

Agenda Report



Date: November 8, 2011
To: Stephen W. Helvey, City Manager
Jeffrey W. Collier, Chief Assistant City Manager
From: Brian Lee, Building Services Manager, Building Official
Subject: Whittier Main Oil Field Development Project;
Conditional Use Permit No. CUP09-004

RECOMMENDATION

It is recommended the City Council adopt a Resolution that certifies the Final Environmental Impact Report and related environmental documents for the Whittier Main Oil Field Development Project and adopts Findings and a Statement of Overriding Considerations pursuant to the California Environmental Quality Act (Pub. Res. Code § 21000, *et seq.*); and adopt a Resolution approving Conditional Use Permit CUP09-004 to allow the development and operation of the Whittier Main Oil Field Development Project.

BACKGROUND

The Planning Commission held a public hearing on the Project on October 19, October 20, October 24, and October 25, 2011. During the public hearing, many residents and interested persons provided testimony both for and against the Project. Testimony regarding the Project was also provided by Staff; MRS, the City's environmental consultant for the Project, and Matrix Oil Corporation (Matrix), the Project applicant. In addition, the City received 26 letters regarding the Project after the close of the comment period on the Draft Environmental Impact Report.

Following the public hearing, at its meeting of October 25, 2011, the Whittier City Planning Commission voted 5-0 to adopt Resolution No. P.C. 11-30 certifying the Final Environmental Impact report and related environmental documents for the Whittier Main Oil Field Development Project; and to adopt Resolution No. P.C. 11-31 approving Conditional Use Permit CUP09-004 to allow the development and operation of the Whittier Main Oil Field Development Project. The Project Conditions of Approval, as approved by the Planning Commission, included modifications of the draft originally circulated to avoid duplication or conflicts with Project mitigation measures; to correct or clarify conditions based on recommendations of Staff and Matrix; and to add conditions recommended by Planning Commission and Staff.

On October 26, 2011, Councilman Henderson and Councilman Vinatieri requested that Conditional Use Permit No. CUP09-004 be formally reviewed by the City Council in order to make a final determination on the Planning Commission's decision regarding the Whittier Main Oilfield Development Project.

DISCUSSION

Project Site

The City owns approximately 1,290 acres of former oil fields in the hills north of the developed areas of the City. This area was commonly known as the Whittier Main Oil Field, which produced oil for more than 100 years as an active oil field and drilled about 550 wells in that time until the early 1990s. The majority of the land overlying the oil field was purchased by the City from Chevron and Unocal with Measure A funds in order to preserve the land surface as open space and wildlife habitat. The land is currently managed for the City by the Puente Hills Landfill Native Habitat Preservation Authority (Authority) and is part of the 3,869-acre Puente Hills Landfill Native Habitat Preserve (Preserve), which is bound by the San Gabriel River to the west and the Chino Hills to the east. The proposed Project oil and gas production and processing facilities would be located on one site within the Whittier Main Oil Field, encompassing not more than 7 acres total.

The Project also proposes a new 2.8-mile pipeline connection from the Project Site to a tie-in at Leffingwell Road and La Mirada Boulevard to transport marketable crude oil. The connection line would be constructed within the public right-of-way, along the same trench and at the same time as the natural gas sales line and would follow the same route to tie into the Southern California Gas Company (SCGC) line at the intersection of Colima and Lambert Roads.

Exhibit 1. Project Area Location Map



	ZONING	GENERAL PLAN	LAND USE
Site	Open Space	Open Space	Preserve
North	Open Space	Open Space	Preserve
South	Open Space, Residential Estate (R-E), Single Family Residential (R-1)	Open Space, Low Density Residential	Preserve, Low Density Residential, Golf Course
East	Open Space	Open Space	Preserve, Colima Road, Community Ball Fields
West	Open Space, Hillside Residential (H-R), Single Family Residential (R-1), Light Multiple Residential (R-2)	Open Space, School, Low Density Residential, Hillside Residential	Preserve, School, Low Density Residential, Hillside Residential

Project Overview

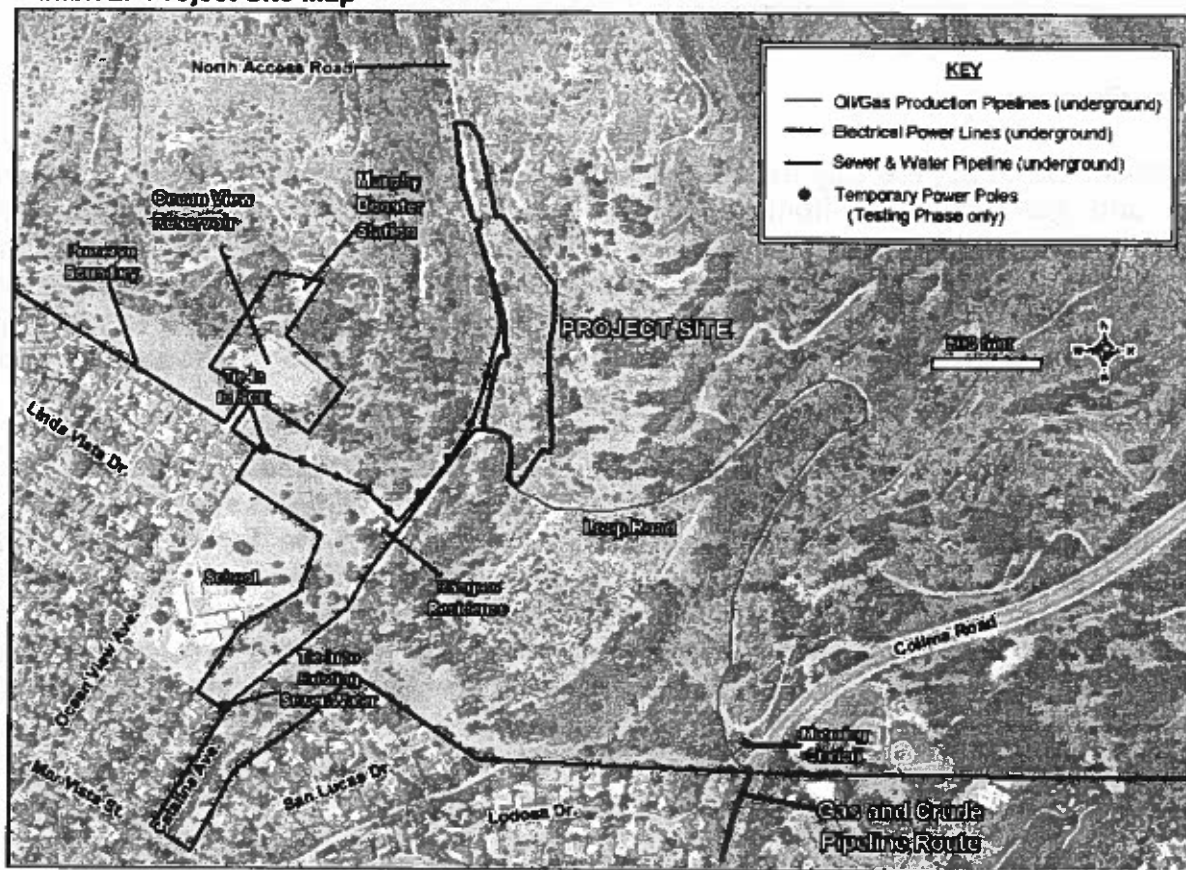
On October 28, 2008, the City awarded a lease to Matrix that could permit resumption of oil and gas extraction from the Whittier Main Oil Field site, subject to full environmental review and issuance of a discretionary conditional use permit. In exchange for the right to access these mineral rights, Matrix would provide a substantial long-term income stream from revenues generated by its drilling operations to the City and for the preservation and enhancement of the Preserve’s ecological resources and native habitat.

To comply with the requirements of the lease, Matrix has submitted a conditional use permit application to drill and produce oil on the Whittier Main Oil Field site. The Project, as proposed through the conditional use permit, would provide for a drilling and production program that would occur in three phases. The first would be an initial exploratory phase whereby three wells would be drilled and tested on a temporary basis. If these wells are successful, the Project would proceed to the construction and operations phases. If the exploration wells are unsuccessful, the Project would end, all drilling equipment would be removed, and the Project site would be restored to its previous condition. The exploratory phase of the Project is expected to last about eight months.

The construction phase of the Project is expected to last approximately 30 months. Once constructed, the Project is expected to produce up to 10,000 barrels of oil per day and up to 6,000,000 standard cubic feet of gas. The Project proposes crude oil and

natural gas sales pipelines to carry the products from the Oil Field site to outside distributors. The pipelines would be built under existing Preserve roads from the Project Site to Colima Road. A small SCGC meter building (20 by 30 feet) would be constructed near the pipeline before the pipeline enters Colima Road. From the point where the natural gas and crude oil pipelines enter Colima Road, the pipelines would be built to connect the proposed Project Site to the existing high-pressure natural gas pipeline that runs underneath Lambert Road and to the crude oil pipeline that presently runs under Leffingwell Road. The crude oil pipeline would then continue south along Colima Road and La Mirada Boulevard to Leffingwell Road. The crude oil pipeline would tie in to the existing crude oil pipeline system owned and operated by Crimson California Pipeline Company, headquartered in Long Beach. This system collects crude oil from several production locations (wells and processing in Brea, Montebello, and Santa Fe Springs) and supplies the crude oil to area refineries for the eventual production of gasoline, diesel fuel, and jet fuel. The crude oil pipeline would cross into the unincorporated area of Los Angeles County, south of Lambert Road, between the City of Whittier and the City of La Mirada. (Reference Exhibit 2, Project Site Map.)

Exhibit 2. Project Site Map



As proposed, the fully developed Project would consist of a single pad with wells, an oil processing plant, a gas plant, and an oil-truck loading facility, all located on an approximately 7 acre site within the City-owned Whittier Main Oil Field. Major components of the Project are summarized in Table 1, Proposed Project Design Parameters.

Table 1 Proposed Project Design Parameters

Parameter	Value
Crude oil production	Up to 10,000 bpd
Natural gas production	Up to 6 million cubic feet per day
Produced water injection	Up to 7,200 bpd
Maximum number of wells	60
Number of production wells	Up to 52: all at the Project Site
Number of injection wells	Up to 8, all at the Project Site
NGL production	Up to 70 bpd, mixed with crude oil
Pipeline length and tie-in, gas	1.8 miles, Colima Road to Lambert
Pipeline length and tie-in, crude	2.8 miles, Colima Road to La Mirada to Leffingwell Avenue
Water use, during construction	2,000 gallons per day during grading and earthmoving Up to 10,000 gallons per day during pipeline installation 1,000 gallons per month during facility construction
Water use, during drilling	Up to 4,500 gallons per day
Water use, during operations and maintenance	Up to 1,300 gallons per day
Electrical use, operations	3,700 kW peak, 2,500 kW average
Well workovers	Up to 52 per year
Well re-drills, peak	Up to 3 per year

Notes: bpd = barrels per day; NGL = natural gas liquid; kW = kilowatts; estimated peak values and maximums shown

Drilling and Testing Phase

The Drilling and Testing Phase would determine the potential productivity and economic viability of the Project. During this phase, up to three test wells would be drilled from the Project Site to vertical depths between 1,000 and 10,000 feet. These wells would utilize horizontal drilling technology, which enables the wells to be drilled long distances laterally, such that the bottom-hole locations may be several thousand feet from the surface locations of each well.

Catalina Avenue would provide the only access to the site during the Drilling and Testing Phase; Mar Vista Street and other area roadways would provide access to Catalina Avenue. Parking and staging would take place within the Preserve immediately inside the Catalina Avenue gate and at the Project Site.

Prior to the start of the Drilling and Testing Phase, a portion of the Project Site would be cleared and leveled to accommodate the drilling equipment, which includes the drilling rig, temporary liquid storage tanks, pumps, gas handling equipment, and pipe racks. The extension of Catalina Avenue within the Preserve would also be improved during

this phase to provide access for emergency firefighting equipment. Utility crews would also install water and electricity to the drill sites, necessary precursors to drilling activities.

After the Project Site is sufficiently prepared, the drilling rig and associated equipment would be brought to the site and assembled. Each well is estimated to take up to 30 days to drill. The three test wells would be drilled one after another, utilizing the same rig and support equipment, which would remain on the property for approximately 90 days. When the last well is completed, the rig and associated equipment would be moved off the property while monitoring and sampling of the test wells continues.

During the Drilling and Testing Phase, a 15-foot tall noise blanket would be installed around the perimeter of the drill site to minimize noise and shield views into the sites. Additional soundproofing would be installed on the drilling rig as necessary. Any additional wells drilled before construction is completed would be similarly shielded and soundproofed.

Design and Construction Phase

If the Project Drilling and Testing Phase yield the quality and level of production that Matrix deems economically viable, then the Project would proceed to the Design and Construction Phase. During the Design and Construction Phase, the following activities would be performed:

- Stabilize, upgrade, and pave the existing North Access Road and further improve Catalina Avenue within the Preserve;
- Construct oil and natural gas processing facilities;
- Construct natural gas and crude oil sales pipelines; and
- Construct well cellars and associated equipment.

Matrix plans to provide sufficient well cellar and supporting oil and gas processing capacity to process maximum production volumes of 10,000 barrels of crude oil and 6 million cubic feet of natural gas per day.

All roads used within the Preserve would be paved during the Design and Construction Phase. The existing North Access Road would be stabilized, upgraded, and paved to make the road safe and usable for larger vehicles. This would alleviate the need for such traffic to enter the Preserve via Catalina Avenue. All vehicles with two axles and without trailers would use the Catalina Avenue entrance.

Within the 7-acre Project Site, construction would include the well stations, up to three well cellars, associated liquid and gas separating equipment at the well area, and the oil processing facility and gas plant.

Grading the Project Site would include cut and fill. Matrix has proposed a modification to its grading of the site to reduce the amount of grading required for the Project pads as well as the number of truck trips during project construction.

The revised grading would achieve the following:

- Overall cuts and fills for dirt work are balanced, i.e., no required soil export or required berms installed for the purposed of soil stockpiling;
- Eliminates the collateral impact to the surrounding area outside the 7 acre facility to minimize footprint and rehabilitation acreage, i.e. 27 acres impact with berms and slope-backs;
- Significant reduction in visual impacts from the Preserve (eastern side) by not sloping back hillsides and retaining the large eucalyptus grove to the southeast;
- Eliminates retaining walls in the 30-40' category. Retaining walls will be held to heights 8-10 feet, thus reducing cost and safety concerns substantially;
- Eliminates the requirement to transport soils to the Landfill or other destinations;
- Reduces Project grading truck trips by 9,313.

A permanent water supply pipeline would be constructed and buried under the existing road from the fire hydrant on Catalina Avenue to the Project Site. Electrical power would be routed via buried lines to the Project Site from the electrical meter provided by SCE at the end of Ocean View Ave. Matrix would construct a new 4-inch cast iron sewer pipeline from the new facility office within the Project Site to the sewer connection on Catalina Avenue at the entrance to the Whittier Main Oil Field. The sewer pipeline would service restrooms at the Project Site offices. The office would be 30 feet by 80 feet and would contain two restrooms.

The crude oil and natural gas sales pipelines and SCGC meter building would be built during this phase. A comprehensive fire protection system as required by the Los Angeles County Fire Department (LACoFD) would be installed, including fire hydrants and automated alarm systems. The access roads from Catalina Avenue and the Loop Road from Colima Road would continue to be the emergency entrances and emergency site access would be designed in accordance with LACoFD requirements.

Operations and Maintenance Phase

The Operations and Maintenance Phase of the Project would consist of drilling the remaining wells (57 wells), and operating and maintaining the oil processing, natural gas processing, and oil loading facilities. Drilling would take up to 30 days per well, including drilling rig set-up, tear-down, and drilling operations. This would total up to 5 years of drilling if done continuously. Up to eight of the 57 wells would be injection wells for injecting produced water back into the reservoirs. Well drilling during the operations and maintenance phase might be extended to drilling fewer wells per year depending on

the quality and quantity of crude oil produced as well as market conditions. Production and injection wells would be drilled with a single drilling rig.

Upon construction completion, a permanent masonry block or concrete wall would be constructed surrounding the entire site. Native plants would be planted outside the wall for decoration and screening. Subsequent wells would be drilled within the Project Site, and additional soundproofing and shielding would be provided as necessary.

Once constructed, the Project would be operated and maintained as an oil and gas field, designed to current oil field technology standards, including automated alarms and shut downs for abnormal conditions. Operations would be designed to utilize automated equipment for emergency shutdowns of major equipment and system malfunctions, as well as for earthquakes, fires, and other natural disasters. Oil field operators would be present 24 hours per day, seven days per week to monitor activity and check for safety and security of operations.

The Operations phase would include appropriate shielded lighting at night, and around-the-clock security cameras would survey the perimeter and the interior of the sites.

Environmental Review

A Draft Environmental Impact Report (DEIR) was prepared for the Whittier Main Oil Field Development Project in compliance with the California Environmental Quality Act and the State Guidelines (collectively "CEQA"). The DEIR was circulated for public review and comment from June 6, 2011 to July 21, 2011, as required by State CEQA Guidelines section 15105. The City received a total of 132 comment letters on the DEIR. Of these comments, one was from the applicant, 12 were from public agencies, 14 from organizations, and 105 from residents. All comments were responded to, and none of these comments raised new issues that required recirculation of the EIR. The comments received on the DEIR, and the City's responses to those comments, comprise the Final Environmental Impact Report (FEIR). The City also has reviewed the 26 letters regarding the Project that were submitted after the close of the comment period on the DEIR, and has determined that those letters also do not raise any new issues that require recirculation of the EIR.

After the DEIR was prepared and circulated for public review, and in an effort to be responsive to concerns raised by various commenters, Matrix proposed project refinements by redesigning the layout and amount of grading required for the Project pads. As discussed above, the design revisions reduce the amount of grading and result in a reduced overall impact area to the Preserve. Under these changes, the amount of earth moved from the site during Project grading would be reduced from 147,000 yards to zero. The duration of grading would be cut in half, from 24 weeks to 12 weeks. By eliminating soil export, the design modification would eliminate the requirement to transport soils to the Landfill or other destinations, which would in turn

eliminate the grading soil export trips and result in a reduction of 9,313 truck trips during Project grading. These changes are discussed and analyzed in Appendix O of the FEIR, and were considered and approved as part of the Project by the Planning Commission at its October 25, 2011 meeting.

Environmental Impacts of the Project

As discussed in the FEIR, the Project would generate potentially significant environmental impacts in air quality; biological resources; safety, risk of upset and hazardous materials; geological resources; noise and vibration; aesthetics and visual resources; traffic and circulation; hydrology and water resources; cultural resources and archeology; wastewater; land use and policy consistency; fire protection and emergency services; public services and utilities; recreation; and environmental justice. The FEIR recommends a series of mitigation measures designed to reduce these potentially significant impacts.

However regardless of recommended mitigation measures, the FEIR finds that certain impacts cannot be reduced to less than significant levels and would remain significant and unavoidable. These impacts are associated with air quality; aesthetics; hydrology and water resources; land use and policy consistency; and recreation. Because these are significant and unavoidable impacts, CEQA requires the City to adopt a Statement of Overriding Considerations (SOC) prior to approving the proposed Project CUP. The SOC must demonstrate that the specific economic, legal, social, technological, or other benefits of the Project outweigh the unavoidable adverse environmental effects.

The Planning Commission approved the SOC for the Project, finding that the economic, social and other benefits of the Project outweigh the significant and unavoidable air quality, aesthetics, hydrology and water quality, land use and policy consistency, and recreation related impacts identified in the FEIR and the record of proceedings. The Planning Commission found that each one of the following benefits of the Project, independent of the other benefits, warrants approval of the Project notwithstanding the unavoidable environmental impacts of the Project as identified in the FEIR.

- A. The development of the Whittier Main Oil Field Development Project will provide restoration activity benefits in the Preserve as part of the Project.
- B. The proposed Project will provide a stable source of funding for the Habitat Authority for as long as the wells produce oil and gas, thereby ensuring a long-term funding source for restoration within the Preserve.
- C. The development of the Project will provide the City with royalty benefits that can be used to benefit City residents through public services and infrastructure improvements.
- D. The development of the Project will stimulate the local economy by providing opportunities for qualified local businesses to sell goods and services to workers.

- E. The development of the Project will provide jobs to the area through construction and operation of the Project.

Municipal Code Compliance

The Project Site is designated as Open Space (OS) in the City Zoning Map. According to Section 18.09.010 of the City Municipal Code, the purpose of the OS zone is to delineate wildlands, wildlife and wildlife habitat. Permitted uses within the OS zone are limited to water facilities; electrical transmission facilities; and fire control measures. Conditionally permitted uses include oil, gas or other hydrocarbon substances, the drilling and production thereof, including but not limited to exploratory borehole operations.

To conditionally approve an oil and gas operation in an OS zone, the City is required to make the following findings consistent with Section 18.52.040 of the Municipal Code:

1. That the site proposed for the use is adequate in size, shape and topography;
2. That the site proposed for the use has sufficient access to streets which are adequate, in width and pavement type, to carry the quantity and quality of traffic generated by the proposed use;
3. That the proposed use will not unreasonably interfere with the use, possession and enjoyment of surrounding and adjacent properties;
4. That the proposed use will be compatible with the permitted uses of surrounding and adjacent properties;
5. That the use will, as to location, operation and design, be consistent with the general plan, any applicable specific plan, and the Whittier zoning regulations.

The City can make these findings for the following reasons:

The Project proposes to occupy approximately 7 acres of the 1,290-acre City owned Whittier Main Oil Field site. The Project has been designed to achieve a grading plan that balances cut and fill and minimizes soil export. Recommended conditions of approval require City review and approval of detailed grading plans, erosion control and restoration of disturbed slopes. The Project site is adequate in size, shape and topography to accommodate the proposed oil and gas production and processing facilities.

The Project will add additional truck and vehicle trips to City streets. Primary Project travel routes include Catalina Avenue, Penn Street and the North Access Road. Conditions of approval recommended for the Project require a Traffic Management

Plan, off-site staging of construction vehicles and equipment, and car or van pooling to reduce impacts on City streets. The Project EIR found that there are no significant and unavoidable impacts to transportation and circulation, including impacts to streets. Subject to conditions of approval, the Project site has adequate street access to accommodate the proposed oil and gas production and processing facilities.

The Project will re-introduce oil and gas production and processing facilities into an open space area. The EIR finds that certain impacts cannot be reduced to less than significant levels and would remain significant and unavoidable. These impacts include air quality, aesthetics, hydrology and water quality, land use and policy consistency, and recreation. However, these potential impacts would be overridden by the benefits of the restoration activities at the Preserve that would be undertaken as a result of the Project. Without the approval of the Project, the Preserve is unlikely to have funding that would allow continued restoration and preservation of the site. The Oil and Gas Lease between the City of Whittier and Matrix provides for continuing funding for the Habitat Authority with annual administrative fees and mitigation fees upon issuance and acceptance of a CUP. The Project would provide a stable source of funding for the Habitat Authority for as long as the wells produce oil and gas.

In addition, the City would significantly benefit from funds received from the royalties generated from oil and gas production. Those funds could provide for enhancements to public services and infrastructure throughout the life of the Project. Some of those improvements could include education, safety, traffic, beautification projects and other community benefits. Although the Project would interfere with the use and enjoyment of the Preserve, the benefits of the Project to the Preserve and the community do not make this interference unreasonable.

Matrix has redesigned the Project to minimize impacts to habitat and surrounding land uses. However, as noted above, regardless of recommended mitigation measures, the EIR finds that certain impacts cannot be reduced to less than significant levels and would remain significant and unavoidable. Because the Project would provide a long-term revenue stream that would directly benefit the Preserve and the community, the proposed oil and gas facilities are considered compatible with the surrounding properties.

The City of Whittier General Plan permits oil and gas production in all land use districts and the City's Zoning Ordinance allows oil and gas production drilling in all zone districts with a Conditional Use Permit. The City awarded a lease to Matrix that could permit resumption of oil and gas extraction from the proposed Project Site, subject to environmental review and approval of a discretionary conditional use permit. Matrix has been coordinating with the City to develop plans to obtain a conditional use permit, while considering ecological concerns to preserve natural habitats. Although the Project would result in unavoidable adverse impacts, the long-term benefits of the Project to the

Preserve and community bring the Project into consistency with the spirit of the City General Plan and zoning regulations.

Related Issues

Several comments raised issues regarding the lease between the City and the Project Applicant and Proposition A's role in the use of the property. These are not environmental issues but are nonetheless being addressed in order to provide additional information to the City Council and the public.

Several parties have contended that the land lease and the CUP are inconsistent with the terms of Proposition A under which the property was acquired. As set forth in the Legal Analysis of Carlyle W. Hall, Jr., Esq., of Akin Gump, issued in July 2011, the provisions of Proposition A explicitly permit the sale, disposal or lease of land acquired with Proposition A funds, so long as there is no net loss of surface area for recreational purposes. The City of Whittier is currently engaging the Los Angeles County Parks and Open Space District (the "District") in discussions on replacing the area contemplated to be used for the Project site with additional open space land which would maintain the same net amount of surface area protected by Proposition A restrictions and available for recreation, habitat preservation, and other uses encouraged by Proposition A. Moreover, Proposition A does not affect the sub-surface rights of the City as the fee owner of the land. Long-standing case law supports the City's rights to take advantage of these subsurface rights, and particularly to engage in oil and gas extraction, and case law further supports the consistency between the proposed Project and the recreational and park uses of the property as a whole. So long as the oil production activities do not substantially impair or materially interfere with the public's use of the parkland, the Project would be permitted under California law and would be consistent with both its dedication for park and recreation uses and the provisions of Proposition A.

The Project site and related temporarily disturbed areas will constitute less than one percent of the total preserve acreage. The area where the Project will be located is not currently available to the public for surface recreational uses due to its degraded condition. Without the funding from the Project, there is no likelihood in the foreseeable future of a funding source which will allow either the Project site or the other thousands of acres of the preserve to be rehabilitated and made available for public recreational use. All of these factors combine to support a conclusion that the oil and gas drilling operations contemplated by the lease and the CUP will not substantially impair or materially interfere with the public's use of the 1,290 acre preserve, and in fact, will provide a revenue source, if the Project is successful, to allow the very access to and use of the Preserve that has heretofore been impossible.

Additional Comments

Staff has included additional comments (see Attachment G) that were submitted to the City after the Planning Commission agenda packet was sent out, but which were provided to the Commission during the public hearing. Also included are the modifications to the Conditions of Approval that were provided to the Commission during the hearing process (Attachment H). In addition, a letter from the Puente Hills Landfill Native Habitat Preservation Authority (Habitat Authority) was received by staff on October 28, 2011, and is included as Attachment I.

Modified Conditions of Approval

Subsequent to the Planning Commission Public hearing, staff met with the applicant to discuss the conditions of approval and clarify the intent of some of the conditions included in the project approval. The current draft conditions of approval being proposed in this staff report include the modifications supported by staff (Attachment H). Additional changes to the conditions being requested by the applicant are included as attachment I.

FISCAL IMPACT

As estimated in FEIR Appendix H, Socioeconomic Analysis for Whittier Main Oil Development Project, the revenue to the City from Project oil and gas operations will range between \$7.5 million per year and \$115.4 million per year.

CONCLUSION

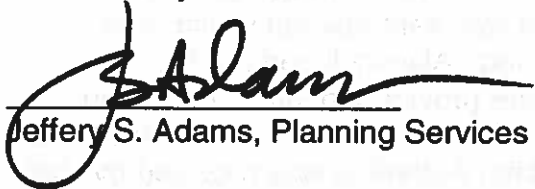
Staff finds the proposal to be consistent with Section 18.52.040 of the Municipal Code. Based on the information mentioned above, the conditions of approval approved by the Planning Commission, and the FEIR, staff concludes that the benefits of the Project to the Preserve and community outweigh adverse impacts associated with the proposal. Staff recommends approval of CUP09-04 subject to the implementation of the attached Conditions of Approval.

Submitted by:



Brian Lee,
Building Services Manager, Building Official

Reviewed by:



Jeffery S. Adams, Planning Services Manager

Prepared by:



Joann Lombardo
Consulting Planner

Attachment:

- A) Draft CC Resolution for the Environmental Impact Report and Mitigation Monitoring Report, Findings and Statement of Overriding Considerations.
- B) Draft CC Resolution for Conditional Use Permit No. CUP09-004, with conditions of approval.
- C) Environmental Impact Report and Mitigation Monitoring Report (Previously Provided)
- D) Planning Commission Staff Report for October 19, 2011 (previously provided).
- E) Written Comments to the Planning Commission (post staff report)
- F) Revised Conditions of Approval submitted to the Planning Commission (including a redlined version) on 10/20/11, 10/24 & 10/25/11
- G) Habitat Authority Letter dated October 28, 2011.
- H) Planning Commission approved Conditions of Approval showing a red-lined version of the proposed modifications.
- I) Applicant Requested changes to the draft Conditions of Approval

Exhibit:

- 1) Project Location map
- 2) Project Site Map

RESOLUTION NO. _____

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF WHITTIER, CALIFORNIA CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE WHITTIER MAIN OIL FIELD DEVELOPMENT PROJECT; ADOPTING FINDINGS PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT; ADOPTING A STATEMENT OF OVERRIDING CONSIDERATIONS, AND ADOPTING A MITIGATION MONITORING AND REPORTING PROGRAM

The City Council of the City of Whittier hereby finds and resolves as follows:

Section 1. The project, known as the Whittier Main Oil Field Development Project, is the drilling, exploration and production of oil and gas reserves located on property owned by the City of Whittier that is part of the Puente Hills Landfill Native Habitat Preserve (the "Project"). The Project would occur in three phases, with the first phase consisting of a drilling and testing phase which would involve the drilling of up to three test wells to assess the quality and quantity of oil and natural gas produced. The second phase, known as the design and construction phase, would involve construction of well cellars, the installation of gas and oil processing equipment, and crude transportation facilities. The third phase, known as the operations and maintenance phase, would involve drilling the remaining wells (for a total of up to 60 wells), and the operation and maintenance of the gas and oil facilities and the wells, which would include well workovers and occasional well re-drilling. The Project site would contain the oil and gas drilling and processing facilities on a single pad, which would include the well area, a gas plant area, and an oil plant area consisting of well cellars, well test stations, liquid and gas separating equipment, a truck loading facility, an oil processing facility, and gas plant. The total permanent area required for the pads would be approximately 6.9 acres with an additional 6.9 acres of roadways (most of which currently exist in the area). A fuel modification zone would be required by the Los Angeles County Fire Department which would encompass an additional 7.6 acres. Up to an additional 4.9 acres would be temporarily disturbed for construction and grading of the site. The total impacted area for the Project would be 28.1 acres.

Section 2. In April 2009, Matrix Oil Corporation (the "Applicant") submitted an application for a conditional use permit ("CUP") for an oil drilling, exploration and production project. A Draft Environmental Impact Report for this project was released to the public in October 2010 for a 60-day comment period. After this 60-day comment period, in April 2011, the Applicant presented a new CUP application to the City for a new project that conformed to the Central Consolidated Site Alternative detailed in the Draft Environmental Impact Report. Further, as detailed in Section 7 of this Resolution, additional project refinements have been proposed by the Applicant. This new CUP application, along with the refinements detailed in Section 7 of this Resolution, resulted in what is now the Project as defined herein.

Section 3. In April 2011, a Notice of Preparation (“NOP”) was distributed to various agencies, organizations, and interested persons throughout the City and surrounding area. The proposed Project was described, the scope of the environmental review was identified, and the agencies and the public were invited to review and comment on the NOP.

Section 4. On May 5, 2011, two public scoping meetings were held. The first scoping meeting was held for the general public, and the second scoping meeting was specific to responsible agencies. Both scoping meetings were held in order to obtain input on the scope of environmental review for the Project.

Section 5. In June 2011, a Draft Environmental Impact Report (the “DEIR”) was prepared for the new Project. In accordance with the California Environmental Quality Act (“CEQA”) (Cal. Pub. Res. Code §21000 *et seq.*) and the State Guidelines (the “Guidelines”) (14 Cal. Code Regs. §15000 *et seq.*) promulgated with respect thereto, the City analyzed the Project’s potential impacts on the environment.

Section 6. The City circulated the DEIR and the Appendices for the Project to the public and other interested parties for a 45-day comment period, consistent with the 45-day public comment period required by Guidelines Section 15105, from June 6, 2011 to July 21, 2011. Additionally, on June 30, 2011, the City held a public workshop on the DEIR. The City received a total of 132 comment letters on the DEIR.

Section 7. After the DEIR was circulated for public review, and in an effort to be responsive to environmental concerns raised by various commenters, the Applicant proposed project refinements by redesigning the layout and amount of grading required for the Project pads. These refinements are discussed and analyzed in Appendix O of the Final Environmental Impact Report (the “Final EIR”), which is hereby incorporated by this reference. The refinements would reduce the amount of grading and result in a reduced overall impact area to the Preserve. Under these changes, the amount of earth moved from the site during Project grading would be reduced from 147,000 yds to zero. There will also be a significant reduction in visual impacts from the Preserve (eastern side) as there will be no sloping back hillsides and the large eucalyptus grove to the southeast will be retained. Additionally, retaining walls in the 30 to 40 foot range will be eliminated. Further, the duration of grading would be cut in half, from 24 weeks to 12 weeks. Most significantly, by eliminating soil export, the design modification would eliminate the requirement to transport soils to the Landfill or other destinations, which would eliminate the grading soil export trips resulting in a reduction of 9,313 truck trips during Project grading. The Project as defined in the DEIR, along with the refinements to the Project detailed in Appendix O of the FEIR, is the “Project.”

Section 8. The City prepared written responses to all comments received on the DEIR, and those responses to comments are incorporated into the Final EIR. The Responses to Comments were distributed to all public agencies that submitted comments on the DEIR at least 10 days prior to certification of the Final EIR.

Section 9. The Final EIR is comprised of the DEIR dated June 2011 and all appendices thereto, including Appendix O that details the Project refinements, the Comments and Response to Comments on the DEIR, and the Mitigation Monitoring and Reporting Program.

Section 10. On October 19, 20, 24, and 25, 2011 the Planning Commission of the City of Whittier held numerous days of public hearing in order to take testimony from the public and residents on the Project and the environmental analysis contained in the Final EIR. At the conclusion of this hearing, the Planning Commission adopted a Resolution certifying the Final Environmental Impact Report for the Project, adopting findings pursuant to CEQA, adopting a Statement of Overriding Considerations, and adopting a Mitigation Monitoring Program. The Planning Commission also adopted a Resolution approving Conditional Use Permit 09-004 to allow the development and operation of the Project.

Section 11. On October 26, 2011 Councilman Henderson and Councilman Vinatieri sought review of the Planning Commission's decision pursuant to Municipal Code Section 2.60.010 that allows the City Council to conduct a de novo review of all the issues surrounding the Project.

Section 12. The findings made in this Resolution are based upon the information and evidence set forth in the Final EIR and upon other substantial evidence that has been presented at the hearings and in the record of the proceedings. The documents, staff reports, technical studies, appendices, plans, specifications, and other materials that constitute the record of proceedings on which this Resolution is based are on file for public examination during normal business hours at the City of Whittier, City of Whittier City Hall, 13230 Penn Street, Whittier, California 90602. Each of those documents is incorporated herein by reference.

Section 13. The City Council finds that agencies and interested members of the public have been afforded ample notice and opportunity to comment on the DEIR and the Project.

Section 14. Section 15091 of the State CEQA Guidelines requires that the City, before approving the Project, make one or more of the following written finding(s) for each significant effect identified in the Final EIR accompanied by a brief explanation of the rationale for each finding:

- A. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effects as identified in the Final EIR; or,
- B. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency; or,

- C. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

Section 15. Section 15093 of the State CEQA Guidelines requires that if the Project will cause significant unavoidable adverse impacts, the City must adopt a Statement of Overriding Considerations prior to approving the project. A Statement of Overriding Considerations states that any significant adverse project effects are acceptable if expected project benefits outweigh unavoidable adverse environmental impacts.

Section 16. Environmental impacts identified in the Final EIR that are found to be less than significant and do not require mitigation are described in Exhibit A, Section III, attached hereto and incorporated herein by reference.

Section 17. Environmental impacts identified in the Final EIR as potentially significant, but that can be reduced to less than significant levels with mitigation, are described in Exhibit A, Section IV, attached hereto and incorporated herein by reference.

Section 18. Environmental impacts identified in the Final EIR as significant and unavoidable despite the imposition of all feasible mitigation measures are described in Exhibit A, Section V, attached hereto and incorporated herein by reference.

Section 19. Alternatives to the Project that might eliminate or reduce significant environmental impacts are described in Exhibit A, Section VI, attached hereto and incorporated herein by reference.

Section 20. A discussion of the Project benefits and a Statement of Overriding Considerations for the environmental impacts that cannot be fully mitigated to a less than significant level are set forth in Exhibit B, attached hereto and incorporated herein by reference.

Section 21. Public Resources Code section 21081.6 requires the City to prepare and adopt a mitigation monitoring and reporting program for any project for which mitigation measures have been imposed to assure compliance with the adopted mitigation measures. The Mitigation Monitoring and Reporting Program is attached hereto as Exhibit C, and is hereby incorporated herein by reference.

Section 22. Prior to taking action, the City Council reviewed, considered and has exercised its independent judgment on the Final EIR and all of the information and data in the administrative record, and all oral and written testimony presented to it during meetings and hearings and finds that the Final EIR is adequate and was prepared in full compliance with CEQA. No comments or any additional information submitted to the City, including the information in Appendix O or in comment letters received after the close of the DEIR public review period, have produced any

substantial new information requiring recirculation or additional environmental review of the Project under CEQA.

Section 23. The City Council of the City of Whittier hereby certifies the Final EIR, adopts findings pursuant to the California Environmental Quality Act, as set forth in Exhibit A attached hereto and incorporated herein by reference; adopts the Statement of Overriding Considerations set forth in Exhibit B attached hereto and incorporated herein by reference; adopts the Mitigation Monitoring and Reporting Program attached hereto as Exhibit C and incorporated herein by reference, and imposes each mitigation measure as a condition of Project approval. City staff shall implement and monitor the mitigation measures as described in Exhibit C.

APPROVED AND ADOPTED this ____ day of _____, 2011.

CATHY WARNER, Mayor

Attest:

KATHRYN A. MARSHALL [SEAL]
City Clerk- Treasurer

EXHIBIT A

Findings and Facts in Support of Findings

I. Introduction.

The California Environmental Quality Act ("CEQA") and the State CEQA Guidelines (the "Guidelines") provide that no public agency shall approve or carry out a project for which an environmental impact report has been certified which identifies one or more significant effects on the environment that will occur if a project is approved or carried out unless the public agency makes one or more of the following findings:

A. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effects identified in the EIR.

B. Such changes or alterations are within the responsibility of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

C. Specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the EIR.¹

Pursuant to the requirements of CEQA, the City Council hereby makes the following environmental findings in connection with the proposed Whittier Main Oil Field Development Project. The Whittier Main Oil Field Development Project is the "Project", as more fully described in the Draft EIR ("DEIR") and in Appendix O of the Final EIR ("FEIR"). These findings are based upon evidence presented in the record of these proceedings, both written and oral, the DEIR, and all of their contents, the Comments and Responses to Comments on the EIR, and staff and consultants' reports presented through the hearing process, which comprise the FEIR.

At the Planning Commission hearing on October 19, 20, 24, and 25, 2011, many concerns were expressed regarding the Project scope. As detailed throughout these findings and in the FEIR, the Project is detailed in the Project Description Section of the FEIR, and in Appendix O contained in the FEIR. Contrary to many comments from the public, the "Project" is not what is allowable under the lease agreement between the City and the Applicant.

II. Project Objectives.

As set forth in the EIR, the proposed Project is intended to achieve a number of objectives (the "Project Objectives") as follows:

¹ Cal. Pub. Res. Code § 21081; 14 Cal. Code Regs. § 15091.

1. City Objectives:

- a. Generate a substantial, long-term income stream for the City.
- b. Provide long-term resources to help manage environmental issues associated with the Project within the Preserve.
- c. Minimize environmental impacts from the Project on the Preserve.
- d. Minimize noise impacts to surrounding areas.
- e. Minimize traffic impacts to surrounding areas.
- f. Minimize impacts to the functioning of the Core habitat of the Preserve.
- g. Minimize impacts to operational, recreational, and educational opportunities of the Preserve.
- h. Facilitate the long-term preservation and enhancement of the Preserve's ecological resources and native habitat.
- i. Employ current technologies in an effort to reduce environmental impacts to less-than significant levels.
- j. Maintain reasonable fire safety levels for the community and open space.

2. Applicant Objectives:

- a. Develop the Whittier Main Oil Field, pursuant to the terms of the Oil and Gas Lease with the City of Whittier dated October 28, 2008, utilizing current "slant-drill, or high-angle well" technology and other state-of-the-art techniques, while maintaining safe and efficient operations.
- b. Minimize impacts to the Preserve, as defined in the Lease, by utilizing existing roads as much as possible, and placement of production equipment and facilities on one site utilizing up to seven acres.
- c. Operate in accordance with all prevailing laws and regulations to maximize safety and protect the environment.
- d. Minimize and mitigate negative impacts of the project on the local community.
- e. Stimulate the local economy by providing opportunities for qualified local businesses to sell goods and services and to qualified workers to apply for jobs.
- f. Maximize oil and gas production from the field, thereby maximizing royalty payments to the City of Whittier.

III. Effects Determined to be Less Than Significant Without Mitigation in the EIR.

The EIR found that the proposed Project would have a less than significant impacts without the imposition of mitigation on a number of environmental topic areas listed below. A less than significant environmental impact determination was made for each of the following topic areas listed below, based on the more expansive discussions contained in the Final EIR.

A. AESTHETICS

1. Use of the North Access Road for the Project would not degrade public view sheds in the Project vicinity, and with the Project refinements even less of an impact would result as less traffic would utilize the North Access Road for the hauling of soils.

B. AIR QUALITY

1. The Project would not cause any cumulative air quality impacts.

C. GEOLOGY AND SOILS

1. The proposed Project would not cause earthquakes as a result of wastewater injection into the proposed wells.

2. The Project would not cause any geology and soils cumulative impacts.

D. HYDROLOGY AND WATER QUALITY

1. Reinjection of produced water would not impair water quality of aquifers within the Whittier Area of the Central Groundwater Basin.

2. The Project site would not be susceptible to flooding in an extreme precipitation event.

E. LAND USE

1. The Project would not cause any cumulative land use and policy consistency impacts.

F. ENERGY AND MINERAL RESOURCES

1. The Project would not cause an impact from any increased energy demand.

2. The Project would not cause an impact from any increased fossil fuel use.

3. The Project would not cause a cumulative energy or mineral resources impact.

G. FIRE PROTECTION AND EMERGENCY SERVICES

1. The Project would not cause a cumulative fire protection and emergency services impact.

H. NOISE

1. The Project as refined would not increase vibration levels in the area to a level of significance even without the imposition of mitigation.

2. The Project would not cause a cumulative noise impact.

I. PUBLIC SERVICES AND UTILITIES

1. The Project would not generate a solid waste impact from future drilling, construction and operations.

2. The Project would not cause an impact on demand for potable water as a result of future drilling, construction, and operations.

J. RECREATION

1. The Project would not cause a cumulative recreation impact.

K. SAFETY, RISK OF UPSET, HAZARDOUS MATERIALS

1. The Project would not cause a cumulative safety or risk of upset impact.

L. WASTEWATER

1. The Project would not cause a cumulative wastewater impact.

M. ENVIRONMENTAL JUSTICE

1. The Project will not disproportionately impact minority and low-income populations.

IV. Potentially Significant Environmental Impacts Determined to be Mitigated to a Less Than Significant Level.

The EIR identified the potential for the Project to cause significant environmental impacts. With the exception of those specific impacts to air quality, aesthetics, hydrology and water quality, land use and policy consistency, and recreation discussed in Section V below, measures were identified that would mitigate all of these impacts to a less than significant level.

The City Council finds that the feasible mitigation measures for the Project identified in the Final EIR would reduce the Project's impacts to a less than significant level, with the exception of those unmitigable impacts discussed in Section V below. The City Council will adopt all of the feasible mitigation measures for the Project described in the Final EIR as conditions of approval of the Project and incorporate those into the Project if approved.

A. AESTHETICS

1. Oil Processing Equipment Could Degrade Public Viewsheds

Oil processing equipment could degrade public viewsheds. However, with the implementation of mitigation, this impact would be reduced to less than significant.

(a) Findings

Changes or alterations have been required in, or incorporated into, the Project that will ensure a less than significant public viewshed impact from the oil processing equipment. Specifically, the following mitigation measures are imposed upon the Project to ensure a less than significant impact:

AE-1a Landscaping with native vegetation shall be planted at the periphery of the Project Site for the specific purpose of beautifying and screening the operations from adjoining residential and recreational areas, adjacent public streets, and highways. Berms shall be used in combination with landscaping where it would further reduce visibility. Care should be taken to ensure that the proposed screening does not affect existing desirable views by neighboring properties. A Landscaping Plan shall be prepared to address berms, screening, irrigation, and planting protocols. The Plans and vegetation selection shall be reviewed and approved by the City and the Habitat Authority. The Habitat Authority and a certified landscape architect shall implement and monitor compliance with the Landscaping Plan. Landscaping at the site shall be inspected regularly and maintained in good condition.

AE-1b Within 30 days of installation, all structures visible from public locations at the well or processing sites shall be painted non-reflective earth-tone colors or otherwise surfaced with a color or textured surface in consultation with the City, so that they are less obtrusive to the surrounding area.

(b) Facts in Support of Findings

The proposed processing area would include tanks and vessels and would be proximate to several nearby recreation areas, a scenic overlook that contains hiking and walking trails, and residential areas. Once drilled, the wells would be below grade in the well cellars, would use down-hole pumps and not pumper units, and would not be visible from recreational areas. Due to the proximity of recreational facilities to the proposed oil field operations, installation of tanks and other industrial development could create significant visual resource impacts that would be perceived as incompatible with adjacent uses. In addition, the installation of the facilities would have necessitated the removal of a number of eucalyptus trees. However, with the Project refinements, some of these eucalyptus trees will be retained. The visual simulations show the extent to which the areas up Canada Canyon would be opened to views from the Deer Loop Trail and the viewing area. This removal of eucalyptus trees would exacerbate the impacts of installing industrial equipment in the area.

While oil field production activities would not likely obstruct scenic views seen from trails, recreations areas, or residences, the placement of oil production facilities could significantly degrade the existing visual conditions within selected viewsheds from public trails and recreation areas. Views of the crude oil tanks and equipment would not be significant from residences as existing vegetation would shield most equipment from residences' direct lines of sight. The proposed Project processing equipment could create potentially significant visual impacts to public viewsheds.

Regarding residual impacts, measures to either beautify or effectively screen the proposed Project processing area facilities (e.g., tanks) from view would reduce impacts. Landscaping and berms could minimize the view of the tanks from the Deer Loop Trail and views from the viewing area.

As the growth of vegetation to conceal the processing area equipment could take years, this impact would remain from a number of years before vegetation grows to a substantial height to conceal the equipment. Although this impact would be adverse, since visual impacts are determined on a long-term scale, vegetation would conceal most, if not all, facility equipment over time (except the drilling rig).

Implementing Mitigation Measures AE-1a and AE-1b would reduce the impacts to public viewsheds over the long-term to less than significant with mitigation by requiring berms and landscaping to prevent any significant public viewshed impact.

2. Glare and Nighttime Lighting Impact

The proposed Project could increase glare and nighttime lighting. However, mitigation will be imposed to reduce this impact to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into, the Project that will ensure a less than significant glare and nighttime lighting impact.

Specifically, the following mitigation measures are imposed upon the Project to ensure a less than significant impact:

AE-4 All point lighting sources that may be introduced onsite in support of nighttime operations shall be screened and directed to prevent offsite spillover lighting effects. Spillover lighting shall be limited to 0.1 fc within 30 feet of facility boundaries. Outdoor lighting should be restricted to only those lights that are required by code for lighting building exteriors and safety and security needs. Consistent with public safety needs, street lighting, pedestrian walkway lighting, and parking lot lighting shall use light fixtures that shield and direct light with a backlight shield or other equivalent type of shielding to minimize light spill-over effects into adjacent areas. Light standard heights shall distribute light at ground level consistent with light levels for security, spill-over effects, and efficiency.

(b) Facts in Support of Findings

Visual impacts associated with night-lighting in activity areas would be potentially significant but capable of being mitigated to less than significant levels with mitigation, including shielding exterior night lighting and containing spill-over lighting from fixed point lighting sources.

The governments of most countries require warning lights on all high towers and on low towers near airports, because towers are a hazard to aircraft. The Federal Aviation Administration (FAA), in the Federal Code of Regulation 14 CFR part 77, and in the FAA Advisory Circular 70/7460 and 150/, describes requirements associated with lighting objects that may affect navigable airspace. Objects more than 200-foot high require lighting at a level of approximately 2,000 candela and a flashing rate of between 40 and 60 flashes per minute. A red light would be placed on top of the drilling rig to aid its visibility to aircraft, although this is not specifically required by the FAA. This light would be visible from areas offsite and throughout the area. However, the illumination created by the red flashing light on top of the 125-foot drilling rig would be less than the level that would produce a significant illumination impact.

Where oil wells would be drilled and operations would be scheduled 24 hours per day, lighting the work site drilling platforms for safety may create prominent night lighting during drilling. Lighting impacts from drilling would be potentially significant but would be less than significant with mitigation by shielding exterior night lighting and containing spill-over lighting from fixed point lighting sources.

Mitigation Measure AE-4 requires that all point lighting sources that may be introduced onsite in support of nighttime operations be screened and directed to prevent offsite spillover lighting effects.

Regarding residual impacts, current lighting designs, such as a RUUD Lighting, Inc. area cutoff light, can be equipped with a backlight shield that can reduce lighting levels to less than 0.05 fc within 30 feet horizontal distance utilizing a 400-watt high pressure sodium bulb and forward throw sharp cutoff. With proper shielding and control of the directional nature of the installed lighting, illumination impacts on the Project area and adjacent uses would be less than significant with mitigation.

With the mitigation described above, the impact is reduced to a less than significant level.

3. Cumulative Aesthetics Impact

The Project in conjunction with other projects has the potential to cause a cumulative aesthetics impact. However, with the incorporation of mitigation, any potential cumulative impact will be reduced to the extent feasible and to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into, the Project that will ensure a less than significant cumulative impact. Specifically, the following mitigation measure is imposed upon the Project to ensure a less than significant impact:

AE-1a Landscaping with native vegetation shall be planted at the periphery of the Project Site for the specific purpose of beautifying and screening the operations from adjoining residential and recreational areas, adjacent public streets, and highways. Berms shall be used in combination with landscaping where it would further reduce visibility. Care should be taken to ensure that the proposed screening does not affect existing desirable views by neighboring properties. A Landscaping Plan shall be prepared to address berms, screening, irrigation, and planting protocols. The Plans and vegetation selection shall be reviewed and approved by the City and the Habitat Authority. The Habitat Authority and a certified landscape architect shall implement and monitor compliance with the Landscaping Plan. Landscaping at the site shall be inspected regularly and maintained in good condition.

(b) Facts in Support of Findings

The County of Los Angeles Fire Department and the City of Whittier have determined that a Vegetation Management Plan is necessary for long-term mitigation to reduce wildfire risk (see Section 4.12 of the EIR, Fire Protection and Emergency Response). Eucalyptus trees have been cleared due to fire department concerns related to wildfire risk and the removal of eucalyptus trees is part of the exotic plant

control program detailed in the Habitat RMP. Recent clearance areas include close to 20 acres immediately east of Colima Road and in the area around the Colima Road parking area. Removal of eucalyptus trees along the boundary of the proposed Project Site would increase the visibility of proposed Project equipment. Existing eucalyptus trees would provide extensive shielding of proposed Project equipment from areas along hiking trails and residences along San Lucas and Lodosa Drives. The originally proposed Project in the EIR would have removed a number of eucalyptus trees from the east side of the Project Site. If additional eucalyptus trees are removed, particularly those to the south of the Project Site, this could be considered a significant impact. However, with the Project refinements detailed in Appendix O of the FEIR, the large eucalyptus grove to the southeast will be retained. Mitigation measure AE.1 requires planting vegetation, in consultation with the Habitat Authority, to further screen project components. This mitigation measure would be implemented to reduce any cumulative impacts to less than significant.

No other cumulative projects would be constructed within the same viewsheds as the proposed Project. Therefore, there would be no other potential cumulative significant impacts.

B. AIR QUALITY

1. Operational Emissions

The proposed Project's operational emissions have the potential to exceed the South Coast Air Quality Management District's (SCAQMD) emissions thresholds. However, through the implementation of mitigation, this impact will be less than significant.

(a) Findings

Changes or alterations have been required in, or incorporated into, the Project that will ensure a less than significant operational emissions impact. Specifically, the following mitigation measures are imposed upon the Project to ensure a less than significant impact:

AQ-2a The Applicant shall comply with all SCAQMD regulations, including but not limited to Regulation IV (Prohibitions), Regulation XIII (New Source Review), Regulation XI (Source Specific Standards), and Regulation XIV (New Source Review for Toxic Air Contaminants). The operator shall implement best available control technology and obtain emission offsets as required by SCAQMD Regulation XIII and/or Regulation XX for new and modified permitted emission sources. Emission offsets are required for all emission increases associated with stationary sources, thus, minimizing the impacts associated with emissions from stationary sources.

AQ-2b The Applicant shall implement a program to reduce NO_x, VOC, and PM emissions, including:

- All drilling engines shall meet EPA Tier 3 emissions levels, or utilize other CARB-verified emission control technologies to achieve the same level of emission reduction, or utilize electric engines.
- Treat all used Preserve dirt roads that will be used (gravel or apply soil binders with at least 80% effectiveness) or pave all Preserve dirt roads that will be used during test drilling.
- Limit onsite truck idling to less than 5 minutes.
- Electrify service equipment and auxiliary power units where feasible.
- Use clean street sweepers during operations.
- Pave roads and road shoulders during operational phase.
- Utilize trucks that meet EPA 2010 emission standards and off-road equipment that meets EPA 2015 emissions levels to the extent feasible.
- 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.
- Install only internal floating roof tanks, or utilize a more efficient vapor recovery system for handling organic liquids (crude oil) or some other equivalent method to reduce fugitive emissions to less than the SCAQMD CEQA thresholds.
- Use low-emissions flare systems to achieve flare NO_x emissions of less than 0.06 lb/mmBTU, according to SCAQMD BACT requirements.
- Limit flaring and drilling during the peak day to the equivalent of drilling and full-flow flaring combined to less than 3 hours per day (at full gas plant flow or the equivalent throughput) or limiting flaring only to less than 4 hours per day (at full gas plant flow or the equivalent throughputs).

- Prohibit use of workover rigs at the same time as drilling rigs to reduce peak day emissions
- Further reduce NOx emission by either (1) Purchasing emission offsets to reduce remaining NOx emissions to less than significant levels or (2) utilizing Tier 4 engines on the drilling rig sufficient to reduce daily emissions to less than the thresholds, or (3) electrifying all or portions of the drilling rig engines to reduce NOx emissions to less than the thresholds.

(b) Facts in Support of Findings

Operational activities would generate emissions that exceed South Coast Air Quality Management District thresholds. Operational emissions of the proposed Project would exceed the regional thresholds for VOC and NOx. On the worst-case peak day, assuming that the flare would operate for 24 hours during an upset condition, the entire gas flow would necessarily be directed to the flare. When the flare would not operate for the entire day, emissions would still exceed the regional emissions thresholds due to emissions from the drilling operations and offsite mobile sources.

Operational emissions would exceed the local thresholds associated with the SCAQMD lookup tables for NOx, PM10, and PM2.5. However, modeling indicates that localized impacts would be less than significant. On the worst-case peak day, assuming that the flare would operate for 24 hours during an upset condition, the entire gas flow would necessarily be directed to the flare. The local impacts would be primarily associated with flaring emissions, which would produce more than 90 percent of the NOx and PM emissions during the peak day.

When the flare would not operate for the entire day, emissions of PM10 and PM2.5 would also not exceed the local emissions thresholds.

Mitigation measures could include the use of cleaner, newer drilling engines, use of internal floating roof tanks or a more efficient vapor recovery system, obtaining offsets for NOx emissions, or limiting flare operations.

Mitigation Measure AQ-2a requires the Applicant to comply with all SCAQMD regulations, including but not limited to Regulation IV (Prohibitions), Regulation XIII (New Source Review), Regulation XI (Source Specific Standards), and Regulation XIV (New Source Review for Toxic Air Contaminants). The operator shall implement best available control technology and obtain emission offsets as required by SCAQMD Regulation XIII and/or Regulation XX for new and modified permitted emission sources. Emission offsets are required for all emission increases associated with stationary sources, thus, minimizing the impacts associated with emissions from stationary sources.

Mitigation Measure AQ-2b requires the Applicant to implement a program to reduce NOx, VOC, and PM emissions.

Regarding residual impacts, NOx emissions from flaring would be reduced by utilizing a best available control technology (BACT) compliant flare that would achieve lower NOx and PM emissions. Emissions of NOx when the flare is operating for 24 hours would exceed regional thresholds even with mitigation. Therefore, by reducing the operating hours of the flare during an upset condition, thereby requiring shutting in of some wells, and limiting drilling operations if an upset condition occurs that requires flaring, the emissions of NOx could be reduced to less than the threshold values for NOx during this upset scenario.

However, during the normal operations scenario, when the flare is not operating, and the gas plant combustion equipment is operating along with drilling equipment, the daily emissions would exceed the significance thresholds primarily due to drilling engine emissions.

The emissions of NOx from drilling engines would be reduced through emission offsets, or electrification of some equipment or use of diesel drilling rig engines cleaner (Tier 4 levels for NOx on the drawworks engines, for example). Operations of workover engines would also not be allowed when drilling is occurring in order to reduce peak day emissions. Emissions offsets are validated and acquired through the SCAQMD Emissions Reduction Credit Program (ERC), which can then be sold to other operators for the installation of new equipment or the increase in emissions from existing equipment (SCAQMD Rule 1309). The EPA is phasing in Tier 4 engines requirements for new off-road engines from 2011 to 2014 that would reduce NOx emissions by about 50 percent compared to Tier 3 engines.

Impacts would be less than significant with the above listed mitigation detailed in mitigation measures AQ-2a and AQ-2b.

If Tier 4 engines are not available, ensuring that diesel engines meet at least the EPA Tier 3 requirements or equivalent on the drilling rig would help reduce emissions. The Applicant-proposed drilling rig is reported to have Tier 3 engines. AQ-2b ensures that any other rigs selected would also have Tier 3 engines. However, even with Tier 3 engines, NOx emissions levels would still exceed the regional thresholds and the use of electric motors or offsets would be required. The use of newer trucks would also reduce NOx emissions. However, since the availability of new trucks in many areas is unknown, this measure is assumed to be required where feasible and has not been accounted for in the emission calculations.

Requiring the use of internal floating roof tanks, more efficient vapor recovery, or other equivalent measures would reduce VOC emissions to less than the SCAQMD regional thresholds.

Localized impacts associated with NOx and PM would be reduced by requiring a BACT-compliant flare and clean diesel engines. Impacts would be less than the localized thresholds and impacts would be less than significant.

Emissions when the flare is not operating would not exceed the localized thresholds for the onsite equipment.

With the mitigation described above, the impact is reduced to a less than significant level.

2. Operational Odors

The operational phase of the Project has the potential to produce odors that could rise to the level of significance. With the implementation of mitigation, any potential impact will be reduced to a level of insignificance.

(a) Findings

Changes or alterations have been required in, or incorporated into, the Project that will ensure a less than significant operational odors impact. Specifically, the following mitigation measures are imposed upon the Project to ensure a less than significant impact:

AQ-3a The Operator shall have a gas buster and SCAQMD-approved portable flare at the oil field and available 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 Los Angeles County Fire Chief and the SCAQMD.

AQ-3b The Operator 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 submit a report of the breakdown to the Los Angeles County Fire Chief and the SCAQMD, which shall detail the corrective actions the Operator shall take to avoid exceeding the tank relief pressure.

AQ-3c The Operator shall develop an Odor Minimization Plan. The Odor Minimization Plan shall address potential sources of odors from all oil field equipment, including wells and drilling operation, 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.

AQ-3d The Operator shall develop an Air Monitoring Plan. The Plan shall provide for the monitoring of total hydrocarbon vapors and hydrogen sulfide at each well drill and re-drilling site and total hydrocarbon vapors at the gas plant. At all times during drilling and re-drilling operations, the Operator shall maintain monitoring equipment that shall monitor and digitally record the levels of hydrogen sulfide and total hydrocarbon vapors. Monitors shall be installed at the edge of the drill pad and around the outer edge of the gas plant. Such monitors shall provide automatic alarms that are audible or visible to the Operator of the drilling equipment for the drill rig monitors, and gas plant for the gas plant monitors, 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 H₂S and 500 and 1,000 ppm hydrocarbons, with the higher level requiring shut-down of drilling or gas plant operations and notification to appropriate agencies, including the Los Angeles County 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 Processing, or applicable location.

AQ-3e The Operator shall use an odor suppressant spray system or vapor capture hood and carbon filter 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 (e.g., residences, hiking trails, Ranger Residence).

(b) Facts in Support of Findings

Potential operations and drilling at the Whittier Main Oil Field could create odor events. Odor events could occur due to several different situations associated with equipment or drilling upset conditions. The equipment components could also leak and cause odors. Tanks are equipped with hatches to protect them from overpressure. If these hatches lift, due to a failure of the vapor recovery compressor,

for example, odor events could occur. During drilling, drilling muds, well kicks, and releases from increased pressure up the wellbore could cause odor events. During drilling, pockets of gas can be encountered, which can be picked up by the circulating muds, brought to the surface, and released through the muds processing system. These types of releases have caused notices of violation (NOV) at other oilfields in the past, such as the Baldwin Hills Oilfield. Any of these scenarios would be considered a significant impact.

The release of material that contains even small amounts of sulfur compounds (H₂S) or hydrocarbons produces an odor. Several compounds associated with the oil and gas industry can produce nuisance odors. Sulfur compounds, found in oil and gas, have very low odor threshold levels. The H₂S levels in the produced gas from the Proposed Project wells are estimated to be less than a few parts per million.

Modeling was conducted to predict the potential extent of odor impacts from normal operations fugitive component leaks. The modeling utilized the same meteorological parameters and air dispersion models as the health risk analysis using the HARP Model. The H₂S concentration was assumed to be 4 ppm, because hydrogen sulfide levels in the produced gas have historically been low and this is the limit allowed by the Southern California Gas Company. The odor threshold was conservatively set at 2 ppb for H₂S. The resulting vapor cloud could produce odors downwind. The modeling was based on the peak hour of metrological parameters that could produce the greatest downwind distance.

The results indicated that normal operations fugitive emissions could produce concentrations greater than the odor threshold less than a few hundred feet from the Project equipment, which would not reach nearby residences. Impacts from normal operations fugitive emissions would therefore be less than significant.

Releases of materials causing odors can travel a substantial distance since the odor thresholds for materials can be very low, in the parts per billion. Odor impacts associated with accidental releases from the oil field could impact surrounding areas and could be a significant impact.

Odor events can be mitigated with systems that direct odor-causing releases to flare-type systems, odor masking materials, and systems in place to notify operators when releases could or do occur. These mitigation measures are utilized in oil fields in urban areas and have been incorporated into the Project through the above identified mitigation measures.

Regarding residual impacts, implementing the above identified mitigation measures would eliminate odor events that have resulted in odor complaints and NOV at other oilfields in the past, as well as other suspected sources of odors associated with the oil field operations. Although odor events could still occur, the number of odor events with mitigation would most likely be reduced to less than six per year, which is less than the SCAQMD definition of a "nuisance," and would therefore be less than significant.

Using portable flares and odor suppressants as addressed in mitigation AQ-3a and AQ-3e during drilling would eliminate the odor events associated with mud vapors and drilling gasses. Technology to separate the muds from entrained gasses and utilize flares, or equivalent devices, to combust the gasses would prevent events similar to the January 2006 event at the Baldwin Hill Oil field, where gasses entrained in the muds were released and detected by oilfield neighbors. The flare systems would utilize a de-gassing vessel (i.e., gas buster); the muds would first pass through this vessel to release entrained gasses. These gasses would be combusted in a flare while the liquid muds would flow to muds processing. The dedicated flare pilot or igniter would automatically and immediately ignite the flare gasses. The flare would essentially eliminate all of the hydrocarbons in the gas, and the combustion of gasses would create substantial heat, providing the combusted products with sufficient buoyancy to rise quickly into the air without producing odors. This type of flare technology for drilling operations is well developed in the oil and gas industry.

Engineering analysis of the field operations identified tank hatches as a potential odor source. The tanks have a relief system that relieves the pressure to the atmosphere instead of to the vapor recovery system if the pressure gets too high inside of the tank. This could occur if the vapor recovery system fails or if surges in fluid flow cause short-term increases in pressure that exceed the capacity of the vapor recovery system compressor. Ensuring appropriate monitoring of the tank relief systems would increase the understanding associated with intermittent tank releases and allow for minimizing these potential odor events by increasing compressor capacity if necessary.

By implementing these mitigation measures, the oil field operations would apply best available technology (e.g., tank monitoring, drilling flare and odor control, muds odor control). Impacts would therefore be reduced to less than significant with mitigation. With the mitigation described above, the impact is reduced to a less than significant level.

Additionally, at the Planning Commission hearing that occurred on October 19, 20, 24 and 25, 2011, many speakers expressed concerns regarding odors. As detailed above, it is anticipated that any odor risk would be reduced to a less than significant level through the implementation of mitigation. Further, as detailed on pages 2-46 of the EIR "[i]n the event that odor producing hydrogen sulfide levels in the gas are greater than 20 ppm or a crude oil hydrogen sulfide concentration, which could produce vapors above 100 ppm, the well would immediately be shut in. Should this occur, the Project would be modified, including all necessary permits, to handle H₂S sour gas. If this were not practical, the Project could be abandoned." Thus, any odor risk would be eliminated by shutting down the well, or the odor risk will be reduced through mitigation. Thus, the impact will be less than significant.

3. Toxic Emissions

Potential operations and drilling at the Project site would emit toxic materials. However, mitigation is imposed upon the Project to ensure a less than significant impact.

(a) Findings

Changes or alterations have been required in, or incorporated into, the Project that will ensure a less than significant toxic emissions impact. Specifically, the following mitigation measure is imposed upon the Project to ensure a less than significant impact:

AQ-5 The Applicant shall install CARB-verified Level 3 diesel catalysts on all diesel-powered drilling equipment or utilize diesel engines that have an equivalent PM emission rate (Tier 4 engines) or electric drilling rigs. The current list of CARB-Verified Level 3 diesel catalysts is available from <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>. Catalysts or engine certifications shall demonstrate achieving 85% reduction for diesel particulate matter

(a) Facts in Support of Findings

Potential operations and drilling at the Whittier Main Oil Field would emit toxic materials. Based on SCAQMD annual emission reporting requirements, future operations at the oil field could exceed the emissions for equipment that is covered by the SCAQMD Rule 301 reporting requirements. Although the SCAQMD Rule 301 reporting requirement does not include mobile sources and temporary equipment (e.g., drill rigs and construction equipment), they have been included to provide a comparison of these emissions to the reporting thresholds.

As part of this analysis, a health risk assessment was conducted using the CARB Hotspots Analysis and Reporting Program (HARP) model. HARP is a computer software package that combines the tools of emission inventory database, facility prioritization, air dispersion modeling, and risk assessment analysis. All of these tools are tied to a single database allowing sharing and utilizations of information.

The Office of Environmental Health Hazard Assessment (OEHHA) document "Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments" outlines the risk assessment methods and procedures. The following paragraphs discuss the inputs associated with the model.

Receptor locations were established based on the Preserve boundary, a regional receptor grid, and the closest residences. The main receptor grid covered a 1- by 1-kilometer (0.6 by 0.6 miles) grid with spacing every 100 meters (328.1 feet). Receptors along the Preserve boundary were spaced approximately 20 meters (65.6 feet) apart.

The health risk assessment utilized local meteorological data for worst-case health risk estimates: SCAQMD meteorological data from the Whittier monitoring station is located on Leffingwell Road, approximately three miles northwest of the oil field.

Pursuant to SCAQMD Guidelines, terrain elevation heights were included in the modeling analysis. Digital Elevation Mapping data in the HARP modeling software were used to input elevation for all sources and receptors. Digital Elevation Mapping data from four U.S. Geological Survey quadrangles were required, which included Baldwin Park, El Monte, La Habra and Whittier.

It was assumed that all offsite individuals would experience a lifetime exposure (i.e., 70 years under the SCAQMD and OEHHA risk assessment guidelines) for operations and drilling. Two emission scenarios were evaluated in the analysis: a 70-year average emissions profile to estimate lifetime cancer risk, and a peak emissions year that was assumed to persist for 70 years to evaluate the SCAQMD's criteria limiting the risk per year to 1/70 of the maximum allowable risk. Since drilling would only occur over a five year period, the maximum emissions scenario represents a very conservative estimate of potential health risk.

Overall, the worst-case health risk associated with future operations exceeded applicable health risk criteria for individual cancer risk. Based on the health risk assessment modeling results, potential health risks would be considered potentially significant. Sources that contributed the greatest to the high health risk levels mainly included diesel engines, especially those associated with the drilling of new wells.

The cancer burden is defined as the estimated increase in the occurrence of cancer cases in a population subject to a MICR of greater than or equal to one in 1,000,000 (1×10^{-6}) resulting from exposure to toxic air contaminants.

Emissions of toxic materials can be reduced by limiting operations near sensitive receptors and installing devices on the diesel engines that reduce emissions of toxic materials. These devices are verified and registered by the CARB and are commonly used on diesel engines throughout industry to reduce diesel particulate matter, the main toxic component of diesel exhaust.

Mitigation Measure AQ-5 requires the Applicant to install CARB-verified Level 3 diesel catalysts on all diesel-powered drilling equipment or utilize diesel engines that have an equivalent PM emission rate (Tier 4 engines) or electric drilling rigs. The current list of CARB-Verified Level 3 diesel catalysts is available from <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>. Catalysts or engine certifications shall demonstrate achieving 85% reduction for diesel particulate matter.

Regarding residual impacts, diesel catalysts are widely used to reduce emissions from diesel engines. CARB recommends diesel catalysts as part of their ongoing Airborne Toxic Control Measures and maintains a list of certifications of applicable technologies. CARB has evaluated various types of control options for

diesel particulate and identified the control efficiency, cost, and source test data. CARB found that the most effective control technologies are catalyst-based diesel particulate filters. CARB requires diesel catalyst manufacturers to certify that they can achieve the required reduction levels.

