

## **8.0 Summary of Mitigation Measures and Mitigation Monitoring Plan**

### **8.1 Mitigation Monitoring Program**

As the Lead Agency under the California Environmental Quality Act (CEQA), the City of Hermosa Beach (City) is required to adopt a program for reporting or monitoring regarding the implementation of mitigation measures for this Project, if it is approved, to ensure that the adopted mitigation measures are implemented as defined in this Environmental Impact Report (EIR). This Lead Agency responsibility originates in Public Resources Code Section 21081.6(a) (Findings) and the CEQA Guidelines Sections 15091(d) (Findings) and 15097 (Mitigation Monitoring or Reporting).

### **8.2 Monitoring Authority and Enforcement Responsibility**

The purpose of a Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) is to ensure that measures adopted to mitigate or avoid significant impacts are implemented. A MMCRP can be a working guide to facilitate not only the implementation of mitigation measures by the Project proponent, but also the monitoring, compliance, and reporting activities of the City and any monitors it may designate.

The City may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as deemed necessary, and some monitoring responsibilities may be assumed by responsible agencies, such as affected jurisdictions and cities. The number of monitors assigned to the Project will depend on the number of concurrent activities and their locations. The City or its designee(s), however, will ensure that each person delegated any duties or responsibilities is qualified to monitor compliance.

Any mitigation measure study or plan that requires the approval of the City must allow at least 60 days for adequate review time. When a mitigation measure requires that a mitigation program be developed during the design phase of the Project, the Applicant must submit the final program to City for review and approval for at least 60 days before any activity begins. Other agencies and jurisdictions may require additional review time. It is the responsibility of the environmental monitor assigned to the Project to ensure that appropriate agency reviews and approvals are obtained.

The City or its designee will also ensure that any deviation from the procedures identified under the monitoring program is approved by the City. Any deviation and its correction shall be reported immediately to the City or its designee by the environmental monitor assigned to the Project.

The City is responsible for enforcing the procedures adopted for monitoring through the environmental monitor assigned to the Project. Any assigned environmental monitor shall note problems with monitoring, notify appropriate agencies or individuals about any problems, and report the problems to the City or its designee.

### **8.3 Mitigation Compliance Responsibility**

The Applicant is responsible for successfully implementing all the mitigation measures in the MMCRP, and is responsible for assuring that these requirements are met by all of its contractors and field personnel. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining permits or avoiding a specific impact entirely. Other mitigation measures include detailed success criteria. Additional mitigation success thresholds will be established by applicable agencies with jurisdiction through the permit process and through the review and approval of specific plans for the implementation of mitigation measures.

### **8.4 General Monitoring Procedures**

**Environmental Monitors.** The City and the environmental monitor(s) are responsible for integrating the mitigation monitoring procedures into the construction or operation process in coordination with the Applicant. To oversee the monitoring procedures and to ensure success, the environmental monitor assigned to the Project must be on site during that portion of the construction or operation that has the potential to create a significant environmental impact or other impact for which mitigation is required. The environmental monitor is responsible for ensuring that all procedures specified in the monitoring program are followed.

**Construction and Operations Personnel.** A key feature contributing to the success of mitigation monitoring will be obtaining the full cooperation of construction and operations personnel and supervisors. Many of the mitigation measures require action on the part of the supervisors or crews for successful implementation. To ensure success, the following actions, detailed in specific mitigation measures, will be taken:

- Procedures to be followed by construction or operations companies hired to do the work will be written into contracts between the Applicant and any contractors. Procedures to be followed by construction and operations crews will be written into a separate document that all personnel will be asked to sign, denoting agreement.
- One or more meetings will be held to inform all and train personnel about the requirements of the monitoring program.
- A written summary of mitigation monitoring procedures will be provided to supervisors for all mitigation measures requiring their attention.

**General Reporting Procedures.** Site visits and specified monitoring procedures performed by other individuals will be reported to the environmental monitor. A monitoring record form will be submitted to the environmental monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress tracked by the environmental monitor. A checklist will be developed and maintained by the environmental monitor to track all procedures required for each mitigation measure and to ensure that the timing specified for the procedures is adhered to. The environmental monitor will note any problems that may occur and take appropriate action to rectify the problems.

Public Access to Records. The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available for public inspection by the City or its designee on request.

### **8.5 Mitigation Monitoring Table**

Tables 8.1 through 8.11 present a summary of monitoring and reporting plan requirements for the mitigation measures identified in Chapter 4 of the EIR as applicable to the Proposed Project. The Table provides the following information, by column:

- Mitigation Measure (description of the mitigation measure identified in Chapter 4);
- Monitoring/Plan Requirements (monitoring or plan requirements necessary to verify compliance with the mitigation measure);
- Method of Verification (this is how the responsible agency can determine if the mitigation measure has been implemented);
- Timing (this identifies when action needs to be taken on mitigation measure); and
- Responsible Agency (this is the agency that is responsible for assuring compliance with the mitigation measure).

