Program. The Applicant will also coordinate with the City of Hermosa Beach, Public Works Department, to verify that subsidence has been mitigated sufficiently. GEO-4e In the unlikely event that subsidence related mitigation induces seismicity, corrective actions related to subsidence shall proceed until baseline surface elevations have been achieved, as subsidence related damage would likely be more pronounced in comparison to damage associated with Project related micro-seismicity. Upon reestablishment of baseline elevations, drilling operations shall cease until a balance between subsidence avoidance and induced seismicity avoidance can be established, as agreed upon by the California Division of Oil, Gas and Geothermal Resources and the City of Hermosa Beach.
GEO.5	Site grading could increase erosion and impact water quality offsite.	III	
GEO.6	Expansive soils could be present at Proposed Project Sites. *(Also applicable to the Proposed City Maintenance Yard Project)*	II	GEO-6 A Registered Civil Engineer shall analyze surficial and near-surface soils at the Project Site subsequent to grading and prior to on-site construction, to determine whether expansive soils are present. Similarly, soils at the Proposed City Maintenance Yard Project Site and along the proposed pipeline route shall be analyzed for soil expansion potential. In the event that clay-rich, expansive soils are present, foundations shall be designed to accommodate expansive soils and pipelines shall be placed within a blanket of non-expansive soils to prevent structural damage and/or failure. Foundation and pipeline design shall be reviewed and approved by a Registered Civil Engineer.
GEO.7	Corrosion could potentially damage the structural components and pipelines which	II	GEO-7a Proposed Oil Project design must conform to the recommendations of HDR Schiff (2012), included within Appendix C in NMG Geotechnical (2012), or as per the City Engineer, and should occur prior to completion of the final Project design. GEO-7b All buried metal pipelines shall be coated and placed under impressed cathodic protection. To monitor for internal corrosion, corrosion coupons or equivalent measures can be

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	would result in a pipe burst and subsequent oil spill.		utilized. GEO-7c External pipe inspections shall be conducted for the exposed pipeline sections to ensure atmospheric coatings are in good conditions. All external inspections shall be documented and reviewed by the operations management and repairs documented, when necessary. GEO-7d In accordance with California Division of Oil, Gas, and Geothermal Resources pipeline regulations (Public Resources Code Sections 3013 and 3782), a pipeline management plan shall be implemented for the Project Site. Similarly, in accordance with United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration regulations, a pipeline management plan shall be implemented for proposed pipelines located beyond the perimeter of the Project Site. These plans shall include, but not be limited to mechanical testing, including ultrasonic and hydrostatic testing. GEO-7e All concrete in contact with the high sulfate or corrosive soils shall be Type V concrete in accordance with the 2010 California Building Code.
Section 4.8 4.8 Safety, Risk of Upset, and Hazards			
SR.1	Operational and drilling activities would generate offsite risks that exceed the thresholds.	I	SR-1a The Applicant shall cause to be prepared an independent third-party audit, under the direction and supervision of the City, of the gas and crude oil plants and pipelines, once constructed, including the well pads, to ensure compliance with Fire Code, applicable API and NFPA codes, EPA RMP, OSHA PSM, DOGGR and SPCC and emergency response plans requirements. All audit items shall be implemented in a timely fashion, and the audit shall be updated annually, as directed by the City and the Los Angeles County Fire Departments. The final installation of the facilities shall include a seismic assessment, including walkthroughs, of equipment to withstand earthquakes prepared by a registered Structural Engineer in compliance with Local Emergency Planning Committee Region 1 CalARP guidance and the seismic assessment shall be updated, with walkthrough inspections, annually to ensure compliance with the codes and standards at the time of installation. SR-1b The Applicant