To evaluate the effectiveness of the proposed mitigation measure, the HARP model was rerun using the same approach as was used to evaluate the potential future oil field development. Overall, worst-case health risks associated with mitigated project operations are below all applicable health risk criteria.

With implementation of mitigation, which would meet the SCAQMD Best Available Control Technology for Toxics requirements, impacts would be reduced to less than significant. With the mitigation described above, the impact is reduced to a less than significant level.

C. BIOLOGICAL RESOURCES

1. Grading and Vegetation Clearing Impacts

Project grading and vegetation clearing for fuel modification, and increased noise, would result in adverse effects, either directly or through habitat modifications, on sensitive wildlife species. However, with the implementation of mitigation, any potential impact will be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project that ensure a less than significant grading and vegetation clearing impact. Specifically, the following mitigation measures are imposed upon the Project to ensure any impact is less than significant:

BIO-1a To mitigate the Project's permanent loss of 4.84 acres of coastal sage scrub, the Applicant shall provide minimum 3:1 areal replacement. To mitigate the loss of habitat value due to the Project's noise impacts affecting 5.49 acres of coastal sage scrub, the Applicant shall provide minimum 1:1 areal replacement. In total, the Applicant shall restore 19.99 acres of degraded habitats in the La Cañada Verde and Arroyo Pescadero watersheds to coastal sage scrub communities, or as otherwise agreed to by the appropriate resource agencies and the City. No additional grading or habitat disturbance shall occur along the North Access Road beyond what is currently designated in the Road Improvement Plan included in Appendix A. All aspects of the restoration effort shall comply with the Habitat Authority's Restoration Guidelines, as specified in Appendix N of the RMP (LSA 2007, Pages 251-372). The following shall apply:

- All contractors involved in the restoration effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).
- The restoration specialist shall work with the Habitat Authority to select restoration sites in the Habitat Authority's Whittier Management Unit, preferably in the La Cañada Verde and Arroyo Pescadero watersheds.
- A conservation easement shall be placed over any site restored under this mitigation measure. This easement will be submitted to the USFWS for review and approval.
- Mandatory components of any restoration plan shall include, but not be limited to, a pre- and post-construction survey to describe the final, full extent of disturbance area to determine habitat loss and replacement, Site Preparation, Implementation Specifications, Maintenance Methods, Performance Standards, Monitoring Methods, Documentation and Reporting, and Contingency Measures (in case performance standards are not met in any area). All components of any restoration plan prepared in satisfaction of this mitigation measure shall be reviewed and approved by the Habitat Authority, the City, USFWS, and CDFG prior to implementation.
- Maintenance of all plantings will be the Applicant's responsibility, and shall include any activities required to meet the performance standards set for the restoration program. Restoration efforts shall be scheduled to start at the same time as construction activities to reduce the temporal loss of habitat. A minimum of 5 years of maintenance shall be required unless the plan's long-term performance standards are judged by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) to be satisfied in less than 5 years.
- Monitoring all restoration sites will be the Applicant's responsibility for a minimum of 5 years, or until the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) judge all of the Project's long-term performance standards to be satisfied. The site monitor shall be a biologist, native landscape horticulturist, or other professional qualified to: (1) assess the

performance of the planting effort; (2) recommend corrective measures, if needed; and (3) document wildlife use of planting areas over time. The site monitor shall be selected by the Applicant and approved by the City and the Habitat Authority.

- If performance standards are not achieved in any restoration area, an alternative or auxiliary mitigation plan shall be submitted to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- The monitoring results shall be reported at least annually to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- Additionally, all mitigation must comply with the Restoration Plans for Mitigation and Monitoring Plans found on the Habitat Authority's web page (<http://www.habitatauthority.org/devdedmit.shtml>).

BIO-1b To prevent erosion and invasion by non-native weeds, and to help offset the Project's overall biological impacts including the temporal loss of habitat, the Applicant shall provide minimum 2:1 areal replacement of all graded slopes outside of permanent impact areas (approximately 4.80 acres; restoration shall be revegetated exclusively with appropriate, locally indigenous plant species and will incorporate non-flammable species as appropriate). To mitigate the permanent disturbance to 12.34 acres of native habitats (8.59 of chaparral and 4.28 acres of annual grassland), the Applicant shall provide minimum 1:1 areal replacement. In total, the Applicant shall restore 22.5 acres of degraded habitat in the La Cañada Verde and Arroyo Pescadero watersheds to native communities, as agreed to by the appropriate resource agencies and the City. All contractors involved in the revegetation effort, including the revegetation specialist and landscape contractor, shall be reviewed and approved by the City and Habitat Authority. Revegetation efforts shall comply with the Habitat Authority's Restoration Guidelines, as specified in Appendix N of the RMP (LSA 2007, Pages 251-372). The following shall apply:

- All contractors involved in the restoration effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City, the Habitat Authority,

and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- Mandatory components of any restoration plan shall include, but not be limited to, a pre- and post-construction survey to describe the final, full extent of disturbance area to determine habitat loss and replacement, Site Preparation, Implementation Specifications, Maintenance Methods, Performance Standards, Monitoring Methods, Documentation and Reporting, and Contingency Measures (in case performance standards are not met in any area). All components of any restoration plan prepared in satisfaction of this mitigation measure shall be reviewed and approved by the Habitat Authority the City, USFWS, and CDFG prior to implementation.

- Maintenance of all plantings will be the Applicant's responsibility, and shall include any activities required to meet the performance standards set for the restoration program. Restoration efforts shall be scheduled to start at the same time as construction activities to reduce the temporal loss of habitat. A minimum of 5 years of maintenance shall be required unless the plan's long-term performance standards are judged by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) to be satisfied in less than 5 years.

- Monitoring all restoration sites will be the Applicant's responsibility for a minimum of 5 years, or until the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) judge all of the Project's long-term performance standards to be satisfied. The site monitor shall be a biologist, native landscape horticulturist, or other professional qualified to: (1) assess the performance of the planting effort; (2) recommend corrective measures, if needed; and (3) document wildlife use of planting areas over time.

- The site monitor shall be selected by the Applicant and approved by the City and the Habitat Authority.

- If performance standards are not achieved in any restoration area, an alternative or auxiliary mitigation plan shall be submitted to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- The monitoring results shall be reported at least annually to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- Additionally, all mitigation must comply with the Restoration Plans for Mitigation and Monitoring Plans found on the Habitat Authority's web page (<http://www.habitatauthority.org/devdedmit.shtml>).

BIO-1c Restoration and revegetation efforts shall include the salvage and stockpile of weed-free topsoil (upper 12 inches of soil) from any and all areas of intact (non-weedy) native communities that are graded for Project implementation, as determined by the site monitor described in and required by mitigation measure BIO-1 b, so that the soil can later be spread over graded slopes to increase native plant species diversity in the restored areas. Mature coast prickly pear, dudleya, and other translocatable species will be transplanted as feasible in the revegetation and fuel modification zones. Such salvage may also be appropriate for revegetation areas.

BIO-1d The Applicant or US Army Corps of Engineers shall consult with the US Fish and Wildlife Service to obtain an Incidental Take Statement, if needed, pursuant to Section 7 or Section 10 of the federal Endangered Species Act to cover the Project's potential "take" (which includes the permanent and temporary loss of approximately 5 acres of critical habitat and 5.49 acres of noise-related disturbance) of the coastal California gnatcatcher, a federally listed species.

(b) Facts in Support of Findings

The United States Fish and Wildlife Service (USFWS) designates the Project Site as critical habitat for the federally threatened coastal California gnatcatcher. Two individual gnatcatchers and one family group have been observed within the Project Area boundaries during protocol surveys conducted in coastal sage scrub and riparian scrub on the Project Site. As detailed in Appendix O, project implementation would entail permanent loss of 4.64 acres of coastal sage scrub and 0.39 acres of riparian scrub for grading and clearing for fuel modification. Another 0.14 acres of coastal sage scrub would be temporarily impacted by grading and then restored. These represent potentially significant adverse effects upon this listed species and its required habitat.

The DEIR indicates the "maximum hour noise contours" for the proposed project during operations, after noise mitigations are applied. The DEIR shows that

required mitigation measures will generally reduce noise in the project area to levels between 40 and 60 dBA, although levels up to 70dBA are expected in zones extending up to approximately 200 feet from the edges of drilling pads. Noise levels below the level of 60 dBA are not expected to be adverse.

As discussed in Section 4.2.1.2 in the EIR, LSA Associates conducted noise-level surveys in the Bonita Reservoir wildlife habitat area during each year from 1996 through 2000. The Final Report concluded that California gnatcatchers can live and reproduce successfully in close proximity to roads and that "no adverse effects were observed during periods of noise levels higher than 60dBA Leq (i.e., during periods of construction activity)."

The limited area where levels are expected to increase to 60-70 dBA could be avoided by some special-status species, among them the coastal California gnatcatcher, a listed species known to occur within coastal sage scrub and riparian habitats in the local area. Therefore, increasing noise levels above 60 dBA within 5.49 acres of preserved coastal sage scrub habitat and 0.75 acres of preserved riparian habitat are identified as a potentially significant, adverse effect on the gnatcatcher and its habitat.

As detailed in the EIR, hauling activities during the construction phase, would have the potential to disturb nesting birds including nesting California gnatcatchers and wildlife movement. For example, the noise contour analysis describes noise levels higher than 60dBA on 8.4 acres of native or naturalized habitat located along the North Access Road. However, this impact would be eliminated with the Project refinements detailed in Appendix O of the FEIR. Construction noise levels along the North Access Road with the Project refinements detailed in Appendix O would be below 55 dBA average hourly due to construction traffic and therefore under the significance thresholds.

One other listed species, the American peregrine falcon, has been recorded on the Project Site, but its occurrence appears to be limited to only occasional visitation during fall and winter. Project implementation would have adverse, but less-than-significant, effects upon this listed species. Several additional "special status" species that are not listed as threatened or endangered are present, or could be present, on the Project Site. The silvery legless lizard, yellow-breasted chat, pallid bat, and San Diego desert woodrat are California Species of Special Concern that are known or presumed to occur on the site (chats occur mainly in riparian areas but also utilize adjacent brushy habitats). The Project's permanent grading impacts to native upland habitat used by these species would be potentially less than significant with mitigation.

The remaining "special status" species either have only limited potential for occurrence on the Project Site (this includes the Los Angeles pocket mouse and black-tailed jackrabbit) or are "California Special Animals" that are widespread in the Puente-Chino Hills and elsewhere in the region.

The above identified mitigation would be imposed upon the Project to reduce these potential impacts.

Regarding residual impacts, the use of the North Access Road would entail some widening and would require fuel modification clearance of 10 feet on either side. Impacts to coastal sage scrub and riparian habitats would be mitigated through 3:1 restoration of degraded areas; temporary impacts to habitats would be mitigated at a 2:1 replacement ratio to reduce the level of the temporal loss of habitat. All areas temporarily impacted would be replanted with appropriate native habitats as designated by the Habitat Authority guidelines. The existing North Access Road already passes through habitat of the federally listed California gnatcatcher. Due to the small amount of coastal dune scrub habitat that would be disturbed for all road improvements and the high tolerance for noise this species has been shown to exhibit, the improvement of the road would have a negligible effect upon the local area's suitability for the continued occurrence of the gnatcatcher. Although the final geotechnical report has not been completed for the North Access Road, no new grading would be permitted along the North Access Road beyond the current grading boundaries.

As stated in section 4.2.1.2 in the EIR, "noise negatively influences bird populations and communities, and acoustic masking may be a dominant mechanism precluding many birds from breeding in noisy habitats". The temporary impacts to sensitive nesting habitat resulting from construction and drilling noise would be offset by a 1:1 habitat replacement ratio.

Replacement ratios for grading of sensitive coastal sage scrub typically requires greater than 1:1 replacement. The proposed mitigation included in this analysis requires a 3:1 replacement for coastal scrub because: (1) the CDFG requested a replacement ratio of 3:1 for this Project; (2) the habitat loss would be located within a habitat preserve, which implies existing habitat values and the sensitivity of this location in terms of needing to be well-buffered against human intrusions and other constraints from surrounding development; (3) there would be impacts to preserved habitats that lie outside of limits of disturbance from "edge effects" that can't be completely eliminated through mitigation; (4) there would be temporal losses that would occur before the restoration efforts provide functioning habitat; and (5) ecological systems that are already under stress from surrounding intensive development exhibit a compromised capacity to rebound from disruptive processes, such as fire and human intrusion.

Implementing Mitigation Measures BIO-1a through BIO-1d would offset the proposed grading and noise impacts to coastal sage scrub and would reduce impacts to the coastal California gnatcatcher, silvery legless lizard, yellow-breasted chat, pallid bat (foraging), and San Diego desert woodrat, as well as any other special status species potentially impacted on the site, to less than significant with mitigation. Thus, the impact is reduced to a less than significant level.

On October 28, 2011 a comment letter was received from the Puente Hills Landfill Native Habitat Preservation Authority expressing concern regarding language in the biological mitigation measures detailed above. Specifically, the Authority expressed concern that cumulative effects would result as language was added to the mitigation to require restoration efforts be started at the same time as construction activities. The intent with this additional language is to ensure restoration efforts occur immediately as construction occurs to ensure that habitat impacts are minimized. Thus, it is not anticipated that cumulative effects would occur as the goal is a minimization of impacts by ensuring habitat is restored as construction occurs. Thus, no additional undisclosed impacts are expected.

2. Construction Impacts to Riparian Habitat

The proposed Project would result in the permanent and temporary loss of 1.0 acre of mulefat scrub riparian habitat, a federally protected aquatic resource as defined by Section 404 of the Clean Water Act, and increased noise could temporarily inhibit wildlife use of preserved riparian habitat. Nevertheless, mitigation is imposed that will ensure a less than significant impact.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant construction impact to riparian habitat. The following measures will ensure a less than significant impact.

BIO-2a To mitigate the Project's permanent loss of 0.22 acre of riparian habitat, the Applicant shall provide minimum 3:1 areal replacement. To mitigate the Project's noise impacts affecting 0.75 acres of riparian habitat, the Applicant shall provide minimum 1:1 areal replacement. In total, the Applicant shall restore 1.41 acres of degraded areas within the La Cañada Verde and Arroyo Pescadero watersheds, or as otherwise agreed to by the appropriate resource agencies and the City. The 0.12 acre of temporary grading impact would be mitigated through the 1:1 revegetation specified in BIO-1.b. All aspects of this restoration shall comply with the Habitat Authority's Restoration Guidelines, as specified in Appendix N of the RMP (LSA 2007, Pages 251-372). The following points shall apply:

- All contractors involved in the restoration effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- Mandatory components of any restoration plan shall include, but not be limited to, a pre- and post-construction survey to describe the final, full extent of disturbance area to determine habitat loss and replacement, Site Preparation, Implementation Specifications, Maintenance Methods, Performance Standards, Monitoring Methods, Documentation and Reporting, and Contingency Measures (in case performance standards are not met in any area). All components of any restoration plan prepared in satisfaction of this mitigation measure shall be reviewed and approved by the Habitat Authority the City, USFWS, and CDFG prior to implementation.

- Maintenance of all plantings will be the Applicant's responsibility, and shall include any activities required to meet the performance standards set for the restoration program. Restoration efforts shall be scheduled to start at the same time as construction activities to reduce the temporal loss of habitat. A minimum of 5 years of maintenance shall be required unless the plan's long-term performance standards are judged by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) to be satisfied in less than 5 years.

- Monitoring all restoration sites will be the Applicant's responsibility for a minimum of 5 years, or until the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) judge all of the Project's long-term performance standards to be satisfied. The site monitor shall be a biologist, native landscape horticulturist, or other professional qualified to: (1) assess the performance of the planting effort; (2) recommend corrective measures, if needed; and (3) document wildlife use of planting areas over time.

- The site monitor shall be selected by the Applicant and approved by the City and the Habitat Authority.

- If performance standards are not achieved in any restoration area, an alternative or auxiliary mitigation plan shall be submitted to the City, the Habitat Authority, and appropriate resource agencies (e.g., CDFG, USACE, U.S. Fish and Wildlife Service).

- The monitoring results shall be reported at least annually to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- Additionally, all mitigation must comply with the Restoration Plans for Mitigation and Monitoring Plans found on the Habitat Authority's web page (<http://www.habitatauthority.org/devdedmit.shtml>).

BIO-2b The Project proponent shall be required to obtain all applicable federal and state permits and agreements, including: (1) a Section 404 Permit from the US Army Corps of Engineers; (2) certification, or a waiver of certification, from the Los Angeles Regional Water Quality Control Board that the activity would not adversely affect water quality; and (3) a Streambed Alteration Agreement from the California Department of Fish and Game.

(b) Facts in Support of Findings

Project implementation would include road widening and vegetation clearing on the sides of roads, including Catalina Road, the construction of new underground oil and gas production pipelines along the Loop Road, and the installation of an underground electrical power line along the main access road from the Project Site to the tie-in of the SCE Line at Ocean View Avenue which would result in the permanent loss of 0.08 acres of mulefat scrub and riparian habitats and the temporary loss of 0.03 acres of mulefat scrub riparian habitat. Fuel modification would consume an additional 0.14 acres of this habitat, which is federally protected as defined by the USACE Section 404 of the Clean Water Act. The loss of this habitat would adversely affect these regulated and biologically sensitive resources and the special status species that depend on them, such as the yellow-breasted chat, which would be a less than significant impact with mitigation.

The area where noise levels are expected to increase to 60-70 dBA could be avoided by some special-status species, among them the coastal California gnatcatcher, a listed species known to occur within both coastal sage scrub and riparian habitats in the local area. Therefore, increasing noise levels above 60 dBA within 0.75 acres of preserved riparian habitat are identified as a potentially significant, temporary adverse effect on this habitat.

Regarding residual impacts, replacement ratios for grading sensitive riparian habitat typically require greater than 1:1 replacement depending on the quality and quantity of disturbance. The proposed mitigation included in this analysis requires 3:1 replacement for impacts to riparian habitat because: (1) the habitat loss would be within a habitat preserve, with existing habitat values and the sensitivity of this location in terms of being well-buffered against human intrusions and other constraints from surrounding development; (2) impacts to preserved habitat that lies outside the limits

of disturbance from "edge effects" cannot be completely eliminated through mitigation; (3) temporal losses would occur before the restoration efforts provide functioning habitat; and (4) ecological systems already under stress from surrounding intensive development exhibit a compromised capacity to rebound from disruptive processes, such as fire and human intrusion.

The temporary impacts to sensitive nesting habitats resulting from construction and drilling noise would be offset by a 1:1 habitat replacement ratio. Implementation of Mitigation Measure BIO-2a and BIO-2b would offset and reduce impacts to streambeds and riparian habitat areas to levels less than significant with mitigation. With the mitigation described above, the impact is reduced to a less than significant level.

3. Oil Spill Impacts on Riparian and Coastal Sage Scrub

A rupture or leak from oil wells, pipelines, or exposure to materials from other oil field-related infrastructure has the potential to result in a substantial adverse effect on native species and habitats, sensitive species, sensitive species habitat, and sensitive habitats including riparian and coastal sage scrub. However, with the implementation of mitigation, any impacts will be reduced to a level of insignificance.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant oil spill impact. Specifically, the following mitigation measures are imposed upon the Project to ensure a less than significant impact.

BIO-3a The applicant shall prepare an Emergency Response Action Plan that would address protection of sensitive biological resources and 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 Action Plan shall include provisions for containment and cleanup within 2 miles downstream of the Project Site. The plan shall contain detailed descriptions of various containment and cleanup alternatives for each segment of the streambed. Selection of a containment alternative would be made during an emergency event, but the approach and plan shall be reviewed by the California Division of Fish and Game, the Los Angeles Regional Water Quality Control Board, and Los Angeles County Flood Control District.

Where feasible, low-impact, site-specific techniques such as hand-cutting contaminated vegetation and using low-pressure water flushing shall be specified to remove spilled material from particularly sensitive wildlife habitats, such as riparian woodlands, because procedures such as shoveling, bulldozing, and raking can cause more damage to a sensitive habitat than the oil spill itself. The Emergency Response Action Plan shall evaluate the non-cleanup option for ecologically vulnerable habitats.

When habitat disturbance cannot be avoided, the Emergency Response Action 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 sensitive habitat areas shall be identified. The Emergency Response Action Plan shall include species- and site-specific procedures for collection, transportation and treatment of oiled wildlife, particularly for sensitive species.

The Emergency Response Action Plan shall include procedures for timely re-establishment of vegetation that replicates the habitats disturbed (or, in the case of disturbed habitats dominated by non-native species, replaces them with suitable native species).

The Emergency Response Action Plan shall be approved by the City and Habitat Authority prior to commencing any construction activities.

BIO-3b To reduce exposure risks to wildlife in the Project Site area, all open basins containing any Project-related fluids shall either be emptied at the end of each day or fenced and covered to exclude all wildlife, including birds, bats, and amphibians. Drilling muds, concrete waste, and truck washing water shall be contained within closed Baker-style tanks or collected by a vacuum truck before the end of each day and shall not be stored overnight in open pits.

(b) Facts in Support of Findings

A rupture or leak from oil wells, pipelines, or exposure to materials from other oil field-related infrastructure has the potential to result in a substantial adverse effect on native species and habitats, sensitive species, sensitive species habitat, and sensitive habitats including riparian and coastal sage scrub. Oil field operations could result in spills due to geologic hazards, mechanical failure, structural failure, corrosion, or human error during drilling, hauling, piping, or processing operations. The most likely spills from the facility would involve crude oil and/or produced water. Such spills or cleanup activities could potentially result in impacts to biological resources onsite or offsite. Small leaks or spills, which are contained and remediated quickly, may have minor or negligible impacts to biological resources. In contrast, large spills or pipeline or tank ruptures, could spread into sensitive habitats (i.e., riparian or coastal sage scrub habitats) and substantially degrade their value, with potential long-term impacts to biological resources. Future oil development increases the potential for leaks or spills, and associated impacts to biological resources.

Depending on the location of the infrastructure rupture or failure, such a spill could flow into the riparian drainages near the Project Well Site, the proposed oil and gas pipelines running along the Loop Road, and/or the proposed access roads which will be used to haul product in haul trucks. Spills and associated contaminated storm water runoff reaching any of these waterways could have significant and widespread impacts to water quality and, consequently, to sensitive biological resources associated with this habitat. Impacts to biological resources from a potential oil spill associated with the future oil development would be potentially significant, but mitigable.

In addition, the Applicant maintains an Emergency Response Action Plan, which includes Specific Incident Response Checklists for potential piping rupture or leak, valve rupture or leak, manifold failure, and storage tank leaks. This plan prioritizes procedures for facility personnel to mitigate or prevent any discharge resulting from facility operations. Spill mitigation procedures and response guidelines are provided for discharges of crude oil and produced water that could result from such leaks or failures.

The potential for oil spills and associated impacts to biological resources is limited by mitigation measures developed for the potential impacts related to the risk of upset, hazards, and hazardous materials and related to hydrology and water resources as detailed below. Mitigation developed for the Project's potential impacts to hydrology and water resources includes secondary containment around tanks; design of retention basins; Spill Prevention, Control and Countermeasure Plan; a Pipeline Management Plan; and the requirement of an Emergency Response Action Plan; all of which would act to limit the potential for onsite spills and associated significant impacts. Where a spill or cleanup could impact sensitive species, or the loss of habitat for sensitive species, implementing Mitigation Measures BIO-3a and BIO-3b would further reduce impacts on biological resources.

Regarding residual impacts, implementing several mitigation measures, as well as infrastructure preventative maintenance, structural integrity tests, and routine inspections, would reduce the likelihood and severity of potential spill and exposure impacts to sensitive biological resources to less than significant with mitigation. Typically oil spills that occur on land are easily contained and impacts are minimized.

The Hydrology and Water Resources section of the EIR identifies potential long-term significant impacts to biological resources from a potential spill from the facility involving crude oil or produced water. Such spills could potentially result in water quality impacts to creeks and shallow groundwater. Small leaks or spills, which are contained and remediated quickly, may have minor or negligible impacts to water resources. In contrast, large spills, such as those from a tank rupture at the processing facility, well blow-out, or pipeline rupture, could spread to surface waters or groundwater and could substantially degrade water quality. However, the Project area presents limited riparian resources or sensitive species that could be affected by a substantial oil spill and this impact is considered significant but mitigable.

With the mitigation described above, the impact is reduced to a less than significant level.

4. Impacts to Wildlife Species and Migratory Corridors

The proposed Project could substantially interfere with the movement of native resident or wildlife species or with established native resident or migratory wildlife corridors, or interfere with the use of native wildlife nursery sites. With the implementation of mitigation, any potential impact will be reduced to less than significant.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant wildlife species and migratory corridors impact. Specifically, the following mitigation measures are imposed upon the Project to ensure a less than significant impact.

BIO-4a Devices and measures shall be employed to minimize noise effects on wildlife. At a minimum, noise barriers shall surround the drill rig floor, mud mixers, cleaners, conveyers, shakers, pumps, and other oil development and operational facilities; construction activities shall be limited to daylight hours except for emergencies; construction machinery shall be operated per manufacture's specifications; and a Noise Reduction Plan and monitoring plan shall be implemented to ensure that Project activities are operating within the ranges included in mitigation measure N-4.

BIO-4b All Project lighting shall be designed and shielded with the intent of preventing spillage of light into adjacent preserved open space areas. Outdoor lighting shall be restricted to lights required by code for lighting building exteriors and for safety and security needs. All Project lighting shall be fully shielded and designed to prevent spillage of light into adjacent preserved open space areas. Lighting shall be constructed so that all light emitted by the fixture, either directly from the lamp or from a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal as determined by photometric test or certified by the manufacturer. Any structural part of the light fixture providing this shielding shall be permanently affixed. Light standard heights shall distribute light at ground level consistent with light levels for security, spill-over effects, and efficiency. After initial installation of Project lighting, a biological monitor acceptable to the City and Habitat Authority shall conduct a field inspection to confirm that the proper lamps have been installed and that light spillage into the Preserve has been minimized to the maximum extent feasible without compromising safety or other critical night-lighting requirements.

BIO-4c To minimize the potential for road mortality of wildlife, all roads within the Preserve boundary used to access onsite oil facilities shall have enough traffic calming devices, appropriately sized and spaced, to limit traffic to a maximum speed of 10 miles per hour. All nighttime traffic shall be minimized during the construction and operational phases and permitted only for activities required for safety reasons or emergencies; all hauling activities shall be restricted to daylight hours, defined as the hours after sunrise and before sunset. This restriction shall be in addition to any others placed on the Project, including by mitigation measure N-4, which is intended mainly to limit noise impacts upon neighboring residential communities, consistent with the City Municipal Code. No permanent solid walls or k-rail walls shall be placed along the North Access Road. The use of k-rails in this area would require wildlife passages placed every 20 feet to allow wildlife to move freely off the road.

BIO-4d Any project landscaping shall consist entirely of species native to the Project Site and surrounding areas within the Preserve and approved by the County of Los Angeles Fire Department and the Habitat Authority. Any

irrigation provided shall be limited to that required to initially establish the native plants; no permanent irrigation shall be permitted.

BIO-4e 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 Game Code, initial construction of the pad sites and facilities and annual fuel modifications involving vegetation removal/trimming shall be done outside the breeding season (February 15 through August 31). If construction 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. USFWS protocol surveys for listed avian birds (California gnatcatcher and least Bell's vireo) shall be conducted if disturbances occur in coastal sage scrub or riparian habitats. If nesting birds are observed within the vicinity, then a minimum 100-foot buffer from the nest would be established. The buffer would be delineated by orange construction fencing and signage and would remain in place until the nest is abandoned or the young have fledged. The nest monitor would be present when any buffer fencing is established. Alternatively, the Project proponent may retain a biologist acceptable to the City and Habitat Authority to monitor the nest and to ensure that Project activities do not violate the Migratory Bird Treaty Act or the California Fish and Game Code. At minimum, the biologist would check for new active nests, and determine the status of ongoing active nests, weekly during the specified nesting season. The biologist would ensure that all fencing and signage was properly maintained, and would provide weekly e-mail updates on the status of all monitored nests to the City, Habitat Authority, CDFG, and USFWS. If the biologist determines that California gnatcatcher nesting is being disrupted, the construction activities will cease and wait until the young have fledged or the nest is determined to have failed.

BIO-4f Hawks and owls nest earlier than most other native birds. If initial construction activities, drilling, re-drilling, ground disturbance, or vegetation clearing, or annual fuel modification involving vegetation removal/trimming occurs from December 1 through August 31, the nest monitor would conduct a pre-construction survey within 3 days prior to vegetation removal or other construction-related disturbances focused on actively nesting hawks or owls. If

any actively nesting hawks or owls are found, a 300-foot buffer would be established around the nest tree to help ensure that nesting is not disrupted. If any active songbird nests are found, a 100-foot buffer would be established as described in BIO-4e. The buffer would be delineated by orange construction fencing and signage and would remain in place until the nest is either abandoned or the young have fledged. The nest monitor would be present when any buffer fencing is established. Alternatively, the Project proponent may retain a biologist acceptable to the City and Habitat Authority to monitor the nest and to ensure that Project activities do not violate the Migratory Bird Treaty Act or the California Fish and Game Code. At a minimum, the biologist would check for new active nests, and determine the status of ongoing active nests, weekly during the specified nesting season. The biologist would ensure that all fencing and signage was properly maintained, and would provide weekly e-mail updates on the status of all monitored nests to the City, Habitat Authority, CDFG, and USFWS.

BIO-4g To avoid the direct loss of special-status bats that could result from removal of trees that may provide maternity roost habitat (e.g., in cavities or under loose bark), the following steps shall be taken:

- Tree removal or relocation shall be scheduled between October 1 and February 28, outside of the maternity roosting season.
- If trees must be removed during the maternity season (March 1 to September 30), a qualified bat specialist (i.e., a person holding a California Department of Fish and Game collection permit and a memorandum of understanding allowing the handling and collection of bats) shall conduct a pre-construction survey to identify those trees proposed for disturbance that could provide hibernacula or nursery colony roosting habitat for bats. Each tree identified as potentially supporting an active maternity roost shall be closely inspected by the bat specialist a maximum of 7 days prior to tree disturbance to more precisely determine the presence or absence of roosting bats.
- Immediately after completion of the pre-construction surveys, and prior to any tree removals, the bat specialist will prepare a report providing the results of these surveys and identifying actions to be taken to avoid or minimize

potential impacts to roosting bats due to authorized tree removal or other potential bat roosting habitats.

- The pre-construction report shall be provided to the City and the Habitat Authority prior to any tree removal.

- If bats are not detected, but the bat specialist determines that roosting bats may be present, it is preferable to push the tree down using heavy machinery rather than felling it with a chainsaw.

- Maternity season lasts from March 1 to September 30. Trees determined to be maternity roosts shall be left in place until the end of the maternity season.

- A 250-foot buffer, in which no construction activities are permitted, shall be established around any tree, rock outcrop, or other occupied roost habitat until bats have left the maternity site or the end of the maternity season (whichever is later).

- The bat specialist shall document all monitoring activities, and shall prepare a summary report upon completion of tree disturbance activities. Reports would include the following:

- the number and type of affected trees determined to support or potentially support roosting bats prior to disturbance;

- any actions undertaken to safely exclude roosting bats prior to disturbance and the results of those actions;

- trees temporarily avoided to protect roosting bats; and

- roosting bats found (alive or dead) after trees were removed or relocated.

- This report shall be provided to the City and Habitat Authority within 30 days following completion of tree removals.

BIO-4h To reduce impacts to wildlife movement corridors and to provide protective cover for wildlife using the Service Tunnel, and consistent with the Resource Management Plan recommendations, the Applicant shall be required to install appropriate native screening vegetation around the western terminus of the Service Tunnel (LSA 2007). The

Applicant shall consult with the Habitat Authority to identify the appropriate limits of screening vegetation. The plantings installed as screening shall comply with the Habitat Authority's Restoration Guidelines. All contractors involved in the native screening effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City and Habitat Authority.

BIO-4i Consistent with the Resource Management Plan recommendations, Project lighting shall not be directly visible from the western terminus of the Service Tunnel.

BIO-4j Consistent with the Resource Management Plan recommendations, the Project proponent shall be required to consult with the Habitat Authority to develop and implement signage explaining the importance of limiting human disturbances in the vicinity of the Service Tunnel between sunset and sunrise.

BIO-4k A qualified biological monitor approved by the City, USFWS, CDFG, and the Habitat Authority shall be onsite during all vegetation removal and initial ground disturbance activities to ensure the compliance with all permit conditions protecting biological resources. The biological monitor shall be present to salvage wildlife species that may be otherwise killed or injured by heavy equipment and vegetation clearing. All salvaged wildlife shall be relocated to suitable adjacent habitat within the Preserve. The biological monitor shall have the authority to temporarily halt activities if permit requirements and conditions are not being met. The biological monitor shall conduct annual site inspections of the facilities, roads, and operations activities to ensure that all applicable mitigation measures are being enacted. The biological monitor shall prepare an annual summary report describing site visit observations and shall provide this report to the City, Habitat Authority and regulatory agencies (including CDFG, US ACE, and USFWS) for review.

BIO-4l The Applicant shall fund and implement a biological resources training program for all construction workers, oilfield workers, and their contractors. Training shall occur annually and as needed for new workers. Training program shall be reviewed and approved by the HA and shall include a description of important biological resources within the Preserve and all applicable conditions, permit

requirements, and protection measures implemented to protect those resources.

BIO-4m All grading limits shall be delineated by orange construction fencing and permanent signage every 50 feet along the fence stating "No Entry — Sensitive Habitat." The City and the Habitat Authority shall approve the fencing prior to commencement of grading activities (including clearing and grubbing).

BIO-4n Recreational access to the Arroyo San Miguel Trail shall be closed during construction or drilling activities at the Drill Pad Site. To continue providing recreation access to the Arroyo San Miguel Trails (on the east side of Colima Road), the Applicant shall develop additional recreational access, in coordination with the Habitat Authority, to the Arroyo San Miguel Trail by any of the following or equivalent: (1) enhancing the parking area on the east side of Colima Road; (2) developing the parking area along Le Flore Drive, approximately 1 mile east of Colima Road; or (3) developing pedestrian access along Colima Road from the Preserve parking area (on the west side of Colima Road) utilizing the new signalized intersection.

(b) Facts in Support of Findings

The Project Site has been recognized as occupying an especially sensitive and important portion of both the Preserve and the greater Chino-Puente Hills region. Data collected during several studies on the preserve show evidence of large (coyote, bobcat, mule deer, and mountain lion) and mid-size (raccoon, possum, and skunk) mammals moving through the Project area, surrounding habitat, and residential areas. Land use policies in the Whittier Hills and in the wider Chino-Puente Hills region have been designed and implemented with an understanding that the lands that include the Project Site would be restored, maintained, and preserved consistent with their special land use designations. For these reasons, loss and degradation of habitat at the Project Site could be expected to have greater adverse effects upon ecological processes and native wildlife populations than would occur in an area with comparable natural communities that does not occupy such a sensitive location within a natural Preserve.

Regarding Core Habitat Impacts, the Project Site, pipeline routes, and access roads are predominantly located in the La Cañada Verde watershed, within the Preserve's designated Core Habitat Management Zone, an area currently set aside for the sole purpose of providing undisturbed habitat for wildlife. The North Access Road is located deepest within the Core Habitat. This is the largest contiguous area in the Preserve that is well-buffered from such "edge effects" as lighting, noise, and intrusions by humans and domestic animals. It is an area that biologists characterize

as a "native wildlife nursery site" for such species as the mule deer and bobcat. During the 30-year life of the Project, levels of noise, light, human presence, and vehicle traffic would increase in all parts of the Project Site, including areas that serve as nursery sites and that have been purposefully set aside for the purpose of conservation of natural communities and their constituent species. The removal of native vegetation and non-native vegetation would result in the loss of important nesting habitat for songbirds and raptors. These represent potentially significant adverse effects upon wildlife populations in the Preserve.

In the Puente Hills, the bobcat has been a focus of conservation concern, as it is a widely distributed top predator that exhibits some sensitivity to human activity. Use of the Service Tunnel by bobcats and other native wildlife species has remained high following the tunnel's opening to human use in 2002. Bobcats do show a moderate negative response to urbanization. Research from across the region has demonstrated that other wildlife species including coyote, raccoon, and mule deer, exhibit only a moderately negative or positive response to urbanization. It is also relevant that, for many decades, extensive and unmitigated oil operations took place across a much wider portion of the La Cañada Verde and Arroyo Pescadero watersheds than is currently being proposed, and wildlife species including bobcat continue to use, or have returned to the area to use, the resources that are currently present in the Preserve. For these reasons, the proposed actions are not anticipated to result in a long-term impact to that habitat that would substantially inhibit the bobcat, other larger mammal species, migratory bird nesting habitat, and bat species' use of the La Cañada Verde watershed, either as a nursery site or as a movement corridor. It is concluded that the Project's potential impacts on bobcats and other wildlife species will be adverse, but less than significant with provision of the required mitigation measures.

Vibrations associated with drilling would vary over time. The highest vibration levels experienced by wildlife would most likely occur during the initial portion of drilling a well, during approximately the first 100 feet of drilling, and this would last a matter of hours when drilling is close to the surface. The actual peak vibration levels during this period would be only for a sum total of a matter of minutes. One well would be drilled per month. Therefore, while it is possible that some wildlife in the vicinity of the drilling operation, such as bobcats, would experience anxiety due to vibrations produced during high-vibration periods, those periods would be rare and relatively short-lived, lasting for only a period of hours per month. Data on wildlife response to vibration impacts is not well documented; however, the typical response observed by the EIR preparers for most wildlife to a short-term, infrequent event, is short term avoidance, but if the abnormal condition (such as noise and vibration) ceases, wildlife species typically return to their normal behavior. Therefore, impacts to wildlife resulting from vibrations, expected to last only a few minutes for each well drilled, are considered to be adverse, but less than significant.

Use of the North Access Road would require road widening, the installation of retaining walls, clearance of 10 feet on either side for fuel modification, and would directly impact approximately 4.75 acres of vegetated habitats (not including the

existing road area). However, with the implementation of BIO1-1b, this impact will be reduced to less than significant.

The North Access Road is located in the core habitat of the Preserve, which currently has minimal disturbances. This access road would increase pressure on an already constricted wildlife movement corridor and therefore, the overall effect would be an increase in impacts to biological resources. Installation of a k-rail wall could restrict wildlife movement on the road. The proposed Project would have contributed an average additional 24 vehicles per day during operations and up to 84 truck trips during excavation activities that are anticipated to last 120 days during the construction phase. However, with the Project refinements detailed in Appendix O of the FEIR, these truck trips are substantially lessened.

Impacts to wildlife movement would be significant but mitigable in most areas of the proposed Project. However, increased levels of drilling operations and human activities in the Core Habitat, which currently has minimal disturbances, would result in substantial impacts to wildlife movement. The impacts would be most severe in those areas farthest away from existing human pressures. The increased levels of noise, light, human presence, and vehicle traffic, during both the construction and operational phases of the Project, could result in significant adverse effects upon a critical wildlife movement linkage.

At the intersection of the Loop Road and Colima Road, a portion of the underground oil and gas production pipelines and metering station is located near the entrance (approximately 1,750 feet away from) to the Service Tunnel, which is an important region-wide linkage for terrestrial wildlife attempting to traverse Colima Road immediately east of the Project Site. It is expected that wildlife use of the Service Tunnel would be adversely affected by activities in the eastern portion of the project area. The Service Tunnel has been identified as an important element of wildlife movements in the area and the impacts to wildlife movement would be significant. The Service Tunnel has also been utilized as a recreational resource as part of the Arroyo San Miguel trail, which passes through the tunnel and accesses the Preserve on the east side of Colima Road. Impacts from the Project could be partially mitigated by closing the Arroyo San Miguel trail that utilizes the tunnel to recreational use, at least during the most intensive activities, such as drilling or construction.

Various species of wildlife have been found along the shoulders of Colima Road in recent years due to vehicle-strikes, even though wildlife use of the Service Tunnel has also been heavy. It is expected that these patterns will not change substantially if drilling occurs approximately 1,850 feet west of the Service Tunnel, at the Project site. A network of old oilfield roads and trails feeds down to the lower Arroyo Pescadero watershed from the hills north of the proposed drilling area. Wildlife choosing to avoid the proposed drilling site by moving through the hills to the north would encounter two different roads that would provide an alternative route through the Arroyo Pescadero (which does not have any other easy crossing points except at its extreme southern edge, next to existing houses) and then proceed southeast to the Service Tunnel.

Regarding residual impacts, the Project would result in impacts on individual animals; most of the direct loss or injuries would be expected for the smaller wildlife species such as rodent species, lizards, snakes, and amphibians, all of which have small home ranges. The removal of both native and non-native vegetation would impact nesting habitat; however the RMP does target eucalyptus trees for removal as part of the exotic plant control program and restoration of areas with native vegetation would replace the loss of nesting habitat. Impacts to wildlife movement are expected; however, impacts are not expected to be catastrophic, or lead to the loss of an entire species from the area. Improvements on the North Access Road, which include grading and installing retaining walls and traffic barriers on steeper slopes are not expected to substantially affect wildlife movement on the access road because the retaining walls are located in areas with steeper slopes adjacent to cuts along the existing roads (steeper slopes are already less likely to be used for wildlife access) and Mitigation Measure BIO-4b, which restricts permanent solid walls or requires the placement of wildlife passage corridors, will provide wildlife with access off of the road. Most wildlife species living in the open spaces in the project area are accustomed to some level of human disturbance; the Preserve has experienced years of previous oil development and is surrounded by a densely populated residential area, and yet, wildlife still persist.

Implementing mitigation measures recommended for noise and vibration detailed above, would reduce impacts to wildlife inhabiting the Project area and species migrating through the area. Mitigation Measure N-1a limits the construction activities to daylight hours and the Traffic Section mitigation now limits all truck travel from 8 a.m. to 3 p.m. due to the parking limitations along Penn Street; mitigation measure N-1b requires that all construction machinery operate according to the manufacture's specifications. Mitigation Measure N-2a requires a Noise Reduction Plan for all drilling operations that requires appropriate noise levels, 30-foot high enclosures around drill rigs, soundproofing around other facilities and machinery, barrier composition and design, and backup indicators. Mitigation Measure N-2b requires a quiet mode for facility operations at night. Mitigation Measure N-2c requires a noise abatement study to monitor noise levels at specific sensitive resources and includes City shut-down authority if noise criteria are exceeded. Mitigation Measure N-4 requires a Noise Reduction Plan for all operational activities to ensure that all Project activities operate within the dB range defined in Mitigation Measure N-4.

Implementing the proposed mitigation described above, including minimizing noise impacts (BIO-4a); designing project lighting to be shielded and directed away from open space areas (BIO-4b); reducing speed limits and night driving (BIO-4c); installing native screening around the existing Service Tunnel (BIO-4h); requiring a biological monitor onsite during ground disturbance activities to ensure protection measures are being implemented (BIO-4k); and implementing a biological resources training program (BIO-4l), would reduce impacts to wildlife nursery sites and wildlife corridors and linkages to less than significant. Thus, the impact would be reduced to a less than significant level.

At the Planning Commission hearing held on October 19, 20, 24, and 25, 2011 a number of concerns were expressed regarding the lack of bobcat studies. However, bobcat studies were not warranted for this Project as it is not anticipated that the Project will result in a dramatic change in the bobcat's use of the La Canada Watershed as a whole. This is because the studies in the field of bobcats has shown they only exhibit a moderate negative response to urbanization activities, similar to what would occur under the Project. Therefore, bobcat studies are not required. It is worth noting that bobcats are not a threatened or endangered species in California.

5. Conflicts with Local Policies and Ordinances

The proposed Project would conflict with local policies and ordinances protecting biological resources, such as a tree preservation policy or ordinance. Nevertheless, mitigation is imposed to ensure a less than significant impact.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant impact. Specifically, the following mitigation measures are imposed upon the Project to ensure a less than significant impact.

BIO-1a To mitigate the Project's permanent loss of 4.84 acres of coastal sage scrub, the Applicant shall provide minimum 3:1 areal replacement. To mitigate the loss of habitat value due to the Project's noise impacts affecting 5.49 acres of coastal sage scrub, the Applicant shall provide minimum 1:1 areal replacement. In total, the Applicant shall restore 19.99 acres of degraded habitats in the La Cañada Verde and Arroyo Pescadero watersheds to coastal sage scrub communities, or as otherwise agreed to by the appropriate resource agencies and the City. No additional grading or habitat disturbance shall occur along the North Access Road beyond what is currently designated in the Road Improvement Plan included in Appendix A. All aspects of the restoration effort shall comply with the Habitat Authority's Restoration Guidelines, as specified in Appendix N of the RMP (LSA 2007, Pages 251-372). The following shall apply:

- All contractors involved in the restoration effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).
- The restoration specialist shall work with the Habitat Authority to select restoration sites in the Habitat

Authority's Whittier Management Unit, preferably in the La Cañada Verde and Arroyo Pescadero watersheds.

- A conservation easement shall be placed over any site restored under this mitigation measure. This easement will be submitted to the USFWS for review and approval.

- Mandatory components of any restoration plan shall include, but not be limited to, a pre- and post-construction survey to describe the final, full extent of disturbance area to determine habitat loss and replacement, Site Preparation, Implementation Specifications, Maintenance Methods, Performance Standards, Monitoring Methods, Documentation and Reporting, and Contingency Measures (in case performance standards are not met in any area). All components of any restoration plan prepared in satisfaction of this mitigation measure shall be reviewed and approved by the Habitat Authority, the City, USFWS, and CDFG prior to implementation.

- Maintenance of all plantings will be the Applicant's responsibility, and shall include any activities required to meet the performance standards set for the restoration program. Restoration efforts shall be scheduled to start at the same time as construction activities to reduce the temporal loss of habitat. A minimum of 5 years of maintenance shall be required unless the plan's long-term performance standards are judged by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) to be satisfied in less than 5 years.

- Monitoring all restoration sites will be the Applicant's responsibility for a minimum of 5 years, or until the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) judge all of the Project's long-term performance standards to be satisfied. The site monitor shall be a biologist, native landscape horticulturist, or other professional qualified to: (1) assess the performance of the planting effort; (2) recommend corrective measures, if needed; and (3) document wildlife use of planting areas over time. The site monitor shall be selected by the Applicant and approved by the City and the Habitat Authority.

- If performance standards are not achieved in any restoration area, an alternative or auxiliary mitigation plan

shall be submitted to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- The monitoring results shall be reported at least annually to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- Additionally, all mitigation must comply with the Restoration Plans for Mitigation and Monitoring Plans found on the Habitat Authority's web page (<http://www.habitatauthority.org/devdedmit.shtml>).

BIO-1b To prevent erosion and invasion by non-native weeds, and to help offset the Project's overall biological impacts including the temporal loss of habitat, the Applicant shall provide minimum 2:1 areal replacement of all graded slopes outside of permanent impact areas (approximately 4.80 acres; restoration shall be revegetated exclusively with appropriate, locally indigenous plant species and will incorporate non-flammable species as appropriate. To mitigate the permanent disturbance to 12.34 acres of native habitats (8.59 of chaparral and 4.28 acres of annual grassland), the Applicant shall provide minimum 1:1 areal replacement. In total, the Applicant shall restore 22.5 acres of degraded habitat in the La Cañada Verde and Arroyo Pescadero watersheds to native communities, as agreed to by the appropriate resource agencies and the City. All contractors involved in the revegetation effort, including the revegetation specialist and landscape contractor, shall be reviewed and approved by the City and Habitat Authority. Revegetation efforts shall comply with the Habitat Authority's Restoration Guidelines, as specified in Appendix N of the RMP (LSA 2007, Pages 251-372). The following shall apply:

- All contractors involved in the restoration effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- Mandatory components of any restoration plan shall include, but not be limited to, a pre- and post-construction survey to describe the final, full extent of disturbance area to determine habitat loss and replacement, Site Preparation, Implementation Specifications, Maintenance

Methods, Performance Standards, Monitoring Methods, Documentation and Reporting, and Contingency Measures (in case performance standards are not met in any area). All components of any restoration plan prepared in satisfaction of this mitigation measure shall be reviewed and approved by the Habitat Authority the City, USFWS, and CDFG prior to implementation.

- Maintenance of all plantings will be the Applicant's responsibility, and shall include any activities required to meet the performance standards set for the restoration program. Restoration efforts shall be scheduled to start at the same time as construction activities to reduce the temporal loss of habitat. A minimum of 5 years of maintenance shall be required unless the plan's long-term performance standards are judged by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) to be satisfied in less than 5 years.

- Monitoring all restoration sites will be the Applicant's responsibility for a minimum of 5 years, or until the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) judge all of the Project's long-term performance standards to be satisfied. The site monitor shall be a biologist, native landscape horticulturist, or other professional qualified to: (1) assess the performance of the planting effort; (2) recommend corrective measures, if needed; and (3) document wildlife use of planting areas over time.

- The site monitor shall be selected by the Applicant and approved by the City and the Habitat Authority.

- If performance standards are not achieved in any restoration area, an alternative or auxiliary mitigation plan shall be submitted to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- The monitoring results shall be reported at least annually to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- Additionally, all mitigation must comply with the Restoration Plans for Mitigation and Monitoring Plans found

on the Habitat Authority's web page (<http://www.habitatauthority.org/devdedmit.shtml>).

BIO-1c Restoration and revegetation efforts shall include the salvage and stockpile of weed-free topsoil (upper 12 inches of soil) from any and all areas of intact (non-weedy) native communities that are graded for Project implementation, as determined by the site monitor described in required by mitigation measure BIO-1 b, so that the soil can later be spread over graded slopes to increase native plant species diversity in the restored areas. Mature coast prickly pear, dudleya, and other translocatable species will be transplanted as feasible in the revegetation and fuel modification zones. Such salvage may also be appropriate for revegetation areas.

BIO-1d The Applicant or US Army Corps of Engineers shall consult with the US Fish and Wildlife Service to obtain an Incidental Take Statement, if needed, pursuant to Section 7 or Section 10 of the federal Endangered Species Act to cover the Project's potential "take" (which includes the permanent and temporary loss of approximately 5 acres of critical habitat and 5.49 acres of noise-related disturbance) of the coastal California gnatcatcher, a federally listed species.

BIO-2a To mitigate the Project's permanent loss of 0.22 acre of riparian habitat, the Applicant shall provide minimum 3:1 areal replacement. To mitigate the Project's noise impacts affecting 0.75 acres of riparian habitat, the Applicant shall provide minimum 1:1 areal replacement. In total, the Applicant shall restore 1.41 acres of degraded areas within the La Cañada Verde and Arroyo Pescadero watersheds, or as otherwise agreed to by the appropriate resource agencies and the City. The 0.12 acre of temporary grading impact would be mitigated through the 1:1 revegetation specified in BIO-1.b. All aspects of this restoration shall comply with the Habitat Authority's Restoration Guidelines, as specified in Appendix N of the RMP (LSA 2007, Pages 251-372). The following points shall apply:

- All contractors involved in the restoration effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- Mandatory components of any restoration plan shall include, but not be limited to, a pre- and post-construction survey to describe the final, full extent of disturbance area to determine habitat loss and replacement, Site Preparation, Implementation Specifications, Maintenance Methods, Performance Standards, Monitoring Methods, Documentation and Reporting, and Contingency Measures (in case performance standards are not met in any area). All components of any restoration plan prepared in satisfaction of this mitigation measure shall be reviewed and approved by the Habitat Authority the City, USFWS, and CDFG prior to implementation.

- Maintenance of all plantings will be the Applicant's responsibility, and shall include any activities required to meet the performance standards set for the restoration program. Restoration efforts shall be scheduled to start at the same time as construction activities to reduce the temporal loss of habitat. A minimum of 5 years of maintenance shall be required unless the plan's long-term performance standards are judged by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) to be satisfied in less than 5 years.

- Monitoring all restoration sites will be the Applicant's responsibility for a minimum of 5 years, or until the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) judge all of the Project's long-term performance standards to be satisfied. The site monitor shall be a biologist, native landscape horticulturist, or other professional qualified to: (1) assess the performance of the planting effort; (2) recommend corrective measures, if needed; and (3) document wildlife use of planting areas over time.

- The site monitor shall be selected by the Applicant and approved by the City and the Habitat Authority.

- If performance standards are not achieved in any restoration area, an alternative or auxiliary mitigation plan shall be submitted to the City, the Habitat Authority, and appropriate resource agencies (e.g., CDFG, USACE, U.S. Fish and Wildlife Service).

- The monitoring results shall be reported at least annually to the City, the Habitat Authority, and appropriate resource

agencies (e.g., U.S. Fish and Wildlife Service). - Additionally, all mitigation must comply with the Restoration Plans for Mitigation and Monitoring Plans found on the Habitat Authority's web page (<http://www.habitatauthority.org/devdedmit.shtml>).

BIO-2b The Project proponent shall be required to obtain all applicable federal and state permits and agreements, including: (1) a Section 404 Permit from the US Army Corps of Engineers; (2) certification, or a waiver of certification, from the Los Angeles Regional Water Quality Control Board that the activity would not adversely affect water quality; and (3) a Streambed Alteration Agreement from the California Department of Fish and Game.

BIO-3a The applicant shall prepare an Emergency Response Action Plan that would address protection of sensitive biological resources and 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 Action Plan shall include provisions for containment and cleanup within 2 miles downstream of the Project Site. The plan shall contain detailed descriptions of various containment and cleanup alternatives for each segment of the streambed. Selection of a containment alternative would be made during an emergency event, but the approach and plan shall be reviewed by the California Division of Fish and Game, the Los Angeles Regional Water Quality Control Board, and Los Angeles County Flood Control District.

Where feasible, low-impact, site-specific techniques such as hand-cutting contaminated vegetation and using low-pressure water flushing shall be specified to remove spilled material from particularly sensitive wildlife habitats, such as riparian woodlands, because procedures such as shoveling, bulldozing, and raking can cause more damage to a sensitive habitat than the oil spill itself. The Emergency Response Action Plan shall evaluate the non-cleanup option for ecologically vulnerable habitats.

When habitat disturbance cannot be avoided, the Emergency Response Action 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 sensitive habitat areas shall be identified. The Emergency Response Action Plan shall include species- and site-specific procedures for collection, transportation and treatment of oiled wildlife, particularly for sensitive species.

The Emergency Response Action Plan shall include procedures for timely re-establishment of vegetation that replicates the habitats disturbed (or, in the case of disturbed habitats dominated by non-native species, replaces them with suitable native species).

The Emergency Response Action Plan shall be approved by the City and Habitat Authority prior to commencing any construction activities.

BIO-3b To reduce exposure risks to wildlife in the Project Site area, all open basins containing any Project-related fluids shall either be emptied at the end of each day or fenced and covered to exclude all wildlife, including birds, bats, and amphibians. Drilling muds, concrete waste, and truck washing water shall be contained within closed Baker-style tanks or collected by a vacuum truck before the end of each day and shall not be stored overnight in open pits.

BIO-4a Devices and measures shall be employed to minimize noise effects on wildlife. At a minimum, noise barriers shall surround the drill rig floor, mud mixers, cleaners, conveyers, shakers, pumps, and other oil development and operational facilities; construction activities shall be limited to daylight hours except for emergencies; construction machinery shall be operated per manufacture's specifications; and a Noise Reduction Plan and monitoring plan shall be implemented to ensure that Project activities are operating within the ranges included in mitigation measure N-4.

BIO-4b All Project lighting shall be designed and shielded with the intent of preventing spillage of light into adjacent preserved open space areas. Outdoor lighting shall be

restricted to lights required by code for lighting building exteriors and for safety and security needs. All Project lighting shall be fully shielded and designed to prevent spillage of light into adjacent preserved open space areas. Lighting shall be constructed so that all light emitted by the fixture, either directly from the lamp or from a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal as determined by photometric test or certified by the manufacturer. Any structural part of the light fixture providing this shielding shall be permanently affixed. Light standard heights shall distribute light at ground level consistent with light levels for security, spill-over effects, and efficiency. After initial installation of Project lighting, a biological monitor acceptable to the City and Habitat Authority shall conduct a field inspection to confirm that the proper lamps have been installed and that light spillage into the Preserve has been minimized to the maximum extent feasible without compromising safety or other critical night-lighting requirements.

BIO-4c To minimize the potential for road mortality of wildlife, all roads within the Preserve boundary used to access onsite oil facilities shall have enough traffic calming devices, appropriately sized and spaced, to limit traffic to a maximum speed of 10 miles per hour. All nighttime traffic shall be minimized during the construction and operational phases and permitted only for activities required for safety reasons or emergencies; all hauling activities shall be restricted to daylight hours, defined as the hours after sunrise and before sunset. This restriction shall be in addition to any others placed on the Project, including by mitigation measure N-4, which is intended mainly to limit noise impacts upon neighboring residential communities, consistent with the City Municipal Code. No permanent solid walls or k-rail walls shall be placed along the North Access Road. The use of k-rails in this area would require wildlife passages placed every 20 feet to allow wildlife to move freely off the road.

BIO-4d Any project landscaping shall consist entirely of species native to the Project Site and surrounding areas within the Preserve and approved by the County of Los Angeles Fire Department and the Habitat Authority. Any irrigation provided shall be limited to that required to initially establish the native plants; no permanent irrigation shall be permitted.

BIO-4e 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 Game Code, initial construction of the pad sites and facilities and annual fuel modifications involving vegetation removal/trimming shall be done outside the breeding season (February 15 through August 31). If construction 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. USFWS protocol surveys for listed avian birds (California gnatcatcher and least Bell's vireo) shall be conducted if disturbances occur in coastal sage scrub or riparian habitats. If nesting birds are observed within the vicinity, then a minimum 100-foot buffer from the nest would be established. The buffer would be delineated by orange construction fencing and signage and would remain in place until the nest is abandoned or the young have fledged. The nest monitor would be present when any buffer fencing is established. Alternatively, the Project proponent may retain a biologist acceptable to the City and Habitat Authority to monitor the nest and to ensure that Project activities do not violate the Migratory Bird Treaty Act or the California Fish and Game Code. At minimum, the biologist would check for new active nests, and determine the status of ongoing active nests, weekly during the specified nesting season. The biologist would ensure that all fencing and signage was properly maintained, and would provide weekly e-mail updates on the status of all monitored nests to the City, Habitat Authority, CDFG, and USFWS. If the biologist determines that California gnatcatcher nesting is being disrupted, the construction activities will cease and wait until the young have fledged or the nest is determined to have failed.

BIO-4f Hawks and owls nest earlier than most other native birds. If initial construction activities, drilling, re-drilling, ground disturbance, or vegetation clearing, or annual fuel modification involving vegetation removal/trimming occurs from December 1 through August 31, the nest monitor would conduct a pre-construction survey within 3 days prior to vegetation removal or other construction-related disturbances focused on actively nesting hawks or owls. If any actively nesting hawks or owls are found, a 300-foot buffer would be established around the nest tree to help ensure that nesting is not disrupted. If any active songbird nests are found, a 100-foot buffer would be established as

described in BIO-4e. The buffer would be delineated by orange construction fencing and signage and would remain in place until the nest is either abandoned or the young have fledged. The nest monitor would be present when any buffer fencing is established. Alternatively, the Project proponent may retain a biologist acceptable to the City and Habitat Authority to monitor the nest and to ensure that Project activities do not violate the Migratory Bird Treaty Act or the California Fish and Game Code. At a minimum, the biologist would check for new active nests, and determine the status of ongoing active nests, weekly during the specified nesting season. The biologist would ensure that all fencing and signage was properly maintained, and would provide weekly e-mail updates on the status of all monitored nests to the City, Habitat Authority, CDFG, and USFWS.

BIO-4g To avoid the direct loss of special-status bats that that could result from removal of trees that may provide maternity roost habitat (e.g., in cavities or under loose bark), the following steps shall be taken:

- Tree removal or relocation shall be scheduled between October 1 and February 28, outside of the maternity roosting season.
- If trees must be removed during the maternity season (March 1 to September 30), a qualified bat specialist (i.e., a person holding a California Department of Fish and Game collection permit and a memorandum of understanding allowing the handling and collection of bats) shall conduct a pre-construction survey to identify those trees proposed for disturbance that could provide hibernacula or nursery colony roosting habitat for bats. Each tree identified as potentially supporting an active maternity roost shall be closely inspected by the bat specialist a maximum of 7 days prior to tree disturbance to more precisely determine the presence or absence of roosting bats.
- Immediately after completion of the pre-construction surveys, and prior to any tree removals, the bat specialist will prepare a report providing the results of these surveys and identifying actions to be taken to avoid or minimize potential impacts to roosting bats due to authorized tree removal or other potential bat roosting habitats.

- The pre-construction report shall be provided to the City and the Habitat Authority prior to any tree removal.

- If bats are not detected, but the bat specialist determines that roosting bats may be present, it is preferable to push the tree down using heavy machinery rather than felling it with a chainsaw.

- Maternity season lasts from March 1 to September 30. Trees determined to be maternity roosts shall be left in place until the end of the maternity season.

- A 250-foot buffer, in which no construction activities are permitted, shall be established around any tree, rock outcrop, or other occupied roost habitat until bats have left the maternity site or the end of the maternity season (whichever is later).

- The bat specialist shall document all monitoring activities, and shall prepare a summary report upon completion of tree disturbance activities. Reports would include the following:

- the number and type of affected trees determined to support or potentially support roosting bats prior to disturbance;

- any actions undertaken to safely exclude roosting bats prior to disturbance and the results of those actions;

- trees temporarily avoided to protect roosting bats; and

- roosting bats found (alive or dead) after trees were removed or relocated.

- This report shall be provided to the City and Habitat Authority within 30 days following completion of tree removals.

BIO-4h To reduce impacts to wildlife movement corridors and to provide protective cover for wildlife using the Service Tunnel, and consistent with the Resource Management Plan recommendations, the Applicant shall be required to install appropriate native screening vegetation around the western terminus of the Service Tunnel (LSA 2007). The Applicant shall consult with the Habitat Authority to identify the appropriate limits of screening vegetation. The plantings installed as screening shall comply with the

Habitat Authority's Restoration Guidelines. All contractors involved in the native screening effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City and Habitat Authority.

BIO-4i Consistent with the Resource Management Plan recommendations, Project lighting shall not be directly visible from the western terminus of the Service Tunnel.

BIO-4j Consistent with the Resource Management Plan recommendations, the Project proponent shall be required to consult with the Habitat Authority to develop and implement signage explaining the importance of limiting human disturbances in the vicinity of the Service Tunnel between sunset and sunrise.

BIO-4k A qualified biological monitor approved by the City, USFWS, CDFG, and the Habitat Authority shall be onsite during all vegetation removal and initial ground disturbance activities to ensure the compliance with all permit conditions protecting biological resources. The biological monitor shall be present to salvage wildlife species that may be otherwise killed or injured by heavy equipment and vegetation clearing. All salvaged wildlife shall be relocated to suitable adjacent habitat within the Preserve. The biological monitor shall have the authority to temporarily halt activities if permit requirements and conditions are not being met. The biological monitor shall conduct annual site inspections of the facilities, roads, and operations activities to ensure that all applicable mitigation measures are being enacted. The biological monitor shall prepare an annual summary report describing site visit observations and shall provide this report to the City, Habitat Authority and regulatory agencies (including CDFG, US ACE, and USFWS) for review.

BIO-4l The Applicant shall fund and implement a biological resources training program for all construction workers, oilfield workers, and their contractors. Training shall occur annually and as needed for new workers. Training program shall be reviewed and approved by the HA and shall include a description of important biological resources within the Preserve and all applicable conditions, permit requirements, and protection measures implemented to protect those resources.

BIO-4m All grading limits shall be delineated by orange construction fencing and permanent signage every 50 feet along the fence stating "No Entry — Sensitive Habitat." The City and the Habitat Authority shall approve the fencing prior to commencement of grading activities (including clearing and grubbing).

BIO-4n Recreational access to the Arroyo San Miguel Trail shall be closed during construction or drilling activities at the Drill Pad Site. To continue providing recreation access to the Arroyo San Miguel Trails (on the east side of Colima Road), the Applicant shall develop additional recreational access, in coordination with the Habitat Authority, to the Arroyo San Miguel Trail by any of the following or equivalent: (1) enhancing the parking area on the east side of Colima Road; (2) developing the parking area along Le Flore Drive, approximately 1 mile east of Colima Road; or (3) developing pedestrian access along Colima Road from the Preserve parking area (on the west side of Colima Road) utilizing the new signalized intersection.

(b) Facts in Support of Findings

Section 4.11 of the EIR, Land Use and Policy Consistency Analysis, discusses the proposed Project's conflicts with existing ordinances, plans, and permit requirements. These inconsistencies include conflicts with the City of Whittier's General Plan and Municipal Code and with the Preserve's Resource Management Plan (RMP). Section 4.11 identifies inconsistencies with local policies and ordinances. These conflicts relevant to biological resources are discussed in the following paragraphs, but Section 4.11, Land Use and Policy Consistency Analysis, identifies the inconsistency analysis. The General Plan designates the Project Site as open space of "high sensitivity." Whereas many of the General Plan's open space policies identify the need to preserve and carefully manage such areas, the Plan also calls for a "balance between oil drilling activities and the protection of plant and animal communities in the hillsides."

The Project Site is zoned as Open Space ("OS") under the Municipal Code. Therefore, reintroduction of oil exploration to the Project Site would conflict with Sections 18.09.010, 18.09.020, and 18.09.030 of the Whittier Municipal Code (see Section 4.2.2.3, Local Resource Regulations). However, oil and gas exploration and production are also allowed with a conditional use permit under Section 18.52.030.

Project implementation would conflict with various goals and objectives of the RMP, especially concerning activities identified as permissible within the Core Habitat Zone of the Preserve (including the western half of the Project Site), which the RMP limits to "authorized biological survey and some restoration and/or invasive species removal, but no unsupervised public access." A portion of the proposed project is

located within the RMP Preservation Management Zone, which allows for "existing passive, low-impact recreation." The RMP as approved is not directly consistent with the overarching City of Whittier General Plan for the areas within the City of Whittier that, as previously noted, allows for oil and gas production activities to occur within the open space zone district. In addition, there are existing oil and gas production activities ongoing within the Preserve as part of the Matrix Sycamore Canyon oil production operations that are not described as part of the RMP.

However, Project implementation would also contribute funding for the Habitat Authority's management and restoration activities within the Preserve, enabling the implementation of local land-protection policies that would otherwise be expected to be unfunded or underfunded as landfill fees and other revenue sources become depleted.

As described under the Project Description in the EIR:

Solid-waste disposal fees from the Puente Hills Landfill provide the primary funding for the Habitat Authority. This funding will continue through the remaining life of the landfill, currently scheduled to close in November 2013. The Puente Hills Landfill is owned by the County of Los Angeles and is managed by the Sanitation District of the Los Angeles County Solid Waste Management Department. The Oil and Gas Lease between the City of Whittier and Matrix provides for continuing funding for the Habitat Authority with annual administrative fees and mitigation fees upon issuance and acceptance of a CUP. A successful Project would provide a stable source of funding for the Habitat Authority for as long as the wells produce oil and gas.

As noted above, without the approval of the Project and the lack of funding that would occur after 2013, the Preserve may have inadequate funding to continue current levels of restoration and preservation of the site, which in turn would prevent the Preserve from meeting the goals and objectives of the RMP.

Implementing mitigation measures BIO-1a through BIO-1d, BIO-2a and BIO-2b, BIO-3a and BIO-3b, and BIO-4a through BIO-4n would reduce the proposed Project's conflicts with local policies and ordinances protecting biological resources.

By implementing the above mitigation measures, impacts from Project-related activities can be reduced. With the mitigation described above, the impact is reduced to a less than significant level.

6. Cumulative Impact

The proposed Project could result in adverse effects on biological resources that are cumulatively considerable when evaluated in conjunction with other past or present projects in the vicinity. However, with the implementation of mitigation, this impact would be reduced to a level of insignificance.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant cumulative biological impact. Specifically, the following mitigation is imposed upon the Project to ensure a less than significant impact.

CUMULATIVE BIO-1a The applicant shall ensure, and shall demonstrate to the City of Whittier and Habitat Authority, that the existing Matrix Oil drilling operation in lower Sycamore Canyon, in the Whittier Hills, complies with Chapter 12.08.390 of the County of Los Angeles Code (Exterior Noise Standards). Compliance includes achieving an exterior noise standard of 45 dBA (L50) applicable at the property boundary (i.e., the Preserve's property boundary) of all noise-sensitive areas and residential areas, any time of the day. All Preserve areas shall be regarded as "noise-sensitive areas" for purposes of the County of Los Angeles Code and this mitigation measure.

CUMULATIVE BIO-1b No test-drilling, construction, or re-drilling of wells shall be conducted simultaneously with, and within the same watershed as, construction work on the Tehachapi Renewable Transmission Project. The Applicant shall provide the City and Habitat Authority with written evidence of having coordinated construction schedules with Southern California Edison prior to commencing any construction activities.

In addition to the above mentioned mitigation measures, the following mitigation measure is provided for consideration as a recommended mitigation measure that is not required, but would nevertheless provide some benefit to the overall knowledge of wildlife movement within the larger Preserve area.

CUMULATIVE BIO-1c To provide land managers at the Preserve (and those in the general area of the Chino-Puente Hills) data to better understand and manage wildlife movement conflicts and issues, the Applicant shall provide the Habitat Authority funds to conduct a multi-year, scientific study to evaluate the wildlife movement patterns of bobcats and other wildlife species utilizing the Preserve. The extent and cost of this study shall be designed, reviewed, and approved by the City, the Applicant, and the Habitat Authority prior to issuance of grading permits.

(b) Facts in Support of Findings

The Preserve represents a limited area of natural open space surrounded by intensive urban development and crossed by numerous roads. Much of the Preserve is already subject to noise impacts from existing land uses, including the existing Matrix Oil drilling operation in lower Sycamore Canyon, in the Whittier Hills. Project implementation would increase noise levels within one of the quieter parts of the Preserve. Increased noise associated with the implementation of the proposed project, or any alternative, would represent a cumulatively considerable increase in the level of noise in the Preserve. Most of the cumulative projects listed in Section 3.0 of the EIR, Cumulative Projects Description, involve infill or modifications to existing developments outside of locations where sensitive biological resources have been recorded. It is unlikely that such projects would disturb sensitive habitats that potentially support special-status plant or wildlife species, or constrain the movement of wildlife through the local area.

The Matrix City of La Habra Heights project is a proposed oil development Project south of the Preserve in the City La Habra Heights. Since the development is proposed for an existing oil development area, impacts on biological sensitive habitats that potentially support special-status plant or wildlife species, or constrain the movement of wildlife through the local area, would be less than significant.