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**Table 8-1 Aesthetics and Visual Resources**

<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
EM-1	<p>Prior to issuance of the first grading and/or construction permits, the Applicant shall enter into agreements with the City to provide funding for the implementation and administration of an environmental monitoring program, including an environmental monitor, to ensure compliance with each Agency's environmental Conditions of Approval. The monitor shall assist the Agencies in condition compliance and mitigation monitoring for all applicable construction and operational stages of the Oil Project, as specified in a scope of work, as approved by the Agencies.</p> <p>The monitoring program shall include a post-construction program to monitor measures that extend beyond the construction period (e.g., success of landscaping, etc.), as well as monitor certain mitigation measures required during the operational phase.</p> <p>The monitor will prepare a working monitoring plan that reflects the Agencies -approved environmental mitigation measures/conditions of approval. This plan will include:</p> <ol style="list-style-type: none"> <li>1. Goals, responsibilities, authorities, and procedures for verifying compliance with environmental mitigations;</li> <li>2. Lines of communication and reporting methods;</li> <li>3. Daily and weekly reporting of compliance;</li> <li>4. Construction crew training regarding environmental sensitivities;</li> <li>5. Authority to stop work; and</li> <li>6. Action to be taken in the event of non-compliance.</li> </ol> <p>The environmental monitor shall be under contract to the Agencies. Costs of the monitor, monitoring program, and any Agency administrative fees, shall be paid by the Applicant.</p> <p>The Applicant shall also be responsible for funding work required by permit conditions requiring use of individuals with special expertise (e.g., geologist, noise engineer, etc.). The Agencies' environmental monitor will coordinate the monitoring efforts of the specialist, including communication with the Agencies, reporting and availability (at appropriate times: prior to issuance of construction permits, or during construction, as required by applicable permit conditions).</p>	Conditions included within the Development Agreement, including administrative measures to ensure bonding, payment methods and insurance	Before the start of Phase 1	City of Hermosa Beach
AE-1a	Material choice of electrical drill rig acoustical shroud shall be of neutral sky	Approval of	Prior to	City of

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		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
	color which is selected for its ability to reduce visual impact, in coordination with and approval by the City Community Development Director.	Construction Documents and Specifications and field-demonstration	issuance of permits	Hermosa Beach
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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
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 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 palette selected.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach

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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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
AE-2e	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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
AE-3a	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).	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	Cities of Hermosa Beach, Redondo Beach and Torrance
AE-3b	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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	Cities of Hermosa Beach, Redondo Beach and Torrance
AE-3c	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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach

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AE-4a	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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
AE-4b	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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
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)	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach

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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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Redondo Beach
AE-6b	Light levels and quantities of fixtures shall not exceed that which is needed for security and safety.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	Cities of Redondo Beach and Torrance

<b>Proposed City Maintenance Yard Project Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
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	Approval of Construction	Prior to issuance of	City of Hermosa

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<b>Proposed City Maintenance Yard Project Mitigation Measures</b>				
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		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
	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.	Documents and Specifications and Inspection	permits and during construction	Beach
AE-8a	All proposed site lighting shall be fully shielded and shall incorporate permanent features which prevent light spillage beyond the property line.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
AE-8b	Light levels and quantities of fixtures at the Proposed City Maintenance Yard Project shall not exceed that which is needed for security.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
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.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach

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**Table 8-2 Air Quality and GHG's**

<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
AQ-1a	<p>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):</p> <ul style="list-style-type: none"> <li>- Apply water every 3 hours to disturbed areas and unpaved roads within a construction site (61 percent reduction).</li> <li>- 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).</li> <li>- Limit onsite vehicle speeds on unpaved roads to 15 mph and posting of speed limits.</li> <li>- 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).</li> <li>- 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).</li> <li>- 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).</li> <li>- Appoint a construction relations officer to act as a community liaison concerning onsite construction issues, such as dust generation.</li> </ul>	Plan review, site inspections	Before and during construction Both Oil Project and City Yard	SCAQMD City of Hermosa Beach
AQ-1b	<p>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):</p> <ul style="list-style-type: none"> <li>- All off-road construction equipment shall be tuned and maintained according to manufacturers' specifications.</li> <li>- Any temporary electric power shall be obtained from the electrical grid, rather than portable diesel or gasoline generators.</li> <li>- All off-road diesel construction equipment with greater than 100-</li> </ul>	Plan review, site inspections	Before and during construction	SCAQMD City of Hermosa Beach