shall ensure that the crude oil spill containment areas shall be designed as Class I Division I areas according to NFPA and NEC, or that spark producing equipment (such as the flare) would be isolated from the containment area, in order to reduce the potential for crude oil fires. The refrigeration system shall utilize non-flammable refrigerant. SR-1c The Applicant shall ensure that all crude-oil truck haulers and a sufficient number of onsite personnel (at least two per shift) are trained in HAZMAT (to the HAZWOPER technician level at least) spill response and that each truck carries a spill response kit. SR-1d The Applicant shall install automatic valves on the gas pipeline that will automatically shut down under a low pressure scenario at the Processing Facility Area for all pipelines leaving the processing plant, and shall install a backflow prevention device at the main gas pipeline tie-in location, to prevent the release of gas from the main transmission pipeline in the event of a rupture in the gas pipeline. The second, return pipeline shall remain isolated from the main gas pipeline

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			during normal operations. SR-1e The Applicant shall ensure that warning tape is installed above the pipelines within the pipeline trench to warn third parties that pipelines are located below the warning tape and that the pipelines are capable of utilizing a smartpig. SR-1f The odorant system shall have its own, smaller containment area around it limiting the spilled pool size to the minimum size attainable, in order to prevent any offsite impacts. Transfer of odorant shall utilize carbon canisters and a canister change-out/maintenance program to ensure that filling of odorant tanks do not cause offsite impacts. SR-1g The comingled produced gas shall be continuously monitored for hydrogen sulfide. If H_2S levels in the produced gas from any individual well exceeds 100 ppm, then that well shall be shut in and abandoned as per DOGGR requirements. Wells shall be tested when fluids first flow, when the well is placed into production and periodically thereafter in order to ensure that all wells operate below 100 ppm H2S.
SR.2	Grading at the site could mobilize soil contamination.	II	SR-2 The Applicant shall sample soil during Phase 1 grading to ensure that soil lead contamination levels are below 9,500 mg/kg and that soil contaminated with TPH are below the regulatory guidelines. If soils are encountered above these levels, then those soils shall be removed from the site and transported to a disposal site. This may necessitate implementing the RAP during Phase 1 if substantial amounts of contamination are encountered.
Section 4.9 Hydrology and Water Quality			
HWQ.1	New grading, construction,and soil remediation could degrade surface water quality	III	No mitigation required.
HWQ.2	A rupture or leak during oil drilling operations, from pipelines, or from other infrastructure could substantially degrade surface water and groundwater quality	I	HWQ-2a The Applicant shall properly maintain the associated crude oil pipelines, storage tanks, and processing facilities within and outside the Project Site, including smart-pigging according to State of California Office of the State Fire Marshal requirements and the standards outlined by the Department of Oil, Gas and Geothermal Resources, and the Los Angeles Regional Water Quality Control Board. The Applicant shall visually inspect onsite storage tanks and processing equipment at least daily and provide a visual inspection of the crude oil pipeline right-of-way on a weekly basis. HWQ-2b The Applicant shall install a leak detection system for crude pipelines to the selected valve box location. The system shall include pressure and flow meters, flow balancing, supervisor control and data acquisition system, and a computer alarm system in the event of a suspected leak. Temperature, pressure, and flow shall be monitored at each pipeline entry and exit. If any variable deviates by more than 10 percent of the normal operating range, the system shall trigger both audible and visual alarms. Flow balancing shall be conducted every 15 minutes, 1 hour, 24 hours,