The following projects do have potential to contribute to cumulatively considerable adverse effects upon biological resources in the local area, including increasing pressures on general wildlife movement in the area:

- **La Habra Heights Trail Connectors Plan.** This proposed Project would plan for the removal of numerous sick and dying trees; replanting of native species; leveling of turf along the trail at Oak Creek Park; revegetation of additional areas; rebuild of amphitheater at Creek Park; installation of interpretive signage regarding the wildlife and native vegetation in the area; replacement of two bridges damaged by previous storms; repair of horse trail paths and planting native vegetation along the sides; re-sloping the path to the public restroom facilities; and installation of three "stormceptor" devices along La Mirada Creek to keep pollutants from entering the stream.

- **Southern California Edison's Tehachapi Renewable Transmission Project (TRTP), Segments 4 through 11,** comprises approximately 173 miles of new and upgraded transmission infrastructure for new wind generation development projects. The TRTP transmission route extends south from Kern County through Los Angeles County and east to San Bernardino County. Segment 8A of this project passes through the Chino-Puente Hills open space, generally following the right-of-way of an existing transmission line. As summarized by Aspen Environmental Group (2010), the Draft EIR/EIS and Final EIR for this Project identifies the following potential impacts to biological resources that exist in Chino-Puente Hills (prior to avoidance and/or mitigation):

- Construction activities would result in temporary and permanent losses of native vegetation;
- Loss of wetland and riparian habitats;
- Establishment and spread of noxious weeds;
- Construction activities, including the use of access roads and helicopter construction, would result in disturbance to wildlife and may result in wildlife mortality;
- Construction activities conducted during the breeding season would result in the loss of nesting birds or raptors;
- Loss of foraging habitat for wildlife; Most of the cumulative projects listed in Section 3.0, Cumulative Projects Description, involve infill or modifications to existing developments outside of locations where sensitive biological resources have been recorded. It is unlikely that such projects would disturb sensitive habitats that potentially support special-status plant or wildlife species, or constrain the movement of wildlife through the local area.

These projects would be or have been subject to CEQA review and would incorporate mitigation measures, as appropriate. Nevertheless, natural open space lands in the Project vicinity are highly constrained by surrounding intensive development, and the habitat that is preserved is fragmented by numerous existing roads. Ecological systems placed under such stresses exhibit a compromised capacity to rebound from disruptive processes, such as fire and human intrusion. For this reason, concerns about the cumulative impacts of multiple projects are greatest in already-stressed systems.

The mitigation measures identified throughout these findings and in the EIR are designed to bolster the ecological resilience of the Preserve in the Project vicinity, counteracting the adverse effects of the proposed Project, both considered alone and in the context of contributions to cumulatively considerable impacts of other planned Projects. Specifically, measures BIO-1a through BIO-1e and BIO-2a and BIO-2b require greater than equal-area replacement of sensitive habitat types that would be permanently impacted by grading; BIO-1a through BIO-1e would also result in revegetation of temporarily graded slopes, some which consist of disturbed and predominantly non-native vegetation in the existing condition. Otherwise, this report has identified a variety of feasible measures designed to avoid or minimize the Project's potential adverse effects upon special-status species and the natural ecological systems that support them. The mitigation program specified in this report effectively addresses the anticipated effects of the proposed Project in the context of past and planned future projects in the Project vicinity, and therefore the Project's contributions to cumulatively considerable biological impacts are deemed less than significant with mitigation. The cumulative projects (see Section 3.0 of the EIR, Cumulative Projects Description) will result in increased infill of open areas, increased human presence, and temporary and permanent loss of habitat in the general area

that is already under extreme pressure from surrounding residential and urban areas. These results will increase impacts to established wildlife migratory corridors in the general area. Cumulative impacts to wildlife movement in the general area would be significant.

If test-drilling, construction, or redrilling of wells for the proposed project or project alternatives conducted simultaneously with, and within the same watershed as, construction work on the Tehachapi Renewable Transmission Project, could result in cumulatively considerable effects on biological resources in the local area.

The recommended scientific study of the movement of wildlife through the Project area would benefit land managers in the Project area tasked with evaluating and managing wildlife movement issues in the Puente Hills. Existing conditions in the Puente Hills open space, with or without the proposed Project, would benefit from increased levels of study so that managers may better understand local wildlife corridor issues and more effectively allocate their resources. The purpose of such a study would not be to provide corrective action for the proposed Project, or to alleviate any possible impacts that might be identified through the study. Rather, funding of such a study would represent an appropriate and beneficial use of City proceeds generated by the proposed Project.

With implementation of Mitigation Measures CUMULATIVE BIO-1 and CUMULATIVE BIO-2, the Project's potential cumulatively considerable impacts would be less than significant.

D. SAFETY, RISK OF UPSET, AND HAZARDOUS MATERIALS

1. Potential for Accidental Release

The proposed Project could introduce risk to the public associated with accidental releases from well drilling and processing operations. In order to avoid any significant impact, mitigation is imposed to ensure a less than significant impact.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant impact from accidental release. Specifically, the following mitigation measures are imposed upon the Project to ensure a less than significant impact.

SR-1a The Applicant shall implement site security methods, including but not limited to: (1) enclosing all wells and equipment (including the metering station) with 8-foot block walls with barbed wire on the inside at 7 feet; (2) Secure gates located at all entrances with automatic opening/closing and secure access; (3) Limitation of climbable landscaping near the facility; (4) Installation of video surveillance systems and burglar/intrusion alarm

systems; (5) Contact information and site access limitations shall be posted in specific locations easily visible to the public, shall be provided to neighboring residents within a set radius, and shall be placed in Preserve information kiosks and on the Habitat Authority and City websites; (6) Visitor sign-in/sign-out and security policies for employees regarding access control, pre-employment screening, post-employment issues, vehicles, access keys, codes, and card security.

SR-1b The Applicant shall conduct a third-party audit 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 periodically, as directed by the City and the Los Angeles County Fire Department.

SR-1c The Applicant shall ensure that all crude-oil truck haulers are trained in HAZMAT spill response and that each truck carries a spill response kit.

(a) Facts in Support of Findings

Releases of flammable gas from the proposed Project Well Pad and Processing Pad facilities would not impact nearby residences or public trails as the facilities are located too far away from receptors. Releases from the metering station located near Colima Road, however, could impact nearby residences. However, these releases are estimated to occur at a low frequency and would therefore not produce unacceptable risk levels.

Some releases at facilities are caused by vandalism, such as opening of valves or sabotaging of equipment integrity. This could increase the frequency of releases. These impacts can be reduced by securing the facilities to reduce the probability of vandalism. Risks could also be increased if the facilities are not built and maintained to current codes and standards. This impact could be reduced by ensuring that audits are conducted periodically to ensure code and standards compliance. Failure to implement appropriate site security measures or to ensure that the facilities are designed and operated and maintained according to applicable codes and standards would be a significant impact.

Since trucks would transport crude for periods of the Project, an accident and subsequent spill could cause environment impacts with the release of crude oil or diesel fuel. Ensuring that drivers are properly trained and equipped would mitigate this impact.

By implementing the above mitigation measures, impacts from Project-related activities can be reduced.

Regarding residual impacts, site security issues could increase the likelihood of vandalism and subsequent failure of equipment resulting in spills or releases of material. Appropriate site security would minimize these incidents to less than a significant impact.

The risk curves associated with the proposed Project operations would be the same even if the wells are never pressurized, since releases from pressurized well are not estimated to reach receptors.

With the mitigation described above, the impact is reduced to a less than significant level.

Additionally, at the Planning Commission hearing on October 19, 20, 24, and 25, 2011, and in subsequent correspondence received from Susan J. O'Carroll from Pareto Planning and Environmental Services, on behalf of Open Space Legal Defense Fund dated October 20, 2011, a concern was raised as to the risk associated with construction around abandoned wells. This issue will not be a concern for this Project as the applicable regulatory agency already imposes regulations and measures to ensure that no risk occurs. More specifically, the California Department of Oil, Gas and Geothermal Resources (DOGGR) has adopted regulations imposing very specific requirements for development on or near abandoned wells. Through the Project's required regulatory compliance, no risk from abandoned wells will result.

2. Potential for Pipeline Release

The proposed Project could introduce risk to the public associated with the transportation of natural gas along Colima Road. Nevertheless, mitigation will be imposed to ensure this potential impact is less than significant.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant pipeline release impact. Specifically, the following mitigation measures are imposed upon the Project to ensure a less than significant impact.

SR-2a The Applicant shall install automatic valves that will automatically shut down under a low pressure scenario at the Processing Facility Area for all pipelines leaving the processing plant, and a backflow prevention device or

automatic shut-down valve at the tie-in location at Lambert Road, to prevent the release of gas from the main transmission pipeline in the event of a rupture in the Colima Road pipeline.

SR-2b The Applicant shall ensure that warning tape is installed above the pipeline within the pipeline trench to warn third parties that a pipeline is located below the warning tape and that the pipeline is capable of utilizing a smartpig.

(b) Facts in Support of Findings

Pipeline failures and releases of natural gas can cause significant impacts to nearby residences. Although the proposed Project gas pipeline (6 inches) is substantially smaller than the San Bruno pipeline (30 inches) that ruptured and caused extensive damage in 2010, it could produce impacts to nearby residences and cause fatalities that would exceed significance levels. Impacts from pipeline releases are generally produced when the natural gas ignites, thereby causing large flame jets or fires and the resulting radiation impacts to nearby populations, particularly if the release continues for an extended period of time.

These impacts can be reduced by installing automatic shutdown valves, which reduce the release duration to only a few minutes, installing warning tape above the pipeline to reduce the probability of third-party impacts, and ensuring that the pipeline can be inspected.

By implementing the above mitigation measures, impacts from Project-related activities can be reduced.

Regarding residual impacts, installation of automatic shutoff valves and backflow prevention valves would reduce the duration that a release occurs. In the event that a pipeline rupture occurs, the Colima Road pipeline would release the majority of its gas inventory in a short time, within 2 to 5 minutes. However, if gas were to flow from the main transmission pipeline along Lambert Road back into the Colima Road pipeline, this would be a large source of gas that could substantially extend the length of time of the release causing more impacts. The installation of a backflow prevention device (a check valve or a shut-down valve) at the tie-in location would prevent this scenario and would reduce the duration of the release and the fraction of persons that would be exposed to radiation or flammable gas above the levels of concern.

Installing an automatic valve at the Processing Facility Area that automatically shuts down on low pressure would ensure that the Processing Facility Area does not continue to feed a break in the Colima Road pipeline or the landfill pipeline and extend the duration of the release.

Third party impacts to pipelines, caused by construction projects that accidentally excavate and damage the pipeline, are a large contributor to pipeline failures. Nationwide accidental third-party impacts are responsible for nearly 20 percent of pipeline failures and within California they cause up to 45 percent of pipeline failures. The installation of warning tape within the Colima Road pipeline trench would help to warn people that a pipeline is present and reduce the number of pipeline failures due to third-party activities.

Ensuring that the Colima Road pipeline is constructed in a manner that allows for the pipeline to be inspected by instruments, or "smart-pigged," would ensure that the pipeline integrity is checked in the future and would reduce the frequency of releases.

With the mitigation measures described above, the impact is reduced to a less than significant level.

3. Soil Contamination Mobilization

The proposed Project could disturb contaminated soil which could affect groundwater and environmental and public health. Nevertheless, mitigation is imposed to ensure a less than significant impact.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant soil contamination impact. Specifically, the following mitigation measure is imposed upon the Project to ensure a less than significant impact.

SR-3 The Applicant shall conduct a site assessment of the Project Site before commencing Project construction and shall sample soils and excavated materials associated with construction to ensure that the soils are not contaminated. Contaminated soils shall be completely excavated and the contaminated areas cleaned to LARWQCB specifications before moving forward with construction of the proposed Project components.

(b) Facts in Support of Findings

Excavation and construction at the drilling site, or associated with the new processing facility or truck loading area installation, could encounter contaminated soils and mobilize them, affecting surface and groundwater quality and thereby environmental and public health. An aerial photo suggests that previous owners used the Project area as tank and equipment areas. However, implementing assessments of the sites so that contaminated soils are identified and dealt with appropriately before construction would reduce the potential for mobilizing contaminated soils. Site assessments are an established practice in site remediation projects.

By implementing the above mitigation measure, potential impacts from Project-related activities can be reduced to less than significant.

Regarding residual impacts, soil could be contaminated in areas affected by Project components. Although some areas have been sampled, there are areas of planned construction that have not been tested, including the truck loading area. Ensuring appropriate assessments and cleanup would ensure that existing site contamination does not adversely affect ground and surface waters. After implementing this mitigation measure, the impact would be less than significant with mitigation.

Additionally, at the Planning Commission public hearing held on October 19, 20, 24, and 25, 2011 concerns were expressed regarding the Appendix O project refinements. Specifically, concerns were raised regarding the soil conditions at the site and risk for contaminants. Although the Appendix O Project refinements result in a slightly revised Project layout, Mitigation Measure SR-3 above would continue to apply and would ensure that any soil contamination risk is reduced to the extent feasible. As such, the soil contamination mobilization risk will continue to be less than significant even with the implementation of the refinements in Appendix O.

E. GEOLOGICAL RESOURCES

1. Rupture of Facilities from Seismically Induced Ground Shaking

Seismically induced ground shaking could damage proposed structures and infrastructure, potentially resulting in loss of property, risk to human health and safety, and oil spills. Implementation of mitigation would reduce this potential impact to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant seismic ground shaking impact. Specifically, the following mitigation is imposed upon the Project to ensure a less than significant impact.

GR1-a Proposed drilling, production, processing, storage, and transportation infrastructure shall be designed and constructed to withstand anticipated ground acceleration in the Project Area, based on the California Building Code. The calculated design base ground motion for project components shall consider the soil type, potential for liquefaction, and the most current and applicable seismic attenuation methods that are available.

GR1-b All surface facilities and equipment shall have suitable foundations and anchoring design, surface

restraints, and moment-limiting supports to withstand seismically induced groundshaking.

GR1-c All conceptual geotechnical recommendations provided by Heathcote Geotechnical (2011) shall be followed during grading and construction at the Project Site. In addition, a Registered Civil Engineer and Certified Engineering Geologist shall perform an updated geotechnical evaluation of the Project Site, as the proposed building pad and slope configuration has changed since completion of the geotechnical report completed in 2010 (Heathcote Geotechnical 2011). The updated evaluation shall include an estimation of both vertical and horizontal anticipated peak ground accelerations, since the Heathcote Geotechnical report only included horizontal peak ground acceleration values.

GR-1d This report shall be completed prior to completion of the final project design and shall be submitted to the City of Whittier for review and approval and any new recommendations not included in the Heathcote Geotechnical (2011) report shall be adhered to. The project design must conform to the recommendations within the updated geotechnical evaluation.

GR-1e All proposed slope construction, roadways, and work pads shall be properly engineered, with fill placed in accordance with requirements of the 2011 County of Los Angeles Building Code (Title 26), which is based on the 2010 California Building Code and the 2009 International Building Code.

GR-1f All proposed pipelines shall be placed in properly constructed trenches and backfilled with bedding and engineered fill that increases the freedom of movement of the pipelines, or alternatively anchored to prevent pipeline movement, as determined by a California Registered Civil Engineer, in accordance with California Building Code, 2010, Los Angeles County requirements, and the American Public Works Association Greenbook.

GR-1g All facilities and equipment, including spill containment berms and Project-related pipelines, shall be designed for the seismic loading in accordance with applicable codes, including the California Building Code, 2010.

GR-1h The Applicant shall cease any non-essential drilling and production activities and inspect all project-related facilities, equipment, and pipelines following any seismic event that generates a ground acceleration of 15 percent of gravity. The Applicant/Operator shall prepare a written report of all inspections and findings to the City for review and approval prior to the recommencement of any operations. The City will respond to the Applicant within 5 working days of the report submittal.

(b) Facts in Support of Findings

The active Whittier Fault is at its closest point approximately 1,500 feet north and northeast of the Project Site and proposed pipeline route, respectively. In addition, the Puente Hills blind fault system underlies the Project Area. Because the surface trace of the Whittier Fault does not traverse the Project Area, the potential for fault surface rupture is low. However, up to 60 directionally drilled wells would potentially be completed across the Whittier Fault and/or the Puente Hills Thrust Fault. In the event that an earthquake occurred along either of these faults, the integrity of the well bore would potentially be compromised at the point where the borehole traverses the fault. In the unlikely event that this occurred, under a worst-case scenario, the oil well boreholes could potentially be sheared and sealed, thus preventing additional oil and gas production from that well. Similarly, injection well boreholes could potentially be sheared and sealed, thus preventing additional disposal of produced water in that well. Although such a scenario would necessitate well abandonment and would be detrimental to oil and gas production and associated disposal operations, the potential for spills or releases of oil and gas or produced water to the environment would be lessened with respect to normal drilling, production, and disposal activities, due to partial or complete sealing of the well as a result of the seismically induced ground motion.

Although the potential for liquefaction is low at the Project Site, areas where the proposed pipeline traverses alluvial filled canyon bottoms would be prone to liquefaction. In addition, other earthquake-related hazards, such as ground acceleration and ground shaking cannot be avoided in the Whittier region, and in particular in the vicinity of the Whittier Fault and Puente Hills thrust fault. Strong-to-intense ground shaking due to an earthquake on these or other regional active faults would potentially result in peak ground accelerations of 0.4861 g. Such ground movement could cause differential settlement and lateral spreading, resulting in potential damage of proposed oil and gas drilling equipment, proposed pipelines, and related Project facilities. Such damage would potentially result in a release of oil and gas into the environment.

As discovered during the 1971 San Fernando earthquake and the 1994 Northridge earthquake, existing building codes are often inadequate to completely protect engineered structures from hazards associated with large ground accelerations. Therefore, potential seismic impacts and associated damage to

structures from a major earthquake on the nearby Whittier Fault, Puente Hills thrust fault, or any other regional fault, would be considered significant.

However, by implementing the above mitigation measures, impacts from Project-related activities can be reduced to less than significant.

2. Expansive Soils

Moderately expansive soils are prone to swelling and shrinking as a result of increased or decreased water content, which could potentially damage proposed structures and infrastructure, resulting in loss of property and oil spills. However, with the implementation of mitigation, any potential impact will be reduced to less than significant.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant expansive soils impact. Specifically, the following mitigation will ensure a less than significant impact.

GR1-c All conceptual geotechnical recommendations provided by Heathcote Geotechnical (2011) shall be followed during grading and construction at the Project Site. In addition, a Registered Civil Engineer and Certified Engineering Geologist shall perform an updated geotechnical evaluation of the Project Site, as the proposed building pad and slope configuration has changed since completion of the geotechnical report completed in 2010 (Heathcote Geotechnical 2011). The updated evaluation shall include an estimation of both vertical and horizontal anticipated peak ground accelerations, since the Heathcote Geotechnical report only included horizontal peak ground acceleration values.

GR-2 Thickened slabs, extending slab edges, and additional reinforcement shall be utilized to reduce negative impacts resulting from expansive soil movement if any construction occurs within moderately expansive soils. In addition, the use of a capillary break under slabs shall be utilized to reduce the potential for moisture transport and pumping that leads to moisture infiltration as a result of heat and moisture gradients. An alternative would be the use of low to non expansive soils for slab support, which would eliminate the potential risk. This can be accommodated by importing select materials. Select grading techniques during grading could utilize the granular

soils in site for subsequent use. Measures shall be as described or as otherwise approved by the City Engineer.

(b) Facts in Support of Findings

Onsite soils consist of interbedded sand, silt and clay, which have a very low to medium soil expansion potential. Expansive soils can heave foundations, slabs, and adversely deflect pipelines. These adverse effects could result in damage or catastrophic failure to the Project components. Foundations constructed on expansive soils require special design considerations to mitigate the hazard. Failure to implement these measures could result in a significant impact.

By implementing the above mitigation measures, impacts from Project-related activities can be reduced to a level of insignificance. All of the above detailed measures will ensure that special design considerations are addressed in order to ensure expansive soils do not cause a significant impact.

3. Impacts from Existing Uncertified Fill On-Site

Existing uncertified fill onsite could potentially be subject to hydroconsolidation, excessive settlement, expansive soil shrink and swell, and differential settlement/expansion, thus potentially damaging proposed structures and infrastructure, resulting in loss of property and oil spills. However, with mitigation, any potential impact will be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant impact with regard to existing uncertified fill onsite. Specifically, the following mitigation will ensure a less than significant impact.

GR1-c All conceptual geotechnical recommendations provided by Heathcote Geotechnical (2011) shall be followed during grading and construction at the Project Site. In addition, a Registered Civil Engineer and Certified Engineering Geologist shall perform an updated geotechnical evaluation of the Project Site, as the proposed building pad and slope configuration has changed since completion of the geotechnical report completed in 2010 (Heathcote Geotechnical 2011). The updated evaluation shall include an estimation of both vertical and horizontal anticipated peak ground accelerations, since the Heathcote Geotechnical report only included horizontal peak ground acceleration values.

(b) Facts in Support of Findings

Based on the report prepared by Heathcote Geotechnical, a review of aerial photographs, and observations of the site, uncertified fill has been placed across the site at various locations, to a depth of approximately 10 feet. The exact locations and the horizontal and vertical limits of uncertified fill have not been clearly discerned. Existing uncertified fill onsite could potentially be subject to hydroconsolidation, excessive settlement, expansive soil shrink and swell, and differential settlement/expansion, thus potentially damaging proposed structures and infrastructure, resulting in loss of property.

By implementing Mitigation Measure GR-1c in association with artificial fill impacts, impacts from Project-related activities can be reduced. This measure would require that all recommendations from any geotechnical evaluation be implemented.

4. Impacts from Landslide Prone Slopes

Landslide prone slopes are present in the Project Area. Such slopes could potentially damage proposed structures and infrastructure, resulting in loss of property and oil spills. However, with implementation of mitigation, any landslide impact will be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant landslide impact. Specifically, the following mitigation will ensure a less than significant impact.

GR1-c All conceptual geotechnical recommendations provided by Heathcote Geotechnical (2011) shall be followed during grading and construction at the Project Site. In addition, a Registered Civil Engineer and Certified Engineering Geologist shall perform an updated geotechnical evaluation of the Project Site, as the proposed building pad and slope configuration has changed since completion of the geotechnical report completed in 2010 (Heathcote Geotechnical 2011). The updated evaluation shall include an estimation of both vertical and horizontal anticipated peak ground accelerations, since the Heathcote Geotechnical report only included horizontal peak ground acceleration values.

(b) Facts in Support of Findings

The California Division of Mines and Geology has mapped mountainous areas that are potentially prone to seismically induced slope failures, including rockfalls, debris flows, slumps, and landslides. Based on these maps, the west-facing slopes immediately east of the Project Site are prone to earthquake-induced landslides. In

addition, the slopes along the east side of Arroyo Pescadero, which is traversed by the proposed pipeline route, are prone to landslides. In addition, a geotechnical investigation of the Project Site indicated the topography is prone to surficial slope failure, due to the friable nature of the Fernando Formation, which forms the slopes within the Project Site.

Bedding within the Fernando Formation also dips out of slope, creating adverse, or unsupported bedding conditions that are prone to failure, especially if undercut at the toe during grading and construction. The overall gross stability of the slopes directly adjacent to or east of the Project Site has a factor of safety of 1.93. The standards from the California Building Code (2010) mandate a factor of safety of 1.5 for finished stability and 1.1 for seismic stability. The seismic gross factor of safety for the overall stability of the hillside range is 1.47. Therefore, these slopes will have a factor of safety above 1.1, with respect to seismic stability. However, the slopes are not surficially stable in general and surficial slope failures were observed in abundance. This is considered a potentially significant impact.

By implementing Mitigation Measure GR-1c in association with slope stability impacts, impacts from Project-related activities can be reduced to a level of insignificance. This measure would require that all recommendations from any geotechnical evaluation be implemented.

5. Impacts from Temporary Excavations

Temporary excavations could impact and adversely affect adjacent properties or de-stabilize the existing hillside. However, with the implementation of mitigation any potential impact will be reduced to a level of insignificance.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant impact with regard to temporary excavations. Specifically, the following mitigation will ensure a less than significant impact.

GR-5a Temporary shoring shall be designed to protect the temporary excavations, structures to remain in place, and adjacent properties. This shoring shall be designed by a State of California Registered Civil Engineer to take into account all lateral load parameters. Shoring can include steel cage, timber supports, sheet piling, soil nailing, shotcrete walls, or as otherwise approved by the City Engineer.

GR-5b Slot cut excavation schemes shall be implemented during grading and foundation excavations to the extent possible, to reduce the potential for failure along temporary cuts, by limiting the area exposed by temporary cuts.

GR-5c All excavations for structures and buildings shall comply with all applicable regulations of the California Occupational Safety and Hazard Administration guidelines as they pertain to excavations.

(b) Facts in Support of Findings

The proposed Project may involve numerous proposed temporary excavations for grading, slope and landslide repair, inadequate soil removal, and trench excavations. Proposed temporary cuts are anticipated to be approximately 5 to 20 feet. Temporary excavations into the existing alluvial deposits at slopes greater than approximately 2:1 (horizontal to vertical) may be prone to collapse, which could remove lateral adjacent support from roads, utilities, and buildings in close proximity to the excavations. Impacts are considered potentially significant.

However, with the implementation of mitigation, this impact would be reduced to a level of insignificance. These measures require temporary shoring, slot cut excavation schemes, and compliance with all excavation regulations of the California Occupational Safety and Hazard Administration.

6. Corrosion Impacts on Structural Components and Pipelines

Corrosion could potentially damage the structural components and pipelines which would result in a pipe burst and subsequent oil spill. However, with the implementation of mitigation, any impact would be reduced to the extent feasible and to a level of insignificance.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant impact with regard to corrosion. Specifically, the following mitigation will ensure a less than significant impact.

GR-6a Site specific chemical testing of soil and bedrock shall be performed to assess corrosion and other adverse chemical aspects. A report with the lab tests shall be submitted to the City of Whittier with any appropriate mitigation measures included. The project design must conform to the recommendations within the geotechnical evaluation, or as per the City Engineer, and should occur prior to completion of the final project design.

GR-6b 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.

GR-6c 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.

GR-6d In accordance with California Division of Oil, Gas, and Geothermal Resources pipeline regulations for environmentally sensitive pipelines, a pipeline management plan shall be implemented (Public Resources Code Sections 3013 and 3782). 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.

GR-6e All concrete in contact with the high sulfate or corrosive soils can be Type V concrete in accordance with the 2010 California Building Code.

(b) Facts in Support of Findings

Soils and bedrock throughout Southern California have varying degrees of sulfate and corrosion potential. Long-term production could result in corrosion of pipelines and other components in contact with the soil and bedrock. Such corrosion could result in oil leaks. No chemical testing was available to assess the various components that may pose a hazard to the proposed concrete and metal components and improvements. If corrosion of pipelines were to occur, the pipelines would be weakened and increase the potential for an oil discharge. Degradation of concrete hold downs, slabs, and foundations could compromise the structural integrity of the elements. Therefore, the impacts due to corrosion would be significant.

With the mitigation described above, the impact is reduced to a less than significant level. The measures would require chemical testing of the soil and bedrock occur to determine corrosion potential, that piping be coated, and that inspections take place to ensure no corrosion occurs. As such, all impacts will be reduced to a level of insignificance.

7. Ground Subsidence Caused by Oil Withdrawal

Oil withdrawal could result in ground subsidence. However, with the implementation of mitigation, any impact would be reduced to less than significant.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant ground subsidence impact. Specifically, the following mitigation will ensure a less than significant impact.

GR-7a Subsidence monitoring shall be completed annually in the vicinity of the wells. 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 results shall be forwarded to the Division of Oil, Gas and Geothermal Resources and the City of Whittier for review.

GR-7b In the event that the Global Position System monitoring indicates that subsidence is occurring in and/or around the Project Area, wastewater or water reinjection operations shall be increased to alleviate such subsidence. The Applicant shall coordinate with the California Division of Oil, Gas and Geothermal Resources in determining appropriate increased levels of wastewater reinjection operations. The Applicant will also coordinate with the City of Whittier to verify that subsidence has been mitigated sufficiently.

(b) Facts in Support of Findings

Subsidence due to oil, gas and groundwater withdrawal generally occurs over a large area. As a result, differential settlement damage due to subsidence is typically only evident in long linear features, such as pipelines, roadways, or aqueducts. No evidence of significant subsidence or problems related to subsidence were identified for the Project Area as identified in the EIR and in Appendix O.

The project will remove an unknown volume of oil, gas, and associated water. In the absence of injection of produced water back into the subsurface, the potential for settlement of the infrastructure increases. Produced water reinjection is a standard practice in the oil and gas industry, not only for the disposal of wastewater, but also to prevent ground subsidence. Although reinjection of produced water in proposed injection wells would substantially reduce the potential for ground subsidence, impacts would be potentially significant in the absence of subsidence monitoring to verify that subsidence is not occurring.

With the mitigation described above, the impact is reduced to a less than significant level. The measures will ensure monitoring for subsidence and will allow for wastewater or water reinjection operations to increase alleviating any potential subsidence.

F. NOISE

1. Construction Noise from Machinery

Construction machinery would increase noise levels. However, with the implementation of mitigation, any potential impact will be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant construction noise impact. Specifically, the following mitigation measures will ensure a less than significant impact.

N-1a Limit all construction activity at the Project Site (including deliveries and arriving and departing workers, and construction activities during the testing phase) to the hours from 7:00 a.m. to 6:00 p.m., Monday through Friday, and from 8:00 a.m. to 5:00 p.m. on Saturdays and prohibit activities on Sundays and federal holidays. In addition, for construction work within the County of Los Angeles unincorporated areas, the Applicant shall ensure that noise levels do not exceed County municipal code levels with a noise study and monitoring and measures, including high grade mufflers, engine tuning, and management of backup alarms. All contracts with construction personnel shall specify the allowable work hours and the study and monitoring requirements.

N-1b Maintain all construction machinery according to the manufacturers' specifications and ensure that mufflers and silencers are maintained properly. Back-up OSHA noise indicators shall be ambient sensitive and self-adjusting to minimize backup indicator noise or flaggers shall be used in the place of backup alarms (as allowed by OSHA).

N-1c Relocate the construction parking and staging area farther from the school and residences on Catalina Avenue to an area north of the Ranger Residence or equivalent.

(b) Facts in Support of Findings

Several construction activities would generate noise, including clearing the site for drilling, potential shredding of vegetative debris, grading, constructing the Processing Facility Area and Gas Plant Area, installing permanent processing equipment, and pipeline construction. Construction would last from a few weeks for pad clearing to approximately 2 years for the Processing Facility Area and Gas Plant Area.

The estimated construction noise levels at some of the receptor locations would be higher than the measured background due to the construction activities.

Estimates of noise levels from construction equipment utilized the FHWA and the Environmental Protection Agency (EPA) studies documenting noise generated by equipment as well as the equipment requirements and use detailed by the Applicant. The worst-case scenario for noise levels would be grading and transporting soil from those areas. However, even in the worst-case scenario, construction would only generate noise during daytime.

Noise modeling utilizing the SoundPlan model indicated that residences along Catalina Avenue, Ocean View Avenue, Romero Drive, and San Lucas Drive and near the proposed Project Site would experience noise levels from 52 to 56 dBA peak hour average during daytime for grading.

The ranger residence, immediately south of the Processing Facility Area and approximately 600 feet away, would experience daytime average noise levels up to 61 dBA (hourly average). The school play yard would experience average daytime noise levels up to 57 dBA. The noise level at the closest recreational area along the Loop Trail would experience a daytime average hour of up to 66 dBA. Although these noise levels would be within the General Plan limits, they would exceed the current baseline daytime levels by up to 18 dbA and would be clearly noticeable. This would be considered a significant impact if the construction activity occurred outside of the hours allowed for construction by the City Municipal Code.

During construction, construction vehicles would use Catalina Avenue and the North Access Road, which would increase noise levels. Construction noise levels with traffic would peak at a 54 dBA hourly average during daytime construction hours at Catalina Avenue. Short-period noise levels (e.g., a passing truck) could range up to 62 dBA at the closest residence property line. Noise levels along the North Access Road would have peaked at about 61 dBA hourly average during the grading phase when soils were anticipated to be exported. However, as detailed in Appendix O, the Project refinements eliminate the export of soil thereby eliminating this noise impact.

During the Design and Construction Phase, construction truck traffic would utilize Penn Street after the North Access Road is constructed to the Landfill and Penn Street. FHWA modeling along Penn Street for the Design and Construction Phase indicates that noise levels could have increased by 0.4 dBA if soil had been deposited at the Landfill or by 1.1 dBA increase if soil trucks had used Penn Street (to transport soil to another location). SoundPlan modeling indicates that noise levels along Penn Street could have increased by 1.4 dBA, 50 feet from the roadway centerline, during the peak hour if trucks transport soil along Penn Street. However, as detailed in Appendix O, soil export will be eliminated with the project refinements, thereby eliminating the increased noise levels.

This would be considered a significant impact if the construction occurred outside of the City Municipal Code allowed hours for construction.

Construction of the pipeline along Colima Road would generate noise at nearby residences. This would be considered a significant impact if the construction traffic occurred outside of the City Municipal Code allowed hours for construction. Some portions of the pipeline would be constructed within the County of Los Angeles unincorporated areas. Construction activities in these areas would need to comply with the County Municipal Code requirements as detailed above. Noise impacts from pipeline construction would be similar to the noise impacts associated with pad grading at the Loop Trail receptor. This would be below the County Municipal Code level of 75 dBA. Failure to comply with County requirements for construction within the County could also be a significant impact.

Regarding residual impacts, limiting the construction hours would ensure that the applicable codes for construction-related noise would not be exceeded.

Studies by the FHWA indicate that backup alarms constitute 41 percent of complaints from construction noise. Measures to reduce or eliminate the use of backup indicators (some signaling, either alarms or flaggers are required by the Occupational Safety and Health Administration [OSHA]) and to maintain construction equipment would reduce the impact of construction noise on nearby sensitive receptors.

Construction noise could exceed County thresholds for construction along Colima Road within the County of Los Angeles. Noise monitoring, in combination with measures, such as equipment muffling, engine tuning, and management of backup alarms, would reduce the impacts to less than significant.

The staging and parking area would be in close proximity to residences and the school. Although noise calculations, including construction time limits, indicate that noise levels would be less than significant with mitigation, equipment loading and unloading at the staging and parking area could create periodic disturbances for nearby residences and the school. Relocating the staging and parking area north of the Ranger Residence would reduce these impacts on the school and the residences.

Residual noise impacts would be less than significant with mitigation.

With the implementation of all mitigation that requires limiting construction to certain hours, ensuring construction equipment is properly maintained, and moving the construction and staging area further away from the school and residences on Catalina Avenue to an area north of the Ranger Residence or equivalent, any potential impact will be reduced to less than significant levels.

At the Planning Commission hearings held on October 19, 20, 24 and 25, 2011, concerns were expressed that the noise impacts in the EIR were measured from a baseline during the day thereby underestimating the potential noise impact. Additionally, concerns were raised that noise and vibration impacts from vehicles were not assessed. However, as detailed in the EIR, the noise baseline was actually measured at night at the quietest time as detailed on page 4.5-11 of the Final EIR.

Therefore, noise impacts were not underestimated. Further, noise and vibration was analyzed from a baseline level that included impacts from vehicles as detailed on page 4.5-13 of the Final EIR.

2. Noise from Drilling Activities

Drilling activities during the Drilling and Testing Phase would increase noise levels in the area. With the implementation of mitigation, any noise from the drilling activities will be reduced to less than significant.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant noise impact from drilling activities. Specifically, the following mitigation will ensure a less than significant impact.

N-2a The Applicant shall develop and implement a Noise Reduction Plan for all drilling (testing, development, and re-drills and workovers) to ensure that the Leq noise levels from activities, measured as a 1-hour Leq, is less than a 3-dBA increase at the closest sensitive residential receptor and less than a 5-dBA increase at the closest sensitive recreational receptor. The Plan shall be prepared by an acoustic consultant approved by the City and the Plan shall be subject to City review and concurrence. The measures in the Plan shall include but not be limited to the following: (1) enclose the drill rig area in soundproof barriers 30 feet high on the south and west sides; (2) utilize a central generator type drilling rig, with the generators the only diesel engines onsite and enclosed in a soundproofed generator house with appropriate grade muffler systems, or install sound enclosures around all diesel engines with appropriate grade muffler systems; (3) install noise barriers around the drill rig floor, mud mixers, cleaners, conveyers, and shakers; (4) enclose drawworks brake area with soundproofing shroud; (5) install pads on V-door and other appropriate areas, timbers and pads on 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 (for both drilling and workover operations); (6) enclose the drilling mast boards area (on drilling and workover rigs) with barriers 2 inches thick and 2 pounds per square foot in density at least 5 feet above and below any noise sources; and (7) install ambient sensitive backup indicators on all equipment requiring backup indicators.

N-2b The Applicant shall institute a quiet-mode for all drilling activities between 7 p.m. and 7 a.m. Quiet-mode operation would apply to both drilling and operations and would involve: (1) using signalers for all backup operations instead of backup alarms and turning off backup alarms; (2) using radios instead of voice communication; (3) minimizing crane use and pipe handling operations, pipe offloading from trucks and board loading during daytime to the maximum extent feasible and nighttime loading only for safety reasons; (4) prohibiting material and supply deliveries to the Project Site between the hours of 7 p.m. and 7 a.m., with exceptions only for safety; and (5) limiting process alarms and communications over the broadcast system to the maximum extent feasible during all operations and use only for safety reasons.

N-2c Provide a comprehensive noise abatement study, including noise and vibration monitoring at nearby sensitive receptors and continuous monitoring near drilling activities, under contract and supervision of the City, to monitor noise and vibration from the drilling and operations in the community. The City shall have the authority to shut-down operations and require additional mitigation if the noise criteria are exceeded.

(b) Facts in Support of Findings

The EIR estimated noise impacts with standard noise propagation equations codified into complex computer models that take into account noise reduction and attenuation due to barriers (e.g., man-made walls, hills, and other natural obstructions), weather effects, and ground absorption. The model used was SoundPlan, which is a commonly used high level noise assessment model in the acoustical industry. Results of the calculations are CNEL and peak-hour noise contours that estimate which areas would experience noise levels above a given threshold. The Project noise was measured against a baseline that accounted for nighttime noise in order to ensure noise impacts were not undercounted.

Large diesel engines used for drilling would likely be the noisiest activity associated with the proposed Project. Drilling operations continue during evening and nighttime hours, exacerbating the noise impacts. Regulatory restrictions on noise are stricter during evening and nighttime than during daytime. Major noise sources associated with drilling activities include metal-on-metal contact, internal combustion engines, electric motors, drawworks brakes, the mud shakers and mixers, warning devices (e.g., equipment backup alarms, H2S monitors), and personnel communicating instructions and commands.

Most of the metal-on-metal noise generated on the rig would be at ground level and from the rig floor. The only source of noise above the rig floor would be at the boards, partway up the drilling rig, where the derrick man would use the pipe elevators to engage or disengage stands of drill pipe as it is pulled from or lowered into the hole. Metal-on-metal noise can be characterized as clanking sounds varying in duration and sound level. Since the clanking noise is loud and short in duration, it may be perceived as more annoying than steady noise from other sources.

This equipment, at various locations and different heights within the drilling site, would not be above the drilling rig floor. Several equipment pieces are truck-mounted and therefore would be slightly elevated. Other equipment would be located on the drill floor, at a height of 19 feet for the Kenai Drilling number 14 rig.

The drilling rig and most of the associated drilling equipment would be diesel powered. The proposed diesel engines are those for the drilling rig mud pumps, the drawworks, and the rig generator. Additionally, the cementing equipment, slickline, wireline equipment, crane, and coil-tubing unit are used less frequently and are mounted on trucks and use the truck engines for power. Miscellaneous small hydraulic-powered equipment (e.g., shakers) would be powered by electricity from diesel-powered generators.

The slickline, well-logging, and cementing unit and the coil tubing units would not be used at the same time the drilling rig is operating since they perform services on the well when pipe is not being drilled. The crane is used only for moving pipe and is assumed to operate 20 percent of the time. All other equipment is assumed to operate 90 percent of the time. The metal-on-metal noise and backup alarms are assumed to have a duration of 1 second and to occur 500 times per day. Back-up alarm noise levels are assumed to be 5 dBA more than the crane's peak noise level.

Noise from the equipment, particularly the equipment at the drilling site ground level, would be partially attenuated by the terrain. This effect is included in the noise model.

Several studies were examined to estimate the noise levels from the drilling equipment, including studies conducted on drilling sites by the Bureau of Land Management and studies in Los Angeles urban areas by Arup Acoustics and Behrens and Associates. Kenai Drilling also provided some noise monitoring data from the drilling rig that was gathered to ensure OSHA compliance with worker hearing protection requirements.

Bureau of Land Management drilling noise studies indicate noise levels from drilling of 83 dBA at 50 feet. A noise study performed for drilling operations in Los Angeles at the Baldwin Hills oilfield indicates equivalent noise levels of 82 dBA from drilling operations. However, information on the specific activities undertaken and details of the equipment arrangements, such as noise reduction techniques, were not available for these studies, so a direct comparison is not possible.

The Baldwin Hills Environmental Impact Report (EIR), prepared for an urban oilfield development in Los Angeles County, conducted noise monitoring of ongoing drilling activities and pumping units. Noise levels during drilling, casing, and cementing activities were 77, 73, and 80 to 82 dBA at 50 feet, respectively. Additional noise monitoring at the Baldwin Hills by Behrens and Associates indicated that noise levels associated with drilling range up to 80 dBA 50 feet from drilling equipment.

As a worst case, the EIR compiled noise estimates for each piece of equipment and activity and assigned noise levels and associated use factors. Estimating noise levels from each piece of equipment, as opposed to assigning a noise level for the entire drilling process, has the advantage of identifying which pieces of equipment are creating impacts and might require mitigation. Large diesel engine (the mud pumps, generator, and the drawworks engines) noise levels are based on Kenai Drilling Company noise monitoring within the rig area.

Trucks and other vehicles that visit the Processing Facility Area and the Well Area were calculated in the model using the vehicle types and traffic levels. These sources generate noise at the Project Site and along Catalina Road (or the North Access Road depending on the phase of drilling). The noise model takes into account the terrain and grade of the road and it corrects the vehicle noise accordingly; for example, trucks laboring uphill produce more noise than trucks on a level surface.

SoundPlan noise modeling indicated that noise levels 50 feet from the drilling equipment arrangement would be approximately 85 dBA Leq. This noise level is somewhat higher than that measured near drilling operations in Los Angeles. However, this level does not include any mitigation (e.g., noise barriers) and is, therefore, considered a conservative, worst-case unmitigated analysis.

The highest noise levels would be encountered at the Ranger Residence and the recreational sensitive receptors within the Preserve along the Loop Trail. The greatest impact on residential sensitive receptors would be at the Romero Drive, Lodosa Drive, and Catalina Avenue receptors.

The primary contributors to noise levels are large diesel engines (e.g., mud pumps, diesel generators, drawworks engine), the cutting conveyer, and pipe clanging at the boards on the drilling rig.

Drilling traffic contributes to the noise impacts to residences along Catalina Avenue during the test drilling to levels averaging an Leq peak hour of approximately 45 dBA 50 feet from the roadway.

In combination with the existing baseline levels, peak hour noise levels at only the residential receptors would increase by an average of almost 3 dBA (not including the Ranger Residence or trail receptors) with the range from less than 1 dBA along Ocean View Avenue to 5 dBA along Catalina Ave.

Noise levels at the Loop Trail location closest to the drilling activities would increase by more than 14 dBA over the minimum baseline peak hour.

Noise increases over baseline would exceed the General Plan levels at the Ranger Residence and the 3 to 5 dBA increase would be exceeded at multiple locations. This would be a significant impact.

Extensive noise control measures could be implemented to reduce noise levels. These measures, used at other oilfields, such as Baldwin Hills, are proven to substantially reduce noise levels.

Regarding residual impacts, the noise reduction methods in the mitigation measures are established practices in the drilling industry that reduce noise levels in drilling situations.

The barrier blankets range in size from 1 to 2 inches thick and density from 1 to 2.5 pounds per square foot. The thicker, denser material achieves greater sound reduction. A sound enclosure differs from a sound barrier because a sound enclosure surrounds the entire piece of equipment, can be made from wood and various thicknesses of sound absorbing material, and is effectively a container in which the equipment is placed (i.e., similar to a generator house). A sound barrier is a wall erected out of sound barrier blanket material or solid material.

Several companies produce exhaust systems that reduce noise from heavy-duty diesel engines; these systems could be used to reduce the noise from diesel engines used during drilling operations. These systems have a range of noise reduction levels and they can attenuate the exhaust noise by 23 to 35 dBA.

Generally, noise reduction levels associated with barriers are approximately 8 to 15 dBA, depending on proximity to the equipment. Measurements at Baldwin Hills oil field indicate that a 30-foot high noise barrier wall and a steel support structure with noise barrier blankets can reduce noise levels by at least 8 dBA. Noise blankets immediately adjacent to and around noise sources, such as the mud pit area, can reduce noise levels by more than 15 dBA.

A variety of companies produce enclosures that can reduce noise levels by as much as 23 dBA. If the enclosures are insulated with additional foam, noise reduction could increase by 6 to 8 dBA (up to 31 to 33 dBA). Measurements taken at Kenai rigs by Kenai Drilling indicate that a generator house can reduce noise levels by at least 13 to 15 dBA.

Regardless of mitigation, these noise levels would occur during day and night because drilling would occur 24 hours per day. The highest noise levels from drilling would occur at the Loop Trail and the Ranger Residence and along Catalina Avenue due to traffic. The largest contributors to the noise levels after mitigation would be diesel generators, the cutting conveyer, backup alarms, and annunciators.

102 These estimates of noise levels are comparable to actual, measured values at the Baldwin Hills oilfield, which utilizes a similar list of mitigation measures. At residences 750 feet from the mitigated Baldwin Hills drilling operations, noise levels from drilling are less than 42 dBA during the maximum hour drilling operations. At

Baldwin Hills, mitigation required noise monitoring devices to be installed 100 feet from drilling equipment that continuously monitor noise levels. Average hourly noise levels for the most recent drilling activity at Baldwin Hills range are from 51 to 60 dBA at 100 feet, which would correlate to 33 to 42 dBA at 820 feet (the closest receptor to the proposed Project drilling site). These noise levels would be less than the measured baseline levels in the Project area and are from an existing, current in-field drilling project. The closest residences to the Well Area drilling operations (aside from the Ranger Residence) would be at Ocean View Avenue, Romero Road, and Catalina Avenue. The Loop Trail receptor is approximately 820 feet from the drilling activities and the noise level from the Project contribution (without the baseline) during the peak hour at the Loop Trail is estimated to be approximately 43 dBA, which is comparable to noise levels estimated at the Baldwin Hills Oilfield with drilling mitigation.

Some of the mitigation measures recommended for the Project have been implemented at the existing, operating Matrix Honolulu Terrace facility. Documented complaints regarding noise from the Honolulu Terrace facility range 100 feet to approximately 1,000 feet from the facility site. Most complaints originate within 500 feet of the site.

The proposed Project equipment arrangement would be similar to Honolulu Terrace operations, except that the Honolulu Terrace facility is in very close proximity to residences; drilling occurs within approximately 100 feet of residences and that facility only utilizes a subset of the extensive range of noise control devices recommended for this Project.

Peak hour mitigated noise level increases at the residential receptors only (not including the Ranger residence or trail receptors) would average 0.4 dBA increase ranging up to a 1.8 dBA increase along Catalina (primarily due to traffic).

The mitigation measures would reduce the noise levels at the nearest residence and at all sensitive receptors to below levels specified in the General Plan and would prevent noise levels from increasing by more than 3 to 5 dBA at all receptor locations. The impacts of drilling would be less than significant with mitigation. Even though hourly average noise levels are less than the significance criterion, periodic noises would still be heard. Annunciators and pipe clangs, even with the mitigation measures, would be heard for short durations.

With the mitigation described above, the impact is reduced to a less than significant level.

3. Operational Noise Impacts

Operational activities would increase noise levels in the area. However, with the implementation of mitigation, this impact would be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant impact with regard to operational noise impacts. Specifically, the following mitigation will ensure a less than significant impact.

N-4 The Applicant shall develop and implement a Noise Reduction Plan for all operations to ensure that Leq noise levels from operational activities, measured as 1-hour Leq, produce less than a 3 dBA increase over the minimum baseline hourly average level at the closest residential receptor to the facility. The measures in the Plan shall include, but not be limited to: (1) installing sound enclosures or buildings around all compressors; (2) installing noise barriers around all pumps and air coolers; (3) installing ambient-sensitive backup indicators on all equipment requiring backup indicators; (4) installing sound enclosures or buildings around all the oil area pumps (e.g., shipping, IGFC, water injection, water booster, reject pumps); (5) installing sound enclosures or buildings around refrigeration units; (6) installing a secondary, 16-foot tall sound wall on the south, west and north sides of the gas plant; (7) ensuring that all office equipment (i.e., air conditioners, heating, ventilation) produces low noise levels or is surrounded by noise barriers; and (8) limiting traffic on the North Access Road to within 7 a.m. to 7 p.m., except for emergencies.

(b) Facts in Support of Findings

Operational activities would include pumps and compressors at the Processing Facility Area and at the Well Area, as well as transformers, heaters, air coolers, annunciators, and equipment at the Gas Plant Area.

Noise levels would increase at all receptor locations compared to the lowest baseline levels measured. For example, at the overlook near the Preserve parking lot, noise levels would increase over the low nighttime baseline values, but during the daytime baseline noise levels are 9 dBA higher due to traffic on Colima Road and the increase in noise levels would be minimal. Operations would be similar during day and night. Unmitigated noise levels 50 feet from the gas plant processing equipment would be approximately 90 dBA within the Gas Plant Area wall.

Traffic to and from the site is assumed to utilize both Catalina Avenue and the North Access Road through Penn Street. Traffic from operations and from drilling would generate noise along traffic routes. Daytime peak hour noise levels along the North Access Road would be as much as 58 dBA during operations when drilling equipment would be delivered (peak drilling truck traffic), as much as 52 dBA during

operations with drilling, and a maximum of 46 dBA with only operational traffic (no drilling).

Noise levels along Penn Street are estimated to increase by approximately 0.1 dBA from relatively low levels of operational traffic. Traffic noise levels along Catalina Avenue would be less than 40 dBA.

Peak-hour noise level increases at the residential receptors only (not including the Ranger Residence or trail receptors) would average almost 6 dBA during the nighttime, ranging from a 1.7-dBA peak-hour increase along Ocean View Avenue to a 7.8-dBA peak-hour increase along Catalina Avenue.

Noise levels at the Loop Trail would increase by more than 16 dBA during the peak hour, which would be clearly noticeable.

Project operations would increase CNEL levels at multiple locations and the maximum hour noise levels would increase by more than 3 to 5 dBA at most locations, exceeding the limits defined in the General Plan and the thresholds. This would be a potentially significant impact.

The noise reduction methods contained in the above referenced mitigation measures are established practices to reduce noise levels in urban situations in the oil and gas industry. The largest noise sources, the compressors and largest pumps, would be enclosed and insulated with noise barriers or solid noise-attenuation material. This type of structure would reduce noise levels 23 to 33 dBA.

Additional noise sources include various pumps at the Well Area and at the air coolers used to cool process streams. Noise barriers would be installed around these sources to minimize the noise levels. The refrigeration unit would also be enclosed in a noise barrier or building or placed inside the compressor building.

Even with these mitigation measures, noise levels at the public Deer Loop Trail could exceed the significance criteria. Therefore, a 16-foot tall noise wall would be installed on the south, west, and north sides of the Gas Plant equipment (a 20-foot retaining wall around the east side acts as a noise barrier). This wall would not only reduce noise levels at the Loop Trail recreational receptor, but it would reduce noise levels within the Preserve and canyon area, which would reduce impacts on biology. Noise levels 50 feet from the gas plant equipment would be reduced to 77 dBA for the maximum hour within the Gas Plant Area wall. Peak hour mitigated noise levels at the residential receptors would increase by less than 0.5 dBA (not including the Ranger Residence or trail receptors), and would range up to an increase of 1.3 at Catalina Avenue due primarily to Project traffic. Noise levels at the Loop Trail, the closest area to the Project activities, would increase by less than 5 dBA during the peak hour. Impacts would be less than the CNEL specified by the General Plan for all receptors, and all receptors would experience less than a 3- to 5-dBA noise level increase. Therefore, the impacts would be less than significant.

4. Concurrent Operational and Drilling Activity Noise

Concurrent operational activities and drilling activities during periods of the Project would increase noise levels in the area. With the implementation of mitigation, this impact would be reduced to a level of insignificance.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant noise impact from concurrent operational and drilling activities. Specifically, the following mitigation will ensure a less than significant impact.

N-1a Limit all construction activity at the Project Site (including deliveries and arriving and departing workers, and construction activities during the testing phase) to the hours from 7:00 a.m. to 6:00 p.m., Monday through Friday, and from 8:00 a.m. to 5:00 p.m. on Saturdays and prohibit activities on Sundays and federal holidays. In addition, for construction work within the County of Los Angeles unincorporated areas, the Applicant shall ensure that noise levels do not exceed County municipal code levels with a noise study and monitoring and measures, including high grade mufflers, engine tuning, and management of backup alarms. All contracts with construction personnel shall specify the allowable work hours and the study and monitoring requirements.

N-1b Maintain all construction machinery according to the manufacturers' specifications and ensure that mufflers and silencers are maintained properly. Back-up OSHA noise indicators shall be ambient sensitive and self-adjusting to minimize backup indicator noise or flaggers shall be used in the place of backup alarms (as allowed by OSHA).

N-2a The Applicant shall develop and implement a Noise Reduction Plan for all drilling (testing, development, and re-drills and workovers) to ensure that the Leq noise levels from activities, measured as a 1-hour Leq, is less than a 3-dBA increase at the closest sensitive residential receptor and less than a 5-dBA increase at the closest sensitive recreational receptor. The Plan shall be prepared by an acoustic consultant approved by the City and the Plan shall be subject to City review and concurrence. The measures in the Plan shall include but not be limited to the following: (1) enclose the drill rig area in soundproof barriers 30 feet high on the south and west sides; (2) utilize a central

generator type drilling rig, with the generators the only diesel engines onsite and enclosed in a soundproofed generator house with appropriate grade muffler systems, or install sound enclosures around all diesel engines with appropriate grade muffler systems; (3) install noise barriers around the drill rig floor, mud mixers, cleaners, conveyers, and shakers; (4) enclose drawworks brake area with soundproofing shroud; (5) install pads on V-door and other appropriate areas, timbers and pads on 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 (for both drilling and workover operations); (6) enclose the drilling mast boards area (on drilling and workover rigs) with barriers 2 inches thick and 2 pounds per square foot in density at least 5 feet above and below any noise sources; and (7) install ambient sensitive backup indicators on all equipment requiring backup indicators.

N-2b The Applicant shall institute a quiet-mode for all drilling activities between 7 p.m. and 7 a.m. Quiet-mode operation would apply to both drilling and operations and would involve: (1) using signalers for all backup operations instead of backup alarms and turning off backup alarms; (2) using radios instead of voice communication; (3) minimizing crane use and pipe handling operations, pipe offloading from trucks and board loading during daytime to the maximum extent feasible and nighttime loading only for safety reasons; (4) prohibiting material and supply deliveries to the Project Site between the hours of 7 p.m. and 7 a.m., with exceptions only for safety; and (5) limiting process alarms and communications over the broadcast system to the maximum extent feasible during all operations and use only for safety reasons.

N-2c Provide a comprehensive noise abatement study, including noise and vibration monitoring at nearby sensitive receptors and continuous monitoring near drilling activities, under contract and supervision of the City, to monitor noise and vibration from the drilling and operations in the community. The City shall have the authority to shut-down operations and require additional mitigation if the noise criteria are exceeded.

N-4 The Applicant shall develop and implement a Noise Reduction Plan for all operations to ensure that Leq noise levels from operational activities, measured as 1-hour Leq, produce less than a 3 dBA increase over the minimum

baseline hourly average level at the closest residential receptor to the facility. The measures in the Plan shall include, but not be limited to: (1) installing sound enclosures or buildings around all compressors; (2) installing noise barriers around all pumps and air coolers; (3) installing ambient-sensitive backup indicators on all equipment requiring backup indicators; (4) installing sound enclosures or buildings around all the oil area pumps (e.g., shipping, IGFC, water injection, water booster, reject pumps); (5) installing sound enclosures or buildings around refrigeration units; (6) installing a secondary, 16-foot tall sound wall on the south, west and north sides of the gas plant; (7) ensuring that all office equipment (i.e., air conditioners, heating, ventilation) produces low noise levels or is surrounded by noise barriers; and (8) limiting traffic on the North Access Road to within 7 a.m. to 7 p.m., except for emergencies.

(b) Facts in Support of Findings

During the test phase drilling of the proposed Project, drilling would occur at the Well Area; however, the Processing Facility Area and Gas Plant Area would not yet be constructed and would not be operating. If the test wells prove to be viable, the Processing Plant Area and Gas Plant Area would be constructed and drilling would thereafter commence at the Well Area. This drilling would last for at least an estimated 5 years and during this time, both drilling and processing noise would occur simultaneously. After 5 years, or until the Applicant drills all the initial wells, drilling would occur periodically (up to 3 months per year) to re-drill wells.

In addition, well workovers would use a smaller, truck mounted portable drilling rig. The truck engines would power this rig to service the wells. Noise levels from workover rigs would be substantially less than from the full-sized rig, but they could introduce some increase in noise levels similar in magnitude to a truck engine. Workovers would not occur at the same time as drilling.

During the drilling period and re-drills, both operations and drilling would affect noise levels, which have been discussed independently. Modeling indicates that drilling would increase noise levels at the Deer Loop Trail receptor, at Catalina Avenue (primarily due to traffic), and at all other receptors by less than the significance criteria.

Implementing Mitigation Measures N-1a and N-1b, N-2a through N-2c, and N-4 would reduce impacts to less than significant.

G. TRANSPORTATION AND CIRCULATION

1. Traffic Increase from Test Drilling, Construction Operations, and Operations and Drilling

Potential test drilling, Construction, and Operations and Drilling at the Whittier Main Oil Field would increase traffic in the area. Implementation of mitigation would reduce potential traffic impacts to below the level of significance

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant impact with regard to traffic. Specifically, the following mitigation will ensure a less than significant impact.

T-1a During all phases at Intersection 6 - Catalina Avenue and Mar Vista Street, provide striping enhancements for southbound lanes to convert the existing single lanes to a left and right lane. Parking shall be restricted immediately north and south of the intersections, according to City Engineer recommendations.

T-1b A worker carpooling program shall be instituted offsite and away from congested areas to reduce Project traffic through congested areas during all Project phases, in coordination with the City traffic engineer.

T-1c During all phases, limit truck and employee access via Catalina Avenue and Mar Vista Street to no more than 40 daily round-trips and a peak hour of 12 one-way trips. No vehicles with more than two axles or weighing more than 3 tons (generally trucks) or vehicles towing large trailers shall be allowed on Catalina Avenue during Phase 2 (except for the initial stages of the North Access Road construction) or Phase 3.

T-1d Implement safety and access improvements, including: (1) During Phase 1, provide a wider turning radius at the northeast corner of Catalina Avenue to improve right turn movements, according to City Engineer recommendations; (2) Prohibit parking on the east side of Catalina Avenue north of Mar Vista Street from 7 a.m. to 6 p.m. Monday through Friday and from 8 a.m. to 5 p.m. on Saturdays to provide additional capacity for trucks during Phase 1, according to City Engineer recommendations; (3) Provide flagmen for truck access on Mar Vista Street during Phase 1; (4) Applicant shall maintain a record of vehicular traffic moving in and out of the Catalina Avenue

Gate; (5) Implement a pavement monitoring program to ensure Mar Vista Street and Catalina Avenue are maintained and damage from truck traffic is appropriately repaired, under direction of city engineers; and (6) Clearly posted speed limit signs on Catalina Avenue. (7) Cover all haul vehicles and sweep or remove any debris that could fall off the truck and impact other drivers before the truck enters public streets.

T-1f Implement a Penn Street Traffic Program, in coordination with the City, evaluating: (1) Traffic levels and periods of heavy traffic along Penn Street; (2) Longer-term traffic monitoring to capture events and variation in traffic flow due to student populations and event traffic; (3) Construction truck traffic impacts on roadway capacity due to parking limitations and event activities; (4) Coordination with Whittier College to reduce impacts of events and parking issues along Penn Street; (5) Alternative parking locations and routes for Whittier College events; (6) Implementing safety improvements, including enhanced pedestrian crosswalks and signage; (7) Identifying sources of landfill traffic and ensuring the proposed Project truck traffic during operations (not construction) does not increase average truck traffic levels on Penn Street; (8) Limited hours for proposed Project truck traffic on Penn Street to avoid congested or impacted periods (e.g., limit truck traffic to periods when the landfill is open, i.e. between 8:00 a.m and 3:00 p.m.); (9) Coordinate periods of heavy traffic flow on Penn Street due to events and prevent use of Penn Street for proposed Project-related construction truck traffic during these events. (10) Prohibiting parking of Project-related traffic along any residential street for non-emergency purposes. (11) Implementing policies for trucks along Penn Street, including speed limits for trucks, yielding requirements to automobiles, and other issues as applicable.

(a) Facts in Support of Findings

Under worst-case conditions, significant impacts would occur at the intersection of Catalina Avenue and Mar Vista Street, during Phase 1, 2 and 3 and at Hadley Street and Whittier Blvd during Phase 2 only. A significant impact would also occur along one street segment, Mar Vista west of Colima Road during Phase 1 only. These impacts would be significant.

Impacts along Penn Street could occur if peak Project-related traffic during construction coincides with large events at Whittier College or William Penn Park. This would be considered a significant impact.

Mitigation Measure T-1a requires that during all phases at Intersection 6 - Catalina Avenue and Mar Vista Street, striping enhancements are provided for southbound lanes to convert the existing single lanes to a left and right lane. Parking shall be restricted immediately north and south of the intersections, according to City Engineer recommendations.

Mitigation Measure T-1b requires that a worker carpooling program be instituted offsite and away from congested areas to reduce Project traffic through congested areas during all Project phases, in coordination with the City traffic engineer.

Mitigation Measure T-1c requires that during all phases, there be a limit on truck and employee access via Catalina Avenue and Mar Vista Street to no more than 40 daily round-trips and a peak hour of 12 one-way trips. No vehicles with more than two axles or weighing more than 3 tons (generally trucks) or vehicles towing large trailers shall be allowed on Catalina Avenue during Phase 2 (except for the initial stages of the North Access Road construction) or Phase 3.

Mitigation Measure T-1d requires implementation of safety and access improvements.

Mitigation Measure T-1f requires implementation of a Penn Street Traffic Program, in coordination with the City.

Regarding residual impacts, the intersection of Catalina Avenue and Mar Vista Street (Intersection 6) would experience impacts during the a.m. and p.m. peak hours of Phase 1 and the p.m. peak hours of Phase 2 and 3. Currently, Catalina Avenue north of Mar Vista Street has very low traffic volumes. Mitigation Measures T-1a and T-1b would reduce the significant impacts to less than significant by improving traffic flow and reducing Project-related traffic. To ensure traffic levels do not produce significant impacts, Mitigation Measure T-1c limits the traffic levels on Catalina during all phases of the project to levels that would not produce significant impacts. This would reduce impacts associated with Intersection 6 to less than significant.

Traffic utilizing Catalina would also produce impacts along Mar Vista Street (Segment 9) during Phase 1. Unless temporary measures, such as removal of traffic calming bulge-outs, are implemented along Mar Vista Street west of Colima Road, the roadway would experience significant impacts during peak hours of Phase 1 of the Project. Temporary elimination of the bulge-outs was determined to be infeasible. Therefore, these impacts would be reduced to less than significant by limiting employee traffic along Catalina Avenue and Mar Vista Street (Mitigation Measure T-1c) during Phase 1. This could be achieved by establishing offsite parking and carpooling to the site (Mitigation Measure T-1b). With these mitigation measures, impacts would be less than significant with mitigation by reducing Project-related traffic.

Safety and access improvements are also included in Mitigation Measure T-1d. These are related to safe access to Catalina Avenue off of Mar Vista Street. Impacts would be less than significant with mitigation.

Impacts at Hadley Street and Whittier Blvd could be eliminated by limiting project traffic to non-a.m. peak periods, thereby avoiding periods when significant impacts could occur.

The development and implementation of the Penn Street Traffic Program (Mitigation Measure T-1f) would reduce the potential for the impacts related to peak Project construction traffic coinciding with large events that impact Penn Street to less than significant with mitigation.

With the mitigation described above, the impact is reduced to a less than significant level.

Also, the impacts identified above will be lessened with the implementation of the Project refinements identified in Appendix O of the Final EIR. As soil hauling and export would not occur, construction traffic impacts will be lessened.

2. Pipeline Construction Traffic Impacts

Construction of the pipeline along area streets could cause significant impacts. Implementation of mitigation would reduce impacts to below the level of significance.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant traffic impact from pipeline construction. Specifically, the following mitigation will ensure a less than significant impact.

T-2 A Traffic Management Plan shall be submitted to the City of Whittier and County of Los Angeles Traffic Engineers for approval, as required, prior to issuance of encroachment permits. The Plan could include the following measures: provide methods to safeguard traffic flow; identify detours (if necessary); identify the placement of traffic control devices (e.g. signs, traffic cones) and flaggers (if needed); and provide other appropriate traffic control measures. Additional measures shall include: (1) One travel lane shall be left open in each direction (delineated by temporary traffic cones/barricades) along roadways during construction (i.e. roads will not be closed). Any temporary street closures shall occur in coordination with city staff. (2) Construction on major roadways through major signalized intersections will not be conducted during peak periods (6 to 9 a.m. and 3 to 6 p.m.), except where requested by the city to alleviate traffic impacts. (3) All

trenches in areas without safety fencing shall be metal plated during non-construction hours. All trenches that interfere with access to residential and business driveways shall be metal plated to provide access. (4) Edges of steel plates shall be made safe for cyclists. (5) All county and municipal fire, police, and paramedic departments shall be notified of the schedule and duration of construction activities. (6) As required, alternative routes shall be identified for emergency vehicles to avoid construction areas. (7) Coordination shall be undertaken with appropriate transit authorities to ensure uninterrupted service along bus or train routes, which shall be crossed or paralleled by the pipeline construction. (8) Alternative pedestrian and bicycle routes shall be identified to avoid construction areas if existing routes are obstructed by pipeline construction activities. (9) Transit stops shall be relocated as necessary to provide access during construction. (10) Staging areas for construction equipment and service truck traffic shall be located off the roadway. (11) Provision shall be made for off-street parking for worker vehicles in areas where parking is limited. (12) Advance notifications shall be made to affected residents and businesses through public information, such as a web site or mailings, and shall include construction scheduling and identify the pipeline as a natural gas pipeline. (13) Schedule construction adjacent to critical land uses so that at least one driveway is left unblocked at all hours or during business hours and ensuring resident and business access during trenching/construction. (14) Ensure that damaged roads are restored to at least their pre-construction condition and to the satisfaction of the responsible agency.

(a) Facts in Support of Findings

Pipeline construction along Colima Road and La Mirada Boulevard could potentially cause traffic impacts that temporarily reduce the capacity of the street system, resulting in substantial increase in the v/c ratio on roads and LOS, or congestion at intersections; inhibit emergency response by paramedic, fire, ambulance, and police vehicles; affect existing roadside parking; and inhibit access to private and commercial driveways.

Mitigation Measure T-2 requires a Traffic Management Plan be submitted to the City of Whittier and County of Los Angeles Traffic Engineers for approval, as required, prior to issuance of encroachment permits. The Plan could include the following measures: provide methods to safeguard traffic flow; identify detours (if necessary); identify the placement of traffic control devices (e.g. signs, traffic cones) and flaggers (if needed); and provide other appropriate traffic control measures.

With the application of the recommended mitigation, impacts would be reduced to less than significant. All of the potential impacts are only associated with the pipeline construction; the operation of the pipeline will have no impact on transportation/traffic.

With the mitigation described above, the impact is reduced to a less than significant level.

3. Cumulative Traffic Impact

Future conditions and other projects in the area could cause significant cumulative traffic impacts in the area. However, mitigation is imposed upon the Project to ensure a less than significant cumulative impact.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant cumulative traffic impact. Specifically, the following mitigation will ensure a less than significant impact.

T-1a During all phases at Intersection 6 - Catalina Avenue and Mar Vista Street, provide striping enhancements for southbound lanes to convert the existing single lanes to a left and right lane. Parking shall be restricted immediately north and south of the intersections, according to City Engineer recommendations.

T-1b A worker carpooling program shall be instituted offsite and away from congested areas to reduce Project traffic through congested areas during all Project phases, in coordination with the City traffic engineer.

T-1c During all phases, limit truck and employee access via Catalina Avenue and Mar Vista Street to no more than 40 daily round-trips and a peak hour of 12 one-way trips. No vehicles with more than two axles or weighing more than 3 tons (generally trucks) or vehicles towing large trailers shall be allowed on Catalina Avenue during Phase 2 (except for the initial stages of the North Access Road construction) or Phase 3.

T-1d Implement safety and access improvements, including: (1) During Phase 1, provide a wider turning radius at the northeast corner of Catalina Avenue to improve right turn movements, according to City Engineer recommendations; (2) Prohibit parking on the east side of Catalina Avenue north of Mar Vista Street from 7 a.m. to 6 p.m. Monday through Friday and from 8 a.m. to 5 p.m. on

Saturdays to provide additional capacity for trucks during Phase 1, according to City Engineer recommendations; (3) Provide flagmen for truck access on Mar Vista Street during Phase 1; (4) Applicant shall maintain a record of vehicular traffic moving in and out of the Catalina Avenue Gate; (5) Implement a pavement monitoring program to ensure Mar Vista Street and Catalina Avenue are maintained and damage from truck traffic is appropriately repaired, under direction of city engineers; and (6) Clearly posted speed limit signs on Catalina Avenue. (7) Cover all haul vehicles and sweep or remove any debris that could fall off the truck and impact other drivers before the truck enters public streets.