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<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
	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-3a	The Applicant shall limit flaring to a total of 5 hours per day at the full flaring capacity (or equivalent) 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.	Plan review, site inspections	Before Phase 4 operations	SCAQMD City of Hermosa Beach
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.	Plan review, site inspections	Before Phase 2 drilling	SCAQMD City of Hermosa Beach
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.	Plan review, site inspections	Before Phase 4 operations	SCAQMD City of Hermosa Beach
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 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.	Plan review, site inspections	Before Phase 2 drilling	SCAQMD City of Hermosa Beach
AQ-5b	The Applicant shall install a detection system that will monitor vapor space on all crude oil tanks. The detection system shall be capable of monitoring pressure in the vapor space of the tanks and notifying the Operator via an alarm when the pressure in the tanks gets within 10 percent of the tank relief pressure. If the tank pressure exceeds the relief pressure, the Operator shall report the incident to the SCAQMD as a breakdown pursuant to Rule 430, and	Plan review, site inspections	Before Phase 4 operations	SCAQMD City of Hermosa Beach

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<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
	submit a report of the breakdown to the Hermosa Beach Fire Chief and the SCAQMD, which shall detail the corrective actions the Operator shall take to avoid exceeding the tank relief pressure			
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 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 event investigations and methods instituted to prevent a re-occurrence.	Plan review, site inspections	Before Phase 2 operations	SCAQMD City of Hermosa Beach
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. At all times during operations, drilling, re-drilling 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 or 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 <sub>2</sub> S and 500 and 1,000 ppm hydrocarbons, with the higher level requiring shut-down of drilling or plant operations and 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.	Plan review, site inspections	Before Phase 2 operations	SCAQMD City of Hermosa Beach
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.	Plan review, site inspections	Before Phase 2 operations	SCAQMD City of Hermosa Beach
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	Plan review, site inspections	Before Phase 2 operations	SCAQMD City of

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		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
	level of 100ppm and the installation of bellows valves where applicable (valves 2 inches or smaller) to ensure that leaking components are minimized at the facility.			Hermosa Beach
AQ-6	<p>The Applicant shall provide credits for all GHG emissions generated above the threshold of 10,000 MTCO<sub>2</sub>e 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:</p> <ol style="list-style-type: none"> <li>1. Credits generated within Los Angeles County per an approved SCAQMD protocol;</li> <li>2. Credits generated within the State of California per an approved SCAQMD protocol;</li> <li>3. Credits that are generated and verified under the CAPCOA GHG Rx program;</li> <li>4. Credits that are generated and verified under the voluntary SCAQMD Regulation XXVII;</li> <li>5. Verified credits registered with the Climate Action Reserve or the American Carbon Registry.</li> </ol> <p>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:</p> <ul style="list-style-type: none"> <li>• Real: emission reduction must have actually occurred, as the result of a project yielding quantifiable and verifiable reductions or removals.</li> <li>• Additional/Surplus: an emission reduction cannot be required by a law, rule, or other requirement.</li> <li>• Quantifiable: reductions must be quantifiable through tools or tests that are reliable, based on applicable methodologies, and recorded with adequate documentation.</li> <li>• 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.</li> </ul>	Plan review, site inspections	Before Phase 4 operations	SCAQMD City of Hermosa Beach

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	<ul style="list-style-type: none"> <li>Enforceable: An enforcement mechanism must exist to ensure that the reduction project is implemented correctly.</li> <li>Permanent: Emission reductions or removals must continue to occur for the expected life of the reduction project.</li> </ul> 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-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 catalyst to reduce Diesel PM emissions. All workover rigs shall utilize electric drive/sources and shall not utilize diesel generators or engines.	Plan review, site inspections	Before Phase 4 operations	SCAQMD City of Hermosa Beach
AQ-7b	Vapor recovery on crude oil tanks shall achieve a minimum of 99 percent recovery of fugitive emissions.	Plan review, site inspections	Before Phase 4 operations	SCAQMD City of Hermosa Beach

<b>Proposed City Maintenance Yard Project Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
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: <ul style="list-style-type: none"> <li>Apply water every 3 hours to disturbed areas and unpaved roads within a construction site (61 percent reduction).</li> <li>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).</li> <li>Limit onsite vehicle speeds on unpaved roads to 15 mph and posting</li> </ul>	Plan review, site inspections	Before and during construction Both Oil Project and City Yard	SCAQMD City of Hermosa Beach