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			and 48 hours with the accuracy defined once the system is established and tested. HWQ-2c Personnel at the site shall be trained in equipment use and containment and cleanup of an oil spill. Dry cleanup methods, such as absorbents, shall be used on paved and impermeable surfaces and shall be included in a spill trailer maintained onsite. Spills in dirt areas shall be immediately contained with an earthen dike and the contaminated soil shall be dug up and discarded in accordance with local and state regulations. HWQ-2d Oil spills shall be contained and cleaned according to measures outlined in the then-current California Stormwater Quality Association Best Management Practice Handbook. HWQ-2e A United States Environmental Protection Agency, Spill Prevention, Control, and Countermeasure Plan, approved by the City of Hermosa Beach Fire Department, shall be implemented in the event of a spill. The Plan, which shall include a spill response trailer, equipment, and personnel training, shall be completed prior to Phase 2 and Phase 4, and in compliance with the California State Oil Spill Contingency Plan (California Department of Fish and Game, Office of Spill Prevention and Response 2010) and the Los Angeles/Long Beach Oil Spill Contingency Plan (California Department of Fish and Wildlife 2011). Spill cleanup shall be completed under the oversight of the lead regulatory agency, with respect to oil spills, as identified in the Spill Prevention, Control, and Countermeasure Plan. HWQ-2f The well cellars shall be lined with an impermeable membrane to prevent oil-based substances from seeping into groundwater supplies. All drilling muds storage shall be contained within Baker-type enclosed tanks, which shall be sized to accommodate high intensity rainfall events without overtopping. HWQ-2g The Applicant shall install a check valve in the crude oil pipeline at the Herondo and Valley drive intersection, where the crude oil pipeline turns eastward and starts uphill. HWQ-2h The Applicant shall fund and install, under the direction of the Hermosa Beach Public Works Department, an oil/grit separators or oil/water separator located along Herondo Street, downstream of Valley Drive, in order to capture small to medium sized spills before they reach the ocean. Installation and maintenance costs shall be provided by the Applicant and the devices shall be inspected by the Applicant to ensure that the "trap" is operational before any storm events. HWQ-2i The Applicant shall utilize a smaller 6" ERW pipe and a heat and impact resistant coating at a minimum comparable to a 3-layer fusion bonded epoxy (such as BrederoShaw 3LPP) and weld coverings equivalent to sleeves with epoxy primer. Specification of the pipe and coating shall approved by the City. HWQ-2j The Applicant shall install a 3 sack slurry starting 6 inches above the pipe to the base of the pavement or ground surface and lay strips of warning tape over the top to prevent third-party damage.
Section 4.10 Land Use/Recreation/Policy Consistency			
LUPR.1	The Proposed	II	

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	Project conflicts with established land use plans, policies, and land use maps.		
LUPR.2	Potential noise, odors, and visual impacts generated from the Proposed Project could be incompatible with adjacent land uses.	I	
LUPR.3	The Proposed relocation of the City Maintenance Yard conflicts with established land use plans, policies, and land use maps	II	
LUPR.4	Accidental oil release and potential cleanup from operation of the oil pipeline would conflict with current and projected recreational users.	I	
LUPR.5	Potential noise, odors, and visual impacts generated from the Proposed Project could create a nuisance to recreational area users.	III	
Section 4.11 Noise and Vibration			
NV.1	Demolition and construction	I	NV-1a Increase the height of the noise barrier on all sides of the site to 24-feet (24-feet is the maximum feasible height for a noise barrier during Phase 1). Minimum sound insulation

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	machinery would increase noise levels.		performance of the barrier shall remain at STC-25. NV-1b The gates on the east and south sides of the site shall be 24-feet high, consistent with the height of the acoustical barrier around the perimeter of the site. The gates shall have no holes or gaps in them and shall be designed to deliver a minimum sound insulation performance of STC-25. NV-1c All acoustical barriers around the site shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.49, 0.72, 0.74, 0.29, 0.21, 0.14.