T-1f Implement a Penn Street Traffic Program, in coordination with the City, evaluating: (1) Traffic levels and periods of heavy traffic along Penn Street; (2) Longer-term traffic monitoring to capture events and variation in traffic flow due to student populations and event traffic; (3) Construction truck traffic impacts on roadway capacity due to parking limitations and event activities; (4) Coordination with Whittier College to reduce impacts of events and parking issues along Penn Street; (5) Alternative parking locations and routes for Whittier College events; (6) Implementing safety improvements, including enhanced pedestrian crosswalks and signage; (7) Identifying sources of landfill traffic and ensuring the proposed Project truck traffic during operations (not construction) does not increase average truck traffic levels on Penn Street; (8) Limited hours for proposed Project truck traffic on Penn Street to avoid congested or impacted periods (e.g., limit truck traffic to periods when the landfill is open, i.e. between 8:00 a.m and 3:00 p.m.); (9) Coordinate periods of heavy traffic flow on Penn Street due to events and prevent use of Penn Street for proposed Project-related construction truck traffic during these events. (10) Prohibiting parking of Project-related traffic along any residential street for non-emergency purposes. (11) Implementing policies for trucks along Penn Street, including speed limits for trucks, yielding requirements to automobiles, and other issues as applicable.

(b) Facts in Support of Findings

Impacts from the proposed Project and cumulative projects would be significant at several intersections and a single roadway segment in the area. Table 4.7-18 in the

EIR lists these intersections and roadway segments and the cumulative impacts for each.

Improvements could be implemented at intersections to mitigate the significant cumulative impacts. These improvements would be implemented through a fair-share cost sharing program with the cumulative projects. However, implementing mitigation measures T-1a through T-1d and measure T-1f would also reduce the cumulative impacts to less than significant.

Improvement projects at the impacted intersections through a fair share agreement system could reduce the cumulative impacts. The proposed Project contribution to these mitigation measures would need to be evaluated through a fair-share analysis by the City or applicable authority.

In addition to mitigation measures T-1d, additional mitigation would include:

- Intersection #12 - Colima Road and Whittier Boulevard: Phase 1, 2, 3. Fair share contribution towards widening and improving the south leg of the intersection to provide a dual northbound left turn lane. Provide signal and striping improvements.
- Segment #9 - Mar Vista Street west of Colima Road: Phase 1, 2. The intersection of Colima Road and Mar Vista Street has adequate eastbound approach with a wider roadway and additional lanes. However, west of Colima Road to Catalina Avenue the roadway features bump outs at some corners and landscaped medians. These measures assist in reducing speed and creating an aesthetically pleasing environment. They also reduce roadway capacity. In order to address potential future cumulative impacts, this segment would need to remove the roadway enhancements.
- Intersection #3 - Hadley Street and Whittier Boulevard: Phase 2. Fair share contribution towards widening and improving the east and north leg of Whittier Boulevard at Hadley Street. Alter the existing striping to provide two southbound left turn lanes and a dedicated westbound right turn lane. These improvements are not likely to be accommodated within the existing right-of-way and additional right-of-way may need to be acquired.

Impacts associated with the Matrix City of La Habra Heights project, a proposed oil development project 1.6 miles south of the Preserve in the City of La Habra Heights, would also not produce cumulative impacts. Although Matrix has not defined the traffic route from this development, these traffic routes would likely require vehicles travelling south and east through the City of La Habra Heights, most likely along Las Palomas Drive to Hacienda Road or Santa Gertrudes Avenue towards Whittier Boulevard. There is no connection from the La Habra Heights site to Mar Vista Street and Colima Road.

With the recommended mitigation measures, cumulative impacts would be reduced to less than significant by improving intersections through a fair share program and implementing limits on the Project-related traffic and avoiding impacted areas.

H. HYDROLOGY AND WATER RESOURCES

1. Surface Runoff Caused by Site Grading and Drainage

Site grading and drainage improvements would alter existing drainage patterns and increase impervious surfaces, which could increase surface runoff, cause flooding, and adversely impact water quality. With the implementation of mitigation, any potential impact will be reduced to a level of insignificance.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant site grading and drainage impact. Specifically, the following mitigation will ensure a less than significant impact.

WR-1a A registered civil engineer experienced in drainage shall prepare a hydrologic study, using the corresponding hydraulic calculations for interception, conveyance, and discharge of runoff. Based on these studies, the engineer shall prepare a drainage plan in accordance with City and County requirements.

WR-1b A registered civil engineer experienced in drainage shall design and implement onsite detention facilities to reduce runoff to existing levels. Onsite detention ponds would attenuate the runoff intensity, such that an excessive peak flow would not occur during high intensity storms and there would be no increase in runoff intensity over existing conditions. The project engineer shall conduct an onsite hydrologic study to determine the approximate increase in storm runoff to accurately scale any onsite detention facilities.

Detention System Design

Onsite detention facilities have the potential to create habitats for mosquito breeding. Any onsite detention facilities shall be designed as a 'dry system' in accordance with the California Department of Public Health. A dry system requires that the facility be designed to discharge all captured water within 4 days. The design slope shall be adequate and properly compacted to prevent standing water and a low flow channel shall be incorporated to direct low flows to the system outlet. The basin shall also provide access for maintenance and inspection.

All catch basins and drainage facilities, including grass swales and bio-retention facilities shall also be designed to prevent standing water.

An operation and maintenance plan shall be incorporated to remove vegetation, sediment, and debris accumulation biannually with an inspection at the beginning of the wet season. Waste from maintenance shall be disposed of according to local and state regulations.

Onsite detention facilities shall be inspected quarterly for burrowing vector damage. Vector control measures shall be incorporated and maintained to prevent damage to the detention facility.

Onsite detention facilities shall be surrounded by 6-foot fencing and provided access with a gate and access road per Los Angeles County standards.

Discharge systems from onsite detention facilities shall be capable of discharging water from the basin while preventing a discharge of oil from the surface of the basin using a weir or subsurface discharge type design to prevent oil discharges from the basin in the event the basin reaches capacity and there is a crude oil spill.

WR-1c Impervious surfaces shall be minimized to prevent pollutant runoff. Gravel roads and parking areas shall be constructed to allow infiltration of stormwater and limit downstream runoff.

WR-1d Structural Best Management Practices shall be used to mitigate the increased pollutant runoff. Runoff from impervious areas shall be directed to grass swales, bio-swales, or detention ponds to aid in filtering out suspended solids and potential contaminants. Grass bio-swales shall not be planted with invasive species. The Best Management Practices shall be designed by a California registered, Qualified Storm Water Pollution Prevention Plan Developer.

WR-1e Pollution control products, such as catch basins with basket inserts, shall be used to catch trash and debris along with filtering elements such as silt fences, straw wattles and absorbent sponges within catch basins. Filter technology may be used to catch sediment, debris, oil, and pollutants.

WR-1f Permanent water quality testing, drainage device, and erosion control maintenance shall be implemented. Sampling and analysis shall be completed in accordance with National Pollutant Discharge Elimination System requirements.

WR-1g A California registered, Qualified Storm Water Pollution Prevention Plan Practitioner shall oversee and monitor construction Best Management Practices and stormwater management programs, in accordance with the State General Construction Permit and the Los Angeles Regional Water Quality Control Board.

(b) Facts in Support of Findings

Access road improvements, well pads, storage tank foundations, processing facilities, and other similar improvements would increase impervious area within the Project Site. The addition of asphalt and concrete paving within the Project Site boundaries would alter the runoff coefficients and increase overall storm runoff from the site. An increased storm runoff value could alter storm flow paths and increase storm flow velocities, which could ultimately overwhelm downstream storm drains. In addition, increased runoff intensities could result in increased erosion, sediment transport, and pollutant transport, causing alterations in adjacent stream flow pH, water temperature, turbidity, nutrients, organic compounds, and suspended sediment. In addition, the Project would include construction of steep cut slopes and sloped paved roads, which would further increase the impacts of the increased storm flows.

Mitigation Measure WR-1a requires a registered civil engineer experienced in drainage to prepare a hydrologic study, using the corresponding hydraulic calculations for interception, conveyance, and discharge of runoff. Based on these studies, the engineer shall prepare a drainage plan in accordance with City and County requirements.

Mitigation Measure WR-1b requires a registered civil engineer experienced in drainage to design and implement onsite detention facilities to reduce runoff to existing levels. Onsite detention ponds would attenuate the runoff intensity, such that an excessive peak flow would not occur during high intensity storms and there would be no increase in runoff intensity over existing conditions. The project engineer shall conduct an onsite hydrologic study to determine the approximate increase in storm runoff to accurately scale any onsite detention facilities.

Mitigation Measure WR-1c requires impervious surfaces to be minimized to prevent pollutant runoff. Gravel roads and parking areas shall be constructed to allow infiltration of stormwater and limit downstream runoff.

Mitigation Measure WR-1d requires Structural Best Management Practices to be used to mitigate the increased pollutant runoff. Runoff from impervious areas shall

be directed to grass swales, bio-swales, or detention ponds to aid in filtering out suspended solids and potential contaminants. Grass bio-swales shall not be planted with invasive species. The Best Management Practices shall be designed by a California registered, Qualified Storm Water Pollution Plan Developer.

Mitigation Measure WR-1e requires pollution control products, such as catch basins with basket inserts, to be used to catch trash and debris along with filtering elements such as silt fences, straw wattles and absorbent sponges within catch basins. Filter technology may be used to catch sediment, debris, oil, and pollutants.

Mitigation Measure WR-1f requires Permanent water quality testing, drainage device, and implementation of erosion control maintenance. Sampling and analysis shall be completed in accordance with National Pollutant Discharge Elimination System requirements.

Mitigation Measure WR-1g requires a California registered, Qualified Storm Water Pollution Prevention Plan Practitioner to oversee and monitor construction Best Management Practices and stormwater management programs, in accordance with the State General Construction Permit and the Los Angeles Regional Water Quality Control Board.

By implementing the above mitigation measures, impacts from Project-related activities can be reduced to a less than significant level.

2. Erosion Impacts Caused by Site Grading and Drainage Improvements

Site grading and drainage improvements would alter existing drainage patterns at the Project Site, which could increase erosion and impact water quality on or off-site. With the implementation of mitigation, any potential impact will be reduced to a level of insignificance.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant erosion impact. More specifically, the following mitigation will reduce any potential impact to less than significant levels.

WR-2a During construction operations, the Applicant shall implement stormwater management protection measures and wet weather measures. These measures would include temporary and permanent Best Management Practices to reduce the potential for erosion and sediment transport. Conventional measures typically recommended by the State Water Resource Board and the California Department of Transportation would reduce potentially significant erosion and runoff impact to less than significant levels:

Implement permanent erosion and sediment control measures:

- Minimize grading, clearing, and grubbing to preserve existing vegetation;
- Use mulches and hydroseed free of invasive plants to protect exposed soils;
- Use geotextiles and mats to stabilize soils;
- Use drainage swales and dissipation devices; and
- Use erosion control measures outlined in the California Stormwater Quality Association Best Management Practice Handbook.

Implement temporary Best Management Practice mitigation measures:

- Use silt fences, sandbags, and straw wattles;
- Use temporary sediment basins and check dams; and
- Use temporary Best Management Practices outlined in the California Stormwater Quality Association Best Management Practice Handbook.

Implement tracking control Best Management Practices to reduce tracking sediment offsite.

- Use stabilized construction entrance and exit with steel shakers;
- Use tire wash areas; and
- Use tracking control Best Management Practices outlined in the California Stormwater Quality Association Best Management Practice Handbook.

WR-2b The Applicant shall implement a Storm Water Pollution Prevention Plan using Best Management Practices and monitor and maintain stormwater pollution control facilities identified in the Storm Water Pollution Prevention Plan, in a manner consistent with the provisions of the Federal Water Pollution Control Act (National Pollutant Discharge Elimination System Program). Stormwater management protection measures and wet

weather measures shall be designed by a California registered, Qualified Storm Water Pollution Prevention Plan Developer. In addition, a California registered, Qualified Storm Water Pollution Prevention Plan Practitioner shall oversee and monitor construction Best Management Practices and stormwater management, in accordance with the State General Construction Permit and the Los Angeles Regional Water Quality Control Board.

(b) Facts in Support of Findings

Site grading and drainage improvements would alter existing drainage patterns at the Project Site, which could increase erosion and/or impact water quality on- or off-site. The Drilling and Testing Phase would include clearing and grubbing operations, access road improvements, and test well pad construction. The Design and Construction Phase would include full-scale grading and earthmoving, including construction of the paved access roads, both to the north and the south, grading the drilling pads, gas plant area, oil processing site, and truck loading area. Excavations would also be necessary to construct the proposed well cellars.

Grading the Project Site would include cut and fill. In addition to the grading operations, oil and gas pipelines and underground utilities, including water, gas and electricity, would be installed under the existing and new access roads. A sewer is also proposed to extend from the southwest portion of the Project Site, beneath the roadway, but above La Canada Verde Creek, and then extend southward, adjacent and parallel to the creek, until reaching a sewer tie-in on Catalina Avenue. Pipeline and sewer construction would necessitate temporary stockpiling of excavated soil adjacent to the trench.

These grading and construction activities would temporarily increase the amount of suspended solids in surface flows derived from the site during storm events, due to sheet erosion of exposed soil, thus potentially resulting in significant water quality impacts to La Canada Verde and Arroyo Pescadero creeks.

Mitigation Measure WR-2a requires that during construction operations, the Applicant shall implement stormwater management protection measures and wet weather measures. These measures would include temporary and permanent Best Management Practices to reduce the potential for erosion and sediment transport.

Mitigation Measure WR-2b requires the Applicant to implement a Storm Water Pollution Prevention Plan using Best Management Practices and monitor and maintain stormwater pollution control facilities identified in the Storm Water Pollution Prevention Plan, in a manner consistent with the provisions of the Federal Water Pollution Control Act (National Pollutant Discharge Elimination System Program). Stormwater management protection measures and wet weather measures shall be designed by a

California registered, Qualified Storm Water Pollution Prevention Plan Developer. In addition, a California registered, Qualified Storm Water Pollution Prevention Plan Practitioner shall oversee and monitor construction Best Management Practices and stormwater management, in accordance with the State General Construction Permit and the Los Angeles Regional Water Quality Control Board.

By implementing the above mitigation measures, impacts from Project-related activities can be reduced to a less than significant level.

3. Degradation of Surface Water Quality

New grading and construction, potential soil remediation, and/or drilling operations could degrade surface water quality. With the implementation of mitigation, this impact would be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant surface water quality impact. More specifically, the following mitigation will reduce any potential impact to less than significant levels.

WR-3a The proposed 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.

WR-3b An 18-inch berm shall be placed around the entire drilling rig to capture any spilled fluids.

WR-3c 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. 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.

WR-3d Oil spills shall be contained and cleaned according to measures outlined in the California Stormwater Quality Association Best Management Practice Handbook.

WR-3e An approved response manual and Oil Spill Contingency Plan 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 the Drilling and Testing phase. 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.

(b) Facts in Support of Findings

New well pad, road, pipeline, and related infrastructure construction activities could result in degradation of local drainages and creeks, including nearby La Canada Verde, Arroyo Pescadero, Arroyo San Miguel, and Leffingwell creeks, as well as two other nearby unnamed creeks. Potential construction related contaminants include solid and sanitary wastes, phosphorous, nitrogen, pesticides, oil and grease, concrete washout, construction chemicals, and construction debris. Similarly, operations could result in an incidental release of oil, oil-based mud, generator fuel, or maintenance related hazardous materials, which could introduce such substances to surface soils and waters.

Excavation and construction at the Project Site could encounter contaminated soils, which could be mobilized such that adjacent creek waters are adversely affected. Potential soil remediation activities (e.g., excavation, on-site biofarming [i.e., bioremediation], and/or offsite disposal of contaminated soil) could also result in incidental spills of petroleum products from excavation and grading equipment. Such contaminants would potentially impair surface water runoff.

The drilling operations would require approximately 4,500 gallons of water per day from a fire hydrant installed near the drill site. The drilling rig and associated equipment would be routinely exposed to water and small quantities of mud or petroleum-based substances, which could be spilled directly onto the surrounding ground surface. In addition, the proposed well cellars would be recessed below the ground surface. Incidental oil leakage or spills of oil-based substances could seep into the underlying groundwater and significantly impact water quality.

However, a pollution pan would be installed under the rig floor to contain and collect any oil-based drilling mud that may spill on the rig floor. The mud would be captured and contained in the catch pan and then returned to the active mud pit system by a cellar pump. The drilling pad would be constructed to allow any fluids spilled directly around the rig to flow into the well cellar. In addition, a 6-inch berm, lined with an impermeable membrane, would be placed around the entire drilling rig after rig installation. In the event that a leak should occur in the mud handling system, the leak would be contained directly around the rig and flow toward the well cellar. Rainwater accumulations within the bermed area around the rig would similarly flow into the well cellar, before being pumped into the active mud pit system. Stormwater from all other areas and facilities would be collected in a bermed water detention basin, located immediately adjacent to the Oil Processing Plant area and allowed to percolate into the ground. No stormwater would be allowed to drain from the Project Site into the surrounding area. As an extra precaution, a spill trailer at the drilling site would be equipped with absorbent material, small spill booms to contain and direct flow, plastic sheets, personal protective equipment, and rakes, shovels, and hand tools, to be used in the event of an oil spill.

Mitigation Measure WR-3a requires the proposed well cellar be lined with an impermeable membrane to prevent oil-based substances from seeping into groundwater supplies.

Mitigation Measure WR-3b requires an 18-inch berm be placed around the entire drilling rig to capture any spilled fluids.

Mitigation Measure WR-3c requires personnel at the site be trained in equipment use and containment and cleanup of an oil spill.

Mitigation Measure WR-3d requires oil spills be contained and cleaned according to measures outlined in the California Stormwater Quality Association Best Management Practice Handbook.

Mitigation Measure WR-3e requires an approved response manual and Oil Spill Contingency Plan be implemented to outline response actions in the event of a spill, including a spill response trailer, equipment, and personnel training.

By implementing the above mitigation measures, impacts from Project-related activities can be reduced to a less than significant level.

4. Depletion of Groundwater Supplies

Although the Project is not anticipated to cause a depletion of groundwater supplies, mitigation is recommended to reduce any already less than significant impact even further.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure the already less than significant depletion of groundwater supplies impact is reduced even further. More specifically, the following mitigation is imposed.

WR-6a Where feasible, the City of Whittier shall supply reclaimed water during construction and well drilling operations, to reduce water supply impacts.

WR-6b Where feasible, the Applicant shall implement water conservation measures during construction and well drilling operations, to reduce water supply impacts.

(b) Facts in Support of Findings

Approximately 2,000 gallons per day of water would be required for clearing and grading operations during the approximate four-week Drilling and Testing Phase and the six-month Design and Construction Phase. Following earth-moving activities, water would be used for concrete curing, hydro testing pipes, and general construction activities. It is anticipated that an average of 1,000 gallons of water would be required

each month to finish construction of the well pad and facilities. Subsequently, approximately 0.4 acre-feet (130,000 gallons) of water would be consumed while drilling each well, for a total of up to 60 wells. On a daily basis, approximately 4,500 gallons per day would be required.

Water would be obtained from the City of Whittier via its existing hydrant at the entry gate at Catalina Avenue. The City has indicated that there is sufficient water available for this increased water demand associated with oil drilling operations at the Project Site. As indicated in Section 4.13 of the EIR, Public Services and Utilities, the water demand associated with this Project would be minor compared to the overall water demand in the area. The Project would not require a new off-site water supply or new or expanded water entitlements. Therefore, there would be no impact on groundwater supplies such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. However, mitigation is imposed in order to reduce the already less than significant impact to an even lower level.

I. CULTURAL RESOURCES

1. Historical Resources

Ground disturbance could cause impacts to historical resources, such as well pads, roadways, and the landscape. However, with the implementation of mitigation, any impact would be reduced to a level of insignificance.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant historical resources impact. Specifically, the following mitigation will ensure a less than significant impact.

CR-1 Develop a monitoring plan, subject to City and Habitat Authority approval, for treatment of areas of direct impact to elements identified as contributing components of the Whittier Main Oil Field including, but not limited to, the following:

- Monitoring concurrent with construction grubbing at the locations of all oil well pads, allowing time for detailed field recordation of each pad that could not be obtained during survey level recording efforts due to heavy vegetation. Recordation should include photographs in digital or 35mm format, scaled plan-view drawings of the well pads, and written documentation that describes construction methods, details, and associated material composition.

- Monitoring concurrent with alteration of existing historic-period roadways to allow for detailed mapping of existing roadways as well as recordation of construction along a

representative segment(s) of the roadway to document the methods used over time as the oil fields evolved; first relying on dirt roads, followed by oil-paved roads, and finally asphalt-paved roads.

- Collection, analysis, reporting, and curation of any associated artifacts that might be unearthed during monitoring activities described above.

- Completion of a report of findings and update of appropriate Department of Parks and Recreation 523 forms to document the information obtained as a result of the mitigation/monitoring program.

(b) Facts in Support of Findings

The Project as currently proposed involves a limited number of alterations of well pad locations within the historic Whittier Oil Field and construction of roads and pipelines. As such, the proposed Project does not require Historic American Engineering Record documentation.

To ensure that the current Project does not result in a substantial adverse change to the significance of the Whittier Oil Field as a historical resource under CEQA, Mitigation Measure CR-1 is recommended.

Mitigation Measure CR-1 requires the Applicant to develop a monitoring plan, subject to City and Habitat Authority approval, for treatment of areas of direct impact to elements identified as contributing components of the Whittier Main Oil Field.

Monitoring must be conducted by a trained archaeologist under the supervision of a Los Angeles County Certified Archaeologist. The monitor must be empowered to halt or redirect construction equipment to be able to document any oil field-related features exposed as a result of construction, as well as to evaluate and document any previously unanticipated discoveries that may be uncovered.

If isolated artifacts are collected during monitoring, once analyzed, they would be donated to the Preserve for display purposes. Monitoring the Colima Road gas and crude pipeline is not recommended since archaeological sensitivity along the developed roadway appears low. Nonetheless, if unidentified archaeological deposits are exposed, construction must cease and a qualified monitor must evaluate the find.

With the mitigation described above, the impact is reduced to a less than significant level.

2. Human Remains

Construction could result in unanticipated disturbance to human remains. If human remains were encountered during grading and excavation, the potential for

disturbance of these remains would be a significant impact. With the implementation of mitigation, this impact would be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant human remains impact. Specifically, the following mitigation will ensure a less than significant impact.

CR-2 If human remains are exposed during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has been notified and can make the necessary findings as to origin and disposition of the remains pursuant to Public Resources Code 5097.98. Construction must halt in the area of the discovery of human remains, the area must be protected, and consultation and treatment shall occur as prescribed by law.

(b) Facts in Support of Findings

According to CEQA, "Archaeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 of the State Health and Safety Code." The State Public Resources Code also ensures the protection of human remains (Sections 5097.94, 5097.98, and 5097.99). Therefore, Mitigation Measure CR-2 is proposed.

Mitigation Measure CR-2 requires that if human remains are exposed during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has been notified and can make the necessary findings as to origin and disposition of the remains pursuant to Public Resources Code 5097.98. Construction must halt in the area of the discovery of human remains, the area must be protected, and consultation and treatment shall occur as prescribed by law.

If the remains were determined to be of Native American origin, the remains would be protected in place and the Native American Heritage Commission must be contacted by the Los Angeles County Coroner, and a Most Likely Descendant must be designated. Any further treatment of the remains would occur in consultation with the Most Likely Descendant, the Native American Heritage Commission, and a qualified archaeologist.

With the mitigation described above, the impact is reduced to a less than significant level.

3. Paleontological Resources

The Project could result in unanticipated disturbance to paleontological resources. Through mitigation, this impact would be reduced to a level of insignificance.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant paleontological resources impact. Specifically, the following mitigation will ensure a less than significant impact.

CR-3 If any paleontological resources are encountered during ground-disturbing activities in the Project area, activities in the immediate area of the find shall be halted and the discovery assessed (LSA 2007). A qualified paleontologist must evaluate the discovery and recommend appropriate treatment options pursuant to guidelines developed by the Society of Vertebrate Paleontology. A paleontological resource impact mitigation program for treatment of the resources would be developed and implemented.

(b) Facts in Support of Findings

At present, there are no known paleontological resources or unique geologic formations or sites located within the Project area. However, the Preserve is underlain by sedimentary formations that are considered to have a high sensitivity in regard to their potential for containing fossilized remains. Therefore, it is possible that paleontological resources could be discovered during ground disturbing activities associated with construction of Project components, including wells, road, pipelines, or other Project infrastructure. However, implementation of Mitigation Measure CR-3 would reduce potential impacts to unknown paleontological resources to a level less than significant.

Mitigation Measure CR-3 requires that if any paleontological resources are encountered during ground-disturbing activities in the Project area, activities in the immediate area of the find shall be halted and the discovery assessed. A qualified paleontologist must evaluate the discovery and recommend appropriate treatment options pursuant to guidelines developed by the Society of Vertebrate Paleontology. A paleontological resource impact mitigation program for treatment of the resources would be developed and implemented.

With the mitigation described above, the impact is reduced to a less than significant level.

4. Cumulative Cultural Resources Impact

The Project, along with other projects, has the potential to cause a cumulative cultural resources impact. However, with mitigation, this impact would be reduced to a level of insignificance.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant cumulative impact. Specifically, the following mitigation will ensure a less than significant impact.

CR-1 Develop a monitoring plan, subject to City and Habitat Authority approval, for treatment of areas of direct impact to elements identified as contributing components of the Whittier Main Oil Field including, but not limited to, the following:

- Monitoring concurrent with construction grubbing at the locations of all oil well pads, allowing time for detailed field recordation of each pad that could not be obtained during survey level recording efforts due to heavy vegetation. Recordation should include photographs in digital or 35mm format, scaled plan-view drawings of the well pads, and written documentation that describes construction methods, details, and associated material composition.

- Monitoring concurrent with alteration of existing historic-period roadways to allow for detailed mapping of existing roadways as well as recordation of construction along a representative segment(s) of the roadway to document the methods used over time as the oil fields evolved; first relying on dirt roads, followed by oil-paved roads, and finally asphalt-paved roads.

- Collection, analysis, reporting, and curation of any associated artifacts that might be unearthed during monitoring activities described above.

- Completion of a report of findings and update of appropriate Department of Parks and Recreation 523 forms to document the information obtained as a result of the mitigation/monitoring program.

CR-2 If human remains are exposed during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has been notified and can make the necessary findings as

to origin and disposition of the remains pursuant to Public Resources Code 5097.98. Construction must halt in the area of the discovery of human remains, the area must be protected, and consultation and treatment shall occur as prescribed by law.

CR-3 If any paleontological resources are encountered during ground-disturbing activities in the Project area, activities in the immediate area of the find shall be halted and the discovery assessed (LSA 2007). A qualified paleontologist must evaluate the discovery and recommend appropriate treatment options pursuant to guidelines developed by the Society of Vertebrate Paleontology. A paleontological resource impact mitigation program for treatment of the resources would be developed and implemented.

(b) Facts in Support of Findings

Erosion and increased site usage, such as the opening of previously inaccessible land, restoration efforts, establishment of new transportation routes and increased access or removal of vegetation, can result in cumulative impacts to archaeological deposits or structural remains. These additions would also alter the terrain, which is considered an important component of the Whittier Oil Field landscape. Mitigation measures proposed for Project impacts would reduce the impacts to be insignificant. Based on the records and literature search there would be no cumulative impacts to known prehistoric resources. A historical archaeological resource itself, the Whittier Oil Field would be impacted, and there is a potential for cumulative impacts to previously unrecorded prehistoric or historical archaeological deposits. These same archaeological deposits may have been impacted by historical exploitation of the oil field, and additional construction could further erode these non-renewable resources.

Either way, with the implementation of the above identified mitigation, any cumulative impact will be reduced to less than significant.

J. WASTEWATER

1. Sanitary Wastewater Generation Impact on Treatment Facility Capacity

The proposed Project would generate sanitary wastewater that could exceed the existing capacity of downstream sewer and wastewater treatment facilities. Through the implementation of mitigation, any impact would be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant sanitary wastewater generation impact. Specifically, the following mitigation will ensure a less than significant impact.

WAS-1 A Registered Civil Engineer shall evaluate the capacity of the existing sewer line system, beginning at the proposed tie-in at Catalina Avenue and continuing downstream to the County Sanitation Districts of Los Angeles County sewer system, prior to any connections. A 7-day capacity performance test shall be performed, based on County 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 District for review and approval. In the event that existing sanitary sewer facilities are insufficient to accommodate increased flows from the proposed Project Site, the Applicant shall provide temporary mobile sanitary facilities (i.e., toilet, sink, and urinal) for onsite personnel, as necessary.

(b) Facts in Support of Findings

During the Design and Construction Phase and Operations and Maintenance Phase, Project operations could impact the capacity of existing sanitation services, as a result of construction and use of new restrooms at the Project Site.

In general, a maximum of 30 personnel is estimated to create 20 to 100 gallons per day of additional effluent. Matrix would construct a new 4-inch sewer pipeline from the new facility office within the Project Site to the existing City of Whittier Sewer and Water District sewer system, along Catalina Avenue. The sewer pipeline would service two restrooms at the Project Site. Portable toilets would also be provided at other strategic locations throughout the Project Area.

It is unclear whether the existing sewer along Catalina Avenue, as well as downstream sewer and wastewater treatment facilities, have the capacity to support the increased sewage volume associated with the Project. Overloading sanitary sewer systems can ultimately result in releases of untreated sewage to surface waters and/or the ocean. Therefore, impacts are considered potentially significant.

Mitigation Measure WAS-1 requires a registered Civil Engineer evaluate the capacity of the existing sewer line system, beginning at the proposed tie-in at Catalina Avenue and continuing downstream to the County Sanitation Districts of Los Angeles County sewer system, prior to any connections. With the mitigation described, the impact is reduced to a less than significant level.

2. Wastewater Generation Impact on Water Quality

The proposed Project would generate wastewater that could impact water quality of nearby drainages and creeks. With mitigation, this impact would be reduced to a level of insignificance.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant wastewater generation impact on water quality. Specifically, the following mitigation will ensure a less than significant impact.

WR-3a The proposed 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.

WR-3b An 18-inch berm shall be placed around the entire drilling rig to capture any spilled fluids.

WR-3c 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. 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.

WR-3d Oil spills shall be contained and cleaned according to measures outlined in the California Stormwater Quality Association Best Management Practice Handbook.

WR-3e An approved response manual and Oil Spill Contingency Plan 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 the Drilling and Testing phase. 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.

(b) Facts in Support of Findings

During the Drilling and Testing Phase, up to 7,200 barrels per day of wastewater would be produced during oil well drilling. These liquids would be temporarily stored in onsite tanks and then transported offsite by trucks. Therefore,

with the exception of possible spills, water quality impacts within adjacent drainages and creeks would be less than significant with mitigation.

Similarly, during the Operations and Maintenance Phase, up to 7,200 barrels per day of wastewater would be produced during oil well drilling. However, up to eight injection wells would be drilled for disposal of produced water, which would be injected into the oil producing formations from which the water was originally derived. Therefore, with the exception of possible spills and groundwater impacts associated with injection activities, water quality impacts within adjacent drainages and creeks would be less than significant with mitigation.

Surface wastewater could be generated during construction, drilling, oil processing, and truck loading. This wastewater could contain various pollutants associated with these activities. However, a pollution pan would be installed under the rig floor to contain and collect any oil-based drilling mud that may spill on the rig floor. The mud would be captured and contained in the catch pan and then returned to the active mud pit system by a cellar pump. The drilling pad would be constructed to allow any fluids spilled directly around the rig to flow into the well cellar. In addition, a 6-inch berm, lined with an impermeable membrane, would be placed around the entire drilling rig after rig installation. In the event that a leak should occur in the mud handling system, the leak would be contained directly around the rig and flow toward the well cellar.

Rainwater accumulations within the bermed area around the rig would similarly flow into the well cellar, before being pumped into the active mud pit system. Stormwater from all other areas and facilities would be collected in a bermed water detention basin, located immediately adjacent to the Oil Processing Plant area and allowed to percolate into the ground. Excess stormwater would be hauled offsite in a vacuum truck. No stormwater would be allowed to drain from the Project Site into the surrounding area. As an extra precaution, a spill trailer at the drilling site would be equipped with absorbent material, small spill booms to contain and direct flow, plastic sheets, personal protective equipment, and rakes, shovels, and hand tools, to be used in the event of an oil spill. As a result, water quality within adjacent drainages and creeks would be less than significant with mitigation.

Implementing mitigation measures WR-3a through WR-3e would reduce the severity of wastewater spill impacts to less than significant.

K. LAND USE POLICY AND CONSISTENCY

1. Noise Incompatibility from Drilling, Construction, and Operations

Noise generated independently from test drilling, construction, and potential future operations could be incompatible with adjacent land uses. Through the implementation of mitigation, this impact will be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant noise land use incompatibility impact. Specifically, the following mitigation will ensure a less than significant impact.

N-1a Limit all construction activity at the Project Site (including deliveries and arriving and departing workers, and construction activities during the testing phase) to the hours from 7:00 a.m. to 6:00 p.m., Monday through Friday, and from 8:00 a.m. to 5:00 p.m. on Saturdays and prohibit activities on Sundays and federal holidays. In addition, for construction work within the County of Los Angeles unincorporated areas, the Applicant shall ensure that noise levels do not exceed County municipal code levels with a noise study and monitoring and measures, including high grade mufflers, engine tuning, and management of backup alarms. All contracts with construction personnel shall specify the allowable work hours and the study and monitoring requirements.

N-1b Maintain all construction machinery according to the manufacturers' specifications and ensure that mufflers and silencers are maintained properly. Back-up OSHA noise indicators shall be ambient sensitive and self-adjusting to minimize backup indicator noise or flaggers shall be used in the place of backup alarms (as allowed by OSHA).

N-2a The Applicant shall develop and implement a Noise Reduction Plan for all drilling (testing, development, and re-drills and workovers) to ensure that the Leq noise levels from activities, measured as a 1-hour Leq, is less than a 3-dBA increase at the closest sensitive residential receptor and less than a 5-dBA increase at the closest sensitive recreational receptor. The Plan shall be prepared by an acoustic consultant approved by the City and the Plan shall be subject to City review and concurrence. The measures in the Plan shall include but not be limited to the following: (1) enclose the drill rig area in soundproof barriers 30 feet high on the south and west sides; (2) utilize a central generator type drilling rig, with the generators the only diesel engines onsite and enclosed in a soundproofed generator house with appropriate grade muffler systems, or install sound enclosures around all diesel engines with appropriate grade muffler systems; (3) install noise barriers around the drill rig floor, mud mixers, cleaners, conveyers, and shakers; (4) enclose drawworks brake area with

soundproofing shroud; (5) install pads on V-door and other appropriate areas, timbers and pads on 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 (for both drilling and workover operations); (6) enclose the drilling mast boards area (on drilling and workover rigs) with barriers 2 inches thick and 2 pounds per square foot in density at least 5 feet above and below any noise sources; and (7) install ambient sensitive backup indicators on all equipment requiring backup indicators.

N-2b The Applicant shall institute a quiet-mode for all drilling activities between 7 p.m. and 7 a.m. Quiet-mode operation would apply to both drilling and operations and would involve: (1) using signalers for all backup operations instead of backup alarms and turning off backup alarms; (2) using radios instead of voice communication; (3) minimizing crane use and pipe handling operations, pipe offloading from trucks and board loading during daytime to the maximum extent feasible and nighttime loading only for safety reasons; (4) prohibiting material and supply deliveries to the Project Site between the hours of 7 p.m. and 7 a.m., with exceptions only for safety; and (5) limiting process alarms and communications over the broadcast system to the maximum extent feasible during all operations and use only for safety reasons.

N-2c Provide a comprehensive noise abatement study, including noise and vibration monitoring at nearby sensitive receptors and continuous monitoring near drilling activities, under contract and supervision of the City, to monitor noise and vibration from the drilling and operations in the community. The City shall have the authority to shut-down operations and require additional mitigation if the noise criteria are exceeded.

(b) Facts in Support of Findings

The drilling, construction, and potential future operations would be in close proximity to land uses zoned as open space and residential. Short-term noise monitoring was performed at a total of six locations around the perimeter of the proposed Project Site. These locations were selected to represent the closest residential and recreational uses to the proposed Project Site. Proposed Project activities during all phases may generate significant noise impacts that would be incompatible with these adjacent land uses.

Implementing mitigation measures N-1a through N-1b and N-2a through N-2c would be necessary to minimize impacts to less than significant levels. Mitigation measures include, but are not limited to, noise barriers, limited hours of operation where applicable, equipment selection and maintenance, and relocation of the ranger residence.

With the mitigation described above, the impact is reduced to a less than significant level.

2. Noise Incompatibility from Concurrent Drilling and Operations

Concurrent drilling and operational activities at the Project Site would increase noise levels that could be incompatible with adjacent land uses. With mitigation, however, this impact would be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant noise land use incompatibility impact. Specifically, the following mitigation will ensure a less than significant impact.

N-1a Limit all construction activity at the Project Site (including deliveries and arriving and departing workers, and construction activities during the testing phase) to the hours from 7:00 a.m. to 6:00 p.m., Monday through Friday, and from 8:00 a.m. to 5:00 p.m. on Saturdays and prohibit activities on Sundays and federal holidays. In addition, for construction work within the County of Los Angeles unincorporated areas, the Applicant shall ensure that noise levels do not exceed County municipal code levels with a noise study and monitoring and measures, including high grade mufflers, engine tuning, and management of backup alarms. All contracts with construction personnel shall specify the allowable work hours and the study and monitoring requirements.

N-1b Maintain all construction machinery according to the manufacturers' specifications and ensure that mufflers and silencers are maintained properly. Back-up OSHA noise indicators shall be ambient sensitive and self-adjusting to minimize backup indicator noise or flaggers shall be used in the place of backup alarms (as allowed by OSHA).

N-2a The Applicant shall develop and implement a Noise Reduction Plan for all drilling (testing, development, and re-drills and workovers) to ensure that the Leq noise levels from activities, measured as a 1-hour Leq, is less than a 3-dBA increase at the closest sensitive residential receptor

and less than a 5-dBA increase at the closest sensitive recreational receptor. The Plan shall be prepared by an acoustic consultant approved by the City and the Plan shall be subject to City review and concurrence. The measures in the Plan shall include but not be limited to the following: (1) enclose the drill rig area in soundproof barriers 30 feet high on the south and west sides; (2) utilize a central generator type drilling rig, with the generators the only diesel engines onsite and enclosed in a soundproofed generator house with appropriate grade muffler systems, or install sound enclosures around all diesel engines with appropriate grade muffler systems; (3) install noise barriers around the drill rig floor, mud mixers, cleaners, conveyers, and shakers; (4) enclose drawworks brake area with soundproofing shroud; (5) install pads on V-door and other appropriate areas, timbers and pads on 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 (for both drilling and workover operations); (6) enclose the drilling mast boards area (on drilling and workover rigs) with barriers 2 inches thick and 2 pounds per square foot in density at least 5 feet above and below any noise sources; and (7) install ambient sensitive backup indicators on all equipment requiring backup indicators.

N-2b The Applicant shall institute a quiet-mode for all drilling activities between 7 p.m. and 7 a.m. Quiet-mode operation would apply to both drilling and operations and would involve: (1) using signalers for all backup operations instead of backup alarms and turning off backup alarms; (2) using radios instead of voice communication; (3) minimizing crane use and pipe handling operations, pipe offloading from trucks and board loading during daytime to the maximum extent feasible and nighttime loading only for safety reasons; (4) prohibiting material and supply deliveries to the Project Site between the hours of 7 p.m. and 7 a.m., with exceptions only for safety; and (5) limiting process alarms and communications over the broadcast system to the maximum extent feasible during all operations and use only for safety reasons.

N-2c Provide a comprehensive noise abatement study, including noise and vibration monitoring at nearby sensitive receptors and continuous monitoring near drilling activities, under contract and supervision of the City, to monitor noise and vibration from the drilling and operations in the community. The City shall have the authority to shut-down

operations and require additional mitigation if the noise criteria are exceeded.

N-4 The Applicant shall develop and implement a Noise Reduction Plan for all operations to ensure that Leq noise levels from operational activities, measured as 1-hour Leq, produce less than a 3 dBA increase over the minimum baseline hourly average level at the closest residential receptor to the facility. The measures in the Plan shall include, but not be limited to: (1) installing sound enclosures or buildings around all compressors; (2) installing noise barriers around all pumps and air coolers; (3) installing ambient-sensitive backup indicators on all equipment requiring backup indicators; (4) installing sound enclosures or buildings around all the oil area pumps (e.g., shipping, IGFC, water injection, water booster, reject pumps); (5) installing sound enclosures or buildings around refrigeration units; (6) installing a secondary, 16-foot tall sound wall on the south, west and north sides of the gas plant; (7) ensuring that all office equipment (i.e., air conditioners, heating, ventilation) produces low noise levels or is surrounded by noise barriers; and (8) limiting traffic on the North Access Road to within 7 a.m. to 7 p.m., except for emergencies.

(b) Facts in Support of Findings

The drilling and potential future operations would be in proximity to land uses zoned as open space and residential. Short-term noise monitoring was performed at a total of six locations around the perimeter of the proposed Project Site. These locations were selected to represent the closest residential and recreational uses to the proposed Project Site. Proposed Project activities during all phases could generate significant noise impacts that would be incompatible with these adjacent land uses.

Noise generated by drilling at the Project Site and operations activities at the Project Site taking place at the same time are sufficiently distant from sensitive receptors and would be considered less than significant with mitigation relative to adjacent recreational uses.

Implementing mitigation measures N-1a through N-1b, N-2a through N-2c, and N-4 would be necessary to minimize impacts to less than significant levels. Mitigation measures include, but are not limited to, noise barriers, limited hours of operation where applicable, equipment selection and maintenance, and relocation of the ranger residence.

With the mitigation described above, the impact is reduced to a less than significant level.

3. Glare and Nighttime Lighting Incompatibility

Future oil field development could increase nighttime lighting and glare inconsistent with surrounding land uses. However, with mitigation, this impact would be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant glare and nighttime lighting incompatibility impact. Specifically, the following mitigation will ensure a less than significant impact.

AE-1b Within 30 days of installation, all structures visible from public locations at the well or processing sites shall be painted non-reflective earth-tone colors or otherwise surfaced with a color or textured surface in consultation with the City, so that they are less obtrusive to the surrounding area.

AE-4 All point lighting sources that may be introduced onsite in support of nighttime operations shall be screened and directed to prevent offsite spillover lighting effects. Spillover lighting shall be limited to 0.1 fc within 30 feet of facility boundaries. Outdoor lighting should be restricted to only those lights that are required by code for lighting building exteriors and safety and security needs. Consistent with public safety needs, street lighting, pedestrian walkway lighting, and parking lot lighting shall use light fixtures that shield and direct light with a backlight shield or other equivalent type of shielding to minimize light spill-over effects into adjacent areas. Light standard heights shall distribute light at ground level consistent with light levels for security, spill-over effects, and efficiency.

(b) Facts in Support of Findings

Introducing night lighting in areas surrounding the proposed Project Site may create visual impacts that would be potentially significant but could be mitigated to less than significant levels by complying with existing city regulations and implementing mitigation measure AE-1b and AE-4.

Drilling at the proposed Project Site would be continuous, 24 hours per day, seven days per week. After full field development is complete, an estimated average of three wells will be re-drilled per year for the life of the proposed Project. Night lighting for safety during new well drilling and 24-hour operations may also create

visual impacts. In these cases, the requirement to shield the fixed lighting sources on the drill rig would reduce temporary night lighting from the drill rig. During the operations phase, lighting would be appropriately shielded at night.

Therefore, the impacts to surrounding land uses from nighttime lighting and glare would be considered significant. However, by implementing mitigation measures AE-1b and AE-4 impacts would be reduced to less than significant.

With the mitigation described above, the impact is reduced to a less than significant level.

4. Incompatibility from Emissions and Odors

Emissions and odors from drilling and operations could be incompatible with adjacent land uses. However, with mitigation, this impact would be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant emissions and odor incompatibility impact. Specifically, the following mitigation will ensure a less than significant impact.

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. The Plan shall also address fugitive dust measure impacts to native habitats. Fugitive dust mitigation measures in the plan should include the following:

- Apply water every 3 hours to disturbed areas within a construction site (61% reduction).
- Require minimum soil moisture of 12% for earthmoving, by using a moveable sprinkler system or water truck. Moisture content can be verified by lab sample or moisture probe (69% reduction).
- Limit on-site vehicle speeds on unpaved roads to 15 mph with radar enforcement (57% reduction) and posting of speed limits.
- Replace ground cover, approved by the Habitat Authority, in disturbed areas as quickly as possible (5% reduction).

- 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% reduction).

- Install gravel bed trackout apron (3 inches deep, 25 feet long, 12 feet wide per lane, and edged by rock berm or row of stakes) to reduce mud and dirt trackout from unpaved truck exit routes (46 to 80% reduction). Water industrial unpaved road three times per day (61% reduction).

- Water industrial unpaved road three times per day (61% reduction).

- Water storage piles by hand or apply cover when wind events are declared, according to SCAQMD Rule 403 when instantaneous wind speeds exceed 25 miles per hour (90% reduction).

- Appoint a construction relations officer to act as a community liaison concerning onsite construction issues, such as dust generation.

AQ-1b Treat all dirt roads with water three times per day prior to and during the Drilling and Resting Phase pad clearing to substantially reduce dirt road fugitive dust emissions.

AQ-1c Treat all roads (pave or apply non-toxic soil binders as approved by the Habitat Authority with at least 80% effectiveness) before beginning the development phase pad grading and facility construction to substantially reduce dirt road fugitive dust emissions during those phases of construction.

AQ-1d The Applicant shall implement a NOx reduction program including the following, or equivalent, measures:

- All off-road construction equipment shall be tuned and maintained according to manufacturers' specifications.

- Any temporary electric power shall be obtained from the electrical grid, rather than portable diesel or gasoline generators.

- Soil hauling shall be coordinated with the Savage Canyon Landfill to receive the soil to limit haul truck travel distance, and utilize trucks that comply with the EPA 2010 model year emissions requirements.

- All off-road diesel construction equipment with greater than 100-horsepower engines shall meet Tier 4 NOx requirements. If the lead agency determines that a Tier 4 fleet or portion thereof cannot be obtained, the lead agency shall require the use of construction equipment that meets Tier 3 emissions requirements or utilize other CARB-verified emission control technologies to achieve the same level of emission reduction.

- During the pad and access road grading phase, all off-road dump trucks shall meet EPA 2010 model year NOx emission requirements. If the lead agency determines that a 2010 model year truck fleet or portion thereof cannot be obtained the lead agency shall require the use of trucks that meet EPA 2007 model year NOx emissions requirements. If the Project's fleet requirements cannot be met with 2010 or 2007 EPA model year truck emissions or portion thereof the lead agency shall require a certified NOx emissions level of less than 2.0g/bhp-hour for trucks used at the Project Site during the pad and access road grading phase.

- 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 when each piece of equipment is mobilized.

AQ-2a The Applicant shall comply with all SCAQMD regulations, including but not limited to Regulation IV (Prohibitions), Regulation XIII (New Source Review), Regulation XI (Source Specific Standards), and Regulation XIV (New Source Review for Toxic Air Contaminants). The operator shall implement best available control technology and obtain emission offsets as required by SCAQMD Regulation XIII and/or Regulation XX for new and modified permitted emission sources. Emission offsets are required for all emission increases associated with stationary sources, thus, minimizing the impacts associated with emissions from stationary sources.

AQ-2b The Applicant shall implement a program to reduce NOx, VOC, and PM emissions, including:

- All drilling engines shall meet EPA Tier 3 emissions levels, or utilize other CARB-verified emission control technologies to achieve the same level of emission reduction, or utilize electric engines.
- Treat all used Preserve dirt roads that will be used (gravel or apply soil binders with at least 80% effectiveness) or pave all Preserve dirt roads that will be used during test drilling.
- Limit onsite truck idling to less than 5 minutes.
- Electrify service equipment and auxiliary power units where feasible.
- Use clean street sweepers during operations.
- Pave roads and road shoulders during operational phase.
- Utilize trucks that meet EPA 2010 emission standards and off-road equipment that meets EPA 2015 emissions levels to the extent feasible.
- 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.
- Install only internal floating roof tanks, or utilize a more efficient vapor recovery system for handling organic liquids (crude oil) or some other equivalent method to reduce fugitive emissions to less than the SCAQMD CEQA thresholds.
- Use low-emissions flare systems to achieve flare NOx emissions of less than 0.06 lb/mmBTU, according to SCAQMD BACT requirements.
- Limit flaring and drilling during the peak day to the equivalent of drilling and full-flow flaring combined to less than 3 hours per day (at full gas plant flow or the equivalent throughput) or limiting flaring only to less than 4 hours per day (at full gas plant flow or the equivalent throughputs).
- Prohibit use of workover rigs at the same time as drilling rigs to reduce peak day emissions

- Further reduce NOx emission by either (1) Purchasing emission offsets to reduce remaining NOx emissions to less than significant levels or (2) utilizing Tier 4 engines on the drilling rig sufficient to reduce daily emissions to less than the thresholds, or (3) electrifying all or portions of the drilling rig engines to reduce NOx emissions to less than the thresholds.

AQ-3a The Operator shall have a gas buster and SCAQMD-approved portable flare at the oil field and available 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 Los Angeles County Fire Chief and the SCAQMD.

AQ-3b The Operator 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 submit a report of the breakdown to the Los Angeles County Fire Chief and the SCAQMD, which shall detail the corrective actions the Operator shall take to avoid exceeding the tank relief pressure.

AQ-3c The Operator shall develop an Odor Minimization Plan. The Odor Minimization Plan shall address potential sources of odors from all oil field equipment, including wells and drilling operation, 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.

AQ-3d The Operator shall develop an Air Monitoring Plan. The Plan shall provide for the monitoring of total hydrocarbon vapors and hydrogen sulfide at each well drill and re-drilling site and total hydrocarbon vapors at the gas plant. At all times during drilling and re-drilling operations, the Operator shall maintain monitoring equipment that shall monitor and digitally record the levels of hydrogen sulfide

and total hydrocarbon vapors. Monitors shall be installed at the edge of the drill pad and around the outer edge of the gas plant. Such monitors shall provide automatic alarms that are audible or visible to the Operator of the drilling equipment for the drill rig monitors, and gas plant for the gas plant monitors, 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 H₂S and 500 and 1,000 ppm hydrocarbons, with the higher level requiring shut-down of drilling or gas plant operations and notification to appropriate agencies, including the Los Angeles County 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 Processing, or applicable location.

AQ-3e The Operator shall use an odor suppressant spray system or vapor capture hood and carbon filter 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 (e.g., residences, hiking trails, Ranger Residence).

AQ-5 The Applicant shall install CARB-verified Level 3 diesel catalysts on all diesel-powered drilling equipment or utilize diesel engines that have an equivalent PM emission rate (Tier 4 engines) or electric drilling rigs. The current list of CARB-Verified Level 3 diesel catalysts is available from <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>. Catalysts or engine certifications shall demonstrate achieving 85% reduction for diesel particulate matter

(b) Facts in Support of Findings

New equipment and new drilling could cause emissions and odor events. Various components in the new equipment could leak and cause odors. New operations would include using tanks that could potentially lead to odor impacts. New drilling would result in emissions from drilling muds during operations. Some of these types of releases could reach recreational and residential areas surrounding the proposed Project Site. These would be considered a significant impact. However, by implementing mitigation measures AQ-1a through AQ-1d, AQ-2a and AQ-2b, AQ-3a through AQ-3e, AQ-4, and AQ-5, impacts would be reduced to less than significant.

With the mitigation described above, the impact is reduced to a less than significant level. Generally, these measures require that a fugitive dust plan be adopted, SCAQMD regulations be followed, a program to reduce NOx, VOC and PM emissions be established, that an odor minimization plan be adopted and that installation of diesel catalyst be put in place. With these various measures, any incompatibility will be eliminated.

5. Conflict with Adopted Land Use Plans, Policies, and Ordinances

The proposed Project conflicts with adopted land use plans, policies, ordinances, habitat conservation plans, or planning efforts to protect the recreational resources of the area. However, through the adoption of mitigation, no incompatibility will exist.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant land use incompatibility impact from a conflict with adopted plans, policies and ordinances. Specifically, the following mitigation will ensure a less than significant impact.

AE-1a Landscaping with native vegetation shall be planted at the periphery of the Project Site for the specific purpose of beautifying and screening the operations from adjoining residential and recreational areas, adjacent public streets, and highways. Berms shall be used in combination with landscaping where it would further reduce visibility. Care should be taken to ensure that the proposed screening does not affect existing desirable views by neighboring properties. A Landscaping Plan shall be prepared to address berms, screening, irrigation, and planting protocols. The Plans and vegetation selection shall be reviewed and approved by the City and the Habitat Authority. The Habitat Authority and a certified landscape architect shall implement and monitor compliance with the Landscaping Plan. Landscaping at the site shall be inspected regularly and maintained in good condition.

AE-1b Within 30 days of installation, all structures visible from public locations at the well or processing sites shall be painted non-reflective earth-tone colors or otherwise surfaced with a color or textured surface in consultation with the City, so that they are less obtrusive to the surrounding area.

AE-4 All point lighting sources that may be introduced onsite in support of nighttime operations shall be screened

and directed to prevent offsite spillover lighting effects. Spillover lighting shall be limited to 0.1 fc within 30 feet of facility boundaries. Outdoor lighting should be restricted to only those lights that are required by code for lighting building exteriors and safety and security needs. Consistent with public safety needs, street lighting, pedestrian walkway lighting, and parking lot lighting shall use light fixtures that shield and direct light with a backlight shield or other equivalent type of shielding to minimize light spill-over effects into adjacent areas. Light standard heights shall distribute light at ground level consistent with light levels for security, spill-over effects, and efficiency.

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. The Plan shall also address fugitive dust measure impacts to native habitats. Fugitive dust mitigation measures in the plan should include the following:

- Apply water every 3 hours to disturbed areas within a construction site (61% reduction).
- Require minimum soil moisture of 12% for earthmoving, by using a moveable sprinkler system or water truck. Moisture content can be verified by lab sample or moisture probe (69% reduction).
- Limit on-site vehicle speeds on unpaved roads to 15 mph with radar enforcement (57% reduction) and posting of speed limits.
- Replace ground cover, approved by the Habitat Authority, in disturbed areas as quickly as possible (5% reduction).
- 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% reduction).
- Install gravel bed trackout apron (3 inches deep, 25 feet long, 12 feet wide per lane, and edged by rock berm or row of stakes) to reduce mud and dirt trackout from unpaved truck exit routes (46 to 80% reduction). Water industrial unpaved road three times per day (61% reduction).
- Water industrial unpaved road three times per day (61% reduction).

- Water storage piles by hand or apply cover when wind events are declared, according to SCAQMD Rule 403 when instantaneous wind speeds exceed 25 miles per hour (90% reduction).

- Appoint a construction relations officer to act as a community liaison concerning onsite construction issues, such as dust generation.

AQ-1b Treat all dirt roads with water three times per day prior to and during the Drilling and Resting Phase pad clearing to substantially reduce dirt road fugitive dust emissions.

AQ-1c Treat all roads (pave or apply non-toxic soil binders as approved by the Habitat Authority with at least 80% effectiveness) before beginning the development phase pad grading and facility construction to substantially reduce dirt road fugitive dust emissions during those phases of construction.

AQ-1d The Applicant shall implement a NOx reduction program including the following, or equivalent, measures:

- All off-road construction equipment shall be tuned and maintained according to manufacturers' specifications.

- Any temporary electric power shall be obtained from the electrical grid, rather than portable diesel or gasoline generators.

- Soil hauling shall be coordinated with the Savage Canyon Landfill to receive the soil to limit haul truck travel distance, and utilize trucks that comply with the EPA 2010 model year emissions requirements.

- All off-road diesel construction equipment with greater than 100-horsepower engines shall meet Tier 4 NOx requirements. If the lead agency determines that a Tier 4 fleet or portion thereof cannot be obtained, the lead agency shall require the use of construction equipment that meets Tier 3 emissions requirements or utilize other CARB-verified emission control technologies to achieve the same level of emission reduction.

- During the pad and access road grading phase, all off-road dump trucks shall meet EPA 2010 model year NOx emission requirements. If the lead agency determines that

a 2010 model year truck fleet or portion thereof cannot be obtained the lead agency shall require the use of trucks that meet EPA 2007 model year NOx emissions requirements. If the Project's fleet requirements cannot be met with 2010 or 2007 EPA model year truck emissions or portion thereof the lead agency shall require a certified NOx emissions level of less than 2.0g/bhp-hour for trucks used at the Project Site during the pad and access road grading phase.

- 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 when each piece of equipment is mobilized.

AQ-2a The Applicant shall comply with all SCAQMD regulations, including but not limited to Regulation IV (Prohibitions), Regulation XIII (New Source Review), Regulation XI (Source Specific Standards), and Regulation XIV (New Source Review for Toxic Air Contaminants). The operator shall implement best available control technology and obtain emission offsets as required by SCAQMD Regulation XIII and/or Regulation XX for new and modified permitted emission sources. Emission offsets are required for all emission increases associated with stationary sources, thus, minimizing the impacts associated with emissions from stationary sources.

AQ-2b The Applicant shall implement a program to reduce NOx, VOC, and PM emissions, including:

- All drilling engines shall meet EPA Tier 3 emissions levels, or utilize other CARB-verified emission control technologies to achieve the same level of emission reduction, or utilize electric engines.

- Treat all used Preserve dirt roads that will be used (gravel or apply soil binders with at least 80% effectiveness) or pave all Preserve dirt roads that will be used during test drilling.

- Limit onsite truck idling to less than 5 minutes.

- Electrify service equipment and auxiliary power units where feasible.

- Use clean street sweepers during operations.
- Pave roads and road shoulders during operational phase.
- Utilize trucks that meet EPA 2010 emission standards and off-road equipment that meets EPA 2015 emissions levels to the extent feasible.
- 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.
- Install only internal floating roof tanks, or utilize a more efficient vapor recovery system for handling organic liquids (crude oil) or some other equivalent method to reduce fugitive emissions to less than the SCAQMD CEQA thresholds.
- Use low-emissions flare systems to achieve flare NOx emissions of less than 0.06 lb/mmBTU, according to SCAQMD BACT requirements.
- Limit flaring and drilling during the peak day to the equivalent of drilling and full-flow flaring combined to less than 3 hours per day (at full gas plant flow or the equivalent throughput) or limiting flaring only to less than 4 hours per day (at full gas plant flow or the equivalent throughputs).
- Prohibit use of workover rigs at the same time as drilling rigs to reduce peak day emissions
- Further reduce NOx emission by either (1) Purchasing emission offsets to reduce remaining NOx emissions to less than significant levels or (2) utilizing Tier 4 engines on the drilling rig sufficient to reduce daily emissions to less than the thresholds, or (3) electrifying all or portions of the drilling rig engines to reduce NOx emissions to less than the thresholds.

AQ-3a The Operator shall have a gas buster and SCAQMD-approved portable flare at the oil field and available 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 Los Angeles County Fire Chief and the SCAQMD.

AQ-3b The Operator 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 submit a report of the breakdown to the Los Angeles County Fire Chief and the SCAQMD, which shall detail the corrective actions the Operator shall take to avoid exceeding the tank relief pressure.

AQ-3c The Operator shall develop an Odor Minimization Plan. The Odor Minimization Plan shall address potential sources of odors from all oil field equipment, including wells and drilling operation, 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.

AQ-3d The Operator shall develop an Air Monitoring Plan. The Plan shall provide for the monitoring of total hydrocarbon vapors and hydrogen sulfide at each well drill and re-drilling site and total hydrocarbon vapors at the gas plant. At all times during drilling and re-drilling operations, the Operator shall maintain monitoring equipment that shall monitor and digitally record the levels of hydrogen sulfide and total hydrocarbon vapors. Monitors shall be installed at the edge of the drill pad and around the outer edge of the gas plant. Such monitors shall provide automatic alarms that are audible or visible to the Operator of the drilling equipment for the drill rig monitors, and gas plant for the gas plant monitors, 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 H₂S and 500 and 1,000 ppm hydrocarbons, with the higher level requiring shut-down of drilling or gas plant operations and notification to appropriate agencies, including the Los Angeles County 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 Processing, or applicable location.

AQ-3e The Operator shall use an odor suppressant spray system or vapor capture hood and carbon filter 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 (e.g., residences, hiking trails, Ranger Residence).

AQ-4 The Applicant shall implement a program to quantify and reduce greenhouse gas emissions associated with operations, such as using green electrical power to run equipment, using high efficiency pumps and electrical devices, requiring diesel engines to use biodiesel, or offsite measures that could offset greenhouse gas emissions. Operations GHG emissions levels shall be quantified and reported to the City and to the SCAQMD annually, and, if GHG emissions exceed the SCAQMD thresholds, a GHG emission reduction program shall be implemented to reduce emissions to less than the threshold value of 10,000 metric tonnes CO₂e annually. Reductions or offsets of GHG emissions shall be quantified according to applicable protocols, and submitted to the City and AQMD. The reduction program shall focus on onsite and local basin-area methods for GHG reductions.

AQ-5 The Applicant shall install CARB-verified Level 3 diesel catalysts on all diesel-powered drilling equipment or utilize diesel engines that have an equivalent PM emission rate (Tier 4 engines) or electric drilling rigs. The current list of CARB-Verified Level 3 diesel catalysts is available from <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>. Catalysts or engine certifications shall demonstrate achieving 85% reduction for diesel particulate matter.

BIO-1a To mitigate the Project's permanent loss of 4.84 acres of coastal sage scrub, the Applicant shall provide minimum 3:1 areal replacement. To mitigate the loss of habitat value due to the Project's noise impacts affecting 5.49 acres of coastal sage scrub, the Applicant shall provide minimum 1:1 areal replacement. In total, the Applicant shall restore 19.99 acres of degraded habitats in the La Cañada Verde and Arroyo Pescadero watersheds to coastal sage scrub communities, or as otherwise agreed to by the appropriate resource agencies and the City. No additional grading or habitat disturbance shall occur along

the North Access Road beyond what is currently designated in the Road Improvement Plan included in Appendix A. All aspects of the restoration effort shall comply with the Habitat Authority's Restoration Guidelines, as specified in Appendix N of the RMP (LSA 2007, Pages 251-372). The following shall apply:

- All contractors involved in the restoration effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- The restoration specialist shall work with the Habitat Authority to select restoration sites in the Habitat Authority's Whittier Management Unit, preferably in the La Cañada Verde and Arroyo Pescadero watersheds.

- A conservation easement shall be placed over any site restored under this mitigation measure. This easement will be submitted to the USFWS for review and approval.

- Mandatory components of any restoration plan shall include, but not be limited to, a pre- and post-construction survey to describe the final, full extent of disturbance area to determine habitat loss and replacement, Site Preparation, Implementation Specifications, Maintenance Methods, Performance Standards, Monitoring Methods, Documentation and Reporting, and Contingency Measures (in case performance standards are not met in any area). All components of any restoration plan prepared in satisfaction of this mitigation measure shall be reviewed and approved by the Habitat Authority, the City, USFWS, and CDFG prior to implementation.

- Maintenance of all plantings will be the Applicant's responsibility, and shall include any activities required to meet the performance standards set for the restoration program. Restoration efforts shall be scheduled to start at the same time as construction activities to reduce the temporal loss of habitat. A minimum of 5 years of maintenance shall be required unless the plan's long-term performance standards are judged by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) to be satisfied in less than 5 years.

- Monitoring all restoration sites will be the Applicant's responsibility for a minimum of 5 years, or until the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) judge all of the Project's long-term performance standards to be satisfied. The site monitor shall be a biologist, native landscape horticulturist, or other professional qualified to: (1) assess the performance of the planting effort; (2) recommend corrective measures, if needed; and (3) document wildlife use of planting areas over time. The site monitor shall be selected by the Applicant and approved by the City and the Habitat Authority.

- If performance standards are not achieved in any restoration area, an alternative or auxiliary mitigation plan shall be submitted to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- The monitoring results shall be reported at least annually to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- Additionally, all mitigation must comply with the Restoration Plans for Mitigation and Monitoring Plans found on the Habitat Authority's web page (<http://www.habitatauthority.org/devdedmit.shtml>).

BIO-1b To prevent erosion and invasion by non-native weeds, and to help offset the Project's overall biological impacts including the temporal loss of habitat, the Applicant shall provide minimum 2:1 areal replacement of all graded slopes outside of permanent impact areas (approximately 4.80 acres; restoration shall be revegetated exclusively with appropriate, locally indigenous plant species and will incorporate non-flammable species as appropriate). To mitigate the permanent disturbance to 12.34 acres of native habitats (8.59 of chaparral and 4.28 acres of annual grassland), the Applicant shall provide minimum 1:1 areal replacement. In total, the Applicant shall restore 22.5 acres of degraded habitat in the La Cañada Verde and Arroyo Pescadero watersheds to native communities, as agreed to by the appropriate resource agencies and the City. All contractors involved in the revegetation effort, including the revegetation specialist and landscape contractor, shall be reviewed and approved by the City and Habitat Authority. Revegetation efforts shall comply with the Habitat

Authority's Restoration Guidelines, as specified in Appendix N of the RMP (LSA 2007, Pages 251-372). The following shall apply:

- All contractors involved in the restoration effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).
- Mandatory components of any restoration plan shall include, but not be limited to, a pre- and post-construction survey to describe the final, full extent of disturbance area to determine habitat loss and replacement, Site Preparation, Implementation Specifications, Maintenance Methods, Performance Standards, Monitoring Methods, Documentation and Reporting, and Contingency Measures (in case performance standards are not met in any area). All components of any restoration plan prepared in satisfaction of this mitigation measure shall be reviewed and approved by the Habitat Authority the City, USFWS, and CDFG prior to implementation.
- Maintenance of all plantings will be the Applicant's responsibility, and shall include any activities required to meet the performance standards set for the restoration program. Restoration efforts shall be scheduled to start at the same time as construction activities to reduce the temporal loss of habitat. A minimum of 5 years of maintenance shall be required unless the plan's long-term performance standards are judged by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) to be satisfied in less than 5 years.
- Monitoring all restoration sites will be the Applicant's responsibility for a minimum of 5 years, or until the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) judge all of the Project's long-term performance standards to be satisfied. The site monitor shall be a biologist, native landscape horticulturist, or other professional qualified to: (1) assess the performance of the planting effort; (2) recommend corrective measures, if needed; and (3) document wildlife use of planting areas over time.

- The site monitor shall be selected by the Applicant and approved by the City and the Habitat Authority.

- If performance standards are not achieved in any restoration area, an alternative or auxiliary mitigation plan shall be submitted to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- The monitoring results shall be reported at least annually to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).

- Additionally, all mitigation must comply with the Restoration Plans for Mitigation and Monitoring Plans found on the Habitat Authority's web page (<http://www.habitatauthority.org/devdedmit.shtml>).

BIO-1c Restoration and revegetation efforts shall include the salvage and stockpile of weed-free topsoil (upper 12 inches of soil) from any and all areas of intact (non-weedy) native communities that are graded for Project implementation, as determined by the site monitor described in required by mitigation measure BIO-1 b, so that the soil can later be spread over graded slopes to increase native plant species diversity in the restored areas. Mature coast prickly pear, dudleya, and other translocatable species will be transplanted as feasible in the revegetation and fuel modification zones. Such salvage may also be appropriate for revegetation areas.

BIO-1d The Applicant or US Army Corps of Engineers shall consult with the US Fish and Wildlife Service to obtain an Incidental Take Statement, if needed, pursuant to Section 7 or Section 10 of the federal Endangered Species Act to cover the Project's potential "take" (which includes the permanent and temporary loss of approximately 5 acres of critical habitat and 5.49 acres of noise-related disturbance) of the coastal California gnatcatcher, a federally listed species.

BIO-2a To mitigate the Project's permanent loss of 0.22 acre of riparian habitat, the Applicant shall provide minimum 3:1 areal replacement. To mitigate the Project's noise impacts affecting 0.75 acres of riparian habitat, the Applicant shall provide minimum 1:1 areal replacement. In total, the Applicant shall restore 1.41 acres of degraded

areas within the La Cañada Verde and Arroyo Pescadero watersheds, or as otherwise agreed to by the appropriate resource agencies and the City. The 0.12 acre of temporary grading impact would be mitigated through the 1:1 revegetation specified in BIO-1.b. All aspects of this restoration shall comply with the Habitat Authority's Restoration Guidelines, as specified in Appendix N of the RMP (LSA 2007, Pages 251-372). The following points shall apply:

- All contractors involved in the restoration effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).
- Mandatory components of any restoration plan shall include, but not be limited to, a pre- and post-construction survey to describe the final, full extent of disturbance area to determine habitat loss and replacement, Site Preparation, Implementation Specifications, Maintenance Methods, Performance Standards, Monitoring Methods, Documentation and Reporting, and Contingency Measures (in case performance standards are not met in any area). All components of any restoration plan prepared in satisfaction of this mitigation measure shall be reviewed and approved by the Habitat Authority, the City, USFWS, and CDFG prior to implementation.
- Maintenance of all plantings will be the Applicant's responsibility, and shall include any activities required to meet the performance standards set for the restoration program. Restoration efforts shall be scheduled to start at the same time as construction activities to reduce the temporal loss of habitat. A minimum of 5 years of maintenance shall be required unless the plan's long-term performance standards are judged by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) to be satisfied in less than 5 years.
- Monitoring all restoration sites will be the Applicant's responsibility for a minimum of 5 years, or until the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) judge all of the Project's long-term performance standards to be satisfied. The site monitor shall be a biologist, native landscape horticulturist,

or other professional qualified to: (1) assess the performance of the planting effort; (2) recommend corrective measures, if needed; and (3) document wildlife use of planting areas over time.

- The site monitor shall be selected by the Applicant and approved by the City and the Habitat Authority.

- If performance standards are not achieved in any restoration area, an alternative or auxiliary mitigation plan shall be submitted to the City, the Habitat Authority, and appropriate resource agencies (e.g., CDFG, USACE, U.S. Fish and Wildlife Service).

- The monitoring results shall be reported at least annually to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service). - Additionally, all mitigation must comply with the Restoration Plans for Mitigation and Monitoring Plans found on the Habitat Authority's web page (<http://www.habitatauthority.org/devdedmit.shtml>).

BIO-2b The Project proponent shall be required to obtain all applicable federal and state permits and agreements, including: (1) a Section 404 Permit from the US Army Corps of Engineers; (2) certification, or a waiver of certification, from the Los Angeles Regional Water Quality Control Board that the activity would not adversely affect water quality; and (3) a Streambed Alteration Agreement from the California Department of Fish and Game.

BIO-3a The applicant shall prepare an Emergency Response Action Plan that would address protection of sensitive biological resources and 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 Action Plan shall include provisions for containment and cleanup within 2 miles downstream of the Project Site. The plan shall contain detailed descriptions of various containment and cleanup alternatives for each segment of the streambed. Selection of a containment alternative would be made during an emergency event, but the approach and plan shall be reviewed by the California

Division of Fish and Game, the Los Angeles Regional Water Quality Control Board, and Los Angeles County Flood Control District.