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<b>Proposed City Maintenance Yard Project Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
	<p>of speed limits.</p> <ul style="list-style-type: none"> <li>• 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).</li> <li>• 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).</li> <li>• 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).</li> <li>• Appoint a construction relations officer to act as a community liaison concerning onsite construction issues, such as dust generation.</li> </ul>			
AQ-1b	<p>The Applicant shall implement a NOx reduction program including the following, or equivalent, measures to the satisfaction of the SCAQMD:</p> <ul style="list-style-type: none"> <li>• All off-road construction equipment shall be tuned and maintained according to manufacturers' specifications.</li> <li>• Any temporary electric power shall be obtained from the electrical grid, rather than portable diesel or gasoline generators.</li> <li>• All off-road diesel construction equipment with greater than 100-horsepower engines shall meet Tier 3 NOx requirements.</li> <li>• Limit onsite truck idling to less than 5 minutes.</li> <li>• 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 when each piece of equipment is mobilized.</li> </ul>	Plan review, site inspections	Before and during construction	SCAQMD City of Hermosa Beach

**Section 8: Summary of Mitigation Measures and Mitigation Monitoring Plan**

**Table 8-3 Biological Resources**

<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
BIO-1	To minimize potential impacts to nesting native bird species, and in compliance with the 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 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.	Plan review, site inspections	Before and during construction	City of Hermosa Beach
BIO-2	The Applicant shall submit for City approval an Emergency Response Plan that would address protection of biological resources and possible revegetation of any areas disturbed during an oil spill or cleanup activities. The Emergency Response Action 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 within 1,000 feet downstream of the Pipeline. The plan shall contain: Definition of the authorities, responsibilities, and duties of all entities involved in oil removal operations; Procedures 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; Actions for after discovery and notification of a discharge; Procedures to facilitate recovery of damages and enforcement measures.	Plan review	Before construction	City of Hermosa Beach

**Section 8: Summary of Mitigation Measures and Mitigation Monitoring Plan**

<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
	<p>The Emergency Response Plan shall be approved by the California Department of Fish and Game (CDFG) Office of Spill Prevention and Response (OSPR). When habitat disturbance cannot be avoided, the Emergency Response Plan shall provide stipulations for development and implementation of site-specific habitat 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 Plan shall include species- and site-specific procedures for collection, transportation and treatment of oiled wildlife.</p> <p>The Emergency Response Plan shall be approved by the City prior to commencing any construction activities.</p>			

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**Table 8-4 Cultural Resources**

<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
CR-1	<p>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.</p> <p>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.</p>	Development and implementation of a monitoring and documentation plan by a qualified archaeologist.	During building demolition within areas of recorded historical resources.	Project Proponent and Construction Contractor
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.	Design of the New City Maintenance Building and landscape	Design Phase	Project Proponent and City
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 <i>Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-39 as revised in 1994)</i> .	Design of the New City Maintenance Building and landscape	Design Phase	Project Proponent and City
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	Development and implementation	The monitoring plan shall be	Project Proponent and

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<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
	Americans and approval by the City. 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.	of a monitoring plan by a qualified archaeologist in consultation with concerned Native American tribes.	submitted for review by the City of Hermosa Beach and approval prior to beginning development. Plan shall be implemented prior to and during construction.	Construction Contractor
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 <i>Secretary of the Interior's Professional Qualifications Standards</i> (48 FR 44738-39 as revised in 1994).	Following construction any remaining archaeological deposits must be stabilized and covered for protection.	Following over-excavation	Project Proponent and Construction Contractor
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.	A paleontological resource monitoring and mitigation program (PRMMP) for treatment of the paleontological resources will be developed and implemented.	The monitoring plan shall be submitted for review by the City of Hermosa Beach and approval prior to beginning development. Plan shall be implemented prior to and/or	Project Proponent and Construction Contractor

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Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	Requirements	Compliance Verification		
		Method	Timing	Responsible Party
			during construction.	
CR-5	<p>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.</p>	<p>The Native American Heritage Commission (NAHC) must be contacted by the Los Angeles County Coroner, and a Most Likely Descendant must be designated. Any further treatment of the remains will occur in consultation with the MLD, the NAHC, and a qualified archaeologist.</p>	<p>Upon discovery of human remains.</p>	<p>Project Proponent and Construction Contractor</p>

**Section 8: Summary of Mitigation Measures and Mitigation Monitoring Plan**

**Table 8-5 Fire Protection and Emergency Response**

<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
FP-1a	The Applicant shall ensure adequate (3,000-5,000 gpm) water supplies are available from the reclaimed water pipeline, the existing hydrant system, or some other source for water supplies that provides sufficient water supply rates, pressure and duration to comply with codes and the LACFD. 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 required by 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.	Review of water flow calcs and tests, annual reviews	Before Phase 2	City of Hermosa Beach HBFD
FP-1b	The Applicant shall implement a community alert notification system to automatically notify area residences and businesses in the event of an emergency at the oil field that would require residents to take shelter or take other protective actions.	Review and testing of system	Before Phase 2	City of Hermosa Beach HBFD
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.	Training and hiring completed at HBFD	Before Phase 2	City of Hermosa Beach 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.	Review and approval of plans	Before Phase 2	City of Hermosa Beach HBFD
FP-1e	The Applicant shall ensure that the emergency response planning includes development and testing of evacuation plans of neighbors for an emergency scenario at the facility, and the Applicant shall implement programs to ensure that all immediate neighbors are included in the notification system.	Review of plan revision	Before Phase 2 and Phase 4	City of Hermosa Beach HBFD