NV.2	Drilling + Production activities would increase noise levels.	II	NV-2a Increase the height of the noise barriers on all sides of the site from 32-feet to 35-feet (35-feet is the maximum height allowed by zoning). Minimum sound insulation performance of the barrier material shall be STC-32. NV-2b The gates on the east and south sides of the site shall have no holes or gaps in them and shall be designed to deliver a minimum STC of 32. Any gaps above the gates must be closed off, by extending the acoustical barrier material from the sides. The intent is to maintain the acoustical integrity of the STC-32 noise barrier in all locations. NV-2c All acoustical barriers around the site shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.49, 0.72, 0.74, 0.29, 0.21, 0.14. NV-2d Install pads on the V-door and other appropriate areas, timbers and pads on the drill deck, pads between drill and casing pipe while in storage and pad and timbers at the boards on the mast to reduce metal-on-metal noise. NV-2e Provide full acoustical enclosures around the mud pumps. The enclosures shall be factory-assembled by a manufacturer with a proven track-record of building noise-reducing enclosures for industrial applications. The total sound power level radiated by the enclosure shall not exceed 77 dBA, including noise contributions from: the access door(s), observation windows, ventilation openings and ventilation fans (if required). NV-2f Provide enhanced inlet and outlet silencers for the Hydraulic Power Unit enclosure and upgrade the walls, roof and floor of the enclosure as necessary to limit the total sound power level radiated by the enclosure to 77 dBA. NV-2g The acoustical shroud around the drilling rig mast shall be comprised of acoustical blankets with a minimum STC rating of 25. The acoustical blankets shall provide continuous coverage of three sides of the mast and shall cover the uppermost 26-feet of the fourth side. NV-2h Provide acoustical treatment within the combustor fan housing and/or at the ventilation openings, as necessary to limit the total sound power level radiated by the housing (including contributions from the door and ventilation openings) to 86 dBA. NV-2i Eliminate use of the combustor during drilling in Phase 2. NV-2j During the drilling portion of Phase 2, implement a “Super-Quiet Mode” of operation between the hours of 2AM and 5AM, during which time drilling would essentially be suspended to minimize

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			noise. Super-Quiet Mode would impose the following additional measures and limitations: no pipe-handling of any kind anywhere on the project site, shakers switched off, top drive and rig floor completely enclosed on four sides by acoustical blankets with a minimum STC rating of 25, operation of the top drive limited to "exercising" the pipe string only, top drive travel limited to the bottom half of the drilling rig mast. Super-Quiet Mode shall be implemented from the outset of drilling work during Phase 2; however, if monitoring shows consistently that noise emissions for normal drilling operations (with mitigation measures NV2a through NV2i in place) would result in less-than-significant impact during all or part of the period between 2AM and 5AM, the Applicant may, at the discretion of the City, be permitted to reduce the hours Super-Quiet Mode operations, or eliminate Super-Quiet Mode altogether.
NV.3	Test Production activities would increase noise levels.	II	NV-3a Increase the height of the noise barriers on all sides of the site from 32-feet to 35-feet (35-feet is the maximum height allowed). Minimum sound insulation performance of the barrier material should be STC-32. NV-3b The gates on the east and south sides of the site shall have no holes or gaps in them and shall be designed to deliver a minimum STC of 32. Any gaps above the gates must be closed off, by extending the acoustical barrier material from the sides. The intent is to maintain the acoustical integrity of the STC-32 noise barrier in all locations. NV-3c All acoustical barriers around the site shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.49, 0.72, 0.74, 0.29, 0.21, 0.14. NV-3d Provide acoustical treatment within the combustor fan housing and/or at the ventilation openings, as necessary to limit the total sound power level radiated by the housing (including contributions from the door and ventilation openings) to 86 dBA.
NV.4	Site construction machinery would result in a substantial increase in ambient noise levels.	I	NV-4a Increase the height of the noise barrier on all sides of the site to 24-feet (24-feet is the maximum feasible height for a noise barrier during Phase 3). Minimum sound insulation performance of the barrier shall remain at STC-25. NV-4b The gates on the east and south sides of the site shall be 25-feet high, consistent with the height of the acoustical barrier around the perimeter of the site. The gates shall have no holes or gaps in them and shall be designed to deliver a minimum sound insulation performance of STC-25. NV-4c All acoustical barriers around the site shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.49, 0.72, 0.74, 0.29, 0.21, 0.14.