Where feasible, low-impact, site-specific techniques such as hand-cutting contaminated vegetation and using low-pressure water flushing shall be specified to remove spilled material from particularly sensitive wildlife habitats, such as riparian woodlands, because procedures such as shoveling, bulldozing, and raking can cause more damage to a sensitive habitat than the oil spill itself. The Emergency Response Action Plan shall evaluate the non-cleanup option for ecologically vulnerable habitats.

When habitat disturbance cannot be avoided, the Emergency Response Action 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 sensitive habitat areas shall be identified. The Emergency Response Action Plan shall include species- and site-specific procedures for collection, transportation and treatment of oiled wildlife, particularly for sensitive species.

The Emergency Response Action Plan shall include procedures for timely re-establishment of vegetation that replicates the habitats disturbed (or, in the case of disturbed habitats dominated by non-native species, replaces them with suitable native species).

The Emergency Response Action Plan shall be approved by the City and Habitat Authority prior to commencing any construction activities.

BIO-3b To reduce exposure risks to wildlife in the Project Site area, all open basins containing any Project-related fluids shall either be emptied at the end of each day or fenced and covered to exclude all wildlife, including birds, bats, and amphibians. Drilling muds, concrete waste, and truck washing water shall be contained within closed Baker-style tanks or collected by a vacuum truck before the end of each day and shall not be stored overnight in open pits.

BIO-4a Devices and measures shall be employed to minimize noise effects on wildlife. At a minimum, noise barriers shall surround the drill rig floor, mud mixers, cleaners, conveyers, shakers, pumps, and other oil development and operational facilities; construction activities shall be limited to daylight hours except for emergencies; construction machinery shall be operated per manufacture's specifications; and a Noise Reduction Plan and monitoring plan shall be implemented to ensure that Project activities are operating within the ranges included in mitigation measure N-4.

BIO-4b All Project lighting shall be designed and shielded with the intent of preventing spillage of light into adjacent preserved open space areas. Outdoor lighting shall be restricted to lights required by code for lighting building exteriors and for safety and security needs. All Project lighting shall be fully shielded and designed to prevent spillage of light into adjacent preserved open space areas. Lighting shall be constructed so that all light emitted by the fixture, either directly from the lamp or from a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal as determined by photometric test or certified by the manufacturer. Any structural part of the light fixture providing this shielding shall be permanently affixed. Light standard heights shall distribute light at ground level consistent with light levels for security, spill-over effects, and efficiency. After initial installation of Project lighting, a biological monitor acceptable to the City and Habitat Authority shall conduct a field inspection to confirm that the proper lamps have been installed and that light spillage into the Preserve has been minimized to the maximum extent feasible without compromising safety or other critical night-lighting requirements.

BIO-4c To minimize the potential for road mortality of wildlife, all roads within the Preserve boundary used to access onsite oil facilities shall have enough traffic calming devices, appropriately sized and spaced, to limit traffic to a maximum speed of 10 miles per hour. All nighttime traffic shall be minimized during the construction and operational phases and permitted only for activities required for safety reasons or emergencies; all hauling activities shall be restricted to daylight hours, defined as the hours after sunrise and before sunset. This restriction shall be in addition to any others placed on the Project, including by

mitigation measure N-4, which is intended mainly to limit noise impacts upon neighboring residential communities, consistent with the City Municipal Code. No permanent solid walls or k-rail walls shall be placed along the North Access Road. The use of k-rails in this area would require wildlife passages placed every 20 feet to allow wildlife to move freely off the road.

BIO-4d Any project landscaping shall consist entirely of species native to the Project Site and surrounding areas within the Preserve and approved by the County of Los Angeles Fire Department and the Habitat Authority. Any irrigation provided shall be limited to that required to initially establish the native plants; no permanent irrigation shall be permitted.

BIO-4e 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 Game Code, initial construction of the pad sites and facilities and annual fuel modifications involving vegetation removal/trimming shall be done outside the breeding season (February 15 through August 31). If construction 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. USFWS protocol surveys for listed avian birds (California gnatcatcher and least Bell's vireo) shall be conducted if disturbances occur in coastal sage scrub or riparian habitats. If nesting birds are observed within the vicinity, then a minimum 100-foot buffer from the nest would be established. The buffer would be delineated by orange construction fencing and signage and would remain in place until the nest is abandoned or the young have fledged. The nest monitor would be present when any buffer fencing is established. Alternatively, the Project proponent may retain a biologist acceptable to the City and Habitat Authority to monitor the nest and to ensure that Project activities do not violate the Migratory Bird Treaty Act or the California Fish and Game Code. At minimum, the biologist would check for new active nests, and determine the status of ongoing active nests, weekly during the specified nesting season. The biologist would ensure that all fencing and signage was properly maintained, and would provide weekly e-mail updates on the status of all monitored nests to the City, Habitat Authority, CDFG, and USFWS. If the biologist determines that California

gnatcatcher nesting is being disrupted, the construction activities will cease and wait until the young have fledged or the nest is determined to have failed.

BIO-4f Hawks and owls nest earlier than most other native birds. If initial construction activities, drilling, re-drilling, ground disturbance, or vegetation clearing, or annual fuel modification involving vegetation removal/trimming occurs from December 1 through August 31, the nest monitor would conduct a pre-construction survey within 3 days prior to vegetation removal or other construction-related disturbances focused on actively nesting hawks or owls. If any actively nesting hawks or owls are found, a 300-foot buffer would be established around the nest tree to help ensure that nesting is not disrupted. If any active songbird nests are found, a 100-foot buffer would be established as described in BIO-4e. The buffer would be delineated by orange construction fencing and signage and would remain in place until the nest is either abandoned or the young have fledged. The nest monitor would be present when any buffer fencing is established. Alternatively, the Project proponent may retain a biologist acceptable to the City and Habitat Authority to monitor the nest and to ensure that Project activities do not violate the Migratory Bird Treaty Act or the California Fish and Game Code. At a minimum, the biologist would check for new active nests, and determine the status of ongoing active nests, weekly during the specified nesting season. The biologist would ensure that all fencing and signage was properly maintained, and would provide weekly e-mail updates on the status of all monitored nests to the City, Habitat Authority, CDFG, and USFWS.

BIO-4g To avoid the direct loss of special-status bats that could result from removal of trees that may provide maternity roost habitat (e.g., in cavities or under loose bark), the following steps shall be taken:

- Tree removal or relocation shall be scheduled between October 1 and February 28, outside of the maternity roosting season.
- If trees must be removed during the maternity season (March 1 to September 30), a qualified bat specialist (i.e., a person holding a California Department of Fish and Game collection permit and a memorandum of understanding allowing the handling and collection of bats) shall conduct a

pre-construction survey to identify those trees proposed for disturbance that could provide hibernacula or nursery colony roosting habitat for bats. Each tree identified as potentially supporting an active maternity roost shall be closely inspected by the bat specialist a maximum of 7 days prior to tree disturbance to more precisely determine the presence or absence of roosting bats.

- Immediately after completion of the pre-construction surveys, and prior to any tree removals, the bat specialist will prepare a report providing the results of these surveys and identifying actions to be taken to avoid or minimize potential impacts to roosting bats due to authorized tree removal or other potential bat roosting habitats.

- The pre-construction report shall be provided to the City and the Habitat Authority prior to any tree removal.

- If bats are not detected, but the bat specialist determines that roosting bats may be present, it is preferable to push the tree down using heavy machinery rather than felling it with a chainsaw.

- Maternity season lasts from March 1 to September 30. Trees determined to be maternity roosts shall be left in place until the end of the maternity season.

- A 250-foot buffer, in which no construction activities are permitted, shall be established around any tree, rock outcrop, or other occupied roost habitat until bats have left the maternity site or the end of the maternity season (whichever is later).

- The bat specialist shall document all monitoring activities, and shall prepare a summary report upon completion of tree disturbance activities. Reports would include the following:

- the number and type of affected trees determined to support or potentially support roosting bats prior to disturbance;

- any actions undertaken to safely exclude roosting bats prior to disturbance and the results of those actions;

- trees temporarily avoided to protect roosting bats; and

- roosting bats found (alive or dead) after trees were removed or relocated.

- This report shall be provided to the City and Habitat Authority within 30 days following completion of tree removals.

BIO-4h To reduce impacts to wildlife movement corridors and to provide protective cover for wildlife using the Service Tunnel, and consistent with the Resource Management Plan recommendations, the Applicant shall be required to install appropriate native screening vegetation around the western terminus of the Service Tunnel (LSA 2007). The Applicant shall consult with the Habitat Authority to identify the appropriate limits of screening vegetation. The plantings installed as screening shall comply with the Habitat Authority's Restoration Guidelines. All contractors involved in the native screening effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City and Habitat Authority.

BIO-4i Consistent with the Resource Management Plan recommendations, Project lighting shall not be directly visible from the western terminus of the Service Tunnel.

BIO-4j Consistent with the Resource Management Plan recommendations, the Project proponent shall be required to consult with the Habitat Authority to develop and implement signage explaining the importance of limiting human disturbances in the vicinity of the Service Tunnel between sunset and sunrise.

BIO-4k A qualified biological monitor approved by the City, USFWS, CDFG, and the Habitat Authority shall be onsite during all vegetation removal and initial ground disturbance activities to ensure the compliance with all permit conditions protecting biological resources. The biological monitor shall be present to salvage wildlife species that may be otherwise killed or injured by heavy equipment and vegetation clearing. All salvaged wildlife shall be relocated to suitable adjacent habitat within the Preserve. The biological monitor shall have the authority to temporarily halt activities if permit requirements and conditions are not being met. The biological monitor shall conduct annual site inspections of the facilities, roads, and operations activities to ensure that all applicable mitigation measures are being enacted. The biological monitor shall prepare an annual

summary report describing site visit observations and shall provide this report to the City, Habitat Authority and regulatory agencies (including CDFG, US ACE, and USFWS) for review.

BIO-4l The Applicant shall fund and implement a biological resources training program for all construction workers, oilfield workers, and their contractors. Training shall occur annually and as needed for new workers. Training program shall be reviewed and approved by the HA and shall include a description of important biological resources within the Preserve and all applicable conditions, permit requirements, and protection measures implemented to protect those resources.

BIO-4m All grading limits shall be delineated by orange construction fencing and permanent signage every 50 feet along the fence stating "No Entry — Sensitive Habitat." The City and the Habitat Authority shall approve the fencing prior to commencement of grading activities (including clearing and grubbing).

BIO-4n Recreational access to the Arroyo San Miguel Trail shall be closed during construction or drilling activities at the Drill Pad Site. To continue providing recreation access to the Arroyo San Miguel Trails (on the east side of Colima Road), the Applicant shall develop additional recreational access, in coordination with the Habitat Authority, to the Arroyo San Miguel Trail by any of the following or equivalent: (1) enhancing the parking area on the east side of Colima Road; (2) developing the parking area along Le Flore Drive, approximately 1 mile east of Colima Road; or (3) developing pedestrian access along Colima Road from the Preserve parking area (on the west side of Colima Road) utilizing the new signalized intersection.

CUMULATIVE BIO-1 The applicant shall ensure, and shall demonstrate to the City of Whittier and Habitat Authority, that the existing Matrix Oil drilling operation in lower Sycamore Canyon, in the Whittier Hills, complies with Chapter 12.08.390 of the County of Los Angeles Code (Exterior Noise Standards). Compliance includes achieving an exterior noise standard of 45 dBA (L50) applicable at the property boundary (i.e., the Preserve's property boundary) of all noise-sensitive areas and residential areas, any time of the day. All Preserve areas shall be

regarded as "noise-sensitive areas" for purposes of the County of Los Angeles Code and this mitigation measure.

CUMULATIVE BIO-2 No test-drilling, construction, or re-drilling of wells shall be conducted simultaneously with, and within the same watershed as, construction work on the Tehachapi Renewable Transmission Project. The Applicant shall provide the City and Habitat Authority with written evidence of having coordinated construction schedules with Southern California Edison prior to commencing any construction activities.

CUMULATIVE BIO-3 To provide land managers at the Preserve (and those in the general area of the Chino-Puente Hills) data to better understand and manage wildlife movement conflicts and issues, the Applicant shall provide the Habitat Authority funds to conduct a multi-year, scientific study to evaluate the wildlife movement patterns of bobcats and other wildlife species utilizing the Preserve. The extent and cost of this study shall be designed, reviewed, and approved by the City, the Applicant, and the Habitat Authority prior to issuance of grading permits.

SR-1a The Applicant shall implement site security methods, including but not limited to: (1) enclosing all wells and equipment (including the metering station) with 8-foot block walls with barbed wire on the inside at 7 feet; (2) Secure gates located at all entrances with automatic opening/closing and secure access; (3) Limitation of climbable landscaping near the facility; (4) Installation of video surveillance systems and burglar/intrusion alarm systems; (5) Contact information and site access limitations shall be posted in specific locations easily visible to the public, shall be provided to neighboring residents within a set radius, and shall be placed in Preserve information kiosks and on the Habitat Authority and City websites; (6) Visitor sign-in/sign-out and security policies for employees regarding access control, pre-employment screening, post-employment issues, vehicles, access keys, codes, and card security.

SR-1b The Applicant shall conduct a third-party audit 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 periodically, as directed by the City and the Los Angeles County Fire Department.

SR-1c The Applicant shall ensure that all crude-oil truck haulers are trained in HAZMAT spill response and that each truck carries a spill response kit.

SR-2a The Applicant shall install automatic valves that will automatically shut down under a low pressure scenario at the Processing Facility Area for all pipelines leaving the processing plant, and a backflow prevention device or automatic shut-down valve at the tie-in location at Lambert Road, to prevent the release of gas from the main transmission pipeline in the event of a rupture in the Colima Road pipeline.

SR-2b The Applicant shall ensure that warning tape is installed above the pipeline within the pipeline trench to warn third parties that a pipeline is located below the warning tape and that the pipeline is capable of utilizing a smartpig.

SR-3 The Applicant shall conduct a site assessment of the Project Site before commencing Project construction and shall sample soils and excavated materials associated with construction to ensure that the soils are not contaminated. Contaminated soils shall be completely excavated and the contaminated areas cleaned to LARWQCB specifications before moving forward with construction of the proposed Project components.

GR1-a Proposed drilling, production, processing, storage, and transportation infrastructure shall be designed and constructed to withstand anticipated ground acceleration in the Project Area, based on the California Building Code. The calculated design base ground motion for project components shall consider the soil type, potential for liquefaction, and the most current and applicable seismic attenuation methods that are available.

GR1-b All surface facilities and equipment shall have suitable foundations and anchoring design, surface

restraints, and moment-limiting supports to withstand seismically induced groundshaking.

GR1-c All conceptual geotechnical recommendations provided by Heathcote Geotechnical (2011) shall be followed during grading and construction at the Project Site. In addition, a Registered Civil Engineer and Certified Engineering Geologist shall perform an updated geotechnical evaluation of the Project Site, as the proposed building pad and slope configuration has changed since completion of the geotechnical report completed in 2010 (Heathcote Geotechnical 2011). This report shall be completed prior to completion of the final project design and shall be submitted to the City of Whittier for review and approval and any new recommendations not included in the Heathcote Geotechnical (2011) report shall be adhered to. The project design must conform to the recommendations within the updated geotechnical evaluation.

GR-1d All proposed slope construction, roadways, and work pads shall be properly engineered, with fill placed in accordance with requirements of the 2011 County of Los Angeles Building Code (Title 26), which is based on the 2010 California Building Code and the 2009 International Building Code.

GR-1e All proposed pipelines shall be placed in properly constructed trenches and backfilled with bedding and engineered fill that increases the freedom of movement of the pipelines, or alternatively anchored to prevent pipeline movement, as determined by a California Registered Civil Engineer, in accordance with California Building Code, 2010, Los Angeles County requirements, and the American Public Works Association Greenbook.

GR-1f All facilities and equipment, including spill containment berms and Project-related pipelines, shall be designed for the seismic loading in accordance with applicable codes, including the California Building Code, 2010.

GR-1g The Applicant shall cease any non-essential drilling and production activities and inspect all project-related facilities, equipment, and pipelines following any seismic event that generates a ground acceleration of 15 percent of gravity. The Applicant/Operator shall prepare a written

report of all inspections and findings to the City for review and approval prior to the recommencement of any operations. The City will respond to Matrix within 5 working days of the report submittal.

GR-2 Thickened slabs, extending slab edges, and additional reinforcement shall be utilized to reduce negative impacts resulting from expansive soil movement if any construction occurs within moderately expansive soils. In addition, the use of a capillary break under slabs shall be utilized to reduce the potential for moisture transport and pumping that leads to moisture infiltration as a result of heat and moisture gradients. An alternative would be the use of low to non expansive soils for slab support, which would eliminate the potential risk. This can be accommodated by importing select materials. Select grading techniques during grading could utilize the granular soils in site for subsequent use. Measures shall be as described or as otherwise approved by the City Engineer.

GR-5a Temporary shoring shall be designed to protect the temporary excavations, structures to remain in place, and adjacent properties. This shoring shall be designed by a State of California Registered Civil Engineer to take into account all lateral load parameters. Shoring can include steel cage, timber supports, sheet piling, soil nailing, shotcrete walls, or as otherwise approved by the City Engineer.

GR-5b Slot cut excavation schemes shall be implemented during grading and foundation excavations to the extent possible, to reduce the potential for failure along temporary cuts, by limiting the area exposed by temporary cuts.

GR-5c All excavations for structures and buildings shall comply with all applicable regulations of the California Occupational Safety and Hazard Administration guidelines as they pertain to excavations.

GR-6a Site specific chemical testing of soil and bedrock shall be performed to assess corrosion and other adverse chemical aspects. A report with the lab tests shall be submitted to the City of Whittier with any appropriate mitigation measures included. The project design must conform to the recommendations within the geotechnical evaluation, or as per the City Engineer, and should occur prior to completion of the final project design.

GR-6b 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.

GR-6c 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.

GR-6d In accordance with California Division of Oil, Gas, and Geothermal Resources pipeline regulations for environmentally sensitive pipelines, a pipeline management plan shall be implemented (Public Resources Code Sections 3013 and 3782). 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.

GR-6e All concrete in contact with the high sulfate or corrosive soils can be Type V concrete in accordance with the 2010 California Building Code.

GR-7a Subsidence monitoring shall be completed annually in the vicinity of the wells. 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 results shall be forwarded to the Division of Oil, Gas and Geothermal Resources and the City of Whittier for review.

GR-7b In the event that the Global Position System monitoring indicates that subsidence is occurring in and/or around the Project Area, wastewater or water reinjection operations shall be increased to alleviate such subsidence. The Applicant shall coordinate with the California Division of Oil, Gas and Geothermal Resources in determining appropriate increased levels of wastewater reinjection operations. The Applicant will also coordinate with the City of Whittier to verify that subsidence has been mitigated sufficiently.

N-1a Limit all construction activity at the Project Site (including deliveries and arriving and departing workers,

and construction activities during the testing phase) to the hours from 7:00 a.m. to 6:00 p.m., Monday through Friday, and from 8:00 a.m. to 5:00 p.m. on Saturdays and prohibit activities on Sundays and federal holidays. In addition, for construction work within the County of Los Angeles unincorporated areas, the Applicant shall ensure that noise levels do not exceed County municipal code levels with a noise study and monitoring and measures, including high grade mufflers, engine tuning, and management of backup alarms. All contracts with construction personnel shall specify the allowable work hours and the study and monitoring requirements.

N-1b Maintain all construction machinery according to the manufacturers' specifications and ensure that mufflers and silencers are maintained properly. Back-up OSHA noise indicators shall be ambient sensitive and self-adjusting to minimize backup indicator noise or flaggers shall be used in the place of backup alarms (as allowed by OSHA).

N-1c Relocate the construction parking and staging area farther from the school and residences on Catalina Avenue to an area north of the Ranger Residence or equivalent.

N-2a The Applicant shall develop and implement a Noise Reduction Plan for all drilling (testing, development, and re-drills and workovers) to ensure that the Leq noise levels from activities, measured as a 1-hour Leq, is less than a 3-dBA increase at the closest sensitive residential receptor and less than a 5-dBA increase at the closest sensitive recreational receptor. The Plan shall be prepared by an acoustic consultant approved by the City and the Plan shall be subject to City review and concurrence. The measures in the Plan shall include but not be limited to the following: (1) enclose the drill rig area in soundproof barriers 30 feet high on the south and west sides; (2) utilize a central generator type drilling rig, with the generators the only diesel engines onsite and enclosed in a soundproofed generator house with appropriate grade muffler systems, or install sound enclosures around all diesel engines with appropriate grade muffler systems; (3) install noise barriers around the drill rig floor, mud mixers, cleaners, conveyers, and shakers; (4) enclose drawworks brake area with soundproofing shroud; (5) install pads on V-door and other appropriate areas, timbers and pads on 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 (for both drilling and workover operations); (6) enclose the drilling mast boards area (on drilling and workover rigs) with barriers 2 inches thick and 2 pounds per square foot in density at least 5 feet above and below any noise sources; and (7) install ambient sensitive backup indicators on all equipment requiring backup indicators.

N-2b The Applicant shall institute a quiet-mode for all drilling activities between 7 p.m. and 7 a.m. Quiet-mode operation would apply to both drilling and operations and would involve: (1) using signalers for all backup operations instead of backup alarms and turning off backup alarms; (2) using radios instead of voice communication; (3) minimizing crane use and pipe handling operations, pipe offloading from trucks and board loading during daytime to the maximum extent feasible and nighttime loading only for safety reasons; (4) prohibiting material and supply deliveries to the Project Site between the hours of 7 p.m. and 7 a.m., with exceptions only for safety; and (5) limiting process alarms and communications over the broadcast system to the maximum extent feasible during all operations and use only for safety reasons.

N-2c Provide a comprehensive noise abatement study, including noise and vibration monitoring at nearby sensitive receptors and continuous monitoring near drilling activities, under contract and supervision of the City, to monitor noise and vibration from the drilling and operations in the community. The City shall have the authority to shut-down operations and require additional mitigation if the noise criteria are exceeded.

N-4 The Applicant shall develop and implement a Noise Reduction Plan for all operations to ensure that Leq noise levels from operational activities, measured as 1-hour Leq, produce less than a 3 dBA increase over the minimum baseline hourly average level at the closest residential receptor to the facility. The measures in the Plan shall include, but not be limited to: (1) installing sound enclosures or buildings around all compressors; (2) installing noise barriers around all pumps and air coolers; (3) installing ambient-sensitive backup indicators on all equipment requiring backup indicators; (4) installing sound enclosures or buildings around all the oil area pumps (e.g., shipping, IGFC, water injection, water booster, reject pumps); (5) installing sound enclosures or buildings around refrigeration units; (6) installing a secondary, 16-foot tall

sound wall on the south, west and north sides of the gas plant; (7) ensuring that all office equipment (i.e., air conditioners, heating, ventilation) produces low noise levels or is surrounded by noise barriers; and (8) limiting traffic on the North Access Road to within 7 a.m. to 7 p.m., except for emergencies.

T-1a During all phases at Intersection 6 - Catalina Avenue and Mar Vista Street, provide striping enhancements for southbound lanes to convert the existing single lanes to a left and right lane. Parking shall be restricted immediately north and south of the intersections, according to City Engineer recommendations.

T-1b A worker carpooling program shall be instituted offsite and away from congested areas to reduce Project traffic through congested areas during all Project phases, in coordination with the City traffic engineer.

T-1c During all phases, limit truck and employee access via Catalina Avenue and Mar Vista Street to no more than 40 daily round-trips and a peak hour of 12 one-way trips. No vehicles with more than two axles or weighing more than 3 tons (generally trucks) or vehicles towing large trailers shall be allowed on Catalina Avenue during Phase 2 (except for the initial stages of the North Access Road construction) or Phase 3.

T-1d Implement safety and access improvements, including: (1) During Phase 1, provide a wider turning radius at the northeast corner of Catalina Avenue to improve right turn movements, according to City Engineer recommendations; (2) Prohibit parking on the east side of Catalina Avenue north of Mar Vista Street from 7 a.m. to 6 p.m. Monday through Friday and from 8 a.m. to 5 p.m. on Saturdays to provide additional capacity for trucks during Phase 1, according to City Engineer recommendations; (3) Provide flagmen for truck access on Mar Vista Street during Phase 1; (4) Applicant shall maintain a record of vehicular traffic moving in and out of the Catalina Avenue Gate; (5) Implement a pavement monitoring program to ensure Mar Vista Street and Catalina Avenue are maintained and damage from truck traffic is appropriately repaired, under direction of city engineers; and (6) Clearly posted speed limit signs on Catalina Avenue. (7) Cover all haul vehicles and sweep or remove any debris that could

fall off the truck and impact other drivers before the truck enters public streets.

T-1f Implement a Penn Street Traffic Program, in coordination with the City, evaluating: (1) Traffic levels and periods of heavy traffic along Penn Street; (2) Longer-term traffic monitoring to capture events and variation in traffic flow due to student populations and event traffic; (3) Construction truck traffic impacts on roadway capacity due to parking limitations and event activities; (4) Coordination with Whittier College to reduce impacts of events and parking issues along Penn Street; (5) Alternative parking locations and routes for Whittier College events; (6) Implementing safety improvements, including enhanced pedestrian crosswalks and signage; (7) Identifying sources of landfill traffic and ensuring the proposed Project truck traffic during operations (not construction) does not increase average truck traffic levels on Penn Street; (8) Limited hours for proposed Project truck traffic on Penn Street to avoid congested or impacted periods (e.g., limit truck traffic to periods when the landfill is open, i.e. between 8:00 a.m and 3:00 p.m.); (9) Coordinate periods of heavy traffic flow on Penn Street due to events and prevent use of Penn Street for proposed Project-related construction truck traffic during these events. (10) Prohibiting parking of Project-related traffic along any residential street for non-emergency purposes. (11) Implementing policies for trucks along Penn Street, including speed limits for trucks, yielding requirements to automobiles, and other issues as applicable.

T-2 A Traffic Management Plan shall be submitted to the City of Whittier and County of Los Angeles Traffic Engineers for approval, as required, prior to issuance of encroachment permits. The Plan could include the following measures: provide methods to safeguard traffic flow; identify detours (if necessary); identify the placement of traffic control devices (e.g. signs, traffic cones) and flaggers (if needed); and provide other appropriate traffic control measures. Additional measures shall include: (1) One travel lane shall be left open in each direction (delineated by temporary traffic cones/barricades) along roadways during construction (i.e. roads will not be closed). Any temporary street closures shall occur in coordination with city staff. (2) Construction on major roadways through major signalized intersections will not be conducted during peak periods (6 to 9 a.m. and 3 to 6 p.m.), except where

requested by the city to alleviate traffic impacts. (3) All trenches in areas without safety fencing shall be metal plated during non-construction hours. All trenches that interfere with access to residential and business driveways shall be metal plated to provide access. (4) Edges of steel plates shall be made safe for cyclists. (5) All county and municipal fire, police, and paramedic departments shall be notified of the schedule and duration of construction activities. (6) As required, alternative routes shall be identified for emergency vehicles to avoid construction areas. (7) Coordination shall be undertaken with appropriate transit authorities to ensure uninterrupted service along bus or train routes, which shall be crossed or paralleled by the pipeline construction. (8) Alternative pedestrian and bicycle routes shall be identified to avoid construction areas if existing routes are obstructed by pipeline construction activities. (9) Transit stops shall be relocated as necessary to provide access during construction. (10) Staging areas for construction equipment and service truck traffic shall be located off the roadway. (11) Provision shall be made for off-street parking for worker vehicles in areas where parking is limited. (12) Advance notifications shall be made to affected residents and businesses through public information, such as a web site or mailings, and shall include construction scheduling and identify the pipeline as a natural gas pipeline. (13) Schedule construction adjacent to critical land uses so that at least one driveway is left unblocked at all hours or during business hours and ensuring resident and business access during trenching/construction. (14) Ensure that damaged roads are restored to at least their pre-construction condition and to the satisfaction of the responsible agency.

WR-1a A registered civil engineer experienced in drainage shall prepare a hydrologic study, using the corresponding hydraulic calculations for interception, conveyance, and discharge of runoff. Based on these studies, the engineer shall prepare a drainage plan in accordance with City and County requirements.

WR-1b A registered civil engineer experienced in drainage shall design and implement onsite detention facilities to reduce runoff to existing levels. Onsite detention ponds would attenuate the runoff intensity, such that an excessive peak flow would not occur during high intensity storms and there would be no increase in runoff intensity over existing conditions. The project engineer shall conduct an onsite

hydrologic study to determine the approximate increase in storm runoff to accurately scale any onsite detention facilities.

Detention System Design

Onsite detention facilities have the potential to create habitats for mosquito breeding. Any onsite detention facilities shall be designed as a 'dry system' in accordance with the California Department of Public Health. A dry system requires that the facility be designed to discharge all captured water within 4 days. The design slope shall be adequate and properly compacted to prevent standing water and a low flow channel shall be incorporated to direct low flows to the system outlet. The basin shall also provide access for maintenance and inspection.

All catch basins and drainage facilities, including grass swales and bio-retention facilities shall also be designed to prevent standing water.

An operation and maintenance plan shall be incorporated to remove vegetation, sediment, and debris accumulation biannually with an inspection at the beginning of the wet season. Waste from maintenance shall be disposed of according to local and state regulations.

Onsite detention facilities shall be inspected quarterly for burrowing vector damage. Vector control measures shall be incorporated and maintained to prevent damage to the detention facility.

Onsite detention facilities shall be surrounded by 6-foot fencing and provided access with a gate and access road per Los Angeles County standards.

Discharge systems from onsite detention facilities shall be capable of discharging water from the basin while preventing a discharge of oil from the surface of the basin using a weir or subsurface discharge type design to prevent oil discharges from the basin in the event the basin reaches capacity and there is a crude oil spill.

WR-1c Impervious surfaces shall be minimized to prevent pollutant runoff. Gravel roads and parking areas shall be constructed to allow infiltration of stormwater and limit downstream runoff.

WR-1d Structural Best Management Practices shall be used to mitigate the increased pollutant runoff. Runoff from impervious areas shall be directed to grass swales, bio-swales, or detention ponds to aid in filtering out suspended solids and potential contaminants. Grass bio-swales shall not be planted with invasive species. The Best Management Practices shall be designed by a California registered, Qualified Storm Water Pollution Prevention Plan Developer.

WR-1e Pollution control products, such as catch basins with basket inserts, shall be used to catch trash and debris along with filtering elements such as silt fences, straw wattles and absorbent sponges within catch basins. Filter technology may be used to catch sediment, debris, oil, and pollutants.

WR-1f Permanent water quality testing, drainage device, and erosion control maintenance shall be implemented. Sampling and analysis shall be completed in accordance with National Pollutant Discharge Elimination System requirements.

WR-1g A California registered, Qualified Storm Water Pollution Prevention Plan Practitioner shall oversee and monitor construction Best Management Practices and stormwater management programs, in accordance with the State General Construction Permit and the Los Angeles Regional Water Quality Control Board.

WR-2a During construction operations, the Applicant shall implement stormwater management protection measures and wet weather measures. These measures would include temporary and permanent Best Management Practices to reduce the potential for erosion and sediment transport. Conventional measures typically recommended by the State Water Resource Board and the California Department of Transportation would reduce potentially significant erosion and runoff impact to less than significant levels:

Implement permanent erosion and sediment control measures:

- Minimize grading, clearing, and grubbing to preserve existing vegetation;

- Use mulches and hydroseed free of invasive plants to protect exposed soils;
- Use geotextiles and mats to stabilize soils;
- Use drainage swales and dissipation devices; and
- Use erosion control measures outlined in the California Stormwater Quality Association Best Management Practice Handbook.

Implement temporary Best Management Practice mitigation measures:

- Use silt fences, sandbags, and straw wattles;
- Use temporary sediment basins and check dams; and
- Use temporary Best Management Practices outlined in the California Stormwater Quality Association Best Management Practice Handbook.

Implement tracking control Best Management Practices to reduce tracking sediment offsite.

- Use stabilized construction entrance and exit with steel shakers;
- Use tire wash areas; and
- Use tracking control Best Management Practices outlined in the California Stormwater Quality Association Best Management Practice Handbook.

WR-2b The Applicant shall implement a Storm Water Pollution Prevention Plan using Best Management Practices and monitor and maintain stormwater pollution control facilities identified in the Storm Water Pollution Prevention Plan, in a manner consistent with the provisions of the Federal Water Pollution Control Act (National Pollutant Discharge Elimination System Program). Stormwater management protection measures and wet weather measures shall be designed by a California registered, Qualified Storm Water Pollution Prevention Plan Developer. In addition, a California registered, Qualified Storm Water Pollution Prevention Plan Practitioner shall oversee and monitor construction Best Management Practices and stormwater management, in accordance with

the State General Construction Permit and the Los Angeles Regional Water Quality Control Board.

WR-3a The proposed 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.

WR-3b An 18-inch berm shall be placed around the entire drilling rig to capture any spilled fluids.

WR-3c 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. 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.

WR-3d Oil spills shall be contained and cleaned according to measures outlined in the California Stormwater Quality Association Best Management Practice Handbook.

WR-3e An approved response manual and Oil Spill Contingency Plan 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 the Drilling and Testing phase. 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.

WR-4a The City of Whittier and other appropriate agencies shall inspect facility conditions at the Project Site on a yearly basis. Inspections shall also occur after earthquake induced land movement or upon periods of large rainfall in order to verify no leak or rupture risks have developed. Inspections shall be completed by personnel with oilfield operations inspection experience (petroleum engineer or equivalent). Inspection and violation records shall be available to the public for review within 5 working days of inspections.

WR-4b The Applicant shall properly maintain the associated crude oil pipelines, storage tanks and processing facilities within and outside the Preserve,

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 Regional Water Quality Control Board. Pipeline, tank and processing inspections, including walking the pipelines within the Preserve, shall occur at least daily.

WR-4c The Applicant shall install a leak detection system for crude pipelines in the Preserve and the Colima Road pipeline. 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.

WR-6a Where feasible, the City of Whittier shall supply reclaimed water during construction and well drilling operations, to reduce water supply impacts.

WR-6b Where feasible, the Applicant shall implement water conservation measures during construction and well drilling operations, to reduce water supply impacts.

CR-1 Develop a monitoring plan, subject to City and Habitat Authority approval, for treatment of areas of direct impact to elements identified as contributing components of the Whittier Main Oil Field including, but not limited to, the following:

- Monitoring concurrent with construction grubbing at the locations of all oil well pads, allowing time for detailed field recordation of each pad that could not be obtained during survey level recording efforts due to heavy vegetation. Recordation should include photographs in digital or 35mm format, scaled plan-view drawings of the well pads, and written documentation that describes construction methods, details, and associated material composition.
- Monitoring concurrent with alteration of existing historic-period roadways to allow for detailed mapping of existing roadways as well as recordation of construction along a

representative segment(s) of the roadway to document the methods used over time as the oil fields evolved; first relying on dirt roads, followed by oil-paved roads, and finally asphalt-paved roads.

- Collection, analysis, reporting, and curation of any associated artifacts that might be unearthed during monitoring activities described above.

- Completion of a report of findings and update of appropriate Department of Parks and Recreation 523 forms to document the information obtained as a result of the mitigation/monitoring program.

CR-2 If human remains are exposed during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has been notified and can make the necessary findings as to origin and disposition of the remains pursuant to Public Resources Code 5097.98. Construction must halt in the area of the discovery of human remains, the area must be protected, and consultation and treatment shall occur as prescribed by law.

CR-3 If any paleontological resources are encountered during ground-disturbing activities in the Project area, activities in the immediate area of the find shall be halted and the discovery assessed (LSA 2007). A qualified paleontologist must evaluate the discovery and recommend appropriate treatment options pursuant to guidelines developed by the Society of Vertebrate Paleontology. A paleontological resource impact mitigation program for treatment of the resources would be developed and implemented.

WAS-1 A Registered Civil Engineer shall evaluate the capacity of the existing sewer line system, beginning at the proposed tie-in at Catalina Avenue and continuing downstream to the County Sanitation Districts of Los Angeles County sewer system, prior to any connections. A 7-day capacity performance test shall be performed, based on County 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 District for review and approval. In the event that existing sanitary sewer facilities

are insufficient to accommodate increased flows from the proposed Project Site, the Applicant shall provide temporary mobile sanitary facilities (i.e., toilet, sink, and urinal) for onsite personnel, as necessary.

FP-1a The oil field operator shall provide fire water supplies from either the Murphy Station 10-inch line or Suburban Water Supply along Colima Road (both of which are nearby and have sufficient supplies), or some other source, that provides sufficient water supply rates and duration to comply with codes and the LACoFD. Any new pipeline installations shall avoid any sensitive habitats (coastal sage scrub or riparian) and will be placed in non-native grassland or disturbed communities. Any non-native grassland in which new pipeline installations are placed shall be returned to its original state after pipeline installation.

FP-1b The oil field operator 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.

FP-1c The oil field operator 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 (near the Preserve hiking trails), installation of fire detection and prevention systems, flame detection, flammable gas detection, fire foam, and associated alarms and alert systems. The design and construction compliance status shall be verified by third-party audits overseen by the City.

FP-1d The oil field operator shall develop emergency response plans addressing the facility's fire-fighting capabilities pursuant to the most recent NFPA requirements, Los Angeles County Fire Code, LACoFD, California Code of Regulation, and API requirements, in coordination with LACoFD and the City of Whittier. These plans should include, but not be limited to, fire monitor placement, fire water capabilities, fire detection capabilities, fire foam requirements, facility condition relating to fire-fighting ease and prevention, and measures to reduce impacts to sensitive resources. The plan should also address coordination with local emergency responders and area schools and daycare facilities.

FP-2a The oil field operator shall ensure that fuel modification areas create at least 30 feet of clearance from all oilfield equipment and 10 feet from all roadways to reduce the potential for ignition sources starting wildfires. Firewater monitors located within the facility should be placed so that sprays could reach beyond the facility walls by at least 30 feet, or as directed by LACoFD, and could be used to extinguish a wildfire started at the facility fence line. Fire hydrants shall be placed along all roadways, spaced according to LACoFD Fire Prevention Regulations Chapter 8 or as specified by LACoFD. The Applicant shall ensure that appropriate wildfire response equipment is located at the site or at the Ranger Residence if the Ranger Residence is located near the site. Construction activities shall include using spark arrestors on construction equipment, monitoring vehicle traffic to ensure activities do not impact dry brush and lead to fire, and the placing firefighting equipment at the construction site according to LACoFD direction.

FP-2b Emergency response plans shall address the issues related to wildfire risks and response, including development of fuel management/modification fire hazard management plan according to LACoFD requirements, coordination with the area residences, the Preserve Rangers and the LACoFD, as well as first response tactics and equipment.

REC-1 The Applicant shall construct and maintain interpretative signage within the Preserve's trails in coordination with the Habitat Preserve. Interpretative signage shall provide an educational component about the Preserve, drilling activities, mitigation, descriptions of local wildlife, habitats, and the environmental values of the Puente Hills area; historic uses and others as determined by the City in consultation with the Habitat Preserve.

(b) Facts in Support of Findings

The Project Site is designated as open space of "high sensitivity" under the City of Whittier General Plan. Although many of the General Plan's open space policies identify the need to preserve and carefully manage such areas, the Plan also calls for a "balance between oil drilling activities and the protection of plant and animal communities in the hillsides."

Inclusion of the mitigation measures discussed in the different issue area sections of the EIR as part of a Conditional Use Permit (CUP), which is allowed under

the City's Zoning Ordinance for oil and gas projects in the Open Space zone district, would mitigate impacts to less than significant levels. Therefore, the proposed Project is found to be consistent with the goals and policies of the City General Plan.

Inclusion of mitigation measures presented in this EIR as well as the proposed Project's expected contributions to ongoing maintenance and improvement of the Preserve are expected to cause the Project to be consistent with the Resource Management Plan (RMP).

Additionally, the Project is found to be consistent with applicable County of Los Angeles goals and policies.

No residual impacts are expected after the recommended mitigation measures are implemented.

Further, implementing the Project would ensure continued funding for the Preserve for additional preservation activities that could otherwise be impeded after the Puente Hills Landfill closes in 2013, eliminating that source of funding.

With the mitigation described above, the impact is reduced to a less than significant level.

L. FIRE PROTECTION AND EMERGENCY SERVICES

1. Firewater Supplies, Equipment Layout, Detection Systems and Emergency Response Potential Deficiencies

Future oil field development activities at the site could be deficient in firewater supplies, equipment layout, detection systems, or emergency response. Through the incorporation of mitigation, any potential impact will be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant impact from deficiencies in firewater supplies, equipment layout, detection systems, or emergency response. Specifically, the following mitigation will ensure a less than significant impact.

FP-1a The oil field operator shall provide fire water supplies from either the Murphy Station 10-inch line or Suburban Water Supply along Colima Road (both of which are nearby and have sufficient supplies), or some other source, that provides sufficient water supply rates and duration to comply with codes and the LACoFD. Any new pipeline installations shall avoid any sensitive habitats (coastal sage scrub or riparian) and will be placed in non-native grassland or disturbed communities. Any non-native

grassland in which new pipeline installations are placed shall be returned to its original state after pipeline installation.

FP-1b The oil field operator 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.

FP-1c The oil field operator 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 (near the Preserve hiking trails), installation of fire detection and prevention systems, flame detection, flammable gas detection, fire foam, and associated alarms and alert systems. The design and construction compliance status shall be verified by third-party audits overseen by the City.

FP-1d The oil field operator shall develop emergency response plans addressing the facility's fire-fighting capabilities pursuant to the most recent NFPA requirements, Los Angeles County Fire Code, LACoFD, California Code of Regulation, and API requirements, in coordination with LACoFD and the City of Whittier. These plans should include, but not be limited to, fire monitor placement, fire 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.

(b) Facts in Support of Findings

Firewater, water used to fight fires, would be obtained from the City of Whittier connection at Catalina Avenue and distributed to the three sites via the backbone pipeline system. Current requirements by NFPA and the LACoFD indicate that firewater supplies should be from 3,000 to 5,000 gpm. Maximum flow capacities at the Catalina Avenue City of Whittier connection are estimated to be 840 gpm at 80 pounds per square inch gauge. This would not be sufficient to meet NFPA or LACoFD requirements and this would be a significant impact.

Based on preliminary design drawings, the site appears to comply with most equipment spacing requirements. However, detailed design drawings are not yet available for the Project. Some equipment spacing could still create impacts, such as

the location of the flare relative to process units or atmospheric storage tanks and distances from public areas, such as the hiking trails near the Truck Loading Facility. Inadequate equipment spacing would be a significant impact.

Early fire detection systems are identified on some preliminary design documents. During the Drilling and Testing Phase, temporary equipment would include hydrogen sulfide monitors on the drilling rig and breathing air packs at the rig and in the safety trailer, as well as a temporary fire hydrant at each well site that would connect to other pressurized hydrants with adequate pressure.

Each site's fire protection would include an automated alarm system and fire hydrant system as required by the LACoFD. However, preliminary design documents do not include installation of fire detection and prevention systems, such as foam systems on crude oil storage tanks, flame detection, and flammable gas detection systems. This would be a significant impact.

If an incident required fire protection and emergency services, the closest fire stations to the proposed Project Site would be LACoFD stations #59 and #28, each approximately 2.0 miles from the site with a 5 to 6 minute response time. The LACoFD has extensive resources and planning to direct at an oil field fire and historical incidents associated with existing oil facilities in the area have been minimal. This response time and capabilities therefore comply with the established significance criteria.

Catalina Avenue and the North Access Road would provide access to the site; these roads would comply with the LACoFD requirements for turning radius and grade (as defined in the regulatory section of Los Angeles County Fire Prevention Regulations).

New development at the proposed Project Site would increase fire risk and fire-fighting requirements. Although detailed plans associated with the proposed Project have not been developed, these plans would include Emergency Response Plans, Spill Prevention Plans, and Oil Spill Response Plans. Additionally, Evacuation Plans would be developed to ensure safety of the field employees and plans would be designed to communicate with surrounding residences and businesses regarding neighborhood evacuations in the event of flammable gas releases, crude oil tank fires, or other relevant events. These plans would be reviewed by the Fire Department and measures would be implemented as part of the permitting phase to ensure that appropriate response capabilities are in place. If these plans are not developed, this would be a significant impact.

Mitigation measures would include measures to ensure proper firewater supply, community outreach, and alert systems, plans reflect current codes, and the development of emergency response plans.

The LACoFD, and other codes and standards, require firewater supplies of 3,000 to 5,000 gpm. A water pipeline installed from the facilities to the Ocean View

Reservoir and the Murphy Booster Station 10-inch water supply line along Ocean View Avenue would provide this supply level, according to discussions with the City. The Ocean View Avenue 10-inch water line is approximately 1,000 feet west of Catalina Avenue within the Preserve.

In addition, the Suburban Water Systems main line along Colima Road could also supply water, according to discussions with Suburban Water Systems. This water connection could be made when the crude oil and natural gas pipelines are laid along the Loop Road to Colima Road. These firewater supplies would be sufficient and the sources are relatively close. With this mitigation, this impact would be less than significant.

Ensuring that equipment spacing complies with codes and standards before construction would ensure that impacts associated with equipment spacing would be less than significant. Early fire detection systems are critical for ensuring that any release response is effective and quick. Notification of area residences and businesses would also facilitate effective emergency response. Notification systems would be initiated by the LACoFD or the sheriff or police departments.

Development of appropriate response plans, in coordination with the LACoFD, would also ensure effective response activities.

With the mitigation described above, the impact is reduced to a less than significant level.

2. Risk of Wildfires

Future oil field development activities at the site could increase the risk of wildfires. Introducing industrial development into an area that is classified as a very high fire hazard zone without the proper equipment or planning would be a significant impact. With mitigation, this potentially significant impact will be reduced to a less than significant level.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant impact from any potential wildfire risk. Specifically, the following mitigation will ensure a less than significant impact.

FP-2a The oil field operator shall ensure that fuel modification areas create at least 30 feet of clearance from all oilfield equipment and 10 feet from all roadways to reduce the potential for ignition sources starting wildfires. Firewater monitors located within the facility should be placed so that sprays could reach beyond the facility walls by at least 30 feet, or as directed by LACoFD, and could be used to extinguish a wildfire started at the facility fence line. Fire hydrants shall be placed along all roadways, spaced

according to LACoFD Fire Prevention Regulations Chapter 8 or as specified by LACoFD. The Applicant shall ensure that appropriate wildfire response equipment is located at the site or at the Ranger Residence if the Ranger Residence is located near the site. Construction activities shall include using spark arrestors on construction equipment, monitoring vehicle traffic to ensure activities do not impact dry brush and lead to fire, and the placing firefighting equipment at the construction site according to LACoFD direction.

FP-2b Emergency response plans shall address the issues related to wildfire risks and response, including development of fuel management/modification fire hazard management plan according to LACoFD requirements, coordination with the area residences, the Preserve Rangers and the LACoFD, as well as first response tactics and equipment.

(b) Facts in Support of Findings

Industrial development could produce sparks due to electrical equipment, engines or vehicles, which could start a wildfire and produce impacts to nearby homes and biological resources in the area. This would be considered a significant impact.

These impacts could be mitigated by ensuring that brush and trees are not close to sources of ignition and that emergency response plans and equipment address issues related to wildfire risks.

Mitigation Measure FP-2a requires the oil field operator to ensure that fuel modification areas create at least 30 feet of clearance from all oilfield equipment and 10 feet from all roadways to reduce the potential for ignition sources starting wildfires. Firewater monitors located within the facility should be placed so that sprays could reach beyond the facility walls by at least 30 feet, or as directed by LACoFD, and could be used to extinguish a wildfire started at the facility fence line. Fire hydrants shall be placed along all roadways, spaced according to LACoFD Fire Prevention Regulations Chapter 8 or as specified by LACoFD. The Applicant shall ensure that appropriate wildfire response equipment is located at the site or at the Ranger Residence if the Ranger Residence is located near the site. Construction activities shall include using spark arrestors on construction equipment, monitoring vehicle traffic to ensure activities do not impact dry brush and lead to fire, and the placing firefighting equipment at the construction site according to LACoFD direction.

Mitigation Measure FP-2b requires emergency response plans to address the issues related to wildfire risks and response, including development of fuel management/modification fire hazard management plan according to LACoFD

requirements, coordination with the area residences, the Preserve Rangers and the LACoFD, as well as first response tactics and equipment.

Sufficient clearance around oil field equipment to avoid sparks or ignition sources starting a wildfire in the area would also reduce the impacts of industrial development in this very high fire hazard severity zone.

With the mitigation described above, the impact is reduced to a less than significant level.

M. RECREATION

1. Concurrent Operation and Drilling Recreation Impacts

Concurrent operational and drilling activities at the Project Site during periods of the Project could affect recreational activities. With mitigation, however, any potential impact will be reduced to a level of insignificance.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant recreation impact from concurrent operations and drilling activities. Specifically, the following mitigation will ensure a less than significant impact.

REC-1 The Applicant shall construct and maintain interpretative signage within the Preserve's trails in coordination with the Habitat Preserve. Interpretative signage shall provide an educational component about the Preserve, drilling activities, mitigation, descriptions of local wildlife, habitats, and the environmental values of the Puente Hills area; historic uses and others as determined by the City in consultation with the Habitat Preserve.

N-1a Limit all construction activity at the Project Site (including deliveries and arriving and departing workers, and construction activities during the testing phase) to the hours from 7:00 a.m. to 6:00 p.m., Monday through Friday, and from 8:00 a.m. to 5:00 p.m. on Saturdays and prohibit activities on Sundays and federal holidays. In addition, for construction work within the County of Los Angeles unincorporated areas, the Applicant shall ensure that noise levels do not exceed County municipal code levels with a noise study and monitoring and measures, including high grade mufflers, engine tuning, and management of backup alarms. All contracts with construction personnel shall specify the allowable work hours and the study and monitoring requirements.

N-1b Maintain all construction machinery according to the manufacturers' specifications and ensure that mufflers and silencers are maintained properly. Back-up OSHA noise indicators shall be ambient sensitive and self-adjusting to minimize backup indicator noise or flaggers shall be used in the place of backup alarms (as allowed by OSHA).

N-2a The Applicant shall develop and implement a Noise Reduction Plan for all drilling (testing, development, and re-drills and workovers) to ensure that the Leq noise levels from activities, measured as a 1-hour Leq, is less than a 3-dBA increase at the closest sensitive residential receptor and less than a 5-dBA increase at the closest sensitive recreational receptor. The Plan shall be prepared by an acoustic consultant approved by the City and the Plan shall be subject to City review and concurrence. The measures in the Plan shall include but not be limited to the following: (1) enclose the drill rig area in soundproof barriers 30 feet high on the south and west sides; (2) utilize a central generator type drilling rig, with the generators the only diesel engines onsite and enclosed in a soundproofed generator house with appropriate grade muffler systems, or install sound enclosures around all diesel engines with appropriate grade muffler systems; (3) install noise barriers around the drill rig floor, mud mixers, cleaners, conveyers, and shakers; (4) enclose drawworks brake area with soundproofing shroud; (5) install pads on V-door and other appropriate areas, timbers and pads on 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 (for both drilling and workover operations); (6) enclose the drilling mast boards area (on drilling and workover rigs) with barriers 2 inches thick and 2 pounds per square foot in density at least 5 feet above and below any noise sources; and (7) install ambient sensitive backup indicators on all equipment requiring backup indicators.

N-2b The Applicant shall institute a quiet-mode for all drilling activities between 7 p.m. and 7 a.m. Quiet-mode operation would apply to both drilling and operations and would involve: (1) using signalers for all backup operations instead of backup alarms and turning off backup alarms; (2) using radios instead of voice communication; (3) minimizing crane use and pipe handling operations, pipe offloading from trucks and board loading during daytime to the maximum extent feasible and nighttime loading only for safety reasons; (4) prohibiting material and supply

deliveries to the Project Site between the hours of 7 p.m. and 7 a.m., with exceptions only for safety; and (5) limiting process alarms and communications over the broadcast system to the maximum extent feasible during all operations and use only for safety reasons.

N-2c Provide a comprehensive noise abatement study, including noise and vibration monitoring at nearby sensitive receptors and continuous monitoring near drilling activities, under contract and supervision of the City, to monitor noise and vibration from the drilling and operations in the community. The City shall have the authority to shut-down operations and require additional mitigation if the noise criteria are exceeded.

N-4 The Applicant shall develop and implement a Noise Reduction Plan for all operations to ensure that Leq noise levels from operational activities, measured as 1-hour Leq, produce less than a 3 dBA increase over the minimum baseline hourly average level at the closest residential receptor to the facility. The measures in the Plan shall include, but not be limited to: (1) installing sound enclosures or buildings around all compressors; (2) installing noise barriers around all pumps and air coolers; (3) installing ambient-sensitive backup indicators on all equipment requiring backup indicators; (4) installing sound enclosures or buildings around all the oil area pumps (e.g., shipping, IGFC, water injection, water booster, reject pumps); (5) installing sound enclosures or buildings around refrigeration units; (6) installing a secondary, 16-foot tall sound wall on the south, west and north sides of the gas plant; (7) ensuring that all office equipment (i.e., air conditioners, heating, ventilation) produces low noise levels or is surrounded by noise barriers; and (8) limiting traffic on the North Access Road to within 7 a.m. to 7 p.m., except for emergencies.

BIO-4n Recreational access to the Arroyo San Miguel Trail shall be closed during construction or drilling activities at the Drill Pad Site. To continue providing recreation access to the Arroyo San Miguel Trails (on the east side of Colima Road), the Applicant shall develop additional recreational access, in coordination with the Habitat Authority, to the Arroyo San Miguel Trail by any of the following or equivalent: (1) enhancing the parking area on the east side of Colima Road; (2) developing the parking area along Le Flore Drive, approximately 1 mile east of Colima Road; or

(3) developing pedestrian access along Colima Road from the Preserve parking area (on the west side of Colima Road) utilizing the new signalized intersection.

(b) Facts in Support of Findings

Construction, drilling, and operations would generate additional noise in the vicinity of the Project Site within the Preserve. Construction noise would be less than significant since it would be short term and only during daytime hours. For recreational users, however, elevated noises from construction machinery could be annoying and disrupt their normal recreational activities, particularly if the construction activities are close to any of the three trails within the Arroyo Pescadero Trailhead. However, none of the recreational areas in the vicinity of the proposed Project Site would typically be affected by higher than 70 A-weighted decibels (dBA) daytime noise levels for construction, which are specified by Los Angeles County and City of Whittier guidelines as acceptable noise levels in recreational areas, such as parks. This impact, therefore, would be less than significant.

Crude oil and natural gas sales pipelines would be built under the existing Preserve Loop Road from the Project Site to Colima Road. The Loop Road is located on a portion of the existing Arroyo Pescadero Trailhead. The Loop Road may also serve as the Fire Department's secondary access route to the facility from Colima Road and may need to be widened to 20 feet.

Both the Loop Trail Road modifications and the pipeline installation would take place during the Design and Construction Phase of the Project and would last approximately 2-3 months. Trails may be temporarily closed to recreational use during these activities for up to 2-3 months.

In addition, recreational access to the Arroyo San Miguel Trail would be closed during construction or drilling activities at the Drill Pad Site. As a result, the Arroyo San Miguel Trail could be temporarily closed to recreational use for approximately 8 years; for 90 days during Drilling and Testing (Phase I), 2 to 3 years during Design and Construction (Phase II), and 5 years during Operations and Maintenance (Phase III).

However, recreational access to the Arroyo San Miguel Trail on the east side of Colima Road could be maintained throughout all three phases by implementing one of three measures: (1) enhancing the parking area on the east side of Colima Road; (2) developing the parking area along Le Flore Drive, approximately 1 mile east of Colima Road; or (3) developing pedestrian access along Colima Road from the Preserve parking area (on the west side of Colima Road) utilizing the new signalized intersection.

Drilling would occur for 3 months during the testing phase, for 5 years during the initial operations period, and for up to 3 months a year thereafter.

Noise from drilling at the Project Site could be significant without mitigation and could create a nuisance for recreational users in close proximity to the Project Site.

However, noise from drilling is considered to be temporary in nature and would only occur when a well was being drilled. In addition, noise levels can be mitigated to less than significant levels, and therefore, recreational impacts from noise would also be less than significant with mitigation by implementing mitigation measures N-1a through N-1b, N-2a through N-2c, and N-4.

Noise from the Project Site operations would be associated with new oil pumps, compressors, and coolers, which when mitigated, would be less than significant. Operational noise generated from truck traffic to and from the Truck Loading Facility would not be significant due to the sporadic nature and low frequency of truck trips.

Implementing mitigation measures N-1a and N-1b, N-2a through N-2c, and N-4 would reduce noise impacts to recreational users to less than significant. In addition, the Mitigation Measure REC-1 would provide recreational users with information about activities at the Project Site.

Mitigation Measure REC-1 requires the Applicant to construct and maintain interpretative signage within the Preserve's trails in coordination with the Habitat Preserve. Interpretative signage shall provide an educational component about the Preserve, drilling activities, mitigation, descriptions of local wildlife, habitats, and the environmental values of the Puente Hills area; historic uses and others as determined by the City in consultation with the Habitat Preserve.

With the mitigation described above, the impact is reduced to a less than significant level.

2. Operations and Drilling Would Increase Recreation Impacts By Creating Odors

New drilling and operations would increase odors that could reach recreational users. New equipment and drilling could create odor events. With mitigation, this impact would be less than significant.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to ensure a less than significant recreation impact from odors. Specifically, the following mitigation will ensure a less than significant impact.

AQ-3a The Operator shall have a gas buster and SCAQMD-approved portable flare at the oil field and available 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 Los Angeles County Fire Chief and the SCAQMD.

AQ-3b The Operator 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 submit a report of the breakdown to the Los Angeles County Fire Chief and the SCAQMD, which shall detail the corrective actions the Operator shall take to avoid exceeding the tank relief pressure.

AQ-3c The Operator shall develop an Odor Minimization Plan. The Odor Minimization Plan shall address potential sources of odors from all oil field equipment, including wells and drilling operation, 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.

AQ-3d The Operator shall develop an Air Monitoring Plan. The Plan shall provide for the monitoring of total hydrocarbon vapors and hydrogen sulfide at each well drill and re-drilling site and total hydrocarbon vapors at the gas plant. At all times during drilling and re-drilling operations, the Operator shall maintain monitoring equipment that shall monitor and digitally record the levels of hydrogen sulfide and total hydrocarbon vapors. Monitors shall be installed at the edge of the drill pad and around the outer edge of the gas plant. Such monitors shall provide automatic alarms that are audible or visible to the Operator of the drilling equipment for the drill rig monitors, and gas plant for the gas plant monitors, 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 H₂S and 500 and 1,000 ppm hydrocarbons, with the higher level requiring shut-down of drilling or gas plant operations and notification to appropriate agencies, including the Los Angeles County 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 Processing, or applicable location.

AQ-3e The Operator shall use an odor suppressant spray system or vapor capture hood and carbon filter 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 (e.g., residences, hiking trails, Ranger Residence).

(b) Facts in Support of Findings

Several different components in the new equipment could leak and cause odors. New operations would use tanks, which could potentially lead to odor events. Drilling muds from drilling operations would create emissions. These types of releases could reach recreational areas surrounding the proposed Project Site.

Implementing mitigation measures AQ-3a through AQ-3e would reduce the frequency of odor events and impacts would be reduced to less than significant with mitigation.

With the mitigation described above, the impact is reduced to a less than significant level.

V. Environmental Effects that Remain Significant and Unavoidable After Mitigation.

In the environmental areas of air quality, aesthetics, hydrology and water quality, land use and policy consistency, and recreation, there are instances where environmental impacts would remain significant and unavoidable even after mitigation. These areas are discussed below.

A. AIR QUALITY

1. Construction Emissions

Construction activities would generate emissions that exceed South Coast Air Quality Management District thresholds. Even with the implementation of mitigation, this impact would remain significant and unavoidable.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to attempt to lessen the significant construction emissions impact. Nevertheless, even with the implementation of the mitigation addressed below, impacts will remain significant and unavoidable.

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. The Plan shall also address fugitive dust measure impacts to native habitats. Fugitive dust mitigation measures in the plan should include the following:

- Apply water every 3 hours to disturbed areas within a construction site (61% reduction).

- Require minimum soil moisture of 12% for earthmoving, by using a moveable sprinkler system or water truck. Moisture content can be verified by lab sample or moisture probe (69% reduction).

- Limit on-site vehicle speeds on unpaved roads to 15 mph with radar enforcement (57% reduction) and posting of speed limits.

- Replace ground cover, approved by the Habitat Authority, in disturbed areas as quickly as possible (5% reduction).

- 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% reduction).

- Install gravel bed trackout apron (3 inches deep, 25 feet long, 12 feet wide per lane, and edged by rock berm or row of stakes) to reduce mud and dirt trackout from unpaved truck exit routes (46 to 80% reduction).

- Water industrial unpaved road three times per day (61% reduction).

- Water storage piles by hand or apply cover when wind events are declared, according to SCAQMD Rule 403 when instantaneous wind speeds exceed 25 miles per hour (90% reduction).

- Appoint a construction relations officer to act as a community liaison concerning onsite construction issues, such as dust generation.

AQ-1b Treat all dirt roads with water three times per day prior to and during the Drilling and Resting Phase pad clearing to substantially reduce dirt road fugitive dust emissions.

AQ-1c Treat all roads (pave or apply non-toxic soil binders as approved by the Habitat Authority with at least 80% effectiveness) before beginning the development phase pad grading and facility construction to substantially reduce dirt road fugitive dust emissions during those phases of construction.

AQ-1d The Applicant shall implement a NOx reduction program including the following, or equivalent, measures:

- All off-road construction equipment shall be tuned and maintained according to manufacturers' specifications.

- Any temporary electric power shall be obtained from the electrical grid, rather than portable diesel or gasoline generators.

- All off-road diesel construction equipment with greater than 100-horsepower engines shall meet Tier 4 NOx requirements. If the lead agency determines that a Tier 4 fleet or portion thereof cannot be obtained, the lead agency shall require the use of construction equipment that meets Tier 3 emissions requirements or utilize other CARB-verified emission control technologies to achieve the same level of emission reduction.

- During the pad and access road grading phase, all off-road dump trucks shall meet EPA 2010 model year NOx emission requirements. If the lead agency determines that a 2010 model year truck fleet or portion thereof cannot be obtained the lead agency shall require the use of trucks that meet EPA 2007 model year NOx emissions requirements. If the Project's fleet requirements cannot be met with 2010 or 2007 EPA model year truck emissions or portion thereof, the lead agency shall require a certified NOx emissions level of less than 2.0g/bhp-hour for trucks used at the Project Site during the pad and access road grading phase.

- 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 when each piece of equipment is mobilized.

There are no other feasible mitigation measures that would reduce the Project's construction emissions from potentially exceeding the SCAQMD's emissions thresholds. Accordingly, specific economic, legal, social, technological or other considerations make infeasible other mitigation measures.

(b) Facts in Support of Findings

Several Project activities would generate construction emissions, including the initial site clearing, site grading, facility construction, and pipeline construction. Some aspects of some activities could occur simultaneously, such as grading and pipeline construction. Pad clearing would occur prior to any other activities.

The emissions from construction activities would exceed those specified by the SCAQMD regional thresholds for NO_x emissions, but not the localized thresholds. NO_x emission levels would exceed regional threshold levels during site grading due to grading equipment and a relatively large number of offsite vehicles necessary for soils transport. Emissions of NO_x can be reduced by utilizing newer, cleaner diesel engines that meet EPA Tier emissions requirements.

Emissions of PM would not exceed the SCAQMD regional thresholds, but they would exceed local emissions thresholds. The emissions of PM₁₀ and PM_{2.5} are associated both with fugitive dust due to travel on dirt roads and disturbed areas and vehicle and construction equipment combustion.

PM emissions associated with fugitive dust can be reduced by implementing measures such as watering, maintaining a level of soil moisture and reducing vehicle speeds, and treating roadways, thereby reducing dust generation. These measures are common practice at construction sites and are described in SCAQMD CEQA Guidance documents and in the mitigation measures above, along with the estimated reduction in PM emissions for each measure. Although SCAQMD Rule 403 requires a fugitive dust control plan, the specifics of the plan are left to the Applicant and the SCAQMD. Therefore, details of the plan are provided to ensure that emissions are reduced to below the thresholds.

Mitigation Measure AQ-1a requires the Applicant to submit and implement a Fugitive Dust Control Plan that includes SCAQMD mitigations for fugitive dust mitigation, according to Rule 403, and SCAQMD CEQA Guidelines. The Plan shall also address fugitive dust measure impacts to native habitats.

Mitigation Measure AQ-1b requires the treatment of all dirt roads with water three times per day prior to and during the Drilling and Resting Phase pad clearing to substantially reduce dirt road fugitive dust emissions.

Mitigation Measure AQ-1c requires the treatment of all roads (pave or apply non-toxic soil binders as approved by the Habitat Authority with at least 80% effectiveness) before beginning the development phase pad grading and facility construction to substantially reduce dirt road fugitive dust emissions during those phases of construction.

Mitigation Measure AQ-1d requires the Applicant to implement a NO_x reduction program.

Regarding residual impacts, implementing a fugitive dust control plan, reducing distances of dirt road travel, and roadway treatments would ensure that particulate emissions would be less than both the regional and local SCAQMD significance thresholds. Soil binders are relatively non-toxic (for polymers) and they reduce particulate emissions from untreated roadways by more than 80 percent. Note that most of Catalina Ave located within the Preserve is currently paved, although it would need to be re-paved during the construction phase. This reduces emissions of fugitive dust due to travel on roadways.

With regard to NO_x emissions, with the Project refinements addressed in Appendix O to the FEIR, truck haul trips will be substantially reduced over what was analyzed in the EIR thereby reducing unmitigated NO_x emissions by 87 lbs/day. Since pipeline construction would occur at the same time, the combined emissions would be less than the SCAQMD thresholds, but only if all of the mitigation elements in AQ-1d are feasible and available (Tier 4 construction equipment, model year 2010 haul trucks, and soil to the landfill).

In addition, during the grading, North Access Road construction, facility construction and pipeline construction, testing emissions would be occurring from the testing flare and the associated truck trips to transport crude oil and water from the test wells to area refineries. These emissions would contribute to the emissions levels associated with construction and, in combination with the grading and pipeline construction emissions, would exceed the emissions NO_x threshold levels for regional emissions.

Since the availability of Tier 4 construction equipment and new diesel trucks that meet the EPA 2010 emissions requirements are unknown, emissions would continue to exceed the regional SCAQMD thresholds for NO_x emissions if these measures cannot be implemented. Therefore, this would remain a significant and unavoidable impact.

This impact remains potentially significant following application of all feasible mitigation.

2. Operational Emissions – Greenhouse Gas Emissions Impact

Operational activities would generate greenhouse gas emissions. Even with the implementation of mitigation, this impact would remain significant and unavoidable.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to attempt to lessen the significant operational greenhouse gas emissions impact. Nevertheless, even with the implementation of AQ-4, impacts will remain significant and unavoidable.

AQ-4 The Applicant shall implement a program to quantify and reduce greenhouse gas emissions associated with operations, such as using green electrical power to run equipment, using high efficiency pumps and electrical devices, requiring diesel engines to use biodiesel, or offsite measures that could offset greenhouse gas emissions. Operations GHG emissions levels shall be quantified and reported to the City and to the SCAQMD annually, and, if GHG emissions exceed the SCAQMD thresholds, a GHG emission reduction program shall be implemented to reduce emissions to less than the threshold value of 10,000 metric tonnes CO₂e annually. Reductions or offsets of GHG emissions shall be quantified according to applicable protocols, and submitted to the City and AQMD. The reduction program shall focus on onsite and local basin-area methods for GHG reductions.

There are no other feasible mitigation measures that would reduce the Project's operational emissions from potentially exceeding the SCAQMD's emissions thresholds. Accordingly, specific economic, legal, social, technological or other considerations make infeasible other mitigation measures.

(b) Facts in Support of Findings

GHG emissions were estimated utilizing the equipment size and fuel use data that were used to estimate criteria emissions along with emission factors as defined by the CARB and the EPA (see Appendix B for the detailed calculations). GHG associated with operations include emissions from combustion sources (e.g., flare, heater, diesel drilling engines), offsite vehicles, electrical generation, and fugitive emissions that contain CO₂ and methane. The largest source of GHG emissions are the heater and the flare, followed by electrical generation.

Emissions associated with stationary equipment, including electrical generation, would exceed the SCAQMD threshold of 10,000 tonnes per year. This would be a significant impact.

Mitigation measures could include a wide variety of measures, from onsite increased efficiency to offsite programs implemented in the community, which could reduce GHG emissions. Onsite measures could include: reduced facility water consumption, waste generation, and material use; recycling to the maximum extent feasible; and using bio-diesel or bio-diesel blends for diesel equipment. Offsite, community-wide measures could include sponsoring retrofitting of diesel buses with hybrid engines and methane-capture technology projects, including methane capture from dairy and agricultural operations. All of these activities would reduce emissions of GHG.

Mitigation measure AQ-4 requires annual quantification and reporting of GHG emissions. Several measures could be implemented if GHG emissions exceed the SCAQMD thresholds, potentially including the following for onsite emissions:

- Reducing energy use, including natural gas and electricity, from existing and proposed direct sources, which would reduce GHG emissions from fuel combustion and electrical generation. Reducing water use, raw material use, and waste generation and increasing recycling would also reduce GHG emissions by reducing the energy used to transport and pump water, produce goods, and truck trips.

- Biodiesel (fatty acid methyl ester) is produced from plant crops, such as soybeans. Since it is made from plant sources, the carbon in the biodiesel has been recently removed from the atmosphere and therefore does not contribute to GHG emissions. Diesel vehicles can use biodiesel fuel (UC 2007). The American Society of Testing and Materials has approved a standard for biodiesel at blend levels up to 20 percent by volume, but some engine manufacturers recommend caution with blends greater than 10 percent. Replacement of 10 to 20 percent of diesel fuel with biodiesel would reduce GHG emissions by a proportionate amount. Biodiesel could be used in Project equipment or other engines in the area, such as school buses, to offset direct emissions from the Project.

Programs in the community that could reduce GHG emissions include the following:

- Planting trees removes CO₂ from the atmosphere as the tree grows. Trees remove CO₂ from the atmosphere through photosynthesis and store, or sequester, the carbon in the tree trunk, branches, and leaves. Tree carbon calculators indicate that a sycamore, 20 inches in diameter (at 4.5 feet height) and 50 feet tall, stores approximately 2.2 metric tonnes of CO₂e and grows at a rate that sequesters approximately 0.1 metric tonnes of CO₂ per year. Protocols for forest carbon sequestration would be utilized to ensure reductions are legitimate, such as those developed by the Climate Action Reserve.