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<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
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 between the Hermosa Beach Fire Department and the Torrance Fire Department 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.	Review of Mutual Aide agreement revision	Before Phase 2 and Phase 4	City of Hermosa Beach HBFD
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. 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. The design and construction compliance status shall be verified by third-party audits under the direction of the City.	Third party audit report review	Before Phase 2 and Phase 4	City of Hermosa Beach HBFD
FP-2b	Fire protection measures specific to the crude oil containment system shall be provided, including the installation of automatic fire foam systems along the perimeter of the crude oil containment system and wellhead area and immediately adjacent to combustion or spark producing equipment within or immediately adjacent to the crude oil containment area that would be automatically and remotely activated in the event of a crude oil spill. The highest level electrical classification achievable shall be designated for all equipment located within the crude oil containment area.	Review of design documents	Before Phase 2 and Phase 4	City of Hermosa Beach HBFD

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<b>Proposed City Maintenance Yard Project Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
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.	Review of design documents	Before the start of the temporary facility construction	City of Hermosa Beach HBFD

**Section 8: Summary of Mitigation Measures and Mitigation Monitoring Plan**

**Table 8-6 Geological Resources/Soils**

<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
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.	Inspection by a California Registered Civil Engineer	Following any seismic event that results in substantial ground accelerations at the Project Site, as pre-determined by a California-licensed geotechnical engineer.	City of Hermosa Beach
GEO-1b	<p>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:</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Ground improvement techniques, including high pressure grout injection, i.e., compaction grouting, shall be used in areas outside the landfill area to reduce seismically induced settlement and allow construction of conventional shallow foundations.</li> <li>• 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.</li> <li>• The upper 2 to 4 feet of soil over the majority of the Project Site shall be excavated and replaced with compacted fill. Approximately 15 feet of soil shall be removed in the former landfill area and replaced with a minimum of 8 feet of compacted fill.</li> <li>• Asphalt pavement and underlying subgrade soils shall be designed to</li> </ul>	Review and approval of geotechnical report.	Approve geotechnical report prior to issuance of grading permit.	City of Hermosa Beach

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<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
	accommodate the proposed drill rig. <ul style="list-style-type: none"> <li>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.</li> </ul>			
GEO-2a	Injection pressures associated with secondary recovery operations (i.e., water flooding) 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.	Comparing pressure measurements on each injection well to formation fracture pressure	During waterflood operations	City of Hermosa Beach
GEO-2b	The seismicity monitoring program shall be completed in coordination with the Caltech Seismological Laboratory.	Coordinate with Cal Tech	Monthly	City of Hermosa Beach
GEO-2c	In the event that monitoring indicates that Proposed Oil Project-induced seismicity is occurring, water flood operations shall be adjusted to alleviate such seismicity. The drilling operator shall coordinate with the California Division of Oil, Gas, and Geothermal Resources in determining appropriate increased or decreased levels in water flood operations.		Following monthly monitoring, as necessary	City of Hermosa Beach
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.	Submit temporary shoring plans and calculations.	Prior to permit issuance	City of Hermosa Beach
GEO-4a	Prior to approval of the first drilling permit, the Applicant shall have submitted and the City of Hermosa Beach, the California Coastal Commission, and the California Division of Oil, Gas and Geothermal Resources shall have approved a Subsidence Monitoring and Avoidance Program. The Subsidence Monitoring Program shall include: <ul style="list-style-type: none"> <li>Ground elevation survey methodologies with high vertical resolution;</li> <li>A network of survey or subsidence monitoring locations, including</li> </ul>	Monitor subsidence with GPS technology.	Annually	City of Hermosa Beach and California Division of Oil and Gas and Geothermal