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NV.5	Pipeline construction machinery would result in a substantial increase in ambient noise levels.	I	None
NV.6	Drilling-plus-production activity on the site would result in a substantial increase in ambient noise levels.	II	NV-6a Increase the height of the noise barriers on all sides of the site from 32-feet to 35-feet (35-feet is the maximum height allowed by zoning code). Minimum sound insulation performance of the barrier material shall be STC-32. NV-6b The gates on the east and south sides of the site shall have no holes or gaps in them and shall be designed to deliver a minimum STC of 32. Any gaps above the gates must be closed off, by extending the acoustical barrier material from the sides. The intent is to maintain the acoustical integrity of the STC-32 noise barrier in all locations. NV-6c All acoustical barriers around the site shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.49, 0.72, 0.74, 0.29, 0.21, 0.14. In the event that a permanent 35-foot wall is built, the interior surfaces of the wall (i.e. those facing inwards towards the drilling and production operations) shall be treated with exterior grade acoustical panels offering equivalent sound absorption performance to that specified in this Measure above a height of 10-feet from the ground. NV-6d Install pads on the V-door and other appropriate areas, timbers and pads on the drill deck, pads between drill and casing pipe while in storage and pad and timbers at the boards on the mast to reduce metal-on-metal noise. NV-6e Provide full acoustical enclosures around the mud pumps. The enclosures shall be factory-assembled by a manufacturer with a proven track-record of building noise-reducing enclosures for industrial applications. The total sound power level radiated by the enclosure shall not exceed 77 dBA, including noise contributions from: the access door(s), observation windows, ventilation openings and ventilation fans (if required). NV-6f Provide enhanced inlet and outlet silencers for the Hydraulic Power Unit enclosure and upgrade the walls, roof and floor of the enclosure as necessary to limit the total sound power level radiated by the enclosure to 77 dBA. NV-6g The acoustical shroud around the drilling rig mast shall be comprised of acoustical blankets with a minimum STC rating of 25. The acoustical blankets shall provide continuous coverage of three sides of the mast and shall cover the uppermost 26-feet of the fourth side. NV-6h During the drilling portion of Phase 4, implement a "Super-Quiet Mode" of operation between the hours of 2AM and 5AM, during which time drilling would essentially be suspended to minimize noise. Super-Quiet Mode would impose the following additional measures and limitations: no pipe-handling of any kind anywhere on the project site, shakers switched off, top drive and rig floor

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			completely enclosed on four sides by acoustical blankets with a minimum STC rating of 25, operation of the top drive limited to "exercising" the pipe string only, top drive travel limited to the bottom half of the drilling rig mast. Super-Quiet Mode shall be implemented from the outset of drilling work during Phase 4; however, if monitoring shows consistently that noise emissions for normal drilling operations (with mitigation measures NV6a through NV6g in place) would result in less-than-significant impact during all or part of the period between 2AM and 5AM, the Applicant may, at the discretion of the City, be permitted to reduce the hours of Super-Quiet Mode operations, or eliminate Super-Quiet Mode altogether.
NV.7	Long term production activity on the site would result in a substantial increase in ambient noise levels.	II	NV-7a Increase the height of the masonry walls on the north and west sides of the site to a minimum of 27-feet. NV-7b Apply outdoor acoustical panels to all available surfaces of the north and west walls that face the production operations above a height of 10-feet above the ground. The purpose of the acoustical panels is to control reflection of production noise in the direction of the sensitive uses to the east and south. The acoustical panels shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.28, 0.68, 0.95, 0.86, 0.89, 0.72. NV-7c Well workover rigs shall be powered by electric drive/sources or the use of "ultra-quiet" generators or engines - either diesel or natural gas-powered - that are capable of operating below the noise significance thresholds for daytime operation.