- Retrofitting diesel buses with more efficient, hybrid-diesel engines would decrease GHG emissions from buses by increasing fuel economy and efficiency and, by association, decreasing fuel combustion. Diesel-hybrid buses employ technology that includes regenerative braking, electric motors, and battery storage to increase fuel efficiency. Experience in New York City indicates fuel economy efficiencies averaging 26 to 52 percent improvement compared to regular diesel buses. This savings in GHG emissions could be applied to offset the increase in GHG emissions from the proposed Project.

- Installation of solar panels at parking lots, for example, or on City buildings or structures, would reduce the need to generate electricity by area utilities and would therefore reduce emissions of GHG. The installation of approximately 300 solar panels could reduce annual emissions of GHG by approximately 100 tons.

- Obtaining offset credit through the Climate Action Reserve or through the voluntary SCAQMD Regulation XXVII, would decrease GHG emissions impacts. This offset program establishes standards for the development, quantification, and verification of GHG emissions reduction projects; issues carbon offset credits known as Climate Reserve Tonnes generated from such projects; and tracks the transaction of credits. The CARB participates in the program. The Climate Action Reserve has issued more than 10 million Climate Reserve Tonnes.

A combination of these mitigation measures could reduce the GHG emissions to below the SCAQMD threshold of 10,000 metric tonnes per year. However, the ability to implement some of these measures is uncertain; therefore, the impacts would still be potentially significant and unmitigable.

B. AESTHETICS

1. Drilling Rig Impact on Public Viewsheds

The drilling rig could degrade public viewsheds. Even with the implementation of mitigation, this impact would remain significant and unavoidable.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to attempt to lessen the significant public viewshed impact caused by the drilling rig. Nevertheless, even with the implementation of mitigation, impacts will remain significant and unavoidable.

AE-1a Landscaping with native vegetation shall be planted at the periphery of the Project Site for the specific purpose of beautifying and screening the operations from adjoining residential and recreational areas, adjacent public streets, and highways. Berms shall be used in combination with landscaping where it would further reduce visibility. Care should be taken to ensure that the proposed screening does not affect existing desirable views by neighboring properties. A Landscaping Plan shall be prepared to address berms, screening, irrigation, and planting protocols. The Plans and vegetation selection shall be reviewed and approved by the City and the Habitat Authority. The Habitat Authority and a certified landscape architect shall implement and monitor compliance with the Landscaping Plan. Landscaping at the site shall be inspected regularly and maintained in good condition.

AE-1b Within 30 days of installation, all structures visible from public locations at the well or processing sites shall be painted non-reflective earth-tone colors or otherwise surfaced with a color or textured surface in consultation

with the City, so that they are less obtrusive to the surrounding area.

AE-1c The Applicant shall redesign the project footprint, in coordination with the Habitat Authority and the Fire Department, to prevent the removal of the eucalyptus trees on the east side of the project site to preserve the visual shielding that these trees provide.

There are no other feasible mitigation measures that would reduce the Project's public viewshed impact caused by the drilling rig. Accordingly, specific economic, legal, social, technological or other considerations make infeasible other mitigation measures.

(b) Facts in Support of Findings

The proposed drilling rig location would be proximate to recreation areas that contain hiking trails, a scenic overlook, as well as residential areas. Many of the locations offer public visibility of the Puente Hills ranging from views of near-field creeks and wooded areas as well as farther-field views of the hills. The proposed Project may affect public views from hiking trails associated with the recreation areas. Due to the proximity of recreational facilities to the proposed oil field operations, installation of the drilling rig could create significant visual resource impacts that would be perceived as incompatible with adjacent uses.

While the drilling rig would not obstruct scenic views from trails, recreation areas, or residences, placement of the drilling rig could significantly degrade the existing visual conditions within selected viewsheds seen from public trails, recreation areas, and, to a lesser extent, residences. The drilling rig would protrude above ridgelines when viewed from the Deer Loop Trail area, thereby exacerbating the impacts associated with a degradation of view quality. Items placed that extend above ridgelines are more noticeable than items placed below ridgelines. However, the drilling rig would generally not be seen protruding above ridgelines from residential areas due in part to terrain and in part due to shielding from area vegetation. The proposed Project drilling rig could create potentially significant visual impacts to public viewsheds.

The drilling rig would be present during the first 3 months of the Project for test drilling, then removed for approximately 2 years, then installed for 5 years or more of Project operations after construction, then removed and brought back only for maximum 3-month periods per year. Therefore, there would be substantial periods in the future when impacts associated with the drilling rig would not be realized.

Mitigation Measure AE-1a requires landscaping with native vegetation be planted at the periphery of the Project Site for the specific purpose of beautifying and screening the operations from adjoining residential and recreational areas, adjacent public streets, and highways. Berms shall be used in combination with landscaping

where it would further reduce visibility. Care should be taken to ensure that the proposed screening does not affect existing desirable views by neighboring properties. A Landscaping Plan shall be prepared to address berms, screening, irrigation, and planting protocols. The Plans and vegetation selection shall be reviewed and approved by the City and the Habitat Authority. The Habitat Authority and a certified landscape architect shall implement and monitor compliance with the Landscaping Plan. Landscaping at the site shall be inspected regularly and maintained in good condition.

Mitigation Measure AE-1b requires that within 30 days of installation, all structures visible from public locations at the well or processing sites shall be painted non-reflective earth-tone colors or otherwise surfaced with a color or textured surface in consultation with the City, so that they are less obtrusive to the surrounding area.

Mitigation Measure AE-1c requires the Applicant to redesign the project footprint, in coordination with the Habitat Authority and the Fire Department, to prevent the removal of the eucalyptus trees on the east side of the project site to preserve the visual shielding that these trees provide.

Regarding residual impacts, measures to either beautify or effectively screen the proposed Project drilling rig from view would reduce impacts. However, the drilling rig mast and views of the drilling rig from the preserve trails and the Preserve viewing area would continue to be visible and degrade the existing visual conditions. The drilling rig would be only minimally visible from most residential areas since it would not extend above the ridge lines and existing vegetation would shield it in the neighborhoods where it might be visible, such as the slightly elevated terrain areas just south of Mar Vista Road, which potentially have views up Canada Canyon or along Catalina Road.

The eucalyptus trees currently located on the east side of the proposed Project site would provide substantial visual shielding of the project equipment and drilling rig. With the installation of a berm on the east side of the site, the Project equipment would be shielded. However, the drilling rig would still be visible from the Deer Loop Trail. By redesigning the Project as detailed in Appendix O, the eucalyptus trees could remain. This measure would reduce the impacts from the Deer Loop Trail location to less than significant as the drilling rig would only be visible through the trees. Impacts from other viewing locations, such as the viewing area, would remain significant and unavoidable.

Figure 4.6-19 in the EIR shows the view from the Preserve viewing area with mitigation, including painting the drilling rig and placing a berm and planting vegetation to the immediate east of the facilities. The berm is assumed to be 15 feet high and about 350 feet in length extending from the Deer Loop Trail up the ridge to the north. The berm would require about 10,000 yds of material, which could be available as there would be excess cut associated with the project. Although impacts would be reduced, they would still be significant and unavoidable due to the drilling rig mast.

Some rigs exist that can drill to 10,000 foot depth and have a mast height of less than 85 feet. The Ensign Rig #535, for example, is a rig owned by Ensign United

States Drilling Company, which has a mast height of 70 feet and can drill to 10,000 foot depth with similar equipment arrangements and capacities as those proposed to be used for the Project by the Applicant. The use of this drilling rig would most likely reduce the visual impacts to less than significant from all viewing locations. However, the availability of this type of rig is not known.

Therefore, the impacts to public viewsheds would be reduced but still significant and unavoidable.

A. HYDROLOGY AND WATER QUALITY

1. Surface Water and Groundwater Quality Degradation

A rupture or leak during oil drilling operations, from pipelines, or other infrastructure could substantially degrade surface water and groundwater quality. Even with the implementation of mitigation, this impact would remain significant and unavoidable.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to attempt to lessen the significant surface water and groundwater quality degradation impact. Nevertheless, even with the implementation of mitigation, impacts will remain significant and unavoidable.

WR-4a The City of Whittier and other appropriate agencies shall inspect facility conditions at the Project Site on a yearly basis. Inspections shall also occur after earthquake induced land movement or upon periods of large rainfall in order to verify no leak or rupture risks have developed. Inspections shall be completed by personnel with oilfield operations inspection experience (petroleum engineer or equivalent). Inspection and violation records shall be available to the public for review within 5 working days of inspections.

WR-4b The Applicant shall properly maintain the associated crude oil pipelines, storage tanks and processing facilities within and outside the Preserve, 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 Regional Water Quality Control Board. Pipeline, tank and processing inspections, including walking the pipelines within the Preserve, shall occur at least daily.

WR-4c The Applicant shall install a leak detection system for crude pipelines in the Preserve and the Colima Road pipeline. 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.

There are no other feasible mitigation measures that would reduce the Project's potential surface water and groundwater quality degradation impact. Accordingly, specific economic, legal, social, technological or other considerations make infeasible other mitigation measures.

(b) Facts in Support of Findings

Up to 60 wells would be drilled at the Project Site, from three separate well cellars. The wells would be used for oil and gas production and water injection. The produced oil and gas would be separated into gas, oil, and water streams. The oil would be processed to remove any remaining water and then the dry oil would be temporarily stored in tanks and shipped via pipeline or trucks to local Los Angeles area refineries. The produced water would be sent to injection wells, where the water would be injected back into the producing formation. The produced gas would be sent to the existing gas plant, where water and gas liquids would be removed.

Proposed drilling and oil processing operations could result in oil spills due to geologic hazards, mechanical failure, structural failure, corrosion, or human error during any of the steps outlined above. Among other geologic hazards, the Whittier Fault underlies portions of the Whittier Oil Field. An active segment of the fault trends approximately 1,500 feet north of the Project Site and 1,500 feet northeast of the proposed pipeline alignment, at the closest point. The most likely spills from the facility would involve crude oil and/or produced water. Such spills could potentially result in water quality impacts to creeks and shallow groundwater. Small leaks or spills, which are contained and remediated quickly, may have minor or negligible impacts to water resources. In contrast, large spills, such as those that could be produced from a tank rupture at the processing facility, well blow-out, or pipeline rupture, could spread to surface waters and/or groundwater and may substantially degrade water quality, with potential long-term impacts to beneficial water uses and biological resources.

La Canada Verde Creek is located immediately adjacent to the Project Site and several other creeks are present along the proposed pipeline route. Although some of the more toxic components of oil, e.g., volatile organic compounds, would be lost

rapidly due to aeration, i.e., volatilization, spills and associated contaminated stormwater runoff reaching any of these waterways could have significant, and widespread impacts to water quality and consequently, sensitive biological resources. Similarly, spills could result in significant, long-term contamination of groundwater in alluvial soils located in these creeks, as these soils are generally unconsolidated and permeable and perched groundwater occurs at relatively shallow depths. Therefore, the impacts could be considered potentially significant.

Under worst-case conditions, maximum estimated spill volumes would be from a catastrophic failure of one of the largest crude oil tanks that have a capacity for approximately 11,000 barrels. The tank area would be surrounded by a concrete retaining wall, sufficient in height to retain 110 percent of the volume of the largest tank. Likewise, all other vessels throughout the facilities would be walled or bermed for spill containment. Although secondary containment would be present surrounding the storage tanks, the worst case scenario would involve a full release of the tank's contents as a result of severe seismically induced ground shaking and associated ground failure. The frequency of a release of crude oil from proposed storage/pumping areas, beyond proposed containment, would be once every 1,029,469 years.

A worst-case scenario for pipeline rupture would be a rupture at the tie-in along Leffingwell Avenue, which could result in complete draining of the pipeline, or approximately 3,700 barrels, back to the Preserve boundary. A release of crude oil from piping/equipment outside of containment areas within the Preserve, due to rupture or leak, has a probability of once every 12 years, but this probability does not necessarily represent large spills.

The potential for rupture of the wellhead area during drilling is once every 33 years. Blow-out prevention systems are proposed to be used during the drilling operations to prevent uncontrolled release of reservoir fluids and shut off the flow to prevent spills and releases of materials that could cause fires and explosions. The safety systems are composed of a stack, actuation systems, a choke manifold, kill systems, and other equipment. Such systems would be placed on each wellhead during drilling and removed after the well is established. In addition, impacts would be reduced with implementation of the following measures:

Mitigation Measure WR-4a requires the City of Whittier and other appropriate agencies to inspect facility conditions at the Project Site on a yearly basis. Inspections shall also occur after earthquake induced land movement or upon periods of large rainfall in order to verify no leak or rupture risks have developed. Inspections shall be completed by personnel with oil-field operations inspection experience (petroleum engineer or equivalent). Inspection and violation records shall be available to the public for review within 5 working days of inspections.

Mitigation Measure WR-4b requires the Applicant to properly maintain the associated crude oil pipelines, storage tanks and processing facilities within and outside the Preserve, 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 Regional Water Quality Control Board. Pipeline, tank and processing inspections, including walking the pipelines, shall occur at least daily.

Mitigation Measure WR-4c requires the Applicant to install a leak detection system for crude pipelines in the Preserve and the Colima Road pipeline. 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.

This impact remains potentially significant following application of all feasible mitigation.

B. LAND USE AND POLICY CONSISTENCY

1. Views of Project Facility Equipment

Views of drilling rigs, construction, and potential future operations could be incompatible with adjacent land uses. Even with the implementation of mitigation, this impact would remain significant and unavoidable.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to attempt to lessen the significant view impact caused by project facility equipment. Nevertheless, even with the implementation of mitigation, impacts will remain significant and unavoidable.

AE-1a Landscaping with native vegetation shall be planted at the periphery of the Project Site for the specific purpose of beautifying and screening the operations from adjoining residential and recreational areas, adjacent public streets, and highways. Berms shall be used in combination with landscaping where it would further reduce visibility. Care should be taken to ensure that the proposed screening does not affect existing desirable views by neighboring properties. A Landscaping Plan shall be prepared to address berms, screening, irrigation, and planting protocols. The Plans and vegetation selection shall be reviewed and approved by the City and the Habitat Authority. The Habitat Authority and a certified landscape architect shall implement and monitor compliance with the

Landscaping Plan. Landscaping at the site shall be inspected regularly and maintained in good condition.

AE-1b Within 30 days of installation, all structures visible from public locations at the well or processing sites shall be painted non-reflective earth-tone colors or otherwise surfaced with a color or textured surface in consultation with the City, so that they are less obtrusive to the surrounding area.

There are no other feasible mitigation measures which would reduce the Project's view impact caused by project facility equipment. Accordingly, specific economic, legal, social, technological or other considerations make infeasible other mitigation measures.

(b) Facts in Support of Findings

Introducing oil field production equipment and grading or other site preparations may create potentially significant visual impacts on surrounding land uses.

Implementing mitigation measures AE-1a and AE-1b would screen the visibility of equipment or conceal it from view and would reduce these visual impacts.

Drilling rigs would introduce an industrial component to some views currently free of industrial aspects. Due to the size and height of the drilling rigs and their extension above tree lines and mountain horizon lines, the rig would strongly contrast with the surrounding environment.

Introducing this industrialized component to the viewsheds could impact the quality of life for some residents and visitors to the area. Specifically, the quality of recreational experiences at the Arroyo Pescadero Trailhead, a popular trail that is highly utilized by recreational users in the area, could also be impacted by the proposed Project equipment. Mid-field views from the neighboring residential streets present a level of industrialization and architectural projection that contrast with the surrounding environment. Therefore, the impacts to adjacent land uses would be significant and unavoidable.

This impact remains potentially significant following application of all feasible mitigation.

C. RECREATION

1. Public Viewsheds Impact From Operation and Drilling

New drilling and operations would adversely affect public viewsheds. Even with the implementation of mitigation, this impact would remain significant and unavoidable.

(a) Findings

Changes or alterations have been required in, or incorporated into the Project to attempt to lessen the significant public viewshed impact caused by operations and drilling. Nevertheless, even with the implementation of mitigation, impacts will remain significant and unavoidable.

AE-1a Landscaping with native vegetation shall be planted at the periphery of the Project Site for the specific purpose of beautifying and screening the operations from adjoining residential and recreational areas, adjacent public streets, and highways. Berms shall be used in combination with landscaping where it would further reduce visibility. Care should be taken to ensure that the proposed screening does not affect existing desirable views by neighboring properties. A Landscaping Plan shall be prepared to address berms, screening, irrigation, and planting protocols. The Plans and vegetation selection shall be reviewed and approved by the City and the Habitat Authority. The Habitat Authority and a certified landscape architect shall implement and monitor compliance with the Landscaping Plan. Landscaping at the site shall be inspected regularly and maintained in good condition.

AE-1b Within 30 days of installation, all structures visible from public locations at the well or processing sites shall be painted non-reflective earth-tone colors or otherwise surfaced with a color or textured surface in consultation with the City, so that they are less obtrusive to the surrounding area.

There are no other feasible mitigation measures that would reduce the Project's public viewshed impact caused by operations and drilling. Accordingly, specific economic, legal, social, technological or other considerations make infeasible other mitigation measures.

(b) Facts in Support of Findings

The proposed Project Site would be in close proximity to portions of the Deer Loop Trail and some of the Arroyo Pescadero Loop Trail in the Arroyo Pescadero Trailhead. Drilling would occur for 3 months during the testing phase, for 5 years during the initial operations period, and for up to 3 months a year thereafter.

Several of the views from recreational locations on the Arroyo Pescadero Trailhead offer public visibility of the proposed Project Site that would be significantly altered as a result of the potential oil field development. Impacted views include those immediately adjacent to the trails as well as views of proposed facilities situated at

considerably greater distances along viewshed-defining ridgelines where they commonly protrude into the skyline.

Further, adverse recreational impacts could result from site grading the natural terrain, removing natural vegetation, and introducing concentrations of oil field industrial development that would be perceived as incompatible with adjacent uses. A Drilling rig would introduce an industrial component to numerous views that do not currently contain industrial aspects in their viewsheds. Due to the size and height of the drilling rig (125 feet) and their extension above tree lines and horizon lines, they would strongly contrast with the surrounding environment.

Implementation of mitigation measures AE-1a and AE-1b is recommended. However, impacts from new drilling and operations to recreation would be considered significant.

This impact remains potentially significant following application of all feasible mitigation.

VI. Project Alternatives.

The City of Whittier considered a reasonable range of alternatives to the proposed Project, including the No Project Alternative, the Savage Canyon Landfill Alternative, the Lambert Railroad Right-of-Way Alternative, and the Loop Trail Road Alternative.

The City also considered other alternatives, but ultimately these alternatives were not pursued for further analysis in the EIR based on the screening analysis contained in Section 5 of the EIR. This screening analysis included whether: (1) the alternative was technically feasible; (2) whether the alternative would lessen the potentially significant impacts of the proposed Project; and (3) whether the alternative would attain most of the basic objectives of the Project. The alternatives not considered for further analysis included the North Site Alternative, the Upper Canada Canyon Alternative, the Consolidated Upper Colima Road Site Alternative, and the Historical Chevron Processing Facility Alternative. Based on the screening analysis, the EIR did not consider these other alternatives in detail.

The No Project Alternative, the Savage Canyon Landfill Alternative, the Lambert Railroad Right-of-Way Alternative, and the Loop Trail Road Alternative were analyzed in the EIR and are discussed below with the basis for rejecting each of these alternatives as infeasible.

A. NO PROJECT ALTERNATIVE

1. Summary of Alternative

CEQA requires the discussion of the No Project Alternative "to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project."

The No Project Alternative would neither install processing equipment nor conduct well drilling operations. The Applicant's proposed Project is construction and operation of drilling and production facilities for exploration and production of oil and gas resources from the Whittier Main Oil and Gas Field. With the No Project Alternative, the field would not be developed and the resources of the field would not be utilized. No new equipment would be installed within the Preserve.

2. Reasons for Rejecting Alternative: Infeasibility

With the No Project Alternative, no development of the oil and gas resources would occur. There would be no drilling and no construction of the access road or processing facility. None of the impacts associated with the proposed Project would occur. No new impacts would occur under the No Project Alternative. However, the No Project Alternative would not meet many of the project objectives, including City Objectives to generate a substantial, long-term income stream for the City, and to facilitate the long-term preservation and enhancement of the Preserve's ecological resources and native habitat through this income stream. Further, the No Project Alternative would fail to meet all of Matrix's Objectives. For these reasons, the City Council rejects this alternative as infeasible.

The City Council hereby finds that each of the reasons set forth above would be an independent ground for rejecting the No Project Alternative as infeasible, and by itself, independent of any other reason, would justify rejection of the No Project Alternative as infeasible.

B. THE SAVAGE CANYON LANDFILL ALTERNATIVE

1. Summary of Alternative

Under this alternative, oil drilling and processing would be located within the existing Savage Canyon Landfill, which is owned by the City of Whittier. Drilling from the Savage Canyon Landfill would be able to reach into some of the reservoirs included in the mineral rights owned by the City. All processing equipment would be installed at the Landfill and drilling would take place at the Landfill immediately adjacent to the processing area. Facility locations within the Landfill would be limited, primarily due to the location of existing, buried waste and topography. Pads under the oil and gas facilities could not be located over previously buried waste, and the pads would preferably be in areas that would not protrude substantially into areas designated for future waste to minimize the effect on the Landfill life. Most of these areas are steep canyons, such as those south and east of the Landfill. Existing waste could be relocated from areas favorable to an oil and gas plant in a process known as "clean closure." Clean closure status can be obtained by the landfill operator with certification from the Regional Water Quality Control Board. In either case, locating the facilities at the Landfill would encroach on areas intended for future waste burial and would therefore decrease the planned life of the Landfill.

2. Reasons for Rejecting Alternative: Infeasibility

The Landfill Site Alternative has advantages over the proposed Project because it would be farther from residential locations and would be located entirely outside of the Preserve. This reduces the impact in biology, safety and risk of upset, as well as noise, air quality and odors. However, none of these are significant impacts associated with the proposed Project.

As there would not be any development within the Preserve, there would be benefits in terms of policies related to biology, impacts to nursery and nesting areas within the core habitat area, and reducing the total loss of habitat. In addition, impacts to wildlife movement for this Alternative would be less than those described for the Proposed Project, which is located within the Preserve where wildlife are less accustomed to human disturbances. In addition, there would not be any traffic utilizing Catalina Avenue and Mar Vista Street and traffic impacts would be reduced over the proposed Project as Penn Street currently operates at an acceptable level of service.

The disadvantages of this alternative over the proposed Project are that there would be a substantial reduction in the amount of oil that could be recovered from the reservoirs, estimated at recovering 52 to 59 percent of the amount that the proposed Project could recover. There would also be potential impacts to the life of the Landfill as the development could infringe upon areas of the Landfill that are planned for future waste disposal. In addition, there could still be biological impacts to occupied California gnatcatcher habitat and to the wildlife corridor as the location is closer to "High Quality" habitat, thereby potentially impacting wildlife movements through the corridor. Finally, permitting of oil and gas facilities within a Landfill operation is

considered speculative and the outcome of an application for such a Project is unknown.

This alternative would generate six significant unavoidable impacts, the same as the proposed Project. It would not have the recreational impact associated with proximity to recreational users that the proposed Project has, but would have an additional significant and unavoidable impact associated with land use issues related to permitting and Landfill life.

Finally, this Alternative would fail to meet a number of project objectives, including providing long-term resources to help manage environmental issues associated with the Project within the Preserve, and the objective of facilitating the long-term preservation and enhancement of the Preserve's ecological resources and native habitat. This is so, because funding for this preservation may not be as robust as the exploration would not occur within the Preserve and less production may occur with this Alternative. Further, Matrix's objective to maximize oil and gas production from the field thereby maximizing royalty payments to the City would also not be met. Thus, due to the failure to meet these project objectives, and because of the potential land use impact associated with permitting, this alternative is deemed infeasible.

The City Council hereby finds that each of the reasons set forth above would be an independent ground for rejecting the Savage Canyon Landfill Alternative as infeasible, and by itself, independent of any other reason, would justify rejection of the Savage Canyon Landfill Alternative as infeasible.

C. THE LOOP TRAIL ROAD ALTERNATIVE

1. Summary of Alternative

Under this alternative, access to the proposed Project site would be provided along the Loop Trail Road that is accessed through a gate along Colima Road located immediately south of the Preserve parking area along Colima Road. The Loop Trail Road is currently only used by recreational hikers and Preserve rangers to access the Loop Trail and Arroyo Pescadero area within the Preserve. Most of the Loop Trail Road is currently used as a recreational trail, called the Deer Loop Trail, which is accessed from the Preserve parking lot along Colima Road. The proposed Project proposes to install the sales gas pipeline and crude oil pipeline underneath this roadway in order to access pipelines that could take the products to market along Colima Road.

The Loop Trail Road access route takes a somewhat circuitous route from Colima Road to the proposed Project site, with the entrance gate located off of Colima and immediately adjacent to residences located along Lodosa Drive. The Loop Trail Road then turns north and continues up Arroyo Pescadero Canyon before heading west and crossing the creek. It then heads in a southwesterly direction before passing through a chain-gate and entering the area of the Preserve that is off-limits to recreational users. It then arrives at the proposed Project site.

The road is currently partially paved and dirt and is somewhat overgrown. It would need to be widened and improved to provide Project access. The entry and exit onto and off of Colima Road would need to be re-aligned to intersect with the new traffic signal that was installed in connection with the Whittier Area Community Church. This re-alignment would allow for a smoother and controlled flow of project traffic onto and off of Colima Road.

Under this alternative, the Loop Trail Road would be used for the construction and operational phases of the project. Catalina Avenue would continue to be used for the Drilling and Testing phase.

2. Reasons for Rejecting Alternative: Infeasibility

This alternative has the advantage over the proposed Project North Access Road in that it allows for Project traffic to directly access an arterial roadway instead of utilizing more residential collector roadways such as Penn Street. Penn Street is a two lane roadway that has residences with driveways that directly access the street, and is host to periodic events associated with William Penn Park and Whittier College. These events impact the neighborhood by periodically increasing traffic and limiting parking. Colima Road, on the other hand, is a four lane arterial, a more major roadway. Traffic levels on Penn Street average close to 2,700 vehicles per day while traffic on Colima Road averages close to 36,000 vehicles per day. The Loop Trail Road alternative, like the North Access Road, would prevent traffic impacts along Mar Vista Street and Catalina Avenue during the construction and operations phases.

In addition, the Loop Trail Road would reduce impacts to individual wildlife and the wildlife travel corridor located in the Preserve's Core Habitat associated with the North Access Road. Although this alternative does direct more traffic towards the important wildlife corridor within the Service Tunnel, the end of the Loop Trail Road and Colima Road intersection is more than 2,000 feet away from the Service Tunnel and therefore not expected to substantially interfere with the Tunnel's use as a travel corridor.

However, the Loop Trail Road is currently used as a recreational trail (the Deer Loop Trail). Noise levels would increase for both recreational and residential receptors located close to the Loop Trail Road. Noise levels for recreational users would increase by more than the 5 dBA threshold and would be considered a significant and unavoidable impact.

The roadway and accompanying traffic would also be visible from nearby residences and recreational areas and trails in close proximity to the Loop Trail Road. This would degrade the visual quality for both residences and recreational users and would be considered a significant impact. Installing berm walls and vegetation, as per mitigation measure AE-1a, could reduce the impacts of the use of the Loop Trail Road by Project vehicles but would also block existing views of the Preserve from residences. Even with mitigation, therefore, this would still be a significant and unavoidable impact.

These impacts could be somewhat mitigated by the development of new trails, but the recreational experience of the Arroyo Pescadero Canyon and trails would be significantly impacted by the passage of traffic through the area.

Finally, based on the recreational impacts noted above, this Alternative would fail to meet many of the project objectives. For instance, it would add to impacts to recreational and educational opportunities in the Preserve, and would increase noise impacts to surrounding areas. For these reasons, the City Council rejects this alternative as infeasible.

The City Council hereby finds that each of the reasons set forth above would be an independent ground for rejecting the Loop Trail Road Alternative as infeasible by itself, and independent of any other reason would justify rejection of the Loop Trail Road Alternative as infeasible.

D. THE LAMBERT RAILROAD PIPELINE RIGHT-OF-WAY ALIGNMENT ALTERNATIVE

1. Summary of Alternative

Under this Alternative, Matrix would construct the crude oil pipeline connection down Colima Road to Lambert Road and then onto the railroad right-of-way along Lambert Road to a tie-in to the Crimson California Pipeline System at the intersection of Lambert Road and Leffingwell Road. This alternative alignment would have advantages over the proposed Project since it would avoid impacts related to construction within a roadway (La Mirada Boulevard). However, this alignment is approximately 0.35 miles longer than the alignment in the proposed Project and may present some leasing and permitting difficulties with the right-of-way along the railroad.

2. Reasons for Rejecting Alternative: Infeasibility

This Alternative would be advantageous since there would be construction of fewer pipelines within area streets, thereby reducing impacts and traffic. Since the alternative pipeline would be slightly longer, however, it may increase total air emissions due to the additional construction requirements. This may be an additional impact over that of the proposed Project. Further, there is potential leasing and permitting difficulties with this Alternative that may make this Alternative legally infeasible.

The City Council hereby finds that each of the reasons set forth above would be an independent ground for rejecting this Alternative as infeasible, and by itself, independent of any other reason, would justify rejection of this Alternative as infeasible.

E. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The No Project Alternative is the only alternative that would avoid the significant unavoidable project-related and cumulative impacts identified for the proposed Project;

however, the No Project Alternative would not meet any of the proposed project objectives.

The EIR identified the proposed Project site with the inclusion of the Lambert Railroad Right-Of-Way Pipeline Route Alternative as the environmentally preferred alternative. However, before doing so, the EIR discussed the other various alternatives.

The Savage Canyon Landfill Alternative could reduce some impacts of the proposed Project as the alternative would locate all facilities outside of the Preserve. Additionally, it could reduce impacts on recreational areas as the alternative Landfill site is not located immediately to adjacent areas. Nevertheless, with this Alternative, there would be a potential reduction to the landfill life and there would be difficulties associated with permitting the alternative within an operating landfill. There would also be a reduction in oil production from this Alternative thereby not meeting the project objectives to providing funding and a revenue source for preservation of the Preserve.

Additionally, the Loop Trail Road Alternative would introduce new impacts in the form of significant and unavoidable impacts related to noise and aesthetic impacts on recreational users. In contrast, the Project as proposed in the EIR would not cause these same impacts.

Finally, the Lambert Railroad Right-Of-Way Pipeline Alternative route presents advantages over the proposed Project pipeline route as it is less disruptive to traffic.

Therefore, the proposed Project with the Lambert Railroad Right-Of-Way Pipeline Alternative is considered to be the Environmentally Preferred Alternative, because it meets all of the project objectives and has fewer impacts than all the alternatives considered.

F. THE PROJECT AS PROPOSED

1. Summary of Project

The Project is described in detail in the EIR and in Appendix O of the Final EIR.

2. Reasons for Selecting Project as Proposed

The City Council has carefully reviewed the attributes and environmental impacts of all the alternatives analyzed in the FEIR and has compared them with those of the proposed Project. The City Council finds that each of the alternatives is infeasible for various environmental, economic, technical, social, or other reasons set forth above. The City Council further finds that the Project as proposed in the EIR and Appendix O is the best combination of features to serve the interests of the public and achieve the project goals.

More specifically, the Project as proposed would develop the site and bring in

additional revenue for the City and the most funding for the preservation of the Preserve by yielding the most production. For all of these reasons, the City Council selects the Project as proposed.

EXHIBIT B

Statement of Overriding Considerations

The following Statement of Overriding Considerations is made in connection with the proposed approval of the Whittier Main Old Field Development Project (the "Project").

CEQA requires the decision-making agency to balance the economic, legal, social, technological or other benefits of a project against its unavoidable environmental risks when determining whether to approve a project. If the benefits of the project outweigh the unavoidable adverse effects, those effects may be considered acceptable. CEQA requires the agency to provide written findings supporting the specific reasons for considering a project acceptable when significant impacts are unavoidable. Such reasons must be based on substantial evidence in the EIR or elsewhere in the administrative record. The reasons for proceeding with this Project despite the adverse environmental impacts that may result are provided in this Statement of Overriding Considerations.

The City Council finds that the economic, social and other benefits of the Project outweigh the significant and unavoidable air quality, aesthetics, hydrology and water quality, land use and policy consistency, and recreation related effects identified in the Final EIR and the record of proceedings. In making this finding, the City Council has balanced the benefits of the Project against its unavoidable impacts and has indicated its willingness to accept those adverse impacts. The City Council finds that each one of the following benefits of the Project, independent of the other benefits, would warrant approval of the Project notwithstanding the unavoidable environmental impacts of the Project as identified in the Final EIR.

A. The development of the Whittier Main Oil Field Development Project will provide restoration activity benefits in the Preserve as part of the Project.

B. The proposed Project will provide a stable source of funding for the Habitat Authority for as long as the wells produce oil and gas, thereby ensuring a long-term funding source for the Preserve.

C. The development of the Project will provide the City with royalty benefits that can be used to benefit the City.

D. The development of the Project will stimulate the local economy by providing opportunities for qualified local businesses to sell goods and services to workers.

E. The development of the Project will provide jobs to the area through construction and operation of the Project.

The City Council finds that the foregoing benefits outweigh the identified significant adverse environmental impacts. The City Council further finds that each of

the individual Project benefits discussed above outweighs the unavoidable adverse environmental effects identified in the Final EIR and therefore finds those impacts to be acceptable. The City Council further finds that each of the benefits listed above, standing alone, is sufficient justification for the City Council to override these unavoidable environmental impacts.

Item	Description	Impact	Significance	Mitigation
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EXHIBIT C

Mitigation Monitoring and Reporting Program

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
<p>AQ.1: Construction activities would generate emissions that exceed South Coast Air Quality Management District thresholds (Significant and Unavoidable).</p>	<p>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. The Plan shall also address fugitive dust measure impacts to native habitats. Fugitive dust mitigation measures in the plan should include the following:</p> <ul style="list-style-type: none"> - Apply water every 3 hours to disturbed areas within a construction site (61% reduction). - Require minimum soil moisture of 12% for earthmoving, by using a moveable sprinkler system or water truck. Moisture content can be verified by lab sample or moisture probe (69% reduction). Limit on-site vehicle speeds on unpaved roads to 15 mph with radar enforcement (57% reduction) and posting of speed limits. - Replace ground cover, approved by the Habitat Authority, in disturbed areas as quickly as possible (5% reduction). <p>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% reduction)</p> <ul style="list-style-type: none"> - 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% reduction). - Water industrial unpaved road three times per day (61% reduction). - Water storage piles by hand or apply cover when wind events are declared, according to SCAQMD Rule 403 when instantaneous wind speeds exceed 25 miles per hour (90% reduction). - Appoint a construction relations officer to act as a community liaison concerning onsite construction issues, such as dust generation. <p>AQ-1b Treat all dirt roads with water three times per day prior to and during the Drilling and Testing Phase pad clearing to substantially</p>	<p>Review of plan and inspection during construction and operations</p>	<p>Before construction and operations</p>	<p>City of Whittier and SCAQMD</p>
		<p>Inspection of test drilling</p>	<p>Before and during test</p>	<p>City of Whittier</p>

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	reduce dirt road fugitive dust emissions.	clearing and drilling activities	drilling	
	AQ-1c Treat all roads (pave or apply non-toxic soil binders as approved by the Habitat Authority with at least 80% effectiveness) before beginning the development phase pad grading and facility construction to substantially reduce dirt road fugitive dust emissions during those phases of construction.	Inspection before facility construction and pad grading	Before pad grading/facility construction	City of Whittier
	<p>AQ-1d The Applicant shall implement a NOx reduction program including the following, or equivalent, measures:</p> <ul style="list-style-type: none"> - All off-road construction equipment shall be tuned and maintained according to manufacturers' specifications. - Any temporary electric power shall be obtained from the electrical grid, rather than portable diesel or gasoline generators. - Soil hauling shall be coordinated with the Savage Canyon Landfill to receive the soil to limit haul truck travel distance, and utilize trucks that comply with the EPA 2010 model year emissions requirements. - All off-road diesel construction equipment with greater than 100-horsepower engines shall meet Tier 4 NOx requirements. If the lead agency determines that a Tier 4 fleet or portion thereof cannot be obtained, the lead agency shall require the use of construction equipment that meets Tier 3 emissions requirements or utilize other CARB-verified emission control technologies to achieve the same level of emission reduction. - During the pad and access road grading phase, all off-road dump trucks shall meet EPA 2010 model year NOx emission requirements. If the lead agency determines that a 2010 model year truck fleet or portion thereof cannot be obtained the lead agency shall require the use of trucks that meet EPA 2007 model year NOx emissions requirements. If the Project's fleet requirements cannot be met with 2010 or 2007 EPA model year truck emissions or portion thereof the lead agency shall require a certified NOx emissions level of less than 2.0g/bhp-hour for trucks used at the Project Site during the pad and access road grading phase. - Limit onsite truck idling to less than 5 minutes. 	Inspection of engine certifications	Before construction	City of Whittier

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	<p>- 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.</p> <p>AQ-2a The Operator shall comply with all SCAQMD regulations, including but not limited to Regulation IV (Prohibitions), Regulation XIII (New Source Review), Regulation XI (Source Specific Standards), and Regulation XIV (New Source Review for Toxic Air Contaminants). The operator shall implement best available control technology and obtain emission offsets as required by SCAQMD Regulation XIII and/or Regulation XX for new and modified permitted emission sources. Emission offsets are required for all emission increases associated with stationary sources, thus, minimizing the impacts associated with emissions from stationary sources.</p>	Inspection of offsets compliance	Before operations	SCAQMD
<p>AQ.2: Operational activities would generate emissions that exceed South Coast Air Quality Management District thresholds (Less Than Significant With Mitigation).</p>	<p>AQ-2b The Applicant shall implement a program to reduce NOx, VOC, and PM emissions, including:</p> <ul style="list-style-type: none"> - All drilling engines shall meet EPA Tier 3 emissions levels, or utilize other CARB-verified emission control technologies to achieve the same level of emission reduction, or utilize electric engines. - Treat all used Preserve dirt roads that will be used (gravel or apply soil binders with at least 80% effectiveness) or pave all Preserve dirt roads that will be used during test drilling. - Limit onsite truck idling to less than 5 minutes. - Electrify service equipment and auxiliary power units where feasible. - Use clean street sweepers during operations. <p>Pave roads and road shoulders during operational phase.</p> <ul style="list-style-type: none"> - Utilize trucks that meet EPA 2010 emission standards and off-road equipment that meets EPA 2015 emissions levels to the extent feasible. <p>- 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.</p> <ul style="list-style-type: none"> - Install only internal floating roof tanks, or utilize a more efficient vapor recovery system for handling organic liquids (crude oil) or some 	Inspection of engine certifications	Before drilling	City of Whittier

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	<p>other equivalent method to reduce fugitive emissions to less than the SCAQMD CEQA thresholds.</p> <ul style="list-style-type: none"> - Use low-emissions flare systems to achieve flare NOx emissions of less than 0.06 lb/mmBTU, according to SCAQMD BACT requirements. - Limit flaring and drilling during the peak day to the equivalent of drilling and full-flow flaring combined to less than 3 hours per day (at full gas plant flow or the equivalent throughput) or limiting flaring only to less than 4 hours per day (at full gas plant flow or the equivalent throughputs). - Prohibit use of workover rigs at the same time as drilling rigs to reduce peak day emissions- Further reduce NOx emission by either (1) Purchasing emission offsets to reduce remaining NOx emissions to less than significant levels or (2) utilizing Tier 4 engines on the drilling rig sufficient to reduce daily emissions to less than the thresholds, or (3) electrifying all or portions of the drilling rig engines to reduce NOx emissions to less than the thresholds. 			
<p>AQ.3: Potential operations and drilling at the Whittier Main Oil Field would create odor events (Less Than Significant With Mitigation).</p>	<p>AQ-3a The Operator shall have a gas buster and SCAQMD-approved portable flare at the oil field and available 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 Los Angeles County Fire Chief and the SCAQMD.</p>	<p>Inspection of drilling site</p>	<p>Before drilling</p>	<p>City of Whittier</p>
	<p>AQ-3b The Operator 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 submit a report of the breakdown to the Los Angeles County Fire Chief and the SCAQMD, which shall detail the corrective actions the Operator shall take to avoid exceeding the tank relief pressure.</p>	<p>Inspection of crude tanks</p>	<p>Before operations</p>	<p>City of Whittier</p>
	<p>AQ-3c The Operator shall develop an Odor Minimization Plan. The</p>	<p>Inspection of</p>	<p>Before</p>	<p>City of</p>

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	<p>Odor Minimization Plan shall address potential sources of odors from all oil field equipment, including wells and drilling operation, 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.</p> <p>AQ-3d The Operator shall develop an Air Monitoring Plan. The Plan shall provide for the monitoring of total hydrocarbon vapors and hydrogen sulfide at each well drill and re-drilling site and total hydrocarbon vapors at the gas plant. At all times during drilling and redrilling operations, the Operator shall maintain monitoring equipment that shall monitor and digitally record the levels of hydrogen sulfide and total hydrocarbon vapors. Monitors shall be installed at the edge of the drill pad and around the outer edge of the gas plant. Such monitors shall provide automatic alarms that are audible or visible to the Operator of the drilling equipment for the drill rig monitors, and gas plant for the gas plant monitors, 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 H₂S and 500 and 1,000 ppm hydrocarbons, with the higher level requiring shut-down of drilling or gas plant operations and notification to appropriate agencies, including the Los Angeles County 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 Processing Site, or applicable location.</p> <p>AQ-3e The Operator shall use an odor suppressant spray system or vapor capture hood and carbon filter 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 (e.g., residences, hiking trails, Ranger Residence).</p>	<p>plan and signage</p>	<p>drilling</p>	<p>Whittier</p>
		<p>inspection of plan and equipment</p>	<p>Before drilling</p>	<p>City of Whittier</p>
		<p>Inspection of drilling operations</p>	<p>During drilling</p>	<p>City of Whittier</p>

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
AQ.4: Potential operations and drilling at the Whittier Main Oil Field would increase greenhouse gas emissions (Significant and Unavoidable).	AQ-4 The Applicant shall implement a program to quantify and reduce greenhouse gas emissions associated with operations, such as using green electrical power to run equipment, using high efficiency pumps and electrical devices, requiring diesel engines to use biodiesel, or onsite measures that could offset greenhouse gas emissions. Operations GHG emissions levels shall be quantified and reported to the City and to the SCAQMD for operations on an annual basis, and, if GHG emissions exceed the SCAQMD thresholds, then a GHG emission reduction program shall be implemented to reduce emissions to less than the threshold value of 10,000 metric tonnes CO2e annually. Reductions or offsets of GHG emissions shall be quantified according to applicable protocols, and submitted to the City and AQMD. The reduction program shall focus on on-site and local/basin area methods for GHG reductions.	Inspection of equipment and programs	During operations	City of Whittier
AQ.5: Potential operations and drilling at the Whittier Main Oil Field would emit toxic materials (Less Than Significant With Mitigation).	AQ-5 The Applicant shall install CARB-Verified Level 3 diesel catalysts on all diesel-powered drilling equipment or utilize diesel engines that have an equivalent PM emission rate (Tier 4 engines) or electric drilling rigs. The current list of CARB-Verified Level 3 diesel catalysts is located at http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm . Catalysts or engine certifications shall demonstrate achieving 85% reduction for diesel particulate matter.	Inspection of drilling operations	During drilling	City of Whittier

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
BIO.1: Project grading and vegetation clearing for fuel modification, and increased noise, would result in adverse effects.	BIO-1a To mitigate the Project's permanent loss of 4.84 acres of coastal sage scrub, the Applicant shall provide minimum 3:1 areal replacement. To mitigate the loss of habitat value due to the Project's noise impacts affecting 5.49 acres of coastal sage scrub, the Applicant shall provide minimum 1:1 areal replacement. In total, the Applicant shall restore 19.99 acres of degraded habitats in the La Cañada Verde and Arroyo Pescadero watersheds to coastal sage scrub communities,	Comply with the Habitat Authority's Restoration Guidelines	Plans prior to permit issuance and restoration prior to construction	Habitat Authority, and City

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
<p>either directly or through habitat modifications on sensitive wildlife species (Less Than Significant With Mitigation).</p>	<p>or as otherwise agreed to by the appropriate resource agencies and the City. No additional grading or habitat disturbance shall occur along the North Access Road beyond what is currently designated in the Road Improvement Plan included in Appendix A. All aspects of the restoration effort shall comply with the Habitat Authority's Restoration Guidelines, as specified in Appendix N of the RMP (LSA 2007, Pages 251-372). The following shall apply:</p> <ul style="list-style-type: none"> - All contractors involved in the restoration effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service). - The restoration specialist shall work with the Habitat Authority to select restoration sites in the Habitat Authority's Whittier Management Unit, preferably in the La Cañada Verde and Arroyo Pescadero watersheds. - A conservation easement shall be placed over any site restored under this mitigation measure. This easement will be submitted to the USFWS for review and approval. - Mandatory components of any restoration plan shall include, but not be limited to, a pre- and post-construction survey to describe the final, full extent of disturbance area to determine habitat loss and replacement, Site Preparation, Implementation Specifications, Maintenance Methods, Performance Standards, Monitoring Methods, Documentation and Reporting, and Contingency Measures (in case performance standards are not met in any area). All components of any restoration plan prepared in satisfaction of this mitigation measure shall be reviewed and approved by the Habitat Authority, the City, USFWS, and CDFG prior to implementation. - Maintenance of all plantings will be the Applicant's responsibility, and shall include any activities required to meet the performance standards set for the restoration program. Restoration efforts shall be scheduled to start at the same time as construction activities to reduce the temporal loss of habitat. A minimum of 5 years of maintenance shall be required unless 		<p>n; restoration planting shall occur in the Fall.</p>	

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	<p>the plan's long-term performance standards are judged by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) to be satisfied in less than 5 years.</p> <ul style="list-style-type: none"> - Monitoring all restoration sites will be the Applicant's responsibility for a minimum of 5 years, or until the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) judge all of the Project's long-term performance standards to be satisfied. The site monitor shall be a biologist, native landscape horticulturist, or other professional qualified to: (1) assess the performance of the planting effort; (2) recommend corrective measures, if needed; and (3) document wildlife use of planting areas over time. The site monitor shall be selected by the Applicant and approved by the City and the Habitat Authority. - If performance standards are not achieved in any restoration area, an alternative or auxiliary mitigation plan shall be submitted to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service). - The monitoring results shall be reported at least annually to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service). - Additionally, all mitigation must comply with the Restoration Plans for Mitigation and Monitoring Plans found on the Habitat Authority's web page (http://www.habitatauthority.org/devdedmit.shtml). 			
	<p>BIO-1b To prevent erosion and invasion by non-native weeds, and to help offset the Project's overall biological impacts including the temporal loss of habitat, the Applicant shall provide minimum 2:1 areal replacement of all graded slopes outside of permanent impact areas (approximately 4.80 acres; restoration shall be revegetated exclusively with appropriate, locally indigenous plant species and will incorporate non-flammable species as appropriate). To mitigate the permanent disturbance to 12.34 acres of native habitats (8.59 of chaparral and</p>	<p>Comply with the Habitat Authority's Restoration Guidelines</p>	<p>Plans prior to permit issuance and revegetation during planting season</p>	<p>Habitat Authority, and City</p>

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Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	<p>4.28 acres of annual grassland), the Applicant shall provide minimum 1:1 areal replacement. In total, the Applicant shall restore 22.5 acres of degraded habitat in the La Cañada Verde and Arroyo Pescadero watersheds to native communities, as agreed to by the appropriate resource agencies and the City. All contractors involved in the revegetation effort, including the revegetation specialist and landscape contractor, shall be reviewed and approved by the City and Habitat Authority. Revegetation efforts shall comply with the Habitat Authority's Restoration Guidelines, as specified in Appendix N of the RMP (LSA 2007, Pages 251-372). The following shall apply:</p> <ul style="list-style-type: none"> - All contractors involved in the restoration effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service). - Mandatory components of any restoration plan shall include, but not be limited to, a pre- and post-construction survey to describe the final, full extent of disturbance area to determine habitat loss and replacement, Site Preparation, Implementation Specifications, Maintenance Methods, Performance Standards, Monitoring Methods, Documentation and Reporting, and Contingency Measures (in case performance standards are not met in any area). All components of any restoration plan prepared in satisfaction of this mitigation measure shall be reviewed and approved by the Habitat Authority the City, USFWS, and CDFG prior to implementation. - Maintenance of all plantings will be the Applicant's responsibility, and shall include any activities required to meet the performance standards set for the restoration program. Restoration efforts shall be scheduled to start at the same time as construction activities to reduce the temporal loss of habitat. A minimum of 5 years of maintenance shall be required unless the plan's long-term performance standards are judged by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) to be satisfied in less than 		after grading	

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	<p>5 years.</p> <ul style="list-style-type: none"> - Monitoring all restoration sites will be the Applicant's responsibility for a minimum of 5 years, or until the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) judge all of the Project's long-term performance standards to be satisfied. The site monitor shall be a biologist, native landscape horticulturist, or other professional qualified to: (1) assess the performance of the planting effort; (2) recommend corrective measures, if needed; and (3) document wildlife use of planting areas over time. - The site monitor shall be selected by the Applicant and approved by the City and the Habitat Authority. - If performance standards are not achieved in any restoration area, an alternative or auxiliary mitigation plan shall be submitted to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service). - The monitoring results shall be reported at least annually to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service). - Additionally, all mitigation must comply with the Restoration Plans for Mitigation and Monitoring Plans found on the Habitat Authority's web page (http://www.habitatauthority.org/devdedmit.shtml). 			
	<p>BIO-1c. Restoration and revegetation efforts shall include salvage of weed-free topsoil (upper 12 inches of soil) from any and all areas of intact (non-weedy) native communities that are graded for Project implementation, as determined by the site monitor described in required by mitigation measure BIO-1 b, so that the soil can later be spread over graded slopes to increase native plant species diversity in the restored areas. Mature coast prickly pear, dudleya, and other translocatable species will be transplanted as feasible in the revegetation and fuel modification zones. Such salvage may also be appropriate for revegetation areas.</p>	<p>Comply with the Habitat Authority's Restoration Guidelines</p>	<p>Plans prior to permit issuance and salvage prior to grading</p>	<p>Habitat Authority, and City</p>

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	BIO-1d The Applicant or US Army Corps of Engineers shall consult with the US Fish and Wildlife Service to obtain an Incidental Take Statement, if needed, pursuant to Section 7 or Section 10 of the federal Endangered Species Act to cover the Project's potential "take" (which includes the permanent and temporary loss of approximately 5 acres of critical habitat and 5.49 acres of noise-related disturbance) of the coastal California gnatcatcher, a federally listed species.	Agency consultation	Prior to permit issuance	City
BIO.2: The proposed Project would result in the permanent and temporary loss of 1.0 acre of mulefat scrub riparian habitat, a federally protected aquatic resource as defined by Section 404 of the Clean Water Act, and increased noise could temporarily inhibit wildlife use of preserved riparian habitat. (Less Than Significant With Mitigation).	BIO-2a To mitigate the Project's permanent loss of 0.22 acre of riparian habitat, the Applicant shall provide minimum 3:1 areal replacement. To mitigate the Project's noise impacts affecting 0.75 acres of riparian habitat, the Applicant shall provide minimum 1:1 areal replacement. In total, the Applicant shall restore 1.41 acres of degraded areas within the La Cañada Verde and Arroyo Pescadero watersheds, or as otherwise agreed to by the appropriate resource agencies and the City. The 0.12 acre of temporary grading impact would be mitigated through the 1:1 revegetation specified in BIO-1.b. All aspects of this restoration shall comply with the Habitat Authority's Restoration Guidelines, as specified in Appendix N of the RMP (LSA 2007, Pages 251-372). The following points shall apply: All contractors involved in the restoration effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service). Mandatory components of any restoration plan shall include, but not be limited to, a pre- and post-construction survey to describe the final, full extent of disturbance area to determine habitat loss and replacement, Site Preparation, Implementation Specifications, Maintenance Methods, Performance Standards, Monitoring Methods, Documentation and Reporting, and Contingency Measures (in case performance standards are not met in any area). All components of any restoration	Comply with the Habitat Authority's Restoration Guidelines	Plans prior to permit issuance and restoration prior to grading; restoration planting shall occur in the Fall.	Habitat Authority, and City

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	<p>plan prepared in satisfaction of this mitigation measure shall be reviewed and approved by the Habitat Authority the City, USFWS, and CDFG prior to implementation.</p> <p>Maintenance of all plantings will be the Applicant's responsibility, and shall include any activities required to meet the performance standards set for the restoration program. Restoration efforts shall be scheduled to start at the same time as construction activities to reduce the temporal loss of habitat. A minimum of 5 years of maintenance shall be required unless the plan's long-term performance standards are judged by the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) to be satisfied in less than 5 years.</p> <p>Monitoring all restoration sites will be the Applicant's responsibility for a minimum of 5 years, or until the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service) judge all of the Project's long-term performance standards to be satisfied. The site monitor shall be a biologist, native landscape horticulturist, or other professional qualified to: (1) assess the performance of the planting effort; (2) recommend corrective measures, if needed; and (3) document wildlife use of planting areas over time.</p> <p>The site monitor shall be selected by the Applicant and approved by the City and the Habitat Authority.</p> <p>If performance standards are not achieved in any restoration area, an alternative or auxiliary mitigation plan shall be submitted to the City, the Habitat Authority, and appropriate resource agencies (e.g., CDFG, USACE, U.S. Fish and Wildlife Service).</p> <p>The monitoring results shall be reported at least annually to the City, the Habitat Authority, and appropriate resource agencies (e.g., U.S. Fish and Wildlife Service).</p> <p>Additionally, all mitigation must comply with the Restoration Plans for Mitigation and Monitoring Plans found on the Habitat Authority's web page (http://www.habitatauthority.org/devdedmit.shtm).</p>			
	BIO-2b. The Project proponent shall be required to obtain all applicable	Agency	Permit prior	City

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		Method	Timing	Responsible Party
	<p>federal and state permits and agreements, including (1) a Section 404 Permit from the US Army Corps of Engineers, (2) certification, or a waiver of certification, from the Los Angeles Regional Water Quality Control Board that the activity would not adversely affect water quality, and (3) a Streambed Alteration Agreement from the California Department of Fish and Game.</p>	consultation	to issuance of grading permits	
<p>BIO.3: A rupture or leak from oil wells, pipelines, or other oil field-related infrastructure has the potential to result in a substantial adverse effect on native species and habitats, sensitive species, sensitive species habitat, and sensitive habitats including riparian and coastal sage scrub (Less Than Significant With Mitigation).</p>	<p>BIO-3a. The applicant shall prepare an Emergency Response Action Plan that would address protection of sensitive biological resources and 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 Action Plan shall include provisions for containment and cleanup within 2 miles downstream of the Project Site. The plan shall contain detailed descriptions of various containment and cleanup alternatives for each segment of the streambed. Selection of a containment alternative would be made during an emergency event, but the approach and plan shall be reviewed by the California Division of Fish and Game, the Los Angeles Regional Water Quality Control Board, and Los Angeles County Flood Control District.</p> <p>Where feasible, low-impact, site-specific techniques such as hand-cutting contaminated vegetation and using low-pressure water flushing shall be specified to remove spilled material from particularly sensitive wildlife habitats, such as riparian woodlands, because procedures such as shoveling, bulldozing, and raking can cause more damage to a sensitive habitat than the oil spill itself. The Emergency Response Action Plan shall evaluate the non-cleanup option for ecologically vulnerable habitats.</p> <p>When habitat disturbance cannot be avoided, the Emergency Response Action 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</p>	Emergency Response Action Plan	Prior to issuance of grading permits	Habitat Authority, and City

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		Method	Timing	Responsible Party
	<p>restore native plant and animal communities to pre-spill conditions. Access and egress points, staging areas, and material stockpile areas that avoid sensitive habitat areas shall be identified. The Emergency Response Action Plan shall include species- and site-specific procedures for collection, transportation and treatment of oiled wildlife, particularly for sensitive species.</p> <p>The Emergency Response Action Plan shall include procedures for timely re-establishment of vegetation that replicates the habitats disturbed (or, in the case of disturbed habitats dominated by non-native species, replaces them with suitable native species).</p> <p>The Emergency Response Action Plan shall be approved by the City and Habitat Authority prior to commencing any construction activities.</p>			
	<p>BIO-3b To reduce exposure risks to wildlife in the Project Site area, all open basins containing any Project-related fluids shall either be emptied at the end of each day or fenced and covered to exclude all wildlife, including birds, bats, and amphibians. Drilling muds, concrete waste, and truck washing water shall be contained within closed Baker-style tanks or collected by a vacuum truck before the end of each day and shall not be stored overnight in open pits.</p>		Prior to issuance of grading permits	City
BIO.4: The proposed Project could substantially interfere with the movement of native resident or wildlife species or with established native resident or migratory wildlife corridors, or interfere with the use of native wildlife nursery sites. (Less Than Significant with	<p>BIO-4a Devices and measures shall be employed to minimize noise effects on wildlife. At a minimum, noise barriers shall surround the drill rig floor, mud mixers, cleaners, conveyers, shakers, pumps, and other oil development and operational facilities; construction activities shall be limited to daylight hours except for emergencies; construction machinery shall be operated per manufacturer's specifications; and a Noise Reduction Plan and monitoring plan shall be implemented to ensure that Project activities are operating within the ranges included in mitigation measure N-4.</p>	Noise mitigation plan	Prior to issuance of grading permits	Habitat Authority and City
	<p>BIO-4b All Project lighting shall be designed and shielded with the intent of preventing spillage of light into adjacent preserved open space areas. Outdoor lighting shall be restricted to lights required by code for lighting building exteriors and for safety and security needs. All</p>	Lighting plan	Prior to issuance of grading permits	Habitat Authority and City

Impact Mitigation)	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	<p>Project lighting shall be fully shielded and designed to prevent spillage of light into adjacent preserved open space areas. Lighting shall be constructed so that all light emitted by the fixture, either directly from the lamp or from a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal as determined by photometric test or certified by the manufacturer. Any structural part of the light fixture providing this shielding shall be permanently affixed. Light standard heights shall distribute light at ground level consistent with light levels for security, spill-over effects, and efficiency. After initial installation of Project lighting, a biological monitor acceptable to the City and Habitat Authority shall conduct a field inspection to confirm that the proper lamps have been installed and that light spillage into the Preserve has been minimized to the maximum extent feasible without compromising safety or other critical night-lighting requirements.</p>			
	<p>BIO-4c. To minimize the potential for road mortality of wildlife, all roads within the Preserve boundary used to access onsite oil facilities shall have enough traffic calming devices, appropriately sized and spaced, to limit traffic to a maximum speed of 10 miles per hour. All nighttime traffic shall be minimized during the construction and operational phases as feasible; all hauling activities shall be restricted to daylight hours defined as the hours after sunrise and before sunset. This restriction shall be in addition to any others placed on the Project, including by mitigation measure N-4, which is intended mainly to limit noise impacts upon neighboring residential communities, consistent with the City Municipal Code. No permanent solid walls or k-rail walls shall be placed along the North Access Road. The use of k-rails in this area would require wildlife passages placed every 20 feet to allow wildlife to move freely off the road.</p>	<p>Traffic speed control plan</p>	<p>Prior to issuance of grading permits</p>	<p>Habitat Authority and City</p>
	<p>BIO-4d. Any project landscaping shall consist entirely of species native to the Project Site and surrounding areas within the Preserve and approved by the County of Los Angeles Fire Department and the Habitat Authority. Any irrigation provided shall be limited to that required to initially establish the native plants; no permanent irrigation</p>	<p>Landscaping plan</p>	<p>Prior to issuance of grading permits</p>	<p>Habitat Authority and City</p>

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	<p>shall be permitted.</p> <p>BIO-4e. 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 Game Code, initial construction of the pad sites and facilities involving vegetation removal, and annual fuel modifications involving vegetation removal/trimming should be done outside the breeding season (February 15 through August 31). If construction involving vegetation removal 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. USFWF protocol surveys for listed avian birds (California gnatcatcher and least Bell's vireo) shall be conducted if disturbances occur in coastal sage scrub or riparian habitats. If nesting birds are observed within the vicinity, then a minimum 100-foot buffer from the nest would be established. The buffer would be delineated by roping construction boundaries and would remain in place until the nest is abandoned or the young have fledged. The nest monitor would be present when any buffer fencing is established. Alternatively, the Project proponent may retain a biologist acceptable to the City and Habitat Authority to monitor the nest and to ensure that Project activities do not violate the Migratory Bird Treaty Act or the California Fish and Game Code. At minimum, the biologist would check for new active nests, and determine the status of ongoing active nests, weekly during the specified nesting season. The biologist would ensure that all fencing and signage was properly maintained, and would provide weekly e-mail updates on the status of all monitored nests to the City, Habitat Authority, CDFG, and USFWS. If the biologist determines that California gnatcatcher nesting is being disrupted, the construction activities will cease and wait until the young have fledged or the nest is determined to have failed.</p> <p>BIO-4f. Hawks and owls nest earlier than most other native birds. If initial construction activities, drilling, re-drilling, ground disturbance, or vegetation clearing, or annual fuel modification involving vegetation removal/trimming occurs from December 1 through August 31, the nest monitor would conduct a pre-construction survey within 3 days prior to vegetation removal or other construction-related disturbances focused</p>	<p>City and Habitat Authority shall review and approve biologist</p>	<p>Mitigation measure applies to construction work between February 15 and August 31</p>	<p>Habitat Authority, and City</p>
		<p>City and Habitat Authority shall review and approve</p>	<p>Mitigation measure applies to construction work between</p>	<p>Habitat Authority, and City</p>

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	<p>on actively nesting hawks or owls. If any actively nesting hawks or owls are found, a 300-foot buffer would be established around the nest tree to help ensure that nesting is not disrupted. If any active songbird nests are found, a 100-foot buffer would be established as described in BIO-4e. The buffer would be delineated by roping construction boundaries and would remain in place until the nest is either abandoned or the young have fledged. The nest monitor would be present when any buffer fencing is established. Alternatively, the Project proponent may retain a biologist acceptable to the City and Habitat Authority to monitor the nest and to ensure that Project activities do not violate the Migratory Bird Treaty Act or the California Fish and Game Code. At a minimum, the biologist would check for new active nests, and determine the status of ongoing active nests, weekly during the specified nesting season. The biologist would ensure that all fencing and signage was properly maintained, and would provide weekly e-mail updates on the status of all monitored nests to the City, Habitat Authority, CDFG, and USFWS.</p> <p>BIO-4g. To avoid the direct loss of special-status bats that that could result from removal of trees that may provide maternity roost habitat (e.g., in cavities or under loose bark), the following steps would be taken:</p> <ul style="list-style-type: none"> - Tree removal or relocation shall be scheduled between October 1 and February 28, outside of the maternity roosting season. - If trees must be removed during the maternity roosting season (March 1 to September 30), a qualified bat specialist (i.e., a person holding a California Department of Fish and Game collection permit and a memorandum of understanding allowing the handling and collection of bats) shall conduct a pre-construction survey to identify those trees proposed for disturbance that could provide hibernacula or nursery colony roosting habitat for bats. Each tree identified as potentially supporting an active maternity roost shall be closely inspected by the bat specialist a maximum of 7 days prior to tree disturbance to more precisely determine the presence or absence of roosting bats. - Immediately after completion of the pre-construction surveys, and prior to any tree removals, the bat specialist will prepare a report providing the results of these surveys and identifying actions to be 	biologist	December 1 and August 31.	
		Retain a qualified bat specialist to implement the required survey and documentation	Mitigation measure applies to construction work between March 1 and September 30.	Habitat Authority and City

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		Method	Timing	Responsible Party
	<p>taken to avoid or minimize potential impacts to roosting bats due to authorized tree removal or other potential bat roosting habitats.</p> <ul style="list-style-type: none"> - The pre-construction report shall be provided to the City and the Habitat Authority prior to any tree removal. - If bats are not detected, but the bat specialist determines that roosting bats may be present, it is preferable to push the tree down using heavy machinery rather than felling it with a chainsaw. - Maternity season lasts from March 1 to September 30. Trees determined to be maternity roosts shall be left in place until the end of the maternity season. - A 250-foot buffer, in which no construction activities are permitted, shall be established around any tree, rock outcrop, or other occupied roost habitat until bats have left the maternity site or the end of the maternity season (whichever is later). - The bat specialist shall document all monitoring activities, and shall prepare a summary report upon completion of tree disturbance activities. Reports would include the following: <ul style="list-style-type: none"> - the number and type of affected trees determined to support or potentially support roosting bats prior to disturbance; - any actions undertaken to safely exclude roosting bats prior to disturbance and the results of those actions; - trees temporarily avoided to protect roosting bats; and - roosting bats found (alive or dead) after trees were removed or relocated. - This report shall be provided to the City and Habitat Authority within 30 days following completion of tree removals. 			
	<p>BIO-4h To reduce impacts to wildlife movement corridors and provide protective cover for wildlife using the Service Tunnel, and consistent with the Resource Management Plan recommendations, the Applicant shall be required to install appropriate native screening vegetation around the western terminus of the Service Tunnel (LSA 2007). The Applicant shall consult with the Habitat Authority to identify the appropriate limits of screening vegetation. The plantings installed as screening shall comply with the Habitat Authority's Restoration</p>	Comply with the Habitat Authority's Restoration Guidelines	Plans prior to issuance of grading permits and planting prior to grading	Habitat Authority, and City

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	<p>Guidelines. All contractors involved in the native screening effort, including the restoration specialist and landscape contractor, shall be reviewed and approved by the City and Habitat Authority.</p>			
	<p>BIO-4i Consistent with the Resource Management Plan recommendations, Project lighting shall not be directly visible from the western terminus of the Service Tunnel.</p>	Lighting plan	Prior to issuance of grading permits	Habitat Authority and City
	<p>BIO-4j. Consistent with the Resource Management Plan recommendations, the Project proponent shall be required to consult with the Habitat Authority to develop and implement signage explaining the importance of limiting human disturbances in the vicinity of the Service Tunnel between sunset and sunrise.</p>	Consult with the Habitat Authority	Prior to issuance of grading permits	Habitat Authority and City
	<p>BIO-4k A qualified biological monitor approved by the City, USFWS, CDFG, and the Habitat Authority shall be onsite during all vegetation removal and initial ground disturbance activities to ensure the compliance with all permit conditions protecting biological resources. The biological monitor shall be present to salvage wildlife species that may be otherwise killed or injured by heavy equipment and vegetation clearing. All salvaged wildlife shall be relocated to suitable adjacent habitat within the Preserve. The biological monitor shall have the authority to temporarily halt activities if permit requirements and conditions are not being met. The biological monitor shall conduct annual site inspections of the facilities, roads, and operations activities to ensure that all applicable mitigation measures are being enacted. The biological monitor shall prepare an annual summary report describing site visit observations and shall provide this report to the City, Habitat Authority and regulatory agencies (including CDFG, US ACE, and USFWS) for review.</p>			
	<p>BIO-4l The Applicant shall fund and implement a biological resources training program for all construction workers, oilfield workers, and their contractors. Training program shall be reviewed and approved by the HA and shall occur annually and as needed for new workers. Training shall include a description of important biological resources within the Preserve and all applicable conditions, permit requirements, and</p>			

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	protection measures implemented to protect those resources.			
	BIO-4m All grading limits shall be delineated by orange construction fencing and permanent signage every 50 feet along the fence stating "No Entry – Sensitive Habitat." The City and the Habitat Authority shall approve the fencing prior to commencement of grading activities (including clearing and grubbing).			
	BIO-4n Recreational access to the Arroyo San Miguel Trail shall be closed during construction or drilling activities at the Drill Pad Site. To continue providing recreation access to the Arroyo San Miguel Trails (on the east side of Colima Road), the Applicant shall develop additional recreational access, in coordination with the Habitat Authority, to the Arroyo San Miguel Trail by any of the following or equivalent: (1) enhancing the parking area on the east side of Colima Road; (2) developing the parking area along Le Flore Drive, approximately 1 mile east of Colima Road; or (3) develop pedestrian access along Colima Road from the Preserve parking area (on the west side of Colima Road) utilizing the new signalized intersection.			
BIO.5: The proposed Project would conflict with local policies and ordinances protecting biological resources, such as a tree preservation policy or ordinance (Less Than Significant With Mitigation).	Implement mitigation measures BIO.1, BIO.2, BIO.3, and BIO.4.	See mitigation measures associated with impacts BIO.1, BIO.2, BIO.3, and BIO.4.	See mitigation measures associated with impacts BIO.1, BIO.2, BIO.3, and BIO.4.	See mitigation measures associated with impacts BIO.1, BIO.2, BIO.3, and BIO.4.
CUMULATIVE BIO.1: The proposed Project could result in adverse effects on biological resources that are cumulatively considerable when	CUMULATIVE BIO-1a The applicant shall ensure, and shall demonstrate to the City of Whittier and Habitat Authority, that the existing Matrix Oil drilling operation in lower Sycamore Canyon, in the Whittier Hills, complies with Chapter 12.08.390 of the County of Los Angeles Code (Exterior Noise Standards). Compliance includes achieving an exterior noise standard of 45 dBA (L50) applicable at the property boundary (i.e., the Preserve's property boundary) of all noise-	Applicant to demonstrate to Habitat Authority and City	Prior to issuance of grading permits	Habitat Authority and City

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evaluated in conjunction with other past or present projects in the vicinity.	sensitive areas and residential areas, any time of the day. All Preserve areas shall be regarded as "noise-sensitive areas" for purposes of the County of Los Angeles Code and this mitigation measure.			
	CUMULATIVE BIO-1b No test-drilling, construction, or redrilling of wells shall be conducted simultaneously with, and within the same watershed as, construction work on the Tehachapi Renewable Transmission Project. The Applicant shall provide the City and Habitat Authority with written evidence of having coordinated construction schedules with Southern California Edison prior to commencing any construction activities.	Applicant to demonstrate to Habitat Authority and City	Ongoing throughout drilling activities	Habitat Authority and City
	CUMULATIVE BIO-1c To provide land managers at the Preserve (and those in the general area of the Chino-Puente Hills) data to better understand and manage wildlife movement conflicts and issues, the Applicant shall provide the Habitat Authority funds to conduct a multi-year, scientific study to evaluate the wildlife movement patterns of bobcats and other wildlife species utilizing the Preserve. The extent and cost of this study shall be designed, reviewed, and approved by the City, the Applicant, and the Habitat Authority prior to issuance of grading permits.*	Program design document	Previous grading permits	Habitat Authority and City