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Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	Requirements	Compliance Verification		
		Method	Timing	Responsible Party
	<p>continuous GPS stations and GPS benchmarks, positioned within and outside the City that are sufficiently spaced to draw conclusions about subsidence within the City;</p> <ul style="list-style-type: none"> <li>• Use of InSAR imagery technology to evaluate regional subsidence patterns both within and beyond the proposed oil field;</li> <li>• Sufficient monitoring frequency to establish trends in subsidence in order to distinguish background ground movement from any subsidence caused by proposed oil field operations;</li> <li>• Reservoir monitoring, including documentation of produced fluid volume (oil, gas and water) and reservoir pressures at similar frequency to ground elevation measurements;</li> <li>• Reporting requirements; and</li> <li>• Action levels.</li> </ul> <p>Subsidence monitoring reports shall be completed annually. Surveying for both vertical and horizontal ground movement shall be completed along the perimeter and throughout the interior of the oil field, utilizing Global Positioning System technology in combination with a network of ground stations. The continuous monitoring GPS stations shall include:</p> <ul style="list-style-type: none"> <li>• Hermosa Beach Pier. The pier will serve as the furthest offshore point in the monitoring program, and the closest to where the center of the subsidence bowl would be expected to occur.</li> <li>• Longfellow Outfall. This Outfall is larger and more structurally stable than some of the other outfalls along the City's coast.</li> <li>• 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.</li> </ul> <p>The results shall be forwarded to the Division of Oil, Gas and Geothermal Resources, the California Coastal Commission, and the City of Hermosa Beach for review.</p>			Resources (DOGGR)
GEO-4b	In the event that the Global Position System monitoring indicates that subsidence 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,	Increase wastewater reinjection and/or water	Following monitoring results indicating	California Division of Oil and Gas and Geothermal

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<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
	Gas and Geothermal Resources in determining appropriate increased levels of wastewater reinjection operations. The Applicant will also coordinate with the City of Hermosa Beach, Public Works Department, to verify that subsidence has been mitigated sufficiently.	replenish-ment operations	subsidence	Resources (DOGGR) and Carpinteria Public Works Department
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 completed by a Registered Civil Engineer.	Soil auger and analytical laboratory	Prior to final design	City of Hermosa Beach
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.	Design for protection against corrosion	Prior to final design	City of Hermosa Beach
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 utilized.	Under impressed cathodic protection	Prior to final design	City of Hermosa Beach
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.	Visual inspections	Monthly	City of Hermosa Beach
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. Mechanical testing, including ultrasonic and hydrostatic testing, shall be completed in coordination with the California Department of Conservation Division of Oil, Gas, and Geothermal Resources staff.	Prepare under guidance of California Department of Conservation Division of Oil, Gas, and	Prior to final design	City of Hermosa Beach

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<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
		Geothermal Resources		
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.	Pour proper concrete adjacent to corrosive soils	During construction	City of Hermosa Beach

<b>City Maintenance Yard Project Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
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 estimation of both vertical and horizontal anticipated peak ground accelerations.	Submit temporary shoring plans and calculations.	Prior to permit issuance	City of Hermosa Beach
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 completed by a Registered Civil Engineer.	Soil auger and analytical laboratory	Prior to final design	City of Hermosa Beach

**Table 8-7 Safety, Risk of Upset and Hazards**

<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
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, and SPCC and emergency response plans requirements. The review shall include a seismic assessment of equipment to withstand earthquakes prepared by a seismic engineer in compliance with Local Emergency Planning Committee Region 1 CalARP guidance. 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.	Review of audit reports	Before Phase 4 operations and annually thereafter	LACFD HBFD
SR-1b	The Applicant shall ensure that no spark producing equipment is located within the crude oil spill containment areas, or that spark producing equipment is sufficiently isolated from the crude oil containment area, in order to reduce the potential for crude oil fires.	Review of design documents	Before Phase 3 construction	City of Hermosa Beach HBFD
SR-1c	The Applicant shall ensure that all crude-oil truck haulers are trained in HAZMAT (to the HAZWOPER technician level at least) spill response and that each truck carries a spill response kit.	Site inspections, review of contracts	Before Phase 2 drilling	City of Hermosa Beach HBFD
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 during normal operations.	Review of design documents	Before Phase 3 construction	City of Hermosa Beach HBFD
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.	Review of design documents	Before Phase 3 construction	City of Hermosa Beach HBFD

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<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
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.	Review of design documents	Before Phase 3 construction	City of Hermosa Beach HBFD
SR-1g	Produced gas shall be continuously monitored for hydrogen sulfide and, if H <sub>2</sub> S levels exceed 100 ppm, the well shall be shut in and abandoned as per DOGGR requirements.	Review of design documents and in-field inspections	Before Phase 2 drilling	City of Hermosa Beach HBFD
SR-2	The Applicant shall sample soil during Phase 1 grading to ensure that soil lead contamination levels are below 9,500 mg/kg. 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.	Review of design documents and in-field inspections	Phase 1	City of Hermosa Beach