NV.8	Demolition and construction equipment would increase noise levels. *(Applicable to the Proposed City Maintenance Yard Project)*	I	NV-8a Provide a continuous, 25-foot high noise control barrier along the north, west and south boundaries of the City Yard site. Minimum sound insulation performance of the barrier material should be STC-32. NV-8b Provide a continuous, 16-foot high noise control barrier along the east boundary of the site. Minimum sound insulation performance of the barrier material shall be STC-25. NV-8c Access to the site for construction shall be limited to a gate on the east side in order to maintain the integrity of the noise barrier on the north side. Gates shall be constructed of solid (no holes) plywood or sheet metal and be designed to deliver a minimum sound insulation performance of STC-25. Any gaps above the gates must be closed off, by extending the acoustical barrier material from the sides. The intent is to maintain the acoustical integrity of the STC-25 noise barrier. NV-8d All acoustical barriers around the site shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.49, 0.72, 0.74, 0.29, 0.21, 0.14.
NV.9	Operational noise from the relocated City Maintenance Yard would increase	II	NV-9a Increase the height of the masonry wall on the west side of the Yard (the wall that spans between the office and shop building) from 6-feet to 12-feet. NV-9b No noise-producing activity allowed in the City Yard before 8AM or after 7PM on weekdays and anytime on Saturdays and Sundays except during emergencies.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
	noise levels. *(Applicable to the Proposed City Maintenance Yard Project)*		NV-9c For the Parking Option, there shall be no openings in the parking structure enclosure except for the vehicular entrance/exit opening on the north side. The entrance/exit should be located as far to the east as possible, to maximize its distance from the homes on Cypress Avenue. Garage exhaust fans shall be enclosed and fitted with duct silencers on the discharge and intake sides as necessary to limit noise emissions to less than significant levels at the nearby sensitive receivers.
NV.10	Demolition and construction equipment would increase noise levels. *(Applicable to the Proposed City Maintenance Yard Project)*	I	NV-10a Provide a continuous, 25-foot high noise control barrier on the north, west and south sides of the site and along those parts of the site boundary adjacent to City Hall. Minimum sound insulation performance of the barrier material should be STC-32. If visual and light concerns preclude a 25-foot high noise control barrier close to City Hall - because of visual and light concerns - the noise barrier here should be as tall as possible. NV-10b Provide a continuous, 16-foot high noise control barrier along the east boundary of the site. Minimum sound insulation performance of the barrier material should be STC-25. NV-10c Access to the site for construction shall be limited to a gate on the east side in order to maintain the integrity of the noise barrier on the north side. Gates shall be constructed of solid (no holes) plywood or sheet metal and be designed to deliver a minimum sound insulation performance of STC-25. Any gaps above the gates must be closed off, by extending the acoustical barrier material from the sides. The intent is to maintain the acoustical integrity of the STC-25 noise barrier. NV-10d All acoustical barriers around the site shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.49, 0.72, 0.74, 0.29, 0.21, 0.14.
NV.11	Operational noise from the temporary City Yard would increase noise levels. *(Applicable to the Proposed City Maintenance Yard Project)*	II	NV-11a Increase the height of the concrete block Yard wall along the west and south sides of City Hall from 8-feet to 16-feet. NV-11b Apply outdoor acoustical panels to the extended wall surfaces facing the Yard above a height of 8-feet above the ground. The purpose of the acoustical panels is to control reflection of operational noise in the direction of the sensitive uses to the west and south. The acoustical panels shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.28, 0.68, 0.95, 0.86, 0.89, 0.72. NV-11c No noise-producing activity allowed in the temporary City Yard before 8 A.M. or after 7 P.M. on weekdays and anytime on Saturdays and Sundays except during emergencies.