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		Method	Timing	Responsible Party
<p>SR.1: The proposed Project could introduce risk to the public associated with accidental releases from well drilling and processing operations (Less Than Significant Mitigation).</p>	<p>SR-1a The Applicant shall implement site security methods, including but not limited to: (1) enclosing all wells and equipment (including the metering station) with 8-foot block walls with barbed wire on the inside at 7 feet; (2) Secure gates located at all entrances with automatic opening/closing and secure access; (3) Limitation of climbable landscaping near the facility; (4) Installation of video surveillance systems and burglar/intrusion alarm systems; (5) Contact information and site access limitations shall be posted in specific locations easily visible to the public, and shall be provided to neighboring residents within a set radius, and shall be placed in Preserve information kiosks and on the Habitat Authority and City websites; (6) Visitor sign-in/sign-out and security policies for employees regarding access control, pre-employment screening, post-employment issues, vehicles, access keys, codes, and card security.</p>	<p>Review of site security measures and plan</p>	<p>Before construction and operations</p>	<p>City of Whittier</p>
	<p>SR-1b The Applicant shall conduct a third-party audit 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 periodically, as directed by the City and the Los Angeles County Fire Department.</p>	<p>Facility walkdowns and audit reports and recommendations</p>	<p>Within first year of operations</p>	<p>City and LA County Fire Department</p>
	<p>SR-1c The Applicant shall ensure that all crude-oil truck haulers are trained in HAZMAT spill response and that each truck carries a spill response kit.</p>	<p>Review of training logs</p>	<p>Before construction and operations</p>	<p>City of Whittier</p>

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SR.2: The proposed Project could introduce risk to the public associated with the transportation of natural gas along Colima Road. (Less Than Significant With Mitigation).	SR-2a The Applicant shall install automatic valves that will automatically shut down under a low pressure scenario at the Processing Facility Area for all pipelines leaving the processing plant and a backflow prevention device or automatic shut-down valve at the tie-in location at Lambert Road; to prevent the release of gas from the main transmission pipeline in the event of a rupture in the Colima Road pipeline.	Inspection of construction design plans	Before construction and operations	City of Whittier
	SR-2b The Applicant shall ensure that warning tape is installed above the pipeline within the pipeline trench to warn third parties that a pipeline is located below the warning tape and that the pipeline is capable of utilizing a smartpig.	Inspection of construction design plans and during construction before backfilling pipeline trench	Before construction	City of Whittier
SR.3: The proposed Project could mobilize soil contamination that could affect groundwater and environmental and public health (Less Than Significant With Mitigation).	SR-3 The Applicant shall conduct site assessments of the Project Site before commencing Project construction and shall sample soils and excavated materials associated with construction to ensure that the soils are not contaminated. Contaminated soils shall be completely excavated and the contaminated areas cleaned to LARWQCB specifications before moving forward with construction of the proposed Project components.	Review of sampling results	Before construction and operations	City of Whittier and RWQCB

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GR.1: Seismically induced ground shaking could damage proposed structures and infrastructure, potentially resulting in loss of property, risk to human health and safety, and oil spills (Less Than Significant With Mitigation).	GR1-a Proposed drilling, production, processing, storage, and transportation infrastructure shall be designed and constructed to withstand anticipated horizontal and vertical ground acceleration in the Project Area, based on the California Building Code. The calculated design base ground motion for project components shall consider the soil type, potential for liquefaction, and the most current and applicable seismic attenuation methods that are available.	Review and approval of design drawings and seismic loading calculations	Approve design drawings and seismic loading calculations prior to issuance of building permits	City of Whittier
	GR1-b All surface facilities and equipment shall have suitable foundations and anchoring design, surface restraints, and moment-limiting supports to withstand seismically induced groundshaking.	Review and approval of design drawings	Approve design drawings prior to issuance of building permits	City of Whittier
	GR1-c All conceptual geotechnical recommendations provided by Heathcote Geotechnical (2011) shall be followed during grading and construction at the Project Site. In addition, a Registered Civil Engineer and Certified Engineering Geologist shall perform an updated geotechnical evaluation of the Project Site, as the proposed building pad and slope configuration has changed since completion of the geotechnical report completed in 2010 (Heathcote Geotechnical 2011). The updated evaluation shall include an estimation of both vertical and horizontal anticipated peak ground accelerations, since the Heathcote Geotechnical report only included horizontal peak ground acceleration values.	Observe and test installation of buried pipelines	Monitoring during construction	City of Whittier
	GR-1d This report shall be completed prior to completion of the final project design and shall be submitted to the City of Whittier for review and approval and any new recommendations not included in the Heathcote Geotechnical (2011) report shall be adhered to. The project design must conform to the	Review and approval	Prior to completion of final project design	City of Whittier

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	<p>recommendations within the updated geotechnical evaluation.</p> <p>GR-1e All proposed slope construction, roadways, and work pads shall be properly engineered, with fill placed in accordance with requirements of the 2011 County of Los Angeles Building Code (Title 26), which is based on the 2010 California Building Code and the 2009 International Building Code .</p>	<p>Observation and inspection. Submit semi-annual reports for review and approval.</p>	<p>Monitor during construction and operations</p>	<p>City of Whittier</p>
	<p>GR-1f All proposed pipelines shall be placed in properly constructed trenches and backfilled with bedding and engineered fill that increases the freedom of movement of the pipelines, or alternatively anchored to prevent pipeline movement, as determined by a California Registered Civil Engineer, in accordance with California Building Code, 2010, Los Angeles County requirements, and the American Public Works Association Greenbook.</p>	<p>Cease any drilling and production activities and inspect all project-related facilities, equipment and pipelines following any seismic event that generates a ground acceleration of fifteen (0.15g) percent of gravity.</p>	<p>Inspection for earthquake damage of drilling and production infrastructure immediately following threshold seismic events</p>	<p>City of Whittier</p>
	<p>GR-1g All facilities and equipment, including spill containment berms and Project-related pipelines, shall be designed for the seismic loading in accordance with applicable codes, including the California Building Code, 2010.</p>	<p>Cease any drilling and production activities and inspect all project-related facilities, equipment and pipelines following any</p>	<p>Inspection for earthquake damage of drilling and production infrastructure immediately</p>	<p>City of Whittier</p>

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		seismic event that generates a ground acceleration of fifteen (0.15g) percent of gravity.	within 15 days following threshold seismic events	
	GR-1h The Applicant shall cease any non-essential drilling and production activities and inspect all project-related facilities, equipment, and pipelines following any seismic event that generates a ground acceleration of 15 percent of gravity. The Applicant/Operator shall prepare a written report of all inspections and findings to the City for review and approval prior to the recommencement of any operations. The City will respond to Matrix within 5 working days of the report submittal.	Cease any drilling and production activities and inspect all project-related facilities, equipment and pipelines following any seismic event that generates a ground acceleration of fifteen (0.15g) percent of gravity.	Inspection for earthquake damage of drilling and production infrastructure immediately following threshold seismic events	City of Whittier
GR.2: Moderately expansive soils are prone to swelling and shrinking as a result of increased or decreased water content,	GR-2a. Thickened slabs, extending slab edges and additional reinforcement shall be installed to reduce negative impacts from any expansive soil movement if any construction occurs within moderately expansive soils. In addition, the use of capillary break under slabs shall be utilized to reduce the potential for moisture transport and pumping that leads to moisture infiltration as a result of heat and moisture gradients. It is essential that sand thickness under slabs be used for concrete curing only and be kept at 2 inches or less. The American Concrete Institute has found that greater thicknesses tend to provide conveyance of excessive moisture under the slabs. An alternative would be the use of low to non expansive soils for	Design drawings and site inspections	Prior to permit issuance and during construction	City of Whittier

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<p>which could potentially damage proposed structures and infrastructure, resulting in loss of property (Less Than Significant with Mitigation).</p>	<p>slab support, which would eliminate the potential risk. This can be accommodated by importing select materials. Select grading techniques during grading could utilize the granular soils in site for subsequent use. Measures shall be as described above or as otherwise approved by the City Engineer.</p>			
<p>GR.3: Existing uncertified fill onsite could potentially be subject to hydroconsolidation, excessive settlement, expansive soil shrink and swell and differential settlement/expansion, and thus could potentially damage proposed structures and</p>	<p>Mitigation Measure GR-1c shall be completed in association with artificial fill impacts.</p>	<p>See MM GR-1c</p>	<p>See MM GR-1c</p>	<p>See MM GR-1c</p>



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infrastructure, resulting in loss of property (Less Than Significant With Mitigation).				
GR.4 Landslide prone slopes are present in the Project Area. Such slopes could potentially damage proposed structures and infrastructure, resulting in loss of property and oil spills (Less Than Significant with Mitigation).	Mitigation Measure GR-1c shall be completed in association with slope stability impacts.	See MM GR-1c	See MM GR-1c	See MM GR-1c
GR.5: Temporary excavations could impact and adversely affect	GR-5a. Temporary shoring shall be designed to protect the temporary excavations, structures to remain in place, and adjacent properties. This shoring shall be designed by a State of California Registered Civil Engineer to take into account all lateral load parameters. Shoring above groundwater levels can range from steel cage to timber supports to sheet piling, soil nailing or shotcrete walls or as otherwise approved by the City	Submit temporary shoring plans and calculations.	Prior to permit issuance	City of Whittier

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adjacent properties or de-stabilize the existing hillside (Less Than Significant Mitigation).	Engineer.			
	GR-5b. Implement slot cut excavation schemes during grading and foundation excavations to the extent possible to reduce the potential for failure along temporary cuts by limiting the area exposed by temporary cuts.	Submit temporary shoring plans and calculations.	Prior to permit issuance	City of Whittier
	GR-5c. All excavations for structures and buildings shall comply with all applicable regulations of the California Occupational Safety and Hazard Administration guidelines as they pertain to excavations.	Submit temporary shoring plans and calculations.	Prior to permit issuance	City of Whittier
GR.6: Corrosion could potentially damage the structural components and pipelines which would result in a pipe burst and subsequent oil spill (Less Than Significant With Mitigation).	GR-6a. Site specific chemical testing shall be performed to assess corrosion and other adverse chemical aspects. A report with the lab tests shall be submitted to the City of Whittier with any appropriate mitigation measures included. The project design must conform to the recommendations within the geotechnical evaluation, or as per the City Engineer, and should occur prior to completion of the final project design.	Submit chemical testing and corrosion protection mitigation measures for project components.	Prior to permit issuance and annual reports	City of Whittier
	GR-6b. 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.	Submit chemical testing and corrosion protection mitigation measures for project components.	Prior to permit issuance and annual reports	City of Whittier
	GR-6c. 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.	Submit chemical testing and corrosion protection mitigation	Prior to permit issuance and annual reports	City of Whittier

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
		measures for project components.		
	GR-6d. In accordance with California Division of Oil, Gas, and Geothermal Resources pipeline regulations for environmentally sensitive pipelines, a pipeline management plan shall be implemented (Public Resources Code Sections 3013 and 3782). 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.	Submit chemical testing and corrosion protection mitigation measures for project components.	Prior to permit issuance and annual reports	City of Whittier, DOGGR
	GR-6e. All concrete in contact with the high sulfate or corrosive soils can be Type V concrete in accordance with the 2010 California Building Code.	Submit chemical testing and corrosion protection mitigation measures for project components.	Prior to permit issuance and annual reports	City of Whittier
GR.7: Oil withdrawal could result in ground subsidence (Less Than Significant With Mitigation).	GR-7a. Subsidence monitoring shall be completed annually in the vicinity of the wells. 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 results shall be forwarded to the Division of Oil, Gas and Geothermal Resources and the City of Whittier for review. GR-7b. In the event that the Global Position System monitoring indicates that subsidence is occurring in and/or around the Project Area, wastewater or water reinjection operations shall be increased to alleviate such subsidence. The Applicant shall coordinate with the California Division of Oil, Gas and	Monitor subsidence with GPS technology.	Annually	City of Whittier
		Increase wastewater reinjection operations.	Following monitoring results indicating subsidence	California Division of Oil, Gas and Geothermal Resources

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
GR.8: Wastewater injection could activate earthquakes along nearby faults (Less Than Significant With Mitigation).	Geothermal Resources in determining appropriate increased levels of wastewater reinjection operations. The Applicant will also coordinate with the City of Whittier to verify that subsidence has been mitigated sufficiently. None.	n/a	n/a	and City of Whittier

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
N.1: Construction machinery would increase noise levels (Less Than Significant With Mitigation).	N-1a. Limit all construction activity at the Project Site (including deliveries and arriving and departing workers, and construction activities during the testing phase) to the hours from 7:00 a.m. to 6:00 p.m., Monday through Friday, and from 8:00 a.m. to 5:00 p.m. on Saturdays and prohibit activities on Sundays and federal holidays. In addition, for construction work within the County of Los Angeles unincorporated areas, the Applicant shall ensure that noise levels do not exceed County municipal code levels with a noise study and monitoring and measures, including high grade mufflers, engine tuning, and management of backup alarms. All contracts with construction personnel shall specify the allowable work hours and the study and monitoring requirements. N-1b Maintain all construction machinery according to the	Site inspection	During construction	City of Whittier



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		Method	Timing	Responsible Party
	<p>manufacturers' specifications and ensure that mufflers and silencers are maintained properly. Back-up OSHA noise indicators shall be ambient sensitive and self-adjusting to minimize backup indicator noise or flaggers shall be used in the place of backup alarms (as allowed by OSHA).</p> <p>N-1c. Relocate the construction parking and staging area farther from the school and residences on Catalina Avenue to an area north of the Ranger Residence or equivalent.</p> <p>N-2a The Applicant shall develop and implement a Noise Reduction Plan for all drilling (testing, development, and re-drills and workovers) to ensure that the Leq noise levels from activities, measured as a 1-hour Leq, is less than a 3-dBA increase at the closest sensitive residential receptor and less than a 5-dBA increase at the closest sensitive recreational receptor. The Plan shall be prepared by an acoustic consultant approved by the City and the Plan shall be subject to City review and concurrence. The measures in the Plan shall include but not be limited to the following: (1) enclose the drill rig area in soundproof barriers 30 feet high on the south and west sides; (2) utilize a central generator type drilling rig, with the generators the only diesel engines onsite and enclosed in a soundproofed generator house with appropriate grade muffler systems, or install sound enclosures around all diesel engines with appropriate grade muffler systems; (3) install noise barriers around the drill rig floor, mud mixers, cleaners, conveyers, and shakers; (4) enclose drawworks brake area with soundproofing shroud; (5) install pads on V-door and other appropriate areas, timbers and pads on 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 (for both drilling and workover operations); (6) enclose the drilling mast boards area (on drilling and workover rigs) with barriers 2 inches thick and 2 pounds per square foot in density at least 5 feet above and below any noise sources; and (7) install ambient sensitive backup indicators on all equipment requiring backup indicators.</p>	<p>Construction drawings and site inspection</p> <p>Plan inspection and monitoring</p>	<p>construction</p> <p>Before construction</p> <p>Prior to and during drilling</p>	<p>Whittier</p> <p>City of Whittier</p> <p>City of Whittier, Habitat Authority</p>
N.2: Drilling activities during the Drilling and Testing Phase would increase noise levels in the area (Less Than Significant With Mitigation).				

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Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	<p>N-2b The Applicant shall institute a quiet-mode for all drilling activities between 7 p.m. and 7 a.m. Quiet-mode operation would apply to both drilling and operations and would involve: (1) using signalers for all backup operations instead of backup alarms and turning off backup alarms; (2) using radios instead of voice communication; (3) minimizing crane use and pipe handling operations, pipe offloading from trucks and board loading during daytime to the maximum extent feasible and nighttime loading only for safety reasons; (4) prohibiting material and supply deliveries to the Project Site between the hours of 7 p.m. and 7 a.m., with exceptions only for safety; and (5) limiting process alarms and communications over the broadcast system to the maximum extent feasible during all operations and use only for safety reasons.</p> <p>N-2c Provide a comprehensive noise abatement study, including noise and vibration monitoring at nearby sensitive receptors and continuous monitoring near drilling activities, under contract and supervision of the City, to monitor noise and vibration from the drilling and operations in the community. The City shall have the authority to shut-down operations and require additional mitigation if the noise criteria are exceeded.</p>	<p>Plan inspection and monitoring</p>	<p>Prior to and during drilling and operations</p>	<p>City of Whittier</p>
N.3: Project activities would increase vibration levels in the area (Less than Significant).	None.	n/a	n/a	n/a
N.4: Operational activities would increase	N-4 The Applicant shall develop and implement a Noise Reduction Plan for all operations to ensure that Leq noise levels from operational activities, measured as 1-hour Leq, produce less than a 3 dBA increase over the minimum baseline hourly average level at the closest residential receptor to the	Plan inspection and monitoring	Prior to and during operations	City of Whittier

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
noise levels in the area (Less Than Significant With Mitigation).	<p>The measures in the Plan shall include, but not be limited to: (1) installing sound enclosures or buildings around all compressors; (2) installing noise barriers around all pumps and air coolers; (3) installing ambient-sensitive backup indicators on all equipment requiring backup indicators; (4) installing sound enclosures or buildings around all the oil area pumps (e.g., shipping, IGFC, water injection, water booster, reject pumps); (5) installing sound enclosures or buildings around refrigeration units; (6) installing a secondary, 16-foot tall sound wall on the south, west and north sides of the gas plant; (7) ensuring that all office equipment (i.e., air conditioners, heating, ventilation) produces low noise levels or is surrounded by noise barriers; and (8) limiting traffic on the North Access Road to within 7 a.m. to 7 p.m., except for emergencies.</p>			

<p>N.5: Concurrent operational activities and drilling activities during periods of the Project would increase noise levels in the area. (Less than Significant with Mitigation).</p>	<p>Implement mitigation measures N-1a and N-1b, N-2a through N-2c, and N-4.</p>	n/a	n/a	n/a
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Impact	Mitigation Measure	Compliance Verification
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	Method	Timing	Responsible Party
<p>AE-1: The drilling rig could degrade public viewsheds (Significant and Unavoidable).</p>	<p>Plan inspection and installed vegetation inspection</p>	<p>Before and during operations</p>	<p>City of Whittier and Habitat Authority</p>
<p>AE-1b. Within 30 days of installation, all visible structures at the well or processing sites shall be painted non-reflective earth-tone colors or otherwise surfaced with a color or textured surface in consultation with the City, so that they are compatible with the surrounding area.</p>	<p>Design drawings review</p>	<p>Before and during construction</p>	<p>City of Whittier</p>
<p>AE-1d. The Applicant shall redesign the project footprint, in coordination with the Habitat Authority and the Fire Department, to prevent the removal of the eucalyptus trees on the east side of the project site to preserve the visual shielding that these trees provide.</p>	<p>Design drawings review, including a vegetation plan</p>	<p>Before construction</p>	<p>City of Whittier</p>
<p>AE-2: Oil processing equipment could degrade public viewsheds (Less than Significant with Mitigation).</p>	<p>See AE-1a and AE-1b</p>	<p>See AE-1a and AE-1b</p>	<p>See AE-1a and AE-1b</p>

Implement mitigation measures AE-1a and AE-1b.

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
AE.3: The use of the north access road could degrade public viewsheds (Less than Significant).	None.	n/a	n/a	n/a
AE.4: The proposed Project could increase nighttime lighting and glare (Less Than Significant With Mitigation).	AE-4. All point lighting sources that may be introduced onsite in support of nighttime operations shall be screened and directed to prevent offsite spillover lighting effects. Spillover lighting shall be limited to 0.1 fc within 30 feet of facility boundaries. Outdoor lighting should be restricted to only those lights that are required by code for lighting building exteriors and safety and security needs. Consistent with public safety needs street lighting, pedestrian walkway lighting, and parking lot lighting shall use light fixtures that shield and direct light with a backlight shield or other equivalent type of shielding, to minimize light spill-over effects into adjacent areas. Light standard heights shall distribute light at ground level consistent with light levels for security, spill-over effects, and efficiency.	Review design documents specifying lighting	Before and during construction	City of Whittier

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
T.1: Potential test drilling, Construction, and Operations and Drilling at the Whittier Mail Oil Field	T-1a. During Phase I at Intersection 6 - Catalina Avenue and Mar Vista Street, provide striping enhancements for northbound and southbound lanes to convert the existing single lanes to a left and shared through and right lane. Parking shall be restricted immediately north of the intersection, according to City Engineer recommendations. T-1b A worker carpooling program shall be instituted offsite and away from congested areas to reduce Project traffic through	Inspection of striping and parking limitations Inspection of carpooling	Before test drilling Before construction	City of Whittier City of Whittier

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Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
would increase traffic in the area (Less Than Significant With Mitigation)	<p>congested areas during all Project phases, in coordination with the City traffic engineer.</p> <p>T-1c During all phases, limit truck and employee access via Catalina Avenue and Mar Vista Street to no more than 40 daily round-trips and a peak hour of 12 one-way trips. No vehicles with more than two axles or weighing more than 3 tons (generally truck), or vehicles towing large trailers shall be allowed on Catalina Avenue during Phase 2 (except for the initial stages of the North Access Road construction) or Phase 3.</p> <p>T-1d Implement safety and access improvements, including: (1) During Phase 1, provide a wider turning radius at the northeast corner of Catalina Avenue to improve right turn movements, according to City Engineer recommendations; (2) Prohibit parking on the east side of Catalina Avenue north of Mar Vista Street from 7 a.m. to 6 p.m. Monday through Friday and from 8 a.m. to 5 p.m. on Saturdays to provide additional capacity for trucks during Phase 1, according to City Engineer recommendations; (3) Provide flagmen for truck access on Mar Vista Street during Phase 1; (4) Applicant shall maintain a record of vehicular traffic moving in and out of the Catalina Avenue Gate; (5) Implement a pavement monitoring program to ensure Mar Vista Street and Catalina Avenue are maintained and damage from truck traffic is appropriately repaired, under direction of city engineers; (6) Clearly posted speed limit signs on Catalina Avenue; and (7) Cover all haul vehicles and sweep or remove any debris that could fall off the truck and impact other drivers before the truck enters public streets.</p>	<p>Applicant required to maintain records of traffic into and out of Catalina Avenue gate, and subsequent records inspection</p> <p>Inspection of contracts and design plans</p>	<p>Before drilling or construction</p> <p>Before drilling</p>	<p>City of Whittier</p> <p>City of Whittier</p>

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	<p>T-1e During Phase 2 soil export, if it is not deposited at the Savage Canyon Landfill, restrict truck traffic to non-am peak hours at the intersection of Hadley Street and Whittier Blvd. Also, prescribe truck routes for soil-transport and crude-haul trucks to ensure avoidance of impacted intersections.</p> <p>T-1f Implement a Penn Street Traffic Program, in coordination with the City, evaluating:</p> <ol style="list-style-type: none"> (1) Traffic levels and periods of heavy traffic along Penn Street; (2) Longer-term traffic monitoring to capture events and variation in traffic flow due to student populations and event traffic; (3) Construction truck traffic impacts on roadway capacity due to parking limitations and event activities; (4) Coordination with Whittier College to reduce impacts of events and parking issues along Penn Street; (5) Alternative parking locations and routes for Whittier College events; (6) Implementing safety improvements, including enhanced pedestrian crosswalks and signage; (7) Identifying sources of landfill traffic and ensuring the proposed Project truck traffic during operations (not construction) does not increase average truck traffic levels on Penn Street; (8) Limited hours for proposed Project truck traffic on Penn Street to avoid congested or impacted periods (e.g., limit truck traffic to periods when the landfill is open, i.e., between 8:00 a.m. and 3:00 p.m.); (9) Coordinate periods of heavy traffic flow on Penn Street due to events and prevent use of Penn Street for proposed Project-related construction truck traffic during these events. (10) Prohibiting parking of Project-related traffic along any residential street for non-emergency purposes. (11) Implementing policies for trucks along Penn Street, including speed limits for trucks, yielding requirements to automobiles, and other issues as applicable. 	<p>Inspection of contracts and design plans</p>	<p>Before construction</p>	<p>City of Whittier</p>
T.2:	T-2. A Traffic Management Plan shall be submitted to the City of	<p>Studies of Penn Street capacity related to events</p>	<p>Before construction</p>	<p>City of Whittier Whittier College</p>

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Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
Construction of the pipeline along area streets could cause significant impacts (Less Than Significant With Mitigation).	<p>Whittier and County of Los Angeles Traffic Engineers for approval, as required, prior to issuance of encroachment permits. The Plan could include the following measures: provide methods to safeguard traffic flow; identify detours (if necessary); identify the placement of traffic control devices (e.g. signs, traffic cones) and flaggers (if needed); and provide other appropriate traffic control measures. Additional measures shall include:</p> <ol style="list-style-type: none"> (1) One travel lane shall be left open in each direction (delineated by temporary traffic cones/barricades) along roadways during construction (i.e. roads will not be closed). Any temporary street closures shall occur in coordination with city staffs. (2) Construction on major roadways through major signalized intersections will not be conducted during peak periods (6 to 9 a.m. and 3 to 6 p.m.), except where requested by the city to alleviate traffic impacts. (3) All trenches in areas without safety fencing shall be metal plated during non-construction hours. All trenches that interfere with access to residential and business driveways shall be metal plated to provide access. (4) Edges of steel plates shall be made safe for cyclists. (5) All county and municipal fire, police, and paramedic departments shall be notified of the schedule and duration of construction activities. (6) As required, alternative routes shall be identified for emergency vehicles to avoid construction areas. (7) Coordination shall be undertaken with appropriate transit authorities to ensure uninterrupted service along bus or train routes, which shall be crossed or paralleled by the pipeline construction. (8) Alternative pedestrian and bicycle routes shall be identified to avoid construction areas if existing routes are obstructed by pipeline construction activities. (9) Transit stops shall be relocated as necessary to provide access during construction. 	approval of plan	construction	Whittier

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	<p>(10) Staging areas for construction equipment and service truck traffic shall be located off the roadway.</p> <p>(11) Provision shall be made for off-street parking for worker vehicles in areas where parking is limited.</p> <p>(12) Advance notifications shall be made to affected residents, businesses, etc. through public information, such as a web site.</p> <p>(13) Schedule construction adjacent to critical land uses so that at least one driveway is left unblocked at all hours or during business hours and ensuring resident and business access during trenching/construction.</p> <p>(14) Ensure that damaged roads are restored to at least their pre-construction condition and to the satisfaction of the responsible agency.</p>			

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
WR.1: Site grading and drainage improvements would alter existing drainage patterns and increase impervious surfaces, which could increase surface runoff, cause flooding, and	WR-1a A registered civil engineer experienced in drainage shall prepare a hydrologic study, using the corresponding hydraulic calculations for interception, conveyance, and discharge of runoff. Based on these studies, the engineer shall prepare a drainage plan in accordance with City and County requirements.	The City of Whittier shall review and approve studies.	Prior to issuance of permit	City of Whittier
	WR-1b A registered civil engineer experienced in drainage shall design and implement onsite detention facilities to reduce runoff to existing levels. Onsite detention ponds would attenuate the runoff intensity, such that an excessive peak flow would not occur during high intensity storms and there would be no increase in runoff intensity over existing conditions. The project engineer shall conduct an onsite hydrologic study to determine the approximate increase in storm runoff to accurately scale any onsite detention facilities.	The City of Whittier shall review and approve studies.	Prior to issuance of permit	City of Whittier

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
<p>adversely impact water quality (Less Than Significant With Mitigation).</p>	<p>Detention System Design Onsite detention facilities have the potential to create habitats for mosquito breeding. Any onsite detention facilities shall be designed as a 'dry system' in accordance with the California Department of Public Health. A dry system requires that the facility be designed to discharge all captured water within 4 days. The design slope shall be adequate and properly compacted to prevent standing water and a low flow channel shall be incorporated to direct low flows to the system outlet. The basin shall also provide access for maintenance and inspection.</p> <p>All catch basins and drainage facilities, including grass swales and bio-retention facilities shall also be designed to prevent standing water.</p> <p>An operation and maintenance plan shall be incorporated to remove vegetation, sediment, and debris accumulation biannually with an inspection at the beginning of the wet season. Waste from maintenance shall be disposed of according to local and state regulations.</p> <p>Onsite detention facilities shall be inspected quarterly for burrowing vector damage. Vector control measures shall be incorporated and maintained to prevent damage to the detention facility.</p> <p>Onsite detention facilities shall be surrounded by 6-foot fencing and provided access with a gate and access road per Los Angeles County standards.</p> <p>Discharge systems from onsite detention facilities shall be capable of discharging water from the basin while preventing a discharge of oil from the surface of the basin using a weir or subsurface discharge type design to prevent oil discharges from the basin in the event the basin reaches capacity and there is a crude oil spill.</p> <p>WR-1c. Impervious surfaces shall be minimized to prevent pollutant runoff. Gravel roads and parking areas shall be</p>			
		The Regional Water Quality	Prior to issuance of	Regional Water

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	constructed to allow infiltration of storm water and limit downstream runoff.	Control Board shall review and approve the Storm Water Pollution Prevention Plans, which shall be submitted as part of the application to the City of Whittier for permits.	permit	Quality Control Board and City of Whittier
	WR-1d. Structural best management practices shall be used to mitigate the increased pollutant runoff. Runoff from impervious areas shall be directed to grass swales, bio-swales, or detention ponds to aid in filtering out suspended solids and potential contaminants. Grass bio-swales shall not be planted with invasive species. The Best Management Practices shall be designed by a California registered, Qualified Storm Water Pollution Prevention Plan Developer.	The Regional Water Quality Control Board shall review and approve the Storm Water Pollution Prevention Plans, which shall be submitted as part of the application to the City of Whittier for permits.	Prior to issuance of permit	Regional Water Quality Control Board and City of Whittier
	WR-1e. Pollution control products, such as catch basins with basket inserts, shall be used to catch trash and debris along with filtering elements such as silt fences, straw wattles and	The Regional Water Quality Control Board	Prior to issuance of permit	Regional Water Quality

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	absorbent sponges within catch basins. Filter technology may be used to catch sediment, debris, oil, and pollutants.	shall review and approve the Storm Water Pollution Prevention Plans, which shall be submitted as part of the application to the City of Whittier for permits.		Control Board and City of Whittier
	WR-1f. Permanent water quality testing, drainage device, and erosion control maintenance shall be implemented. Sampling and analysis shall be completed in accordance with National Pollutant Discharge Elimination System requirements.	The Regional Water Quality Control Board shall review and approve the Storm Water Pollution Prevention Plans, which shall be submitted as part of the application to the City of Whittier for permits.	Prior to issuance of permit	Regional Water Quality Control Board and City of Whittier
	WR-1g. A California registered, Qualified Storm Water Pollution Prevention Plan Practitioner shall oversee and monitor in-construction best management practices and storm water management programs in accordance with the State General	The Regional Water Quality Control Board shall review	Prior to issuance of permit	Regional Water Quality Control

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	Construction Permit and the Los Angeles Regional Water Quality Control Board.	and approve the Storm Water Pollution Prevention Plans, which shall be submitted as part of the application to the City of Whittier for permits.		Board and City of Whittier
WR.2: Site grading and drainage improvements would alter existing drainage patterns at the Project Site, which could increase erosion and impact water quality on or offsite (Less Than Significant With Mitigation).	<p>WR-2a. During construction operations, the Applicant shall implement storm water management protection measures and wet weather measures. These measures would include temporary and permanent best management practices to reduce the potential for erosion and sediment transport. Conventional measures typically recommended by the State Water Resource Board and the California Department of Transportation would reduce potentially significant erosion and runoff impact to less than significant levels.</p> <p>Implement permanent erosion and sediment control measures:</p> <ul style="list-style-type: none"> - Minimize grading, clearing, and grubbing to preserve existing vegetation; - Use mulches and hydroseed free of invasive plants to protect exposed soils; - Use geotextiles and mats to stabilize soils; - Use drainage swales and dissipation devices; and - Use erosion control measures outlined in the California Stormwater Quality Association Best Management Practice Handbook. <p>Implement temporary best management practice mitigation</p>	<p>The Regional Water Quality Control Board shall review and approve the Storm Water Pollution Prevention Plans, which shall be submitted as part of the application to the City of Whittier for permits.</p>	Prior to issuance of permit	Regional Water Quality Control Board and City of Whittier

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	<p>measures:</p> <ul style="list-style-type: none"> - Use silt fences, sandbags, and straw wattles; - Use temporary sediment basins and check dams; and - Use temporary best management practices outlined in the California Stormwater Quality Association Best Management Practice Handbook. <p>Implement tracking control best management practices to reduce tracking sediment offsite.</p> <ul style="list-style-type: none"> - Use stabilized construction entrance and exit with steel shakers; - Use tire wash areas; and - Use tracking control best management practices outlined in the California Stormwater Quality Association Best Management Practice Handbook. 			
	<p>WR-2b. The Applicant shall implement a Storm Water Pollution Prevention Plan using best management practices and monitor and maintain storm water pollution control facilities identified in the Storm Water Pollution Prevention Plan, in a manner consistent with the provisions of the Federal Water Pollution Control Act (National Pollutant Discharge Elimination System Program). Stormwater management protection measures and wet weather measures shall be designed by a California registered, Qualified Storm Water Pollution Prevention Plan Developer. In addition, a California registered, Qualified Storm Water Pollution Prevention Plan Practitioner shall oversee and monitor construction Best Management Practices and stormwater management, in accordance with the State General Construction Permit and the Los Angeles Regional Water Quality Control Board.</p>	<p>The Regional Water Quality Control Board shall review and approve the Storm Water Pollution Prevention Plans, which shall be submitted as part of the application to the City of Whittier for permits.</p>	<p>Prior to issuance of permit</p>	<p>Regional Water Quality Control Board and City of Whittier</p>

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
WR.3: New grading and construction, potential soil remediation, and/or drilling operations could degrade surface water quality (Less than Significant with Mitigation).	WR-3a The proposed 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.			
	WR-3b An 18-inch berm shall be placed around the entire drilling rig to capture any spilled fluids.			
	WR-3c 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. 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.			
WR.4: A rupture or leak during oil drilling operation, from pipelines	WR-3d Oil spills shall be contained and cleaned according to measures outlined in the California Stormwater Quality Association Best Management Practice Handbook.			
	WR-3e An approved response manual and Oil Spill Contingency Plan 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 the Drilling and Testing phase. 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.			
	WR-4a. The City of Whittier and other appropriate agencies shall inspect facility conditions at the Project Site on a yearly basis. Inspections shall also occur after earthquake induced land movement or upon periods of large rainfall in order to verify no leak or rupture risks have developed. Inspections shall be completed by personnel with oil-field operations inspection	The Regional Water Quality Control Board shall review and approve the Storm	Prior to issuance of permit	Regional Water Quality Control Board and City of

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
or other infrastructure, could substantially degrade surface and groundwater quality (Significant and Unavoidable).	experience (petroleum engineer or equivalent). Inspection and violation records shall be available to the public for review within 5 working days of inspections.	Water Pollution Prevention Plans, which shall be submitted as part of the application to the City of Whittier for permits.		Whittier
	WR-4b. The Applicant shall properly maintain the associated crude oil pipelines, storage tanks and processing facilities within and outside the Preserve, 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 Regional Water Quality Control Board. Pipeline, tank and processing inspections, including walking the pipelines within the Preserve, shall occur at least daily.	The Regional Water Quality Control Board shall review and approve the Storm Water Pollution Prevention Plans, which shall be submitted as part of the application to the City of Whittier for permits.	Prior to issuance of permit	Regional Water Quality Control Board and City of Whittier
	WR-4c. The Applicant shall install a leak detection system for crude pipelines in the Preserve and the Colima Road pipeline. 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	The Regional Water Quality Control Board shall review and approve the Storm Water	Prior to issuance of permit	Regional Water Quality Control Board and City of Whittier

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Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	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.	Pollution Prevention Plans, which shall be submitted as part of the application to the City of Whittier for permits.		
WR.5: Reinjection of produced water could potentially impair water quality of aquifers within the Whittier Area of the Central Groundwater Basin (Less than Significant).	None.	n/a	n/a	n/a
WR.6: Drilling and production operations would not substantially deplete groundwater supplies such	WR-6a Where feasible, the City of Whittier shall supply reclaimed water during construction and well drilling operations, to reduce water supply impacts.* WR-6b Where feasible, the Applicant shall implement water conservation measures during construction and well drilling operations, to reduce water supply impacts.*	Construction design plans	Prior to construction	City of Whittier
		Inspection of construction design plans	Prior to construction	City of Whittier

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (Less Than Significant).				
WR.7: The Project Site would not likely be susceptible to flooding during an extreme precipitation event (Less Than Significant).	None.	n/a	n/a	n/a

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
CR.1: Impacts to historical resources, such as well pads, roadways, and	CR-1. Develop a monitoring plan, subject to City and Habitat approval, for treatment of areas of direct impact to elements identified as contributing components of the Whittier Main Oil Field including, but not limited to, the following: - Monitoring concurrent with construction grubbing at the locations of all oil well pads, allowing time for detailed field	Development of a monitoring plan by a qualified archaeologist	Review and approval prior to land use clearance	Applicant and City of Whittier

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
the landscape due to ground disturbance (Less Than Significant With Mitigation).	<p>recording of each pad that could not be obtained during survey level recording efforts due to heavy vegetation. Recordation should include photographs in digital or 35mm format, scaled plan-view drawings of the well pads, and written documentation that describes construction methods, details, and associated material composition.</p> <ul style="list-style-type: none"> - Monitoring concurrent with alteration of existing historic-period roadways to allow for detailed mapping of existing roadways as well as recordation of construction along a representative segment(s) of the roadway to document the methods used over time as the oil fields evolved; first relying on dirt roads, followed by oil-paved roads, and finally asphalt-paved roads. - Collection, analysis, reporting, and curation of any associated artifacts that might be unearthed during monitoring activities described above. - Completion of a report of findings and update of appropriate Department of Parks and Recreation 523 forms to document the information obtained as a result of the mitigation/monitoring program. 			
CR.2: Unanticipated disturbance to human remains due to construction (Less Than Significant With Mitigation).	<p>CR-2. If human remains are exposed during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has been notified and can make the necessary findings as to origin and disposition of the remains pursuant to Public Resources Code 5097.98. Construction must halt in the area of the discovery of human remains, the area must be protected, and consultation and treatment shall occur as prescribed by law.</p>	Contact the Native American Heritage and a Most Likely Descendant must be designated	Upon discovery of human remains	Applicant and Construction Contractor
CR.3: Unanticipated disturbance to paleontological	<p>CR-3. If any paleontological resources are encountered during ground-disturbing activities in the Project area, activities in the immediate area of the find shall be halted and the discovery assessed (LSA 2007). A qualified paleontologist must</p>	Paleontological resource impact mitigation	Upon discovery	Applicant and Construction Contractor

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
resources (Less Than Significant With Mitigation).	evaluate the discovery and recommend appropriate treatment options pursuant to guidelines developed by the Society of Vertebrate Paleontology. A paleontological resource impact mitigation program for treatment of the resources would be developed and implemented.	program		

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
<p>WAS.1: The proposed Project would generate sanitary wastewater that could exceed the existing capacity of downstream sewer and wastewater treatment facilities. (Less Than Significant with Mitigation).</p> <p>WAS.2: The proposed Project would generate wastewater</p>	<p>WAS-1. A Registered Civil Engineer shall evaluate the capacity of the existing sewer line system, beginning at the proposed tie-in at Catalina Avenue and continuing downstream to the County Sanitation Districts of Los Angeles County sewer system, prior to any connections. A 7-day capacity performance test shall be performed, based on County 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 District for review and approval. In the event that existing sanitary sewer facilities are insufficient to accommodate increased flows from the proposed Project Site, the Applicant shall provide temporary mobile sanitary facilities (i.e., toilet, sink, and urinal) for on-site personnel, as necessary.</p> <p>Mitigation measures WR-3a through WR-3e, in Section 4.8, Hydrology and Water Resources, shall be implemented.</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 Whittier</p> <p>See MM WR-3a through WR-3e.</p>

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
that could impact water quality of nearby drainages and creeks (Less than Significant with Mitigation).				

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
LU.1: Noise generated independently from test drilling, construction, and potential future operations could be incompatible with adjacent land uses (Less Than Significant With Mitigation).	Implement mitigation measures N-1a through N-1b and N-2a through N-2c.	See N-1a, N-1b, and N-2a, N-2b, and N-2c.	See N-1a, N-1b, and N-2a, N-2b, and N-2c.	See N-1a, N-1b, and N-2a, N-2b, and N-2c.
LU.2:	Implement mitigation measures N-1a and N-1b, N-2a through N-	See N-1a, N-	See N-1a,	See N-1a, N-

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Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
Concurrent operational activities at the Project Site would increase noise levels that could be incompatible with adjacent land uses (Less than Significant with Mitigation).	2c, and N-4.	1b and N-2a, N-2b, N-2c, and N-4.	N-1b and N-2a, N-2a, N-2b, N-2c, and N-4.	1b and N-2a, N-2b, N-2c, and N-4.
LU.3: Views of drilling rigs, construction, and potential future operations could be incompatible with adjacent land uses (Significant and Unavoidable).	Implement mitigation measures AE-1a and AE-1b.	See AE-1a and AE-1b.	See AE-1a and AE-1b.	See AE-1a and AE-1b.
LU.4: Future oil field development could increase nighttime lighting and glare inconsistent	Implement mitigation measures AE-1b and AE-4.	See AE-1b and AE-4.	See AE-1b and AE-4.	See AE-1b and AE-4.

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
with surrounding land uses (Less Than Significant With Mitigation).				
LU.5: Emissions and odors from drilling and operations could be incompatible with adjacent land uses (Less Than Significant With Mitigation).	Implement mitigation measures AQ-1a through AQ-1d, AQ-2a and AQ-2b, AQ-3a through AQ-3e, AQ-4, and AQ-5.	See AQ-1a through AQ-1d, AQ-2a and AQ-2b, AQ-3a through AQ-3e, AQ-4, and AQ-5.	See AQ-1a through AQ-1d, AQ-2a and AQ-2b, AQ-3a through AQ-3e, AQ-4, and AQ-5.	See AQ-1a through AQ-1d, AQ-2a and AQ-2b, AQ-3a through AQ-3e, AQ-4, and AQ-5.
LU.6: The proposed Project conflicts with adopted land use plans, policies, ordinances, habitat conservation plans, or planning efforts to protect the recreational resources of	Implement all mitigation measures in Section 4.1, Air Quality; Section 4.2, Biology; Section 4.5, Noise; and Section 4.6, Aesthetics and Visual Resources; and Section 4.14, Recreation.	See all mitigation measures in Sections 4.1, Air Quality; 4.2, Biology; 4.5, Noise; 4.6, Aesthetics and Visual Resources; and 4.14, Recreation.	See all mitigation measures in Sections 4.1, Air Quality; 4.2, Biology; 4.5, Noise; 4.6, Aesthetics and Visual Resources; and 4.14, Recreation.	See all mitigation measures in Sections 4.1, Air Quality; 4.2, Biology; 4.5, Noise; 4.6, Aesthetics and Visual Resources; 4.14, Recreation; and Habitat Authority where

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Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
the area (Less Than Significant With Mitigation).				appropriate.

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
FP-1: Future oil field development activities at the site could be deficient in firewater supplies, equipment layout, detection systems, or emergency response (Less Than Significant With Mitigation).	FP-1a The oil field operator shall provide fire water supplies from either the Murphy Station 10-inch line or Suburban Water Supply along Colima Road (both of which are nearby and have sufficient supplies), or some other source, that provides sufficient water supply rates and duration to comply with codes and the LACoFD. Any new pipeline installations shall avoid any sensitive habitats (coastal sage scrub or riparian) and will be placed in non-native grassland or disturbed communities. Any non-native grassland in which new pipeline installations are placed shall be returned to its original state after pipeline installation.	Design of firewater supply systems	Before drilling or construction	LACoFD and City of Whittier
	FP-1b The oil field operator 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.	Installation and operation of community alert notification system	Before operations	City of Whittier
	FP-1c The oil field operator 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 (near the Preserve hiking trails), installation of fire detection and prevention systems, flame detection, flammable gas detection, fire foam, and associated alarms and alert systems. The design and construction	Design documents showing fire detection systems and equipment spacing	Before operations	LACoFD and City of Whittier

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	<p>compliance status shall be verified by third-party audits overseen by the City.</p> <p>FP-1d The oil field operator shall develop emergency response plans addressing the facility's fire-fighting capabilities pursuant to the most recent NFPA requirements, Los Angeles County Fire Code, LACoFD, California Code of Regulation, and API requirements, in coordination with LACoFD and the City of Whittier. These plans should include, but not be limited to, fire monitor placement, fire 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.</p>	Submission of emergency response plan	Before drilling and operations	LACoFD and City of Whittier
FP.2: Future oil field development activities at the site could increase the risk of wildfires (Less Than Significant With Mitigation).	<p>FP-2a The oil field operator shall ensure that fuel modification areas create at least 30 feet of clearance from all oilfield equipment and 10 feet from all roadways to reduce the potential for ignition sources starting wildfires. Firewater monitors located within the facility should be placed so that sprays could reach beyond the facility walls by at least 30 feet, or as directed by LACoFD, and could be used to extinguish a wildfire started at the facility fence line. Fire hydrants shall be placed along all roadways, spaced according to LACoFD Fire Prevention Regulations Chapter 8 or as specified by LACoFD. The Applicant shall ensure that appropriate wildfire response equipment is located at the site or at the Rangers Residence if the Ranger Residence is located near the site. Construction activities shall include using spark arrestors on construction equipment, monitoring vehicle traffic to ensure activities do not impact dry brush and lead to fire, and the placing firefighting equipment at the construction site according to LACoFD direction.</p> <p>FP-2b Emergency response plans shall address the issues related to wildfire risks and response, including development of fuel management/modification fire hazard management plan</p>	<p>Fire prevention plans showing fuel modification areas</p> <p>Emergency response plans showing</p>	<p>Before drilling and operations</p> <p>Before drilling and operations</p>	<p>LACoFD and City of Whittier</p> <p>LACoFD and City of Whittier</p>

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
	according to LACoFD requirements, coordination with the area residences, the Preserve Rangers and the LACoFD, as well as first response tactics and equipment.	wildfire planning and preparation		

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
PS.1: Future drilling, construction, and operations would generate solid wastes (Less Than Significant).	None.	n/a	n/a	n/a
PS.2: Future drilling, construction, and operations would increase demand for potable water (Less Than Significant).	None.	n/a	n/a	n/a

Impact	Mitigation Measure	Compliance Verification



		Method	Timing	Responsible Party
REC.1: Concurrent operational activities at the Project Site during periods of the Project could affect recreational activities (Less than Significant with Mitigation).	REC-1 The Applicant shall construct and maintain interpretative signage within the Preserve's trails in coordination with the Habitat Preserve. Interpretative signage shall provide an educational component about the Preserve, drilling activities, mitigation, descriptions of local wildlife, habitats, environmental values of the Puente Hills area, historic uses, and others as determined by the City in consultation with the Habitat Preserve.	See N-1a through N-1b, N-2a through N-2c, and N-4.	See N-1a through N-1b, N-2a through N-2c, and N-4.	See N-1a through N-1b, N-2a through N-2c, and N-4.
REC.2: The new drilling and operations would increase odors that could reach recreational users (Less Than Significant With Mitigation).	Implement mitigation measures AQ-3a through AQ-3e.	See AQ-3a through AQ-3e.	See AQ-3a through AQ-3e.	See AQ-3a through AQ-3e.
REC.3: New drilling and operations would adversely affect public viewsheds (Significant and Unavoidable).	Implement mitigation measures AE-1a and AE-1b.	See AE-1a and AE-1b.	See AE-1a and AE-1b.	See AE-1a and AE-1b.

Impact	Mitigation Measure	Compliance Verification
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		Method	Timing	Responsible Party
ER.1: New electrical equipment at the potential project facilities would increase electricity consumption, thereby increasing energy demand (Less Than Significant).	None.	n/a	n/a	n/a
ER.2: Increased fossil fuel consumption and production (diesel, gasoline, and natural gas) at the potential project facilities could thereby decrease availability (Less Than Significant).	None.	n/a	n/a	n/a

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
E.J.1: Future	Implement mitigation measures AQ-3a through AQ-3e, SR-3, N-	See AQ-3a	See AQ-	See AQ-3a

Impact	Mitigation Measure	Compliance Verification		
		Method	Timing	Responsible Party
development could disproportionately impact minority and low-income populations (Less Than Significant).	1a through N-1b, N-2a through N-2c, and N-4.	through AQ-3e, SR-3, N-1a through N-1b, N-2a through N-2c, and N-4.	3a through AQ-3e, SR-3, N-1a through N-1b, N-2a through N-2c, and N-4.	through AQ-3e, SR-3, N-1a through N-1b, N-2a through N-2c, and N-4.

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RESOLUTION NO.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF WHITTIER, CALIFORNIA, APPROVING CONDITIONAL USE PERMIT NO. CUP09-004 TO ALLOW THE DEVELOPMENT AND OPERATION OF THE WHITTIER MAIN OIL FIELD PROJECT LOCATED ON CITY OWNED LAND WITHIN THE PUENTE HILLS LANDFILL NATIVE HABITAT PRESERVATION AUTHORITY AREA (FORMERLY THE WHITTIER MAIN OILFIELD), GENERALLY LOCATED NORTH OF MAR VISTA STREET AND WEST OF COLIMA ROAD

WHEREAS, the Planning Commission of the City of Whittier considered the Project and environmental review on October 19th, 20th, 24th, and 25th of 2011, at a duly noticed public hearing as prescribed by law, at which time the City staff and interested persons had an opportunity to and did testify either in support or in opposition to this matter; and

WHEREAS, on October 24, 2011, the Planning Commission voted 5-0 to adopt Resolution No. P.C. 11-xx certifying the Final Environmental Impact report and related environmental documents for the Whittier Main Oil Field Development Project; and approving Resolution No. P.C. 11-xx approving Conditional Use Permit CUP09-004 with project refinements presented in Appendix O of the Final Environmental Impact Report (FEIR), to allow the development and operation of the Whittier Main Oil Field Development Project; and

WHEREAS, on October 26, 2011, Councilman Henderson and Councilman Vinatieri requested that Conditional Use Permit No. CUP09-004 be formally reviewed by the Council in order to make a final determination on the Planning Commission's decision regarding the Whittier Main Oilfield Development Project.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF WHITTIER, CALIFORNIA, DOES RESOLVE AS FOLLOWS:

Section 1. The project, known as the Whittier Main Oil Field Development Project, is the drilling, exploration and production of oil and gas reserves located on property owned by the City of Whittier that is part of the Puente Hills Landfill Native Habitat Preserve (the "Project"). The Project would occur in three phases, with the first phase consisting of a drilling and testing phase which would involve the drilling of up to three test wells to assess the quality and quantity of oil and natural gas produced. The second phase, known as the design and construction phase, would involve construction of well cellars, the installation of gas and oil processing equipment, and crude transportation facilities. The third phase, known as the operations and

maintenance phase, would involve drilling the remaining wells (for a total of up to 60 wells), and the operation and maintenance of the gas and oil facilities and the wells, which would include well workovers and occasional well re-drilling. The Project site would contain the oil and gas drilling and processing facilities on a single pad, which would include the well area, a gas plant area, and an oil plant area consisting of well cellars, well test stations, liquid and gas separating equipment, a truck loading facility, an oil processing facility, and gas plant. The total permanent area required for the pads would be approximately 6.9 acres with an additional 6.5 acres of roadways (most of which currently exist in the area). A fuel modification zone would be required by the Los Angeles County Fire Department which would encompass an additional 6.9 acres. Up to an additional 8.5 acres would be temporarily disturbed for construction and grading of the site. The total impacted area for the Project would be 30.6 acres.

Section 2. In April 2009, Matrix Oil Corporation (the "Applicant") submitted an application for a conditional use permit ("CUP") for an oil drilling, exploration and production project. A Draft Environmental Impact Report for this project was released to the public in October 2010 for a 60-day comment period. After this 60-day comment period, in April 2011, the Applicant amended its CUP application to establish a new project that conformed to the Central Consolidated Site Alternative detailed in the Draft Environmental Impact Report. These revisions resulted in what is now the Project as defined herein.

Section 3. A Draft Environmental Impact Report was prepared for the Project in accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines and circulated for public review from June 6, 2011 to July 21, 2011 for a 45-day public review.

Section 4. After the Draft Environmental Impact Report was prepared and circulated for public review, and in an effort to be responsive to concerns raised by various commenters, Matrix proposed project refinements by redesigning the layout and amount of grading required for the Project pads, reducing the amount of earth moved from the site during Project grading from 147,000 yards to zero. The refinement reduced the expected duration of grading from 24 weeks to 12 weeks, resulting in the elimination of 9,313 truck trips during Project grading. These changes are discussed and analyzed in Appendix O of the Final Environmental Impact Report (FEIR), and are incorporated as part of the Project; and

Section 5. The City Council, at specially scheduled meetings, considered the Project and environmental review on November 8th, 9th, 14th and 15th of 2011, at a duly noticed public hearing as prescribed by law, at which time the City staff and interested persons had an opportunity to and did testify either in support or in opposition to this matter.

Section 6. Following consideration of the entire record of information received at the public hearing and due consideration of the proposed Project, the City Council adopted Resolution No. ___ certifying the Final Environmental Impact Report prepared for the Whittier Main Oil Field Development Project, adopting Findings pursuant to the California Environmental Quality Act, adopting a Statement of Overriding Considerations, and adopting a Mitigation Monitoring and Reporting Program.

Section 7. A duly noticed public hearing was held on Conditional Use Permit No. CUP09-004 by the City Council on November 8th, 9th, 14th and 15th of 2011. Based upon the evidence presented, including the staff analysis, public testimony, suggested conditions of approval and Exhibit Nos. "2 and 3", the City Council determined that the findings required by Section 18.49.070 (A) of the Whittier Municipal Code for the granting of said Conditional Use Permit are as follows:

1. FINDING: *That the site proposed for the use is adequate in size, shape and topography.*

FACT: The Project proposes to occupy approximately 7 acres of the 1,290-acre City owned Whittier Main Oil Field site. The Project has been designed to achieve a grading plan that balances cut and fill and minimizes soil export. Recommended conditions of approval require City review and approval of detailed grading plans, erosion control and restoration of disturbed slopes. The Project site is adequate in size, shape and topography to accommodate the proposed oil and gas production and processing facilities.

2. FINDING: *That the site proposed for the use has sufficient access to streets, which are adequate, in width and pavement type, to carry the quantity and quality of traffic generated by the proposed use.*

FACT: The Project will add additional truck and vehicle trips to City streets. Primary Project travel routes include Catalina Avenue, Penn Street and the North Access Road. Conditions of approval recommended for the Project require a Traffic Management Plan, off-site staging of construction vehicles and equipment, and car or van pooling to reduce impacts on City streets. The Project EIR found that there are no significant and unavoidable impacts to transportation and circulation, including impacts to streets. Subject to conditions of approval, the Project site has adequate street access to accommodate the proposed oil and gas production and processing facilities.

3. **FINDING:** *That the proposed use will not unreasonably interfere with the use, possession, and enjoyment of surrounding and adjacent properties and will be compatible with the permitted uses of surrounding and adjacent properties.*

FACT: The Project will re-introduce oil and gas production and processing facilities into an open space area. Mitigation measures have been imposed upon the project as conditions of approval in order to ensure that the oil and gas production operations would not unreasonably interfere with the use, possession, and enjoyment of the open space area and the Preserve. Nevertheless, the EIR found that certain impacts cannot be reduced to less than significant levels and would remain significant and unavoidable. These impacts include air quality, aesthetics, hydrology and water quality, land use and policy consistency and recreation. However, these potential impacts would be overridden by the benefits of the restoration activities at the Preserve that would be undertaken as a result of the Project. Without the approval of the Project, the Preserve is unlikely to have funding that would allow continued restoration and preservation of the site. The Oil and Gas Lease between the City of Whittier and Matrix provides for continuing funding for the Habitat Authority with annual administrative fees and mitigation fees upon issuance and acceptance of a CUP. The Project would provide a stable source of funding for the Habitat Authority for as long as the wells produce oil and gas. In addition, the City would significantly benefit from funds received from the royalties generated from oil and gas production. Those funds could provide for enhancements to public services and infrastructure throughout the life of the Project. Some of those improvements could include education, safety, traffic, beautification projects and other community benefits. Although the Project would interfere with the use and enjoyment of the Preserve of the property, the benefits of the Project to the Preserve and the community do not make this interference unreasonable.

4. **FINDING:** That the proposed use will be compatible with the permitted uses of surrounding and adjacent properties

FACT: Mitigation measures have been imposed upon the project as conditions of approval in order to ensure that the proposed use will be compatible with the permitted uses of the surrounding properties. . However, as noted above, regardless of

recommended mitigation measures, the EIR finds that certain impacts cannot be reduced to less than significant levels and would remain significant and unavoidable. Because the Project would provide a long-term revenue stream that would directly benefit the Preserve and the community, the proposed oil and gas facilities is compatible with the surrounding properties.

- 5. FINDING:** *That the use will, as to location, operation and design, be consistent with the General Plan and the Whittier Zoning Regulations.*

FACT: The City of Whittier General Plan permits oil and gas production in all land use districts and the City's Zoning Ordinance allows oil and gas production drilling in all zone districts with a Conditional Use Permit. The City awarded a lease to Matrix that could permit resumption of oil and gas extraction from the proposed Project Site. Matrix has been coordinating with the City to develop plans to obtain a conditional use permit, while considering ecological concerns to preserve natural habitats. Although the Project would result in unavoidable adverse impacts, the long-term benefits of the Project to the Preserve and community bring the Project into consistency with the spirit of the City General Plan and zoning regulations.

Section 8. Based upon the above findings and determinations, the City Council hereby approves Conditional Use Permit No. CUP09-004 with the design refinements presented in Appendix O of the FEIR, to allow the development revisions, subject to the conditions of approval in Attachment "A" and incorporated herein by reference.

Section 9. The City Clerk-Treasurer shall certify to the passage and adoption hereof.

APPROVED AND ADOPTED this _____ day of _____ 2011.

CATHY WARNER, Mayor

ATTEST:

KATHRYN A. MARSHALL
City Clerk-Treasurer

Attachments

A) Conditions of Approval for Conditional Use Permit No. CUP09-004.

ATTACHMENT A

Whittier Main Oil Field Development Project Conditional Use Permit CUP#09-004

CONDITIONS OF APPROVAL

GENERAL CONDITIONS

1. **Mitigation Measures.** All mitigation measures set forth in the project CEQA documents, and included as Attachment A, shall be satisfied by the Operator (Matrix Oil Corporation), at the Operator's expense; and the development must operate within the development assumptions utilized for the CEQA review.
2. **Indemnification, Protection and Defense.** The Operator and its successors in interest shall indemnify, protect, defend (with legal counsel reasonably acceptable to the City), and hold harmless, the City, and any agency or instrumentality thereof, and its elected and appointed officials, officers, employees, and agents from and against any and all liabilities, claims, actions, causes of action, proceedings, suits, damages, judgments, liens, levies, costs, and expenses of whatever nature, including reasonable attorney's fees and disbursements (collectively "Claims") arising out of or in any way relating to this project, any discretionary approvals granted by the City related to the development of the project, or the environmental review conducted under California Environmental Quality Act, Public Resources Code Section 21000 et seq., for the project. If the City Attorney is required to enforce any conditions of approval, all costs, including attorney's fees, shall be paid for by the Operator.
3. **Injunctive Relief.** In addition to any administrative remedies or enforcement provided hereunder, the City may seek and obtain temporary, preliminary, and permanent injunctive relief to prohibit violation of the conditions set forth herein or to mandate compliance with the conditions herein. All remedies and enforcement procedures set forth herein shall be in addition to any other legal or equitable remedies provided by law.
4. **Governmental Compliance.** The Operator shall comply with requirements of all Federal, State, County, and local agencies as are applicable to this project.
5. **All oilfield development and operations shall substantially adhere to the approved project plans and description as reviewed and accepted by the Planning Commission on October 25, 2011.**
6. **Project Description.** The procedures, operating techniques, design, equipment and other descriptions provided by the Operator in: 1) its CUP application to the City and in subsequent clarifications and additions to that application; and 2) as described in the project EIR and any subsequent environmental review, are incorporated herein

period applicable to such action, or final resolution of such action, provided that such suspension does not create or lead to new unassessed environmental impacts. If any condition is invalidated by a court of law, the entire project shall be reviewed by the Planning Commission and re-evaluated in its entirety to ensure that substitute feasible mitigation conditions/measures are imposed

12. **Applicability of Conditions to Construction and Operations.** These permit conditions are intended to apply to the project during all phases. The term "operations" shall be understood to encompass construction, drilling and re-drilling and operation phases unless such an interpretation would be inappropriate.
13. **Maximum Number of Wells.** The Operator shall drill no more than 60 wells in the Oil Field project area.
14. **Infrastructure.** The Operator shall have suitable infrastructure in place, as reasonably determined by the City, to support oil operations.
15. **Traffic Management Plan.** Prior to any project excavation or construction activities related to the project site, the Operator shall prepare for review and approval of the City a Traffic Management Plan to reduce project traffic impacts on substantially affected residential streets, including at a minimum affected portions of Penn Street and Catalina Avenue.
16. **The Operator and its successors in interest shall submit a fair share contribution/cost offset to the Whittier Utility Authority associated with the loss of revenue of landfill fees should waste hauler truck trips on Penn Street be reduced to account for an equivalent quantity of truck trips generated from and for the Whittier Main Oil Field Development Project in order to maintain existing, equivalent overall truck trip traffic along Penn Street. The frequency and amount of the fair share contribution shall be determined by the Director of Public Works and Executive Director, and updated as appropriate, to ensure a consistent revenue stream to the Whittier Utility Authority's Solid Waste Collection Account.**
17. **Retaining Walls.** Prior to construction of any retaining walls on the project site, the Operator shall provide plans of retaining walls for review and approval of the City and Habitat Authority.
18. **Environmental Compliance Coordinator.** The City shall hire the Environmental Compliance Coordinators, the costs of which shall be reimbursed by Operator. The number of Environmental Compliance Coordinators shall be determined by the City and shall take into account the level of Oil Operations at the Oil Field. The Environmental Compliance Coordinator(s) shall be approved by, and shall report to, the City Manager or Designee. The responsibilities of the Environmental Compliance Coordinator(s) shall be determined by the City for the Oil Field and shall generally include:

- (1) On-site, day-to-day monitoring of construction, drilling and redrilling, and operational activities as determined by the City Manager or Designee.
- (2) Taking steps to ensure that the Operator, and all employees, contractors and other persons working in the Oil Field, have knowledge of, and are in compliance with all applicable provisions of this conditional use permit.
- (3) Evaluating the adequacy of Drilling, Redrilling, and construction impact mitigations, and proposing improvements to the Operator or contractors, and the City.
- (4) Reporting responsibilities to the various City departments with oversight responsibility at the Oil Field, as well as other agencies such as DOGGR, and SCAQMD.

19. Special Training for Vendors and Employees.

- (1) Prior to any project excavation or construction related activities, Operator shall provide all contractors, subcontractors, oil tankers and workers with an operational manual that will include instructions about Preserve rules; permitted parking areas; smoking prohibition; appropriate location and placement of temporary living trailers, offices as well as guard station posts; guidelines for environmentally friendly operations (i.e. do not push dirt in drainages, do not trim riparian vegetation, etc.). The operational manual shall be reviewed and approved by the City Manager or Designee and Habitat Authority.
- (2) The Operator shall arrange for an on-going special training program to ensure that all employees and vendors are trained to comply with the operational manual, including all environmental and biological compliance and monitoring requirements.

20. The Operator shall improve, at its cost, the internal landfill access road(s) to the satisfaction of the Director of Public Works and enter into a Reciprocal Access Agreement subsequent to the Design but prior to the Construction Phase of the Project. The Agreement shall be subject to review and approval by the City Council and shall include, but not be limited to, the specific design and construction of the required road improvements and their related on-going maintenance, and construction coordination with on-going Savage Canyon Landfill operations.

21. Landfill Road Restrictions. No use of the Landfill Road shall be permitted during the hours from one half (1/2) hour before sunset to 1/2 hour after sunrise, to protect animals with nocturnal foraging/hunting habits, except for emergencies.

22. Ranger Station. A suitable offsite facility shall be obtained by Operator, at Operator's expense, to provide temporary accommodations in place of the ranger station during construction. The location shall be subject to approval of the City Manager or Designee and Habitat Authority prior to Project construction. This temporary location shall remain operational as determined by the City Manager or Designee and Habitat Authority. Following completion of construction, Operator shall restore the existing ranger station to at least its pre-existing usable condition to the satisfaction of the City Manager or Designee.
23. Colima Tunnel. The area around the west end of Colima tunnel where Eucalyptus trees have been previously removed shall be revegetated to provide better cover and to attract more animals to use the tunnel. The revegetation area shall include weedy patches connecting the tree removal area, encompassing approximately 25 acres. Phasing of the revegetation shall be as directed by the City and Habitat Authority.
24. Spill Clean-up Fund. The Operator shall establish a fund, letter of credit or similar mechanism in an amount acceptable to the City to guarantee that funds will be immediately available to undertake clean-up activities in case of a spill. The minimum amount of such fund shall be the deductible amount of any policy of liability, pollution or well control drilling insurance required in this permit.
25. Fire Fighting Apparatus. The Operator shall provide adequate firefighting apparatus to fight oil related fires within all areas of the Preserve on which oil related operations will occur, including pipelines and roads. The type, amount and location of firefighting apparatus shall be determined by the County Fire Department and City.
26. During all construction, drilling and redrilling and operational phases, the Operator shall ensure that protective fencing is in place as required by the City and Habitat Authority.
27. 24-Hour Emergency Contact. Prior to issuance of the first required Permit for Phase 1, the Operator shall provide to City, Habitat Authority and County Fire Department the current name and position, title, address, and 24-hour telephone numbers of the person in charge of the facility, person in charge of construction, and other representatives who shall receive all orders and notices, as well as all communications regarding matters of condition and permit compliance at the site and who shall have authority to implement an emergency facility shutdown.
28. Oilfield Public Relations Contact. The Oilfield shall provide for a public relations officer to be available at all phases of project construction and operation. The officer's name and phone number shall be posted for easy access to the public, including on the City's website.

29. Administrative Items: The following provisions shall apply throughout the Oil Field project area.

- (1) **Costs of Implementing and Enforcing Conditions.** The Operator shall be fully responsible for all reasonable costs and expenses incurred by the City or any City contractors, consultants, or employees, in implementing, monitoring, or enforcing this permit, including but not limited to, costs for permitting, permit conditions implementation, mitigation monitoring, reviewing and verifying information contained in reports, undertaking studies, research and inspections, administrative support, and including the fully burdened cost of time spent by City employees on such matters.
- (2) **Draw-Down Account.** The Operator shall maintain a draw-down account with the City, from which actual costs will be billed and deducted for the purpose of defraying the expenses involved in the City's review and verification of the information contained in any required reports and any other activities of the City, including but not limited to: enforcement, permitting, inspection, coordination of compliance monitoring, administrative support, technical studies, and the hiring of independent consultants. The initial amount to be deposited by the Operator shall be \$500,000. In the first year, if withdrawals from the account have reduced its balance to less than 50 percent of the amount of the initial deposit (\$250,000), the Operator shall deposit \$50,000 in supplemental funds within 30 business days of notification. After the first year, if the balance in the draw-down account is reduced at any time to \$50,000 or less, the Operator shall deposit \$50,000 in supplemental funds on each occasion that the account is reduced to \$50,000 or less within 30 business days of notification. There is no limit to the number of supplemental deposits that may be required. At the discretion of the Operator, the amount of an initial or supplemental deposit may exceed the minimum amounts specified in this subsection. The City Manager or Designee may, from time to time, increase the minimum \$50,000 figure to account for inflation or the City's experience in obtaining funds from the account. Operator shall be entitled to reasonably review the expenditures from the deposit to ensure the expenditures are related to the Project.
- (3) **Indemnification.** The Operator shall enter into an agreement with the City to indemnify and hold harmless the City, its elected and appointed officials, agents, officers and employees from any claim, action or proceeding for damages arising from its Oil Operations, including water, air or soil contamination, health impacts, or loss of property value during the Oil Operations, Abandonment and post-Abandonment of the Oil Operations with terms approved by, and in a form acceptable to, the City Manager.
- (4) **Insurance Requirements.**

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Operator shall demonstrate to the City that it carries on the Matrix Project General Liability Insurance, in an aggregate amount of not less than \$15,000,000, combined limits, \$15,000,000 in Well Control Drilling Insurance, and a policy of Comprehensive Pollution Coverage Insurance in an aggregate amount of not less than \$30,000,000 combined limits. This insurance shall provide coverage for claims for bodily injury, environmental or property damage that result from pollution conditions at, on or emanating from the Matrix facilities. The Comprehensive Pollution Coverage Insurance policy may not contain an exclusion of onsite remediation costs if such an exclusion would exclude, remove or impair coverage for onsite remediation performed in response to a governmental order, demand, warning or other legally enforceable requirement. Should an exclusion exist in the policy, Operator shall post a bond to cover costs associated with remediation.

The insurance policies must be secured through an insurance company having a Best's rating of "A – VII" or better. Operator shall submit one or more certificates of insurance to P&D to be approved by the City Risk Manager. The General Liability and Pollution Legal Liability Insurance policies shall be in place prior to issuance of the Permit and shall remain in full force and effect until revocation of the permit. Operator shall submit certificates of insurance 30 days in advance of the renewal anniversary of each policy. Such certificate(s) shall evidence the coverages described above, shall name the City of Whittier as an additional insured as to each policy provided, and shall afford the City 60 days advance notice of cancellation or non-renewal. The City Risk Manager may adjust the aggregate coverage amount specified above over time depending on factors such as inflation, modifications to State and Federal oil spill financial responsibility guidelines, and project modifications. In making such adjustments, the City Risk Manager shall give due regard to the cost and availability of such coverage, and shall allow Operator a reasonable period of time in which to place such coverage.

The Well Control Drilling Insurance policy shall only be required to be in effect while drilling operations are being conducted. Operator may satisfy the Well Control Drilling Insurance requirement by having its drilling contractor or subcontractors supply the required insurance, so long as the aggregate insurance maintains the total required.

- (5) Performance Security. The Operator shall be subject to the following provisions:
 - a. Performance Bond. Prior to issuance of the first drilling permit pursuant to this section, the Operator shall provide to the City Manager or Designee, a faithful performance bond or financial instrument in the sum to be determined by the City Manager, payable to the City and executed by a corporate surety

acceptable to the City and licensed to transact business as a surety in the State of California. Such bond shall be conditioned upon the faithful performance by Operator of duties related to well abandonment, site restoration and environmental cleanup and shall be in a format and include terms approved by the City Manager.