**Section 8: Summary of Mitigation Measures and Mitigation Monitoring Plan**

**Table 8-8 Hydrology and Water Quality**

<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
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 inspect storage tank and processing equipment at least daily and pipeline inspections on a weekly basis.	Review of maintenance reports	Before Phase 4 operations Annually	City of Hermosa Beach
HWQ-2b	The Applicant shall install a leak detection system for crude pipelines to the Torrance Refinery. 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 5 minutes, 1 hour, 24 hours, and 48 hours with the accuracy defined once the system is established and tested.	Review of system design and testing results	Before Phase 4 operations	City of Hermosa Beach
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.	Review of training and equipment	Before Phase 2 and Phase 4 operations	City of Hermosa Beach
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.	Review of training and incident reports	Before Phase 2 and Phase 4 operations	City of Hermosa Beach

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<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
HWQ-2e	A response manual and Oil Spill Contingency Plan, approved by the City of Hermosa Beach Fire Department, shall be implemented to outline response actions in the event of a spill, including a spill response trailer, equipment, and personnel training. The Plan shall be completed prior to Phase 2. Spill cleanup shall be completed under the oversight of the lead regulatory agency, with respect to oil spills, as identified in the Oil Spill Contingency Plan.	Review of reports	Before Phase 2 and Phase 4 operations	City of Hermosa Beach
HWQ-2f	The well cellar 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.	Review of design documents, field inspection	Before Phase 2 and Phase 4 operations	City of Hermosa Beach
HWQ-2g	The Applicant shall install a check valve in the crude oil pipeline at the Herondo and Valley drive where the crude oil pipeline turns eastward and starts uphill.	Review of design documents, field inspection	Before Phase 4 operations	City of Hermosa Beach City of Hermosa Beach
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.	Review of design documents, field inspection	Before Phase 4 operations	City of Hermosa Beach

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**Table 8-9 Noise and Vibration**

<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
NV-1a	Increase the height of the noise barriers on the west and north sides of the site to 35-feet and upgrade the sound insulation performance of the barrier material from STC-25 to STC-32.	Review of design documents and in-field inspections	Before Phase 1	City of Hermosa Beach
NV-1b	Increase the height of the noise barriers on the south and east sides of the site to 22-feet. The sound insulation performance of the barrier material in these locations may remain at STC-25.	Review of design documents and in-field inspections	Before Phase 1	City of Hermosa Beach
NV-1c	The gates on the east and south sides of the site 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.	Review of design documents and in-field inspections	Before Phase 1	City of Hermosa Beach
NV-1d	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.	Review of design documents and in-field inspections	Before Phase 1	City of Hermosa Beach
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). Minimum sound insulation performance of the barrier material should be STC-32.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach
NV-2b	The gates on the east and south sides of the site shall be constructed of solid (no holes) plywood or sheet metal and be designed to deliver a minimum sound insulation performance of STC-32. Any gaps above the gates must be closed off, by extending the acoustical barrier material from the sides.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach

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<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
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.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach
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.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach
NV-3a	Provide continuous, 35-foot high noise barriers along the west and north sides of the site. Minimum sound insulation performance of the barrier material should be STC-32.	Review of design documents and in-field inspections	Before Phase 3	City of Hermosa Beach
NV-3b	Provide continuous 25-foot high noise barriers along the east and south sides of the site. Minimum sound insulation performance of the barrier material shall be STC-25. The gates on the east and south sides of the site should 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.	Review of design documents and in-field inspections	Before Phase 3	City of Hermosa Beach
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.	Review of design documents and in-field inspections	Before Phase 3	City of Hermosa Beach
NV-5a	Provide a continuous, 35-foot high noise barrier around the entire perimeter of the site. Minimum sound insulation performance of the barrier material should be STC-32.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach

**Section 8: Summary of Mitigation Measures and Mitigation Monitoring Plan**

<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
NV-5b	Provide solid (no holes) plywood or sheet metal gates for the east and south 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.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach
NV-5c	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.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach
NV-5d	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.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach
NV-6a	Increase the height of the masonry walls on the north and west sides of the site to a minimum of 27-feet.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach
NV-6b	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.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach

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<b>Proposed City Maintenance Yard Project Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
NV-7a	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.	Review of design documents and in-field inspections	Before Phase 3 Proposed City Maintenance Yard Project	City of Hermosa Beach
NV-7b	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.	Review of design documents and in-field inspections	Before Phase 3 Proposed City Maintenance Yard Project	City of Hermosa Beach
NV-7c	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.	Review of design documents and in-field inspections	Before Phase 3 Proposed City Maintenance Yard Project	City of Hermosa Beach
NV-7d	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.	Review of design documents and in-field inspections	Before Phase 3 Proposed City Maintenance Yard Project	City of Hermosa Beach
NV-8a	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.	Review of design documents and in-field inspections	Before Phase 3 Proposed City Maintenance Yard Project	City of Hermosa Beach
NV-8b	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.	Review of schedules and in-field inspections	Before Phase 3 Proposed City Maintenance Yard Project	City of Hermosa Beach
NV-8c	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	Review of schedules and	During Phase 3 Yard	City of Hermosa