Section 4.12 Public Services			
No Impacts Identified			
Section 4.13 Transportation and Traffic			
TR.1	Trucks activity along	II	TR-1a For Phases 1-3, the Applicant shall fund, through and in consultation with the School District

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
	Valley Drive would cause impacts to pedestrians or other vehicles		and Safe Routes to School, an afternoon crossing guard to be stationed at the Project Site area to ensure pedestrians passing nearby the Project Site have assistance in crossing the streets and the entrances/exit of the Project Site. Alternately, the Applicant shall ensure that trucks do not travel to and from the Project Site unless school is in session (i.e. truck travel prohibited on Valley Drive after 2:48 p.m., on Wednesdays after 1:45 p.m. or on school minimum days after 12:45 p.m.). The Applicant shall consult with the School District to ensure timing is current. TR-1b For Phases 1-3, the Applicant shall install, subject to the approval of the City Public Works Department, warning signs and blinking yellow lights one block north and south (if applicable with possible one-way on Valley Drive) of the Project Site warning vehicle traffic that trucks may be entering and exiting the roadway. Blinking lights shall only operate when trucks are utilizing the roadway (not 24 hours per day). TR-1c The Applicant shall ensure that all trucks accessing the Project Site and utilizing the Pier Avenue/Valley Drive intersection are less than 65 feet long to prevent safety hazards at the double intersection on Pier Avenue between Valley Drive and Ardmore Avenue. If trucks longer than 65 feet are required, then flagger shall be used at the Pier Avenue and Valley/Ardmore intersection. TR-1d For Phases 1-3, the Applicant shall, with the approval and coordination of the City Public Works Department, either 1) restripe Valley Drive south of Pier Avenue to be a southerly directed one-way street. No on-street parking shall be allowed on Valley Drive between 6th Street and 8th Street to allow for sufficient line of sight for trucks entering and exiting the Project Site; or 2) restripe the section of Valley Drive between 2nd Street and Herondo Street to make it two-way and direct all truck traffic along Herondo Street to approach the project site from the south.
TR.2	Construction of the pipelines along area streets could cause significant traffic circulation/hazard impacts.	II	TR-2a Pipeline construction activities within the Pipeline right-of-way shall be limited to weekday between the hours of 9:00 a.m. and 3:00 p.m., unless the applicable municipality approves a specific exception to the time limit for periods of limited duration, subject to measures required by the municipality to protect the public health and safety. The Applicant shall coordinate with adjacent jurisdictions throughout the design and construction phase. TR-2b The applicant shall implement a Construction Traffic Management Plan (CTMP) during Pipeline construction that includes the following pursuant to the procedures and subject to approval of the applicable municipality: 1) Require the Pipeline contractor(s) to obtain and follow street construction permits in the affected areas (Cities of Hermosa Beach, Redondo Beach, and Torrance, and Caltrans facilities - PCH and Hawthorne Boulevard); 2) Develop detour and traffic management plans consistent with the affected City's standard roadway plans (e.g., Torrance Street Standard T603), the California Manual of Uniform Traffic Control Devices (MUTCD), or the Work Area Traffic Control Handbook (WATCH); 3) Revise Pipeline construction schedules to minimize access impacts to adjacent residents and businesses; and 4) Ensure that all affected residences and business have adequate emergency access during all times and phases of construction. The Applicant shall coordinate with adjacent jurisdictions throughout the design and

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
			construction phase.
TR.3	Routing of Proposed Oil Project truck traffic could violate local prohibitions.	II	TR-3a The applicant shall be prohibited from routing Proposed Oil Project-related heavy truck exceeding 20,000 pounds on 190th Street between Anza Avenue and PCH, except during Pipeline construction. The Applicant shall comply with all requirements of the applicable city. TR-3b The applicant shall route inbound and outbound heavy (>20,000 pounds) truck traffic along PCH and Artesia Boulevard, which are designated truck routes. TR-3c Applicant shall supply private parking sufficient to meet all parking demands and shall direct all employees and contractors to park within Applicant's private parking areas, or to utilize an alternative parking program approved by the City.
TR.4	The City Maintenance Yard could introduce an impact to safety or Bicycle/pedestrian safety. *(Applicable to the Proposed City Maintenance Yard Project)*	II	TR-4a The City shall design the permanent Proposed City Maintenance Yard so that it does not enter/exit directly onto Valley Drive. TR-4b If the permanent Proposed City Maintenance Yard Project affects the sidewalk, then the design shall incorporate a sidewalk design along Valley Drive which utilizes a landscape buffer to separate the pedestrians from the street.
Section 4.14 Water Resources			
WR.1	The Proposed Oil Project and the Proposed City Maintenance Yard Project would generate sanitary sewer wastewater that could exceed wastewater treatment requirements of the applicable RWQCB; exceed the existing capacity of downstream sewer and wastewater	II	WR-1 Prior to approval of demolition and new construction, a Registered Civil Engineer in the State of California shall evaluate the capacity of the existing sewer line system, beginning at the proposed tie-ins on Valley Drive for the Proposed City Maintenance Yard Project and 6th Street for the Proposed Oil Project, and continuing downstream to the Sanitation Districts of Los Angeles County sewer system, prior to any connections. A 7-day capacity performance test shall be performed, based on Sanitation Districts of Los Angeles County average wastewater generation factors, to determine baseline and peak flows, and to ensure the sewer has adequate capacity in the downstream areas. The capacity analysis shall be submitted to the City Public Works Department and the Districts for review and approval. In the event that existing sanitary sewer facilities are insufficient to accommodate increased flows from the Project Site, the Applicant shall provide mobile sanitary facilities (i.e., toilet, sink, and urinal) for onsite personnel, as necessary.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
	treatment facilities; or adversely affect the existing wastewater service provider or the existing wastewater facilities by exceeding current and future demands and capacity. *(Also applicable to the Proposed City Maintenance Yard Project)*		
WR.2	The Proposed Oil Project would generate wastewater that could impact surface water quality and the Pacific Ocean.	II	WR-2 Implement MM HWQ-2a through HWQ-2d.
WR.3	The Proposed Oil Project would generate wastewater that could impact groundwater quality through injection of produced water.	II	WR-3a The Applicant shall complete a site-specific Area of Review/Zone of Endangering Influence analysis, per Division of Oil, Gas, and Geothermal Resources requirements, to determine if oil and gas wells are present that might serve as conduits for injected liquids to migrate upward to underground sources of drinking water. In the event that such wells are present, those wells shall be plugged and abandoned such that underground sources of drinking water (i.e., less than 10,000 mg/L total dissolved solids) are protected. Plugging and abandonment of those wells shall include zonal isolation plugs outside all casings and shall be completed per current Division of Oil, Gas, and Geothermal Resources standards. WR-3b The Applicant shall confine injected fluids into the intended zone of injection in order to adequately protect underground sources of drinking water. Injection well cement shall be placed at the base of all underground sources of drinking water, and not just at the base of fresh water, to protect water with total dissolved solids content ranging from 3,000 mg/L to 10,000 mg/L. WR-3c The Applicant shall complete step-rate tests, using bottom-hole and surface pressure gauges, such that maximum allowable surface injection pressures are set at a maximum of 95 percent of the fracture pressure of the formation being injected.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
			WR-3d The Applicant shall ensure that the hydrostatic pressure in overlying West Coast Basin aquifers is not exceeded during injection over the active life of the disposal wells. To ensure that this does not occur, the static reservoir pressure shall be monitored on a periodic basis, per Division of Oil, Gas, and Geothermal Resources requirements, and injection into the receiving zone shall cease if and when the hydrostatic pressure is exceeded. WR-3e The Applicant shall meet with Division of Oil, Gas, and Geothermal Resources staff annually to review the status of the waste water injection wells. Any deficiencies identified by Division of Oil, Gas, and Geothermal Resources staff shall be immediately rectified by the Applicant.
WR.4	The Proposed Oil Project would require new offsite water supply, but would not substantially deplete water supplies or require new or expanded water entitlements.	III	
Section 4.15 Environmental Justice			
No Impacts Identified			