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<b>Proposed City Maintenance Yard Project Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
	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.	in-field inspections	Operation	Beach
NV-9a	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.	Review of design documents and in-field inspections	Before Phase 1 Proposed City Maintenance Yard Project	City of Hermosa Beach
NV-9b	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.	Review of design documents and in-field inspections	Before Phase 1 Proposed City Maintenance Yard Project	City of Hermosa Beach
NV-9c	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.	Review of design documents and in-field inspections	Before Phase 1 Proposed City Maintenance Yard Project	City of Hermosa Beach
NV-9d	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.	Review of design documents and in-field inspections	Before Phase 1 Proposed City Maintenance Yard Project	City of Hermosa Beach
NV-10a	Increase the height of the concrete block Yard wall along the west and south sides of City Hall from 8-feet to 16-feet.	Review of design documents and in-field inspections	Before Phase 1 Proposed City Maintenance Yard Project	City of Hermosa Beach
NV-10b	Apply outdoor acoustical panels to the extended wall surfaces facing the Yard	Review of	Before Phase	City of

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<b>Proposed City Maintenance Yard Project Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
	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.	design documents and in-field inspections	3 Proposed City Maintenance Yard Project	Hermosa Beach
NV-10c	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.	Review of schedules and in-field inspections	Before Phase 3 Proposed City Maintenance Yard Project	City of Hermosa Beach

**Table 8-10 Transportation and Circulation**

<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
TR-1a	For Phases 1-3, the Applicant shall fund, through and in consultation with the School District 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.	Review of contracts and site inspections	Prior to pipeline construction activities	City of Hermosa Beach
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).	Review of design documents and site inspections	Prior to pipeline construction activities	City of Hermosa Beach
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.	Review of contracts and site inspections	Prior to pipeline construction activities	City of Hermosa Beach
TR-1d	For Phases 1-3, the Applicant shall, with the approval and coordination of the City Public Works Department, 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.	Review of design documents and site inspections	Prior to pipeline construction activities	City of Hermosa Beach
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.	Review of design documents and site inspections	Prior to pipeline construction activities	City of Hermosa Beach

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<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
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.	Approval of CTMP	Prior to pipeline construction activities	City of Hermosa Beach
TR-3a	The applicant shall be prohibited from routing Proposed Oil Project-related heavy truck exceeding 20,000 pounds on 190 <sup>th</sup> Street between Anza Avenue and PCH, except during Pipeline construction. The Applicant shall comply with all requirements of the applicable city.	Use of alternative route	Phases 1-4	City of Hermosa Beach
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.	Use of alternative route	Phases 1-4	City of Hermosa Beach
TR-4a	The City shall design the permanent Proposed City Maintenance Yard so that it does not enter/exit directly onto Valley Drive.	Review of Plans	Phase 3	City of Hermosa Beach
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.	Review of Plans	Phase 3	City of Hermosa Beach

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<b>Proposed City Maintenance Yard Project Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
TR-4a	The City shall design the permanent Proposed City Maintenance Yard so that it does not enter/exit directly onto Valley Drive.	Review of Plans	Phase 3	City of Hermosa Beach
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.	Review of Plans	Phase 3	City of Hermosa Beach

**Table 8-11 Water Resources**

<b>Proposed Oil Project and Pipeline Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
WR-1	<p>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.</p> <p>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.</p>	Area study of the proposed sewer line and a 7-day performance capacity test should be performed at select downstream locations to verify the adequacy of the existing sewer.	Prior to issuance of permit	City of Hermosa Beach
WR-2	Implement MM HWQ-2a through HWQ-2d.	See HWQ-2a through HWQ-2d	See HWQ-2a through HWQ-2d	See HWQ-2a through HWQ-2d

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<b>Proposed City Maintenance Yard Project Mitigation Measures</b>				
<b>Mitigation Measure</b>	<b>Requirements</b>	<b>Compliance Verification</b>		
		<b>Method</b>	<b>Timing</b>	<b>Responsible Party</b>
WR-1	<p>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.</p> <p>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. In the event that existing sanitary sewer facilities are insufficient to accommodate increased flows from the Proposed City Maintenance Yard Project, sewer upgrades shall be completed to accommodate the increased flows.</p>	<p>Area study of the proposed sewer line and a 7-day performance capacity test should be performed at select downstream locations to verify the adequacy of the existing sewer.</p>	<p>Prior to issuance of permit</p>	<p>City of Hermosa Beach</p>



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