- b. **Change of Operator.** The performance bond shall continue in force for one (1) year following any sale, transfer, assignment, or other change of Operator of the Oil Field, or of the current Operator's termination of activities at the oil field. The City may release said bond prior to the end of the one (1) year period upon satisfaction by said Operator of all its obligations. Notwithstanding the foregoing, the performance bond shall not be terminated or released upon the sale, transfer, assignment, or other change of Operator until the new Operator has delivered a replacement bond complying with the provisions of this section.
- c. **Funding Options.** At its sole option, the City may accept Certificates of Deposit, Cash Deposits, or U.S. Government Securities in lieu of commercial bonds to meet the above bonding requirements on terms approved by the City Manager.

30. Record Keeping. As to any condition which requires for its effective enforcement the inspection of records or facilities by City or its agents, the Operator shall make such records available or provide access to such facilities upon reasonable notice from City. The City agrees to keep such information confidential where permitted by law and requested by the Operator in writing.

31. Periodic Review. The City shall conduct a comprehensive review of the conditions of approval at least every five (5) years from CUP issuance to determine if the conditions of approval are adequately protecting the health, safety and general welfare. Such reviews shall, among other things, consider whether additional conditions should be added, appended or removed. One of the main goals of the periodic review shall be to evaluate if proven technological advances that would further reduce impacts of Oil Operations on neighboring land uses should be incorporated into the conditions of approval.

- (1) **Review Requirements.** Each review shall include a report from a Consultant designated by the City Manager or Designee, which shall be prepared after public notice and an opportunity for public comment. The report shall include a comprehensive analysis of the effectiveness of the conditions of approval, and shall review and consider enforcement activity, operational records, and any other issues relating to Oil Operations. A draft of the report shall be provided to the Operator for review and comment. All comments on the draft report from the Operator shall be submitted to the City Manager or Designee in writing, and will be considered, if timely received, before the report is finalized. The final report by the Consultant shall include a recommendation as to whether the Community

Development Director should prepare a proposed amendment to the conditions of approval for submission to the Planning Commission, with review or appeal rights to the City Council.

- (2) **Early Reviews.** An earlier review may be requested by the City Manager or Designee at any time, if more than three (3) material violations occur within any twelve (12) month period and the City Manager or Designee and responsible agencies determine that resolution of the violations requires an amendment to the conditions of approval.

32. Operational Procedures

- (1) All oilfield vehicles on the Oil Field project area shall carry two-way radios or approved equivalent, fire extinguishers, and other emergency equipment.
- (2) If damages due to natural events such as earthquakes or floods occur on the Oil Field project area, the affected area shall be repaired to previous or comparable conditions.
- (3) The Oil Field project area shall remain in safe condition at all times. Operator shall also be responsible for maintaining any affected adjacent areas in safe condition subject to the review and approval of the City and Habitat Authority (i.e. Operator shall pay for all costs associated with stabilizing an affected adjacent slope outside the leased area to guarantee safe site conditions or to reduce potential property damages.)
- (4) Operator shall provide quarterly written, emailed reports to the City, Habitat Authority and on-site or supervising ranger describing project activities. The reports shall contain a list of contractor company names.
- (5) Operator will ensure that the oil operations site manager and on-site or supervising ranger exchange phone numbers.
- (6) Operator shall be responsible for cleanup of trash produced by oil field activities along the roadways and surrounding areas
- (7) Operator shall provide all contractors, subcontractors and oil tankers with adequate directions and maps for accessing the site. Proper sign posting of the Oil Field shall be provided so that oil contractors are aware of the proper entrance.
- (8) The Operator shall clearly identify on site the boundaries of the oil field project area with fencing and in a manner acceptable to the Habitat Authority to avoid confusion over use area for staging, storing, stockpiling, etc.

(9) The Operator shall ensure that roadside/ trailside signs are used as necessary to warn vehicles and hikers, such as "Watch for truck traffic"; "Watch for pedestrians/wildlife". Speed limit signs shall be posted along roads used by oilfield vehicles. Posted speeds shall be a maximum of 10 miles per hour.

(10) The Operator shall be responsible for graffiti cleanup along roads used by oilfield vehicles and on any signs/gates/fencing related to the operation.

(11) The Operator shall report any illegal activity or vandalism to the Habitat Authority and City in a timely manner.

33. City Manager's Review Required. The Operator shall not conduct any new Drilling or Redrilling unless the subject wells have been approved as part of the annual drilling plan, and until copies of all related permits have been submitted to the City Manager or Designee; including, but not limited to the permits required by DOGGR, the County Fire Department, the City Department of Public Works, the County Sanitation District, RWQCB, SCAQMD and other pertinent agencies identified by the City Manager or Designee.

34. Enforcement: In addition to the provisions of Chapter 1.08 of the City of Whittier Municipal Code, the Operator shall be subject to the following enforcement provisions:

(1) **Civil Penalties and Performance Security.** The Operator shall be subject to a penalty for violation of any requirement of this conditional use permit as determined by, and at the discretion of, the City Manager or Designee in an amount not less than \$1,000 or more than \$10,000 per day per violation, but in no event, in an amount beyond that authorized by state law. For this purpose, the Operator shall deposit the sum of \$100,000 in an interest-bearing trust fund with the City within thirty days of the effective date of this section, to establish a draw down account. A written notice of violation and the associated penalty will be sent to the Operator. If the noted violation is not corrected within thirty days to the satisfaction of the City Manager, or if steps satisfactory to the City Manager have not been initiated during that period to effect a cure or to seek modification of the condition, the penalty amount cited in the written notice will be deducted from the account. If the violation is corrected within 30 days but recurs any time within a six-month period, the penalty will be deducted from the account upon each recurrence and the Operator will be notified of such deduction. Once the deposit has been depleted by 50 percent of the initial amount (\$50,000), the Operator shall deposit additional funds sufficient to bring the balance up to the amount of the initial deposit (\$100,000) within 10 business days of notification. There is no limit to the number of supplemental deposits that may be required while the Operator conducts Oil Operations within the City. If the Operator is dissatisfied with the action of the City Manager or Designee, the Operator may file an appeal in accordance with the City's Municipal Code within 15 days after

notice is mailed. Upon receiving a notice of appeal, the decision maker shall take one of the following actions.

- a. Affirm the action of the City Manager or Designee;
- b. Refer the matter back to the City Manager or Designee for further review with or without instructions; or
- c. Set the matter for public hearing and, after hearing, affirm, modify or reverse the action of the City Manager or Designee.

The decision on appeal shall be final as provided in the Whittier Municipal Code.

- (2) Right of Entry. Any officer or employee of the City, or his or her duly appointed representative, whose duties require the inspection of the Oil Field premises shall have the right and privilege at all reasonable times, to enter upon any premises upon or from which any Oil Operations are being conducted for which any permit is required under this conditional use permit, for the purpose of making any of the inspections pursuant to this section, the permit, or in any other ordinance of the City, or for any other lawful purpose, but for safety reasons, shall be accompanied by the Operator or a designee of the Operator and shall wear all appropriate personal protection equipment in accordance with the Operator's established health and safety policies.

OPERATIONAL CONDITIONS

35. Odors, Liquids or Visible Emissions. The Operator shall ensure that all normal Project facility operations will be conducted in such a manner so as not to generate offensive odors, fumes, noxious liquids or visible emissions of smoke.
36. Sour Gas Contingency Plan. The Operator shall prepare a sour gas contingency plan which addresses the actions that will be taken in the event that hydrogen sulfide is encountered during the drilling and production operations. This plan shall require that the well or wells involved be shut down if hydrogen sulfide above 20 ppm is encountered during production and outline what additional measures will be taken if hydrogen sulfide is encountered during production to prevent a hazardous release. No operation with sour gas shall be allowed as part of this permit. The Operator shall distribute copies of the plan to applicable City Departments and the County Fire Department. All plan recipients are to be notified of contingency plan changes via formal contingency plan updates.
37. Pipeline Construction Confined to Right-of-Way. All pipeline construction activities, including work areas and staging and storage areas of pipe, shall be confined to the approved right-of-way both within the Preserve and outside the site on oil and gas pipelines.

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38. **Submittal of As Built Drawings.** Within one year after initial start-up of the project (Phase 1), and again within one year of commencement of Phase 2 operations, The Operator shall submit as-built drawings of the entire facility(s) to City. Any facility modifications required for Phase 3 operations shall also be documented on facility as-built drawings within one year of their construction. The Operator shall submit as many sets of drawings (up to ten sets) as may be requested by the City, as well as electronic copies.
39. **Solid Waste Disposal.** Solid waste generated on the site shall be transported to a City-approved landfill or hazardous waste facility as may be appropriate.
40. **Water Conservation Measures.** The design of all new and/or modified onsite facilities shall incorporate the use of cost-effective water-conserving fixtures.
41. **Energy Conservation Measures.** Throughout the project life, as equipment is added or replaced, cost-effective energy conservation techniques shall be incorporated into project design.
42. **Meteorological Station.** The Operator shall maintain and operate a meteorological station at the Oil Field in good operating condition and in compliance with all applicable EPA and SCAQMD rules, regulations and guidelines, and to the satisfaction of the Director of Public Works. The Operator shall conduct an audit of the meteorological station on an annual basis and submit the results of the audit to the SCAQMD and the Director of Public Works. The Operator shall maintain the data files for the meteorological station for a period of not less than ten years. All such data shall be available upon request to the SCAQMD and the Director of Public Works.
43. **Updated Health Risk Assessment.** After every five (5) years of operation of the meteorological station, the Operator shall provide the previous five (5) years of metrological data to the SCAQMD and the Director of Public Works. If the SCAQMD or the Director of Public Works determines that the previous five (5) years of metrological data from the Oil Field could result in significant changes to the Health Risk Assessment that was conducted as part of the Environmental Impact Report, then the City may elect to re-run the health risk assessment using the previous five (5) years of metrological data from the metrological station.
44. **Safety and Risk of Upset.** The Operator shall at all times conduct oil operations in a manner that minimizes risk of accidents and the release of hazardous materials, and shall comply with the following provisions:
 - (1) **Natural Gas Liquid Blending.** Natural gas liquids at the gas plant shall be blended with the oil to the maximum allowable pipeline system vapor pressure. Natural gas liquids storage shall be limited to the volume allowed in the Risk Management Plan approved by the County Fire Department.

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- (2) **Process Hazards Analysis (PHA).** The Operator shall provide for a PHA to be conducted on all processes at the field and pipeline routes, to address potential releases of flammable gasses, spills of crude oil, oily water or releases that could cause odors.
- (3) **Secondary Containment for Oil.** The Operator shall comply with the following provisions:
 - a. The Operator shall ensure that all oil processing areas, unless determined by the Director of Public Works to be infeasible, shall have secondary containment (berms and walls) that can contain at least 110 percent of the largest oil tank volume in order to reduce the likelihood of oil spills entering the retention basins. In the event the Director of Public Works determines that it would be infeasible to provide 110 percent containment for a particular existing oil tank, the Operator shall provide such containment as the Director of Public Works determines is feasible.
 - b. All above ground piping in the Preserve that contains or could contain Oil shall be protected by basins or secondary containment (berms and/or walls).

45. **Geotechnical.** The Operator shall comply with the following provisions:

- (1) **Grading.** The Operator shall comply with all of the following provisions:
 - a. All proposed grading shall be subject to prior review and approval by the Director of Public Works.
 - b. Grading involving up to 5,000 cubic yards may be undertaken pursuant to a City Master Grading Plan stamped by a registered professional engineer and a California-certified engineering geologist and approved by the Director of Public Works.
 - c. Cuts and fills shall be minimized to avoid erosion and visual impacts.
- (2) **Geotechnical Investigations.** The Operator shall comply with the following provisions:
 - a. A site-specific geotechnical investigation shall be completed for grading in excess of 5,000 cubic yards, unless approved pursuant to a Master Grading Plan approved by the Director of Public Works, and for any grading that supports or impacts a critical facility as determined by the Director. The investigation shall be completed by a California licensed geotechnical engineer and/or California-certified engineering geologist and submitted to the

Director of Public Works for review and approval, in conjunction with an application for a revised grading permit.

- b. A site-specific geotechnical investigation shall be completed for all proposed Permanent Structures. The investigation shall include analysis and recommendations associated with potential seismically induced ground failure, such as differential settlement and lateral spreading. The geotechnical investigation shall be completed by a California licensed geotechnical engineer and/or California-certified engineering geologist and submitted to the Director of Public Works, for review and approval.

(3) Erosion Control. The Operator shall comply with the following provisions:

- a. The Operator shall comply with all provisions of an Erosion Control Plan that has been approved by the Director of Public Works. The Erosion Control Plan shall be reviewed by the Operator every two (2) years to determine if modifications to the Plan are required. Any modifications to the Erosion Control Plan shall be submitted to the Director for review and approval. The Erosion Control Plan shall include any measures requested by the Director.
- b. Erosion shall be controlled on all slopes, creeks and banks so that no mud or other substances are washed onto public streets or surrounding property. Such control measures may consist of planting and irrigation, dams, cribbing, riprap, sand bagging, netting, berms, or other devices.

(4) Restoration of Slopes. Slopes shall be restored to their original grade once the use that required the grading of the slope has been discontinued. However, if restoration of a slope would negatively affect existing drainage patterns or slope stability, the slope shall be restored to a grade that avoids these negative effects.

(5) Oil Field Accelerometer. The Operator shall operate and maintain an accelerometer at the oil field to determine site-specific ground accelerations as a result of any seismic event in the region (Los Angeles/Orange County and offshore waters of the Santa Monica Bay and San Pedro Channel). Readings from the accelerometer shall be recorded at the oil field, and transmitted in real-time to the Caltech Seismological Laboratory. The Operator shall cease operations and inspect all oil field pipelines, storage tanks, and other infrastructure following any seismic event that exceeds a ground acceleration at the oil field of 15 percent of gravity (0.15 g) and promptly notify the Director of Public Works. The Operator shall not reinstitute operations at the oil field and associated pipelines until it can reasonably be determined that all oil field infrastructure is structurally sound.

46. Pipeline Management Plan. The Operator shall maintain and implement a Pipeline Management Plan that meets the requirements of DOGGR regulations.

47. Noise Attenuation. All oil operations on the oil field shall be conducted in a manner that minimizes noise, and shall comply with the following provisions:

(1) Noise Limits. The Operator shall comply with the following provisions:

a. All oil operations on the oil field shall comply with the noise provisions of Chapter 8.32 of Title 8 of the City of Whittier Municipal Code, with the exception of drilling, re-drilling, and reworking, which are exempt from the provisions of said Chapter.

b. Hourly, A-weighted equivalent noise levels associated with Drilling, Redrilling and Reworking shall not elevate existing baseline levels by more than three (3) dBA at any Developed Area, or five (5) dBA at any recreational area, trail or other public area. For daytime activities (7:00 a.m. to 7:00 p.m.) existing baseline noise levels shall be defined as the maximum daytime equivalent noise level (eq) at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. For nighttime activities (7:00 p.m. to 7:00 a.m.), existing baseline noise levels shall be defined as the minimum nighttime equivalent noise level at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. Updated baseline noise levels may be set, and additional monitoring sites may be established, from time to time by the Director of Public Works. In no case shall baseline noise levels include any Drilling, Redrilling or Reworking, or construction or operational operations.

c. Noise produced by Oil Operations shall include no Pure Tones when measured at a Developed Area. (Pure Tones are defined in the EIR.)

(2) Backup Alarms. Backup alarms on all vehicles operating within the Oil Field shall be disabled between the hours of 8:00 p.m. and 8:00 a.m. During periods when the backup alarms are disabled, the Operator shall employ alternate, low-noise methods for ensuring worker safety during vehicle backup, such as the use of spotters.

(3) Equipment Servicing. All noise producing Oil Field Equipment shall be regularly serviced and repaired to minimize increases in Pure Tones and other noise output over time. The Operator shall maintain an equipment service log for all noise producing equipment.

(4) Deliveries to the Oil Field. Deliveries to the Oil Field shall not be permitted after 7:00 p.m. and before 7:00 a.m., Monday through Friday; between 5:00 p.m. and 8:00 a.m. on Saturdays and no activities on Sundays or federal holidays, except in cases of emergency.

- (5) **Construction Equipment.** All construction equipment shall be selected for low-noise output. All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
 - (6) **Construction Equipment Idling.** Unnecessary idling of internal combustion engines near noise-sensitive areas is prohibited.
 - (7) **Worker Notification.** The Operator shall instruct employees and subcontractors about the noise condition provisions prior to commencement of each and every Drilling, Redrilling, Reworking, and construction operation, and shall annually certify to the City Manager or Designee that such employees and subcontractors have been properly trained to comply with such noise provisions. The Operator shall prominently post quiet mode policies at every Drilling and Redrilling site.
48. **Vibration Reduction.** All oil operations on the oil field shall be conducted in a manner that minimizes vibration. Additionally, vibration levels from Oil Operations at the Oil Field shall not exceed a velocity of 0.25 mm/s over the frequency range 1 to 100 Hz at any Developed Area.
49. **Signs.** All signage shall comply with the following provisions:
- (1) **Perimeter Identification Signs.** Identification signs, at intervals acceptable to the Director of Community Development, shall be posted and maintained in good condition along the Outer Boundary Line fence and along the fences adjoining the public roads that pass through the Oil Field. Each sign shall prominently display current and reliable emergency contact information that will enable a person to promptly reach at all times, a representative of the Operator who will have the expertise to assess any potential problem and recommend a corrective course of action. Each sign shall also have the number of the Operator's 24-hour emergency contact, City Code Enforcement contact and the number of SCAQMD that can be called if odors are detected.
 - (2) **Main Entrance Sign.** A sign shall be posted and maintained in good condition at the main entrance of the Oil Field prominently displaying a telephone number by which persons may contact a representative of the Operator at all times to register complaints regarding Oil Field operations.
 - (3) **Other Required Signs.** All identification signs, warning signs, no trespassing signs, and other signs required by County, State and Federal regulations shall be properly posted and maintained in all required locations and in good condition.
 - (4) **No Littering Signs.** "No littering" signs shall be prominently posted and maintained in good condition on all Oil Field entrance gates.

50. **Painting.** All Oil Operation related structures visible from public roadways and surrounding properties within the Oil Field shall be painted or otherwise surfaced or textured with a color that is compatible with the surrounding areas, and has been approved by the City Manager or Designee. The painting or other surfacing of all structures covered by this provision shall thereafter be maintained in good condition.

51. **Well Cellars.** All cellars shall be constructed in accordance with the most current American Petroleum Institute standards. In addition, the Operator shall comply with the following provisions:

(1) **Cellar Fluids.** Well cellars shall be kept free of Oil, water, or debris at all times to the greatest extent possible. During Drilling, Redrilling and Reworking, the cellar shall be kept free of excess Fluids by a pump which discharges into a waste Tank, mud pit, vacuum truck, or other approved disposal system.

(2) **Access to Multi-Well Cellars.** All multi-well cellars exceeding three (3) feet in depth and 25 feet in length shall have two (2) means of entrance and exit and an additional exit for every 50 feet in length thereafter. At least one (1) means of entrance or exit for all multi-Well cellars of 25 feet in length shall be a stairway constructed to California Division of Industrial Safety standards.

(3) **Single Cellar Covers.** All single cellars shall be covered with open grating and have no openings larger than three (3) inches at any point. Covers shall be capable of supporting vehicle weight or guardrails shall be erected to prevent vehicle access.

(4) **Cellar Ladder Openings.** All openings for ladders through grating shall be designed to allow exit from underside without obstruction, and shall be kept free of storage of any type. Said opening shall not be less than 24 inches on either side.

52. **Sumps.** The Operator shall comply with all of the following provisions:

(1) **Sump Clean Out.** All sumps that are used, or installed, or maintained for use in connection with any Well, and which have not been used for 90 days for the operation of or the Drilling, Redrilling or Reworking of such Well or any other Well in the vicinity, shall be cleaned out, and all Oil, rotary mud and rubbish removed.

53. **Water Management Plan.** The Operator shall comply with all provisions of a Water Management Plan that has been approved by the City Manager or Designee and the Director of Public Works. The Plan shall include best management practices, water conservation measures and the use of a drip irrigation system. The Plan shall also address the availability of reclaimed water for use at the Oil Field. The Water Management Plan shall be reviewed by the Operator every three years to determine if modifications to the Plan are required. The Operator shall make changes to the

Plan if requested by the City Manager or Designee or the Director of Public Works. Any modifications to the Water Management Plan shall be submitted to the City Manager or Designee and the Director of Public Works for review and approval. The water management plan shall include any elements requested by the City Manager or Designee or the Director of Public Works.

54. **Groundwater Monitoring.** The Operator shall develop, implement, and carry out a groundwater quality monitoring program for the Oil Field that is acceptable to the Director of Public Works and consistent with all requirements of the Regional Water Quality Control Board. Pursuant to and if required by the approved program, the Operator shall install and maintain groundwater monitoring Wells. Such monitoring Wells shall be located and completed as determined by a California Certified Professional Geologist. The Regional Water Quality Control Board and the Director of Public Works shall be regularly advised of the results of such monitoring, and shall be immediately advised if such monitoring indicates a potential problem.
55. **Fencing.** All portions of the Oil Field on which Oil Operations are conducted shall be enclosed with a fence that at a minimum is compliant with DOGGR regulations codified at California Code of Regulations Title 14, Article 3, Sections 1778 and 1779, or as may be subsequently amended by the State.
56. **Storage of Equipment.** There shall be no storage at the Oil Field of material, equipment, machinery or vehicles which are not essential to the Oil Operations. All non-essential equipment shall be removed from the Oil Field within 30 days of the date they become non-essential, unless a time extension is granted by the Director of Public Works.
57. **Oil Field Cleanup and Maintenance.** The Operator shall maintain the site in a clean and orderly condition and shall comply with the following provisions:
 - (1) **Equipment Removal.** All facilities that have reached the end of their useful economic life shall be properly decommissioned and removed from the Oil Field within one year. Areas not slated for future use shall be restored and revegetated within 90 days of termination of use, unless such restoration and revegetation would interfere with fire safety or access to Oil Operations.
 - (2) **Equipment Maintenance.** All equipment, improvements, facilities and other personal property or fixtures located on the Oil Field, shall be maintained in good condition to the satisfaction of the City Manager or Designee and the Director of Public Works.
 - (3) **Site Debris and Vegetation.** The Operator shall keep the lease area free of debris and vegetation overgrowth to the satisfaction of the Director of Public Works.

58. Security. All unmanned entrances to the Oil Field shall be equipped with sliding gates which shall be kept closed and secured at all times except when authorized vehicles are entering or leaving the Oil Field. The Operator shall maintain 24 hours per day surveillance. In addition, Oil Processing Facilities shall be manned 24 hours per day commencing with the Operations Phase.

59. Oil Field Waste Removal. The Operator shall comply with the following provisions:

(1) Waste Collection. All Drilling, Redrilling and Reworking waste shall be collected in portable steel bins compliant with United States Department of Transportation standards. Any Drilling, Redrilling, and Reworking wastes that are not intended to be injected into a Class II Well, as permitted by DOGGR, shall be removed from the Oil Field no later than 30 days following completion of the Drilling, Redrilling and Reworking. This provision does not apply to active sumps and mud pits.

(2) Waste Discharge. No Oil Field waste shall be discharged into any sewer unless permitted by the Sanitation District, or into any storm drain, irrigation system, stream, or creek, street, highway, or drainage canal. Nor shall any such wastes be discharged on the ground provided that the foregoing shall not prohibit the proper use of active Drilling sumps and mud pits.

(3) Recycling Plan. The Operator shall comply with all provisions of a Recycling Plan that has been approved by the Director of Public Works. The recycling plan shall include any elements requested by the Director.

60. Sanitation. The Operator shall comply with the following provisions:

(1) Garbage and Refuse. The Oil Field shall be maintained in a clean, sanitary condition, free from accumulations of garbage, refuse and other wastes.

(2) Toilets and Wash Facilities. Sanitary toilet and washing facilities shall be installed at any site where personnel are permanently stationed. Portable facilities shall be provided wherever crews are temporarily employed. Such facilities shall be maintained in a clean and sanitary condition at all times.

61. Storage of Hazardous Materials. The Operator shall comply with all provisions of a Hazardous Materials Business Plan that has been submitted to the Fire Chief. The Operator shall deliver to the Fire Chief for review and approval an updated Hazardous Material Business Plan on an annual basis. This Plan shall provide the location of where hazardous materials are stored at the Oil Field. Hazardous materials shall be stored in an organized and orderly manner, and identified as may be necessary to aid in preventing accidents, and shall be reasonably protected from sources of external corrosion or damage to the satisfaction of the Fire Chief.

62. Drilling, Redrilling and Reworking Operations. The Operator shall comply with all of the following provisions:

- (1) **DOGGR Regulations.** All DOGGR regulations related to Drilling, Redrilling and Reworking operations.
- (2) **Number of Drilling and Redrilling Rigs.** No more than one (1) Drilling rig shall be present within the Oil Field at any one time. The maximum number of drilling rigs and redrilling rigs within the Oil Field at any one time shall be two (2).
- (3) **Drill Rig Engines.** All engines used for Drilling and Redrilling operations shall be operated by muffled internal-combustion engines or by electric motors.
- (4) **Fire Safety Regulations.** All Drilling, Redrilling and Reworking shall be in conformance with applicable fire and safety regulations.
- (5) **New Technology.** Proven reasonable and feasible technological improvements which are capable of reducing the environmental impacts of Drilling and Redrilling shall be considered as they become, from time to time, available.
- (6) **Derricks and Portable Masts.** All Derricks and portable masts used for Drilling, Redrilling and Reworking shall meet the standards and specifications of the American Petroleum Institute as they presently exist or as may be amended.
- (7) **Equipment Removal.** All Drilling and Redrilling equipment shall be removed from the site within 90 days following the completion of Drilling or Redrilling activities or as otherwise directed by the City Manager or Designee.
- (8) **Drill Site Conditions.** All Drilling Sites shall be maintained in a neat and orderly fashion.
- (9) **Belt Guards.** Belt guards shall be required over all drive belts on Drilling, Redrilling and Reworking equipment. Guarding shall be as required by, Title 8 of the California Code of Regulations, Section 6622, or as may be subsequently amended.

63. Processing Operations. The Operator shall comply with the following provisions:

- (1) **Limits on Processing Operations.** Unless otherwise expressly required by DOGGR, the only Processing operations permitted at the Well Site shall be: the dehydration and removal of inerts to pipeline quality of Oil and Gas produced from the Well; the storage, handling, recycling and transportation of such materials; and those Processing operations required for water injection purposes.
- (2) **Refining.** No refining shall be conducted within the Oil Field.
- (3) **Well Pumps.** All Well pumping units shall be downhole submersible pumps.

(4) **Removal by Pipeline Only.** All Oil, Gas and other hydrocarbons, produced from any Well in the Oil Field shall be shipped and transported through pipelines, except in case of an emergency or when access to a pipeline becomes unavailable. Excluded from this requirement are the three test wells, propane and other related natural gas liquids that are in amounts in excess of what can be blended into the pipeline. Should any pipeline through which Oil or Gas is transported become unavailable for the safe transportation of said products due to maintenance problems with the pipeline, or lack of sufficient capacity within the pipeline to handle the volume of Oil and Gas needing transportation, or because the owner or Operator of such pipeline elects to discontinue transporting Oil or Gas through such pipeline, then the Operator shall within 180 days of the date the existing pipeline becomes unavailable, seek to acquire a private right of way or easement, or shall file an application for a right of way, easement, encroachment permit or franchise for the construction of a replacement pipeline and shall diligently prosecute such application until such pipeline is completed. During any emergency situation, or during such time as any existing pipeline becomes unsafe or unavailable, Oil and Gas may be transported by truck until the emergency situation is resolved or until a replacement pipeline shall be permitted and constructed in accord with all applicable laws and regulations.

(5) **Pipelines.** The Operator shall comply with the following provisions:

- a. New pipelines that remove Oil or Gas from the Oil Field shall be buried below the surface of the ground;
- b. All pipelines which are not enclosed within a fence shall be placed underground or covered with materials approved by the Fire Chief. Said covers shall be maintained in a neat, orderly, secure manner;
- c. Any and all water or brine produced during pipeline construction shall be injected in accordance with DOGGR requirements, or disposed of in accordance with other local, state or federal regulations;
- d. New pipeline corridors shall be consolidated with existing pipelines or electrical transmission corridors where feasible; and
- e. Upon completion of pipeline construction, the site shall be restored to the approximate previous grade and condition.

(6) **Gas Metering Station.** The Operator shall submit to the Director of Public Works and Fire Chief a site and building plans of the gas metering station for review and approval.

64. Well Reworking Operations. The Operator shall comply with the following provisions:

- (1) DOGGR Regulations. The Operator shall comply with all DOGGR regulations related to Well Reworking operations.
- (2) Number of Reworking Rigs. No more than one (1) Reworking rigs shall be present within the Oil Field at any one time that a Drilling rig is present, unless an emergency condition requires additional Reworking rigs. The maximum number of rigs on site at any one time is two (2).
- (3) Hours of Operation. With exception of emergencies, Well Reworking operations shall not be allowed after 7:00 p.m. or before 7:00 a.m., nor on Sundays or federal holidays.
- (4) Specifications. Reworking rigs shall meet the standards and specifications of the American Petroleum Institute.
- (5) Equipment Removal. Reworking rigs shall be removed from the Oil Field within seven (7) days following the completion of Reworking operations unless such rig will begin to be used on another Well at the Oil Field within that seven (7) day period.

65. Tanks. The Operator shall comply with the following provisions:

- (1) New Tank Specifications. All new Tanks and appurtenances shall be designed, constructed, installed and maintained in accordance with current County Fire Code, American Petroleum Institute, DOGGR, California Division of Industrial Safety, and Environmental Protection Agency Standards, applicable provisions of Title 14 of the California Code of Regulations, Section 1774, and applicable CalARP Program requirements.
- (2) Vapor Recovery. Oil, Wash, and Produced Water Tanks shall be vapor tight and during the Operations Phase, shall be equipped with a vapor recovery system.
- (3) Specifications for New Tank Piping, Valves, Fittings and Connections. All new Tank piping, valves, fittings and connections including normal and emergency relief venting, shall be installed and maintained in accordance with current American Petroleum Institute standards to the satisfaction of SCAQMD and DOGGR.
- (4) Detection of Tank Bottom Leaks. The Operator shall design, implement and comply with a program, approved by the Fire Chief, for controlling and detecting Tank bottom leaks on all Tanks at the Oil Field. The Operator may use a combination of methods including but not limited to diversion walls, dikes, Tank foundations of concrete or gravel and, a Tank bottom leak detection system in compliance with, Title 14 of the California Code and Regulations, Section 1773, or any subsequently enacted State regulations regarding tank bottom leaks.

66. Well and Production Reporting. The Operator shall deliver annual production reports to the City Manager or Designee and the Fire Chief by June 30 of each year. The reports shall cover the previous year's activities and projections for the coming year, and shall provide the following information:

- (1) A copy of all DOGGR Forms 110 and 110B submitted during the previous 12 months.
- (2) Number and mapped location of all Wells Drilled or Redrilled, including Well identification numbers and size and dimensions.
- (3) Number and mapped location of water injection Wells, including Well identification numbers.
- (4) Number and mapped location of Idled Wells, including Well identification numbers and the date each Well was idled.
- (5) Number and mapped location of Abandoned Wells, including date each Well was Abandoned and/or re-abandoned.
- (6) The number of Wells Drilled or Redrilled in the previous year, including location, size and dimensions and type, configuration, engine size and total height of drilling rigs used during the previous year.
- (7) A proposed schedule and phasing of the Drilling, Redrilling, Well Abandonment, Well pad abandonment and restoration activities.
- (8) The maximum number of Wells proposed to be Drilled or Redrilled in the coming year including location, size and dimensions; and type, configuration, engine size and total height of proposed drilling rig to be used during the coming year.
- (9) Estimated target depth of all proposed Wells and their estimated bottom hole locations in the past year (actual) and the coming year (proposed).
- (10) A discussion of the latest equipment and techniques that are proposed for use as part of the Drilling and Redrilling program to reduce environmental impacts;
- (11) Any additional information requested by the City Manager or Designee or the Fire Chief.

67. Idle Well Testing and Maintenance. The Operator shall comply with Title 14, of the California Code of Regulations, Section 1723.9 regarding testing and Maintenance of Idle Wells, or any subsequent enacted State regulations regarding testing and maintenance of Idled Wells. The Operator shall carry out all additional tests,

remedial operations and mitigation measures required by DOGGR if any idle wells do not meet the test standards.

68. Well and Well Pad Abandonment. If DOGGR orders the Operator to plug and abandon any Wells on the Oil Field, the Operator shall deliver to the Fire Department, on a timely basis, all Notices of Intent to Plug and Abandon a Well that the Operator files with DOGGR and shall commence promptly and proceed diligently with the plugging and abandonment operations in accordance with DOGGR rules and regulations and the terms of the DOGGR permit to plug and abandon the Well. Well Abandonment may commence once all necessary permits and approvals are obtained. If the Well pad associated with the Abandoned Well does not contain other production, injection or Idle Wells, and will not be used for future Drilling, then the Operator shall promptly abandon the Well pad consistent with the following provisions:

- (1) **Well Pad Site Cleanup.** The Operator shall leave the site entirely free of Oil, rotary mud, Oil soaked earth, asphalt, tar, concrete, litter, debris and other substances to the satisfaction of DOGGR and in accordance with federal requirements.
- (1) **Contaminated Materials.** All contaminated soils and materials within the Well pad boundaries shall be removed and treated or disposed of in accordance with all local, County, State, and Federal regulations.
- (2) **Well Pad Revegetation.** The Well pad shall be revegetated as approved by the City and Habitat Authority.
- (3) **City Request for Review of Well Status.** The City Manager or Designee may periodically review the status of the Operator's Wells and submit to DOGGR a list of Wells the City Manager or Designee believes should to be plugged and abandoned as specified in Public Resources Code Section 3206.5 or any subsequently enacted State Law related to a local jurisdiction's right to request State-agency review of Idle Wells.
- (4) **Abandonment Procedures.** Within 180 days of permanent facility shut down, the Operator shall submit an Abandonment Plan to DOGGR and submit to the Director of Public Works for review and approval a time line for facility removal, site assessment and remediation as necessary. The Operator shall begin abandonment of the site no later than 20 days after the Director's approval of the timeline or as soon thereafter as practicable, and shall provide to the Director quarterly updates on the abandonment process until such time as the Oil Field is abandoned and restored. The Operator and Landowners shall post a performance bond to insure compliance with all provisions of this subsection, and shall continue to pay property taxes at the rates assessed during Oil Field operation until all site restoration work has been fully completed, as determined by the Director.

69. Monitoring and Compliance: The following provisions shall apply throughout the Oil Field project area.

(1) Environmental Quality Assurance Program (EQAP). The Operator shall comply with all provisions of an Environmental Quality Assurance Program (EQAP) that has been approved by the Director of Public Works. The following provisions relate to the EQAP:

a. EQAP Requirements. The EQAP shall provide a detailed description of the steps the Operator shall take to assure compliance with all provisions of this section, including but not limited to all of the monitoring programs called for by this section.

b. Annual EQAP Reports. Within 60 days of the end of each calendar year, the Operator shall submit to the Director of Public Works an annual EQAP report that reviews the Operator's compliance with the provisions of the EQAP over the previous year and addresses such other matters as may be requested by the Director. The Annual EQAP Report shall include the following:

i. A complete list and description of any and all instances where the provisions of the EQAP, or any of the monitoring programs referred to therein or in this section, were not fully and timely complied with, and an analysis to how compliance with such provisions can be improved over the coming year.

ii. Results and analyses of all data collection efforts conducted by the Operator over the previous year pursuant to the provisions of this section.

c. EQAP Updates. The EQAP shall be updated as necessary and submitted to the Director of Public Works for approval along with the annual EQAP report. The Director shall complete the review of EQAP updates as soon as practicable, and shall either approve the updated EQAP or provide the Operator with a list of specific items that must be included in the EQAP prior to approval. The Operator shall respond to any request for additional information within 30 days of receiving such request from the Director, unless extended by the Director.

(2) Safety Inspection, Maintenance and Quality Assurance Program ("SIMQAP"). The Operator shall comply with all provisions of a Safety Inspection, Maintenance and Quality Assurance Program (SIMQAP) that has been approved by the Director of Public Works and the Fire Chief.

a. SIMQAP Requirements. The SIMQAP shall, at a minimum provide for:

- i. Inspection of construction techniques;
 - ii. Regular maintenance and safety inspections;
 - iii. Periodic safety audits;
 - iv. Corrosion monitoring and leak detection; and
 - v. Inspections of all trucks carrying hazardous and/or flammable material prior to loading.
- b. **SIMQAP Updates.** The Operator shall periodically review and revise the SIMQAP to incorporate changes in procedures, and new safety and maintenance technologies and procedures. The Operator shall make such revisions at least every five years, or more frequently, if the Operator determines changes are necessary or if requested by the Director of Public Works or the Fire Chief. The Operator shall submit SIMQAP updates to the Director and the Fire Chief for their review and approval. The Director shall complete the review of SIMQAP updates as soon as practicable, and shall either approve the updated SIMQAP or provide the Operator with a list of specific items that must be included in the SIMQAP prior to approval. The Operator shall respond to any request for additional information within 30 days of receiving such request from the Director, unless extended by the Director.
- c. **Worker Notification.** The Operator shall ensure that all persons working on the Oil Field comply with all provisions of the currently approved SIMQAP.
- d. **Inspections.** The SIMQAP shall provide for involvement of the City staff or the Environmental Compliance Coordinator in all inspections required by this section.
- (3) **Annual Emergency Response Drills of the County Fire Department.** The Operator shall demonstrate the effectiveness of the Emergency Response Action Plan by responding to one planned emergency response drill per year which shall be conducted in conjunction with the County Fire Department. Emergency response drills required by other agencies that involve County Fire can be used to satisfy this provision. In addition, the Operator shall demonstrate the effectiveness of the Emergency Response Action Plan by responding to not more than two (2) unannounced drills each year which may be called by the County Fire Department at the Oil Field. If critical operations are then underway at the Oil Field, the Operator need not respond to an unannounced drill to the extent such a response would, as a result of such critical operations, create an undue risk of personal injury or property damage, but in such case the Operator must promptly explain the nature of the critical operations, why response is not possible, and when the critical operations will be completed.

- (4) **Noise Monitoring.** The City shall retain an independent qualified acoustical engineer to monitor ambient noise levels in the areas surrounding the Oil Field as determined necessary by the City Manager or Designee, the costs of which will be reimbursed by Operator. The monitoring shall be conducted unannounced and within a time frame specified by the Director of Public Works. Should noise from the Oil Operations exceed the noise thresholds specified in the Noise Reduction Plan, required pursuant to Attachment A, no new Drilling, or Redrilling shall be conducted until the Operator in consultation with the Director identifies the source of the noise and the Operator takes the steps necessary to assure compliance with thresholds specified in the Noise Reduction Plan. The results of all such monitoring shall be promptly posted on the Oil Field Web site.
- (5) **Complaints.** All complaints related to Oil Operations received by the Operator shall be reported on the same business day to the Environmental Compliance Coordinator and to the Director of Public Works. In addition, the Operator shall maintain a written log of all complaints and provide that log to the Director, on a quarterly basis. Depending upon the nature of the complaint, the Operator shall report the complaint to the SCAQMD, DOGGR, and any other appropriate agencies with oversight authority regarding the complaint at issue. If the complaint is received after normal business hours, it shall be reported to the Environmental Compliance Coordinator and the agencies at the opening of the next business day.

HABITAT PROTECTION / RESTORATION CONDITIONS

70. Habitat Mitigation/Restoration

- (1) **Temporary Impacts.** The project proponent shall restore all temporarily impacted areas. For temporary impacts to native vegetation, temporary impact areas shall be restored to the same type of native vegetation. For non-native vegetation, temporary impacts areas shall be restored to appropriate native vegetation. When oil operations have ceased at the leased area, facilities will be removed and restored to appropriate native habitats.
- (2) **Ongoing Exotic Eradication/Habitat Enhancement.** The project proponent shall implement an exotic eradication/habitat enhancement program within designated priority areas within the oil field. This may include, but not be limited to the removal of eucalyptus trees, pepper trees, castor bean, tree tobacco, hemlock, fennel, thistle, and non-native grasses. The eradication program will be reviewed and approved by the Habitat Authority, and will be funded through a Mitigation Fund. The Operator shall establish the Mitigation Fund and ensure annual contributions of \$30,000 (with annual CPI increases). Any unspent funds shall be rolled over to the following year. The Habitat Authority shall have the ability use the fund for related plantings, including distribution of native seeds.

- (3) Impacts to Jurisdictional Waters. For any impacts to jurisdictional waters, the project proponent will obtain all necessary regulatory permits prior to the issuance of a grading permit, including if necessary a Section 404 permit, Section 401 Water Quality Certification, and a Section 1602 Streambed Alteration Agreement. Impacts to jurisdictional waters (and any associated riparian vegetation and/or wetlands) will be mitigated for at a minimum 3:1 ratio, or as required by the regulatory agencies (whichever is higher). If mitigation needs to occur outside the leased area for oil operations then standard access fees applied by the Habitat Authority will apply (see Habitat Authority website for details.)
- (4) Wildlife Movement. For access roads to be re-graded for the project or for existing roads with significant increased activity, the proponent shall install corrugated pipe culverts to facilitate the movement of smaller vertebrates, including rodents, reptiles, and amphibians; as directed and approved by the Habitat Authority Ecologist.

71. Fuel Modification

- (1) Impacts to native habitats as a result of fuel modification (including thinning) will be treated as an impact subject to mitigation requirements.
- (2) All plantings within fuel modification zones will consist of non-invasive species, with priority given to native species.
- (3) Access roads will be cleared of vegetation on a regular basis for purposes of fuel modification in accordance with fire department requirements at the expense of the Operator.
- (4) In addition to clearance for annual fuel modification, roads will be maintained for safe and functional use by the Operator at all times.

72. Noise Attenuation for Wildlife

- (1) During construction, including drilling, activities adjacent to sensitive habitats, including potential nesting gnatcatchers, raptors, etc., will be monitored using permanently installed noise meters. If actual levels (measured from the edge of the leased area) exceed allowable levels, construction activities may be temporarily halted at the direction of the City Manager or Designee until additional measures can be implemented to further reduce noise levels. Noise restrictions may also be imposed by regulatory agencies (e.g., Service, CDFG, etc.) as part of any regulatory permits and/or take authorizations.
- (2) Noise levels attributed to operations will be minimized to the maximum extent feasible. Facilities shall be constructed to eliminate noise impacts on surrounding habitats, or at least minimize noise projected into adjacent open space. A

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standard for noise shall be set to regulate noise projected from the edge of the leased area (e.g., 60 db hourly average or to be determined).

- (3) Vehicle traffic shall be restricted to defined access routes, and using approved equipment for specific areas.
- (4) With the exception of delivering construction and other equipment, access to construction/drilling sites will be using approved vehicles only. Wherever feasible, the Operator shall use hybrid (electric or other low noise) vehicles for all non-construction equipment access.

73. Unauthorized Access

- (1) Unauthorized access into the Preserve will not be allowed. Personnel must remain inside the leased areas and identified roadways at all times.
- (2) All operations shall occur within the defined lease area. All temporary staging areas, including the placement of construction trailers, shall be reviewed with the Habitat Authority to minimize biological impacts. Temporary use areas outside the leased area require a permit through the Habitat Authority (and approval by the City).

74. Conservation Easement: Operator acknowledges and agrees that a Conservation Easement shall be placed over the City-owned Preserve Land, which shall except only the surface areas approved for use in the Project, through the Conditional Use Permit.

75. Prior to initiating the Project, a pavement management program shall be developed by an appropriate pavement design consultant at the cost of the Operator and/or its successors in interest for Catalina Avenue and Penn Street. An appropriate fair share cost of acceptable pavement rehabilitation or reconstruction shall be recommended for the roadways. During the project life, an appropriate frequently-performed pavement condition analysis shall be performed to measure the roadway condition and a fair share contribution shall be made by Operator. Alternatively, the Operator may construct the improvements at its cost.

76. Oil tanker trucks shall be permitted on Catalina Avenue only between the hours of 9 a.m. and 1 p.m. and on Penn Street only between the hours of 9 a.m. to 3 p.m. Only single trailer oil tanker trucks (no doubles) shall be permitted.

77. High volume, high pressure hydraulic fracturing shall not be employed in the Project.

78. Operator shall work with City staff to adopt a program to encourage hiring of local workers for the Project.

ATTACHMENT C

ATTACHMENT C

Environmental Impact Report and Mitigation Monitoring Report

This information is available separately on the City's website

**select "Final Environmental Impact Report"
from the menu on the left side of the Mineral Extraction in the Whittier Hills page**

ATTACHMENT D

ATTACHMENT D

Planning Commission Staff Report for October 19, 2011

**This report is available separately on the City's website
labeled "Matrix Staff Report 10-19-11 with Revisions to Attachment A"
on the Mineral Extraction in the Whittier Hills page**

J: Jeff Adams
Subject: RE: WHITTIER OIL

From: David [mailto:dcowardin1@earthlink.net]
Sent: Wednesday, October 12, 2011 9:21 AM
To: Jeff Adams
Subject: WHITTIER OIL

October 12, 2011

Jeffrey S. Adams,
Planning Commission Secretary
Whittier City Planning Commission

Via e-mail: jadams@cityofwhittier.org

Subject: **WHITTIER OIL EXTRACTION PROJECT, CUP 09-004**

Dear Mr. Adams:

Could you please see that this letter is attached to the package to be delivered to your City of Whittier Planning Commission members prior to the public hearing scheduled to begin on Wednesday, October 19, 2011?

As you know, I have had a ringside seat to these proceedings as a Whittier-designated member of the Habitat Authority's Citizens Technical Advisory Committee. When I first learned of this project my reaction was similar to that of many Whittier residents; that is, the City had begun a process to betray its citizens who for 30 years have successfully labored for a wildland preserve in the Whittier Hills. Later, based on Bob Henderson's assurances, I decided to be more objective and let the facts (principally contained in the environmental documentation) guide my view of the project. After reviewing the iterations of the EIR, I discovered that the City's consultants, along with its minimalist, over-legalistic and secretive approach to the process, have not provided information to alleviate my fears about the negative outcomes of this project and I have, therefore, concluded that I am **OPPOSED**. A few of my objections are stated below:

This Project is Inconsistent with the Whittier Zoning Ordinance

In my view the project is inconsistent with the Whittier General Plan and the Habitat Authority's Resource Management Plan (RMP.) Notwithstanding that, and perhaps you have debated this previously, a reading of the WZO (on-line version, <http://library.municode.com/>) reveals that the OS Zone is special! In their principal uses sections, all other zones permit oil drilling as a conditional use by referring out to Section 18.52.030. OS does not refer out but, in plain fact, has a very specifically stated purpose to protect open space. There is a very specific list of principal uses and a list of prohibited uses, including industrial, with which classification oil drilling is clearly connected. There is an inconsistency here and I doubt that working backward from that permissive clause in 18.52.030A ("Uses permitted in all zones.") would permit oil drilling in the OS Zone when it is clearly prohibited in a different way than all the other zones. I would conclude from this that taking an action on this project cannot take place without the concurrent consideration of a zone change case or ZO

amendment, for which a new environmental report, public notice, and public hearings would be necessary. Without these new procedures, an illegal spot zoning would be committed by the City.

The Project Boundaries are Not Described

There continues to this day to have never been an adequate description or map of the extent of the Project. Since there is no legally defined line around the project, differentiating it from surrounding uses (thinking of the Preserve as an existing and appropriate OS use,) potentially drilling could take place anywhere on the 1,290 acres that is owned by the City of Whittier with a simple modification of the CUP by the Director of Planning without public hearing. If the project site encompasses the whole of the City ownership, it has not been advertized as such and this is not the impression of anyone in Whittier except perhaps the project proponents.

The Project has the Potential to Completely Sever the Puente Hills Corridor

The scientific work of the Habitat Authority and all the other environmental professionals who have studied the Puente Hills has concluded that a viable, but threatened, wildlife corridor exists over the Preserve. The RMP identified a core habitat that contains the corridor pathway and nesting/resting areas, and designated its preservation through a list of restrictive uses, which do not including oil drilling. The Project proposes to locate within the core habitat and, in the recent "environmentally preferred" version, even moves further up one of the core's key canyons and employs an access road that cuts right through more of the core to reach the Savage Canyon landfill. This has been obviously chosen to quiet concerns of residents in Mar Vista Heights, but at the expense of the Preserve. You have no doubt heard of "residential edge effects" and their impacts on wildland areas? Here we have a case where the core habitat as envisioned in the RMP was carefully defined to isolate edge effects away from critical habitat. Moving the edge (human activity and industrial development) over the ridge into La Canada Verde canyon increases the area subject to "edge effects" from about 60 acres to over 200 acres according to my rough calculations.

Having blinders on, unintentional or otherwise, and with no proof whatsoever, some people have discounted the project's impact on the corridor. Thankfully, Planning Commissioners are held to a higher standard. They must independently read and understand the environmental document, deliberate, and make appropriate findings that the project will not affect the public welfare. The consultants have not provided the smallest shred of evidence that the project will not impact the corridor. Without proper evidence, can your Commissioners take the chance that their actions will permanently sever the corridor and terminate a great (and costly) public effort to maintain biological diversity in our region?

More written testimony will be forthcoming, but thanks for your attention to this letter.

Dave Cowardin
8562 La Sierra Avenue
Whittier, California 90605

Subject: FW: Open Space Legal Defense Fund v. Whittier
Importance: High

From: Geralyn Skapik [<mailto:Gskapik@claremontlandgroup.com>]
Sent: Thursday, October 13, 2011 1:55 PM
To: Jeff Adams
Cc: khb@jones-mayer.com; mark@mcallen3.com; mrrios@skapiklaw.com
Subject: Open Space Legal Defense Fund v. Whittier
Importance: High

Dear Mr. Adams-

As you are aware, I represent Open Space Legal Defense Fund (OSLDF). OSLDF wishes to put on a presentation at the Planning Commission meeting scheduled for October 19, 2011, which will be approximately 30 minutes in length. If you request, I will have members of OSLDF cede their time to us for this presentation. A portion of the presentation will consist of a video presentation. Will there be audio/visual equipment that we can utilize for our presentation at the Radisson? If not, we will bring in our own equipment.

Thank you for your cooperation in this matter.
Geralyn Skapik

Geralyn L. Skapik, Attorney at Law
CLAREMONT LAND GROUP
250 West First Street, Suite 330
Claremont, CA 91711
Office (909) 398-4404; (909) 354-8825
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**Resident Objections
to the EIR Report on the proposed
Oil Drilling Facility in Whittier Hills,
(including the associated risks of increased
traffic volume, air pollution and noise levels
on Penn Street, Whittier)**

Prepared by:

Peggy Luna, 13915 Penn Street, Whittier, CA 90602

(Penn Street Residents for over 15 years)

Introduction

This document has been prepared to give the perspective of actual residents in Whittier and not consultants nor City Council members who live far away from the disruption to our residential neighborhood and the wildlife habitat. The residents are the ones who will have to bear the brunt of increased noise, reduction in air quality and potential danger because of the burden the city wants to place on just a few residents. They will also face irreversible home depreciation because of the decision of the City Council in choosing their most convenient trucking routes.

We are not against drilling for oil in any way, shape or form as it is something that our country needs – but we do insist that what the County of Los Angeles and the City of Whittier (including Matrix) will implement, will not adversely impact the lives of the Citizens of Whittier or our existing nature habitat preserve.

We ask you, as our City Council and authors of the DEIR, to read and respond to each and every one of the concerns in writing. We would like all the County of Los Angeles and the City of Whittier Council members to pay close attention to Section 608 of the City of Whittier Charter (Illegal Contracts). Financial interest should be addressed by each member of Whittier Council in the form of signing a personal declaration that they are complying with this important section in the Charter of the City of Whittier.

The City of Whittier's Mission Statement on their website, "the Community Development Department is committed to delivering personalized service, while encouraging a safe, well-designed physical environment and seeking to facilitate balanced growth, preservation and revitalization" (www.cityofwhittier.org/depts/cd/mission.asp). If the City truly operates to this Mission by approving the Oil Drilling project they are in violation of their operational commitment to the community. Increasing traffic on Mar Vista, Catalina, Penn and Painter (plus other alternatives routes to be used at will and not yet disclosed in the DEIR) does not foster a 'safe, well-designed physical environment'. The mission statement also commits the City to 'Balanced growth, preservation and revitalization'. How is increasing road traffic, increasing noise levels, reducing air quality and destroying a wildlife habitat accomplishing that??

Both the Native Habitat Preservation Authority (July 14, 2011) and results of the lawsuit filed against the Baldwin Hills Drilling (July 6, 2011) recognize a "failure by the County of Los Angeles to conduct an adequate EIR report". And yet, we have the very same organization submitting inadequate, nebulous EIR report versions to the residents of the

City of Whittier. This has to change if we are to reach agreement on any of the proposed drilling project terms – stop delivering minimal information, we need full disclosure!

We respectfully request that the Council look at new and innovated ideas to bring financial funding to the City instead of resurrecting old outdated ideas.

While the Draft EIR document has many areas of concern, our focus was on those areas that have a direct impact to our residential neighborhoods. While you will not find comments submitted on every section, those not commented on are no less important. We concentrated on air quality, noise, traffic, safety and disruption of wildlife to our urban neighborhoods.

1. The Daily Traffic survey on Penn Street/Painter/Hadley in the current DEIR is insufficient. Therefore a simulation (trial period) with empty trucks each day (20 oil tankers making 4 rounds trips each day as demonstrated by Mr. Perez at the Community Center) should be carried out for a minimum of 3 weeks on a daily basis. Only then can the true environmental impact of heavy traffic on air quality, noise and safety each day on Penn Street be evaluated.
2. Before the aforementioned 'dry run trial period', the Environmental consultant must first measure air quality through placing a device(s) which will give readings on lampposts on Penn and actually in Penn Park pertinent to air and noise quality readings every 15 minutes over 24 hours in each day over 3-4 weeks. These readings must be posted publicly as a matter of record. Doing this will create true baseline from which the County of Los Angeles and the City of Whittier and Matrix can work from.
3. Full tankers with up to 6,000 gallons will have an impact on the upkeep of Penn Street plus they will have to travel at 20mph or less down Penn when full to avoid running the traffic lights because of the following weight going down the grade.
4. What EXACTLY will be in these tankers? Full disclosure is required. Why, because any HazMat team will need to know what they are dealing with and how to combat a spillage/collision or explosion. The Residents of Whittier need to be informed of exactly what is being carried in these oil tankers along their streets.
5. We need guarantees that the oil tankers will not be stopping and 'stacking up' outside the current landfill site on Penn Street waiting for access to the proposed oil plant.

There is park adjacent to the proposed access and frequently the City just takes up the public parking with their vehicles which then causes inconveniences to the many people who want to enjoy this public recreational park. The initial proposal was very conscious of the feelings of the people who use the wildlife trail – so we urge the City of Whittier Council to treat the hundreds of people who visit Penn Park during the week with the same courtesy in a more relevant EIR that needs to be created.

6. What is the schedule for these trucks – again, the residents need full disclosure. Hours of operation, true volume of oil trucks on Penn/Painter/Hadley etc.
7. Does Baldwin Hills (another County of Los Angeles drilling site) have a fully trained hazmat response team within 10 minutes location of the drilling plant? Please evaluate what other oil drilling cities do regarding hazmat response team and the use of chemicals that must be used with oil operations, testing oil equipment, and chemical needed to combat emergency situations at the oil operations.
8. Schools – there will need to be training or even employment of a hazmat director at each school (including Whittier College) to work with the authorities when a spillage/explosion occurs and co-ordinate evacuation, student accountability, carry out monthly drills, etc.
9. The Fire Department in Whittier is totally unprepared for any accident at this point in time due to the proposed oil drilling operation. There has to be intensive training and the purchase of necessary equipment to enable them to be effective and not rely on a station 20 miles away that will take anywhere from 1.5 hrs to 2 hrs to arrive. Fires need to be addressed within 15-20 minutes of outbreak. If there is a spillage (under USDOT

regulations), effective first response to an incident involving hazardous materials (hazmat) is critical to minimizing the impacts of the incident in terms of public and responder safety, environmental degradation, and costs for clean up.

10. Well-defined hazmat response policies and procedures and responder training allow first responders to accurately identify the hazardous material and direct further response. For certain spills, equipment carried in the first response vehicles (from Compton, 1.5hrs away) can be used to contain the spills until the fire department or hazmat contractor can arrive at the scene. If the Fire Department proposes to use 3M Lightwater ATC FC600 foam concentrate this too has serious environmental issues. It has been established that PFOS (foam concentrate) has a very unfavorable persistence-bioaccumulation-toxicity (PBT) profile and any discharge to groundwater would result in long-term environmental consequences. No-one knows what its half-life is. The lithium salt in PFOS is a registered US EPA insecticide which kills bees and wasps. The long-term effects on humans are not known. But disturbances to liver and hormone metabolism and birth defects in rat embryos as well as potential carcinoma of the prostate in human have been highlighted.

The chemical feedstock used in the manufacture of 3M PFOS-type fluorosurfactants is perfluorooctanyl sulphonyl fluoride (C₈F₁₇SO₂F). In the environment the fluorosurfactants degrade to give perfluoro-octanyl sulphonate (PFOS).

11. Is the City going to install unique highly audible alarms (and not just a siren) to alert the population that there is an actual chemical explosion within the immediate area? Will they program the telephone numbers of every resident within a 5 mile radius of the oil

plant to automatically send out an alert to leave the area? (This could also be done by text messaging.)

12. How are the police going to evacuate over 10,000 people (at least) within this 5 mile radius of the plant effectively? Again what drills will be set up to train the police and residents to do this properly?
13. Within the site, will there be air quality monitors running 24 hours that will feed back information about possible emission violations under the EPA statutes? Will a record of this be published on the City website and delivered to the local EPA office for monitoring?
14. Drilling in the wildlife preserve will drive wildlife close to urbanization. So residents will deal with more coyotes and more deer – what is the City's proposal to deal with this 'influx of new residents' with the safety of the residents considered as well?
15. Empty trucks coming south on Painter will need to turn left onto Penn. For a single truck this is extremely difficult – but a truck with two tanks would be virtually impossible. Therefore, the first thing the city needs to do is install a left filter green light to at least give a large truck time to turn left and not endanger any oncoming residents of Whittier in a potential car accident.
16. Will the park be installed with safety gates to prevent children running out into the car parking area (as they do often)? At this point in time all access to the park is through numerous openings in the surrounding hedges. These openings need to be closed gates that can be opened either side by adults for access for themselves and their young

children. The City should take responsibility for the safety of all individuals (adults and children) accessing recreational Penn Park during the day.

17. Many, many more people visit Penn Park during the week than visit the Habitat Preserve – yet we see nothing in the current DEIR about the preservations of its existing noise levels and air quality. Does the City of Whittier Council not care about preserving current air and noise levels for its residents to relax in safety in an already over burdened Penn Street neighborhood?
18. Trucks must travel at a speed lower than the 30mph both up and down Penn Street (because of their size and weight) to reduce potential accidents. Currently there is not room enough for two garbage trucks to pass each other at the same speed on Penn Street. I have seen many times one garbage truck pull over to the side to let the other garbage truck pass. Garbage trucks do not carry flammable liquid or toxic liquid, so if they do not pass each other why would we allow oil/chemical tankers to pass each other at speeds in excess of 15mph?
19. The current garbage trucks that currently traverse Penn Street on a 6-day basis will not be stopping when the oil trucks come. So how does the County of Los Angeles and the City of Whittier justify putting the whole burden of unbearable traffic, noise and reduction of air quality on the residents of one tiny Penn Street in Whittier?
20. All trucks MUST give way to residents to reduce the possibilly of accidents along Penn Street regardless of the time of day.
21. The City Council is prepared to change established and enforced Whittier City Bylaws to push this Oil Drilling proposition through. Therefore, do the City of Whittier Council

members who voted and are on record, accept full personal responsibility and liability for any lawsuits that may arise from ignoring these reasonable requests by the residents in the event of any traffic accidents or an explosion at the proposed oil drilling plant?

22. Environmental Justice Section of the DEIR (p4.14/2). The Census information in the document is based on the 2000 Census – 11 years ago. Does the City truly believe nothing changes in 11 years?? The USA as a country changed in 2001 never to be the same for anyone. Has Whittier not grown in population in 11 years, I find that very hard to believe. If the DEIR is to be accurate, it needs to be re-written with better analysis using the latest (2010) census information that is available.

23. Environmental Justice Section of the DEIR (p4.16/5). Yet another anomaly in the EIR is the Poverty Status – once again, the creators of the DEIR used 1999 information – 11 years old! We all know that the economy took a downward tail spin in 2008 and has still not recovered. Using the 1999 Poverty Status is unacceptable and this needs to be re-analyzed using 2010 census available data.

24. Transportation (p4.7/1). The baseline analysis on 2010 traffic counts is unacceptable. It states very low traffic for Whittier College when in fact in early 2011 Whittier College opened its new Sport Complex plus rents it out to other athletic clubs and schools. When there is a sports function at Whittier College (and there have been many in the week and weekend over the past 180 days) Penn Street is full of cars coming and going and many people crossing and walking down the middle of the street. Therefore, a new traffic baseline needs to be created for York thru Penn Street to Painter including College to Penn – and not just one day as the present EIR, but over a period of 45 days.

This new baseline analysis needs to be 24 hours and day and when Whittier College is in full operation – there are electronic devices that can be rented by the city to be placed at various locations to monitor traffic flow around the clock. The current analysis only looked at traffic during early morning and coming home traffic entering and exiting Penn and Painter intersection. This analysis is flawed as it has missed gaps of traffic during the day of the garbage trucks and Penn Park activity. Many people use Penn Street and College Avenue to drive through the area that was not picked up in the flawed traffic analysis plan. Many people also use York to pass Penn Park to enter Whittier College this traffic is not calculated either with the flawed analysis plan of the DEIR. All traffic analysis results should be published on the City of Whittier website under a new page that needs to be added for daily recording of Penn Street traffic along the entire length from York to Summit, Penn to landfill access, Penn to Canyon Crest, Penn to College and finally Penn to Painter. The analysis should be 24 hours a day, 7 days a week, for 30 to 45 days. This should accurately record the average traffic using the already impacted Penn Street/York and all street intersections through to Painter Blvd.

25. The DEIR states that Whittier College only play 4 games a year – this is a ridiculous statement unless the creators only paid attention to football. There are track, football, basketball and volleyball played year round. But then if only one day was spent evaluating this – how would the DEIR developers know? All these collective sports events bring a dramatic traffic increase to Penn Street plus create a parking nightmare. Whittier College now has traffic marshals that stand at the Intersection of Canyon Crest

and Penn Street during a sporting event who directs traffic and dictates street parking – shouldn't the City be involved in that?? Many local schools transport in athletic teams and park in red zone areas, is this safe? is this something that the City sanctioned?

26. The new traffic baseline (p4.7/2 – p4.7/4) must use the same traffic intersection as stated on page p4.7/2 as identified in its 13 points in the EIR document. Plus street segments identified in the p4.7/3 and p4.7/4 including York and Summit and landfill access.
27. With regard to pedestrians who cross both Penn Street and Painter Boulevard during the day, what are the hours of operation that oil trucks will be traversing Penn Street (still not disclosed by the City/Matrix/DEIR document). There are a substantial amount of foreign students who attend Whittier College and Kaplan English Language schools. With the increased danger of multiple trucks entering and departing from Penn Street, the four signals needs to improved with audible warning, the 'countdown digital display' and any other measure that can ensure the safety of these pedestrian students. The City relies on these students for revenue therefore it should pay attention to their safety with sincere interest. Remember...cars can stop much faster than trucks!
28. Penn Park has visitors who are mentally and physically disabled to the park each day – sometimes as many as 10 plus 1 or 2 caregivers. I have personally seen many times that these individuals (through no fault of their own) start to wander into the middle of the road and have to be brought back into the park. This is a recreational park created by the forefathers of Whittier City Council for ALL residents – the safety of these individuals carries the same importance as any other resident of Whittier and yet the DEIR bears no

mention of their enjoyment of the park. The DEIR does not mention anything about the hundreds of visitors to Penn Park throughout the week. This is of paramount importance for quality of life for a lot of residents – but then again, the DEIR developers probably only spent a day on that too.

29. All the EIR and relevant documentation regarding this proposed increase of traffic, reduction of air quality and increased noise plus accompanying safety issues is only in English. I would ask the City to explain why when they state in the EIR (p4.16/5) that 55.9% of the City of Whittier residents are Hispanic, that the ALL documentation is not bi-lingual?? In fact there are other minorities too in Whittier – does the City not care about their concerns or worries and choose not to inform them??

30. An EXACT truck route needs to be determined and fixed by the City of Whittier and Matrix before any EIR can be determined. Why?? Because each route brings it own unique requirements and for the developers of the EIR to say at the meeting at the end of June, 2011, that 'the Penn/Painter/Hadley/Whittier Blvd/605 is the preferred route but the others can be used' is a ridiculous statement to make. CEQA (California Environmental Quality Act 1907 clearly states that "CEQA establishes both a procedural obligation to analyze and make public adverse physical environmental effects, and a substantive obligation to mitigate significant impacts". How can the City of Whittier comply with these clearly stated rules when they will not commit to disclosing which routes the trucks will use on Penn Street, what is the proposed schedule of trucks and if 80 visits per working day (or even 7 days a week) is public knowledge. At the June meeting with the developers of the DEIR posted a slide showing there would be 20

trucks per day (which does not seem a lot considering we have many more landfill trucks traversing Penn Street today). But, in the DEIR (p4.7/18) it discloses that those 20 trucks will make a total of 4 trips daily in and out of the proposed site – meaning there will be 80 trips up and down Penn Street each and every day for at least 25 years. How can that not harm the environment in air quality, safety and noise?? The DEIR information is ambiguous and misleading in a representation to play down the disruption the City will cause to the residents of Penn Street and others.

31. Intersection Analysis (p4-7/20). A new Analysis of Traffic with regard to this section needs to be carried out over a 45-day period. The 2010 report on traffic needs to be references as the much stated 'baseline' from which to carry out the 'reality of daily traffic. All new analysis must be posted on the City website for the residents to be able to view and comment on.
32. in the DEIR it states that a Plant Carpool will be created away from the actual plan to facilitate less cars coming up and down Penn Street and Catalina. Where will this carpool be located – at the bottom of Penn or outside of the City limits? What environmental impacts will the Plant Carpool place upon the chosen area, of which we are not knowledgeable of since it has not been disclosed.
33. The cost of the construction of this plant will be enormous and i wonder if it coincides with the recent notification of an increase of 30% In utilities. We need full disclosure of who is paying for the water used at the new plant, the removal of earth etc. by the City. it is ridiculous to expect the residents of the City of Whittier to pay for this work when only the County of Los Angeles and the City of Whittier benefit financially from this

project. A review of utilities needs to be conducted as to why the residents are paying 30% more for water when we do not have a water shortage.

34. The impact that 80 truck trips each and every day will have on the homes (many are over 50 years old) in terms of structural failure of buildings, damage to sewer and water pipes that go down Penn Street. Therefore, does the City or Matrix intend (over the unlimited timeline for the Lease) to pay for all claims that arise from such damage or are the residents supposed to carry that burden themselves. The residents do not want that many trucks each and every day traversing Penn Street – so why should we pay for the damage that will inevitably occur?

35. Are all the major hospitals in the immediate vicinity capable of handling hundreds of people with various injuries should there be a toxic spill from one of these trucks or an explosion at the plant or even air pollution? This needs to be top of the list for the City to be included in the DEIR.

36. If this project is passed, the volume of daily trucks, air pollution and noise levels will adversely affect the value the quality of residential life and wildlife. But also, the traffic, air quality, etc., will devalue the property values of our current homes (already decreased by the recession). I would like to ask if the City of Whittier/Matrix are going to be prepared to pay the difference between the best offer for any home on Penn Street and the current real estate comps? Penn Street residents should not lose financially out of this unwelcome project and the County of Los Angeles, the City of Whittier and Matrix Oil gain from it.

37. is the operation of the plant going to be 24 hours (again nothing in the DEIR). if so, that means the trucks will, during any 24 hour period traversing Penn/Painter/Hadley/Whittier Blvd., and who knows where else. We demand specifics and not have them 'hidden' in case it raises objections that will impact the immediate acceptance of the drilling project.

38. At the June meeting with the DEIR developers, Mr. Perez stated that the proposed volume of trucks would not exceed what we already have on Penn Street for the landfill. However, he failed to realize that these garbage trucks will NOT be going away – so now the traffic would be doubled at least. But then he 'forgot' to mention those 20 trucks each make 4 trips each and every day up Penn Street resulting in a total of 80 trucks (albeit the same 20). This is a very clever manipulation of statistical information but again, as residents, we demand truth and clarity.

39. We need clear identification of EXACTLY what will be contained in these trucks in and out of the drilling plant. We require an MSDS (Material Safety Data Sheet) as clearly defined by OSHA for us to determine if they are hazardous to the residents in any way, shape or form. Please supply those in response to this document.

Subject: FW: Whittier Audubon Comments on Final EIR for Whittier Oil Drilling Project
Attachments: WhittierAudubon_FinalEIR_Comments.doc

From: Joan Powell [<mailto:joan.powell@att.net>]

Sent: Tuesday, October 18, 2011 10:40 AM

To: Jeff Adams

Cc: Jay Oberholtzer; Bob & Letty Brooks; Jeff.Allison@amate.us; Larry Schmah; lindaoberholtzer@gmail.com; Steve Huber

Subject: Whittier Audubon Comments on Final EIR for Whittier Oil Drilling Project

Jeff,

I have attached a comments letter for the Planning Commission, on the Final EIR for Whittier Main Oil Field Drilling Project. I hope you can see that the Planning Commission gets this letter for their consideration.

Thank you.

-- Joan Powell
Conservation Chair
Whittier Area Audubon

p.s. – Appendix M, p. M-4, in the List of Commenters, has “Audubon” misspelled.

WHITTIER AREA AUDUBON



October 15, 2011

Jeff Adams
Community Development Dept.
City of Whittier
13230 Penn St.
Whittier, CA 90602

Subject: Whittier Area Audubon Comments on Final Environmental Impact Report for the Whittier Main Oil Field Project.

Whittier Audubon continues to have concerns about the impacts on wildlife of this project, particularly from:

1. Increased road traffic, noise, and human impacts disruption of the Core Habitat and nursery area of the Puente Hills Landfill Native Habitat Preserve,
2. Insufficient or lacking studies on sensitive species within the project area, and
3. The incompatibility of this project with the land use and policies established for these open spaces of the Puente Hills Landfill Native Habitat Preserve.

Whittier Audubon believes that the environmentally best alternative is the No Project Alternative. If that alternative is not possible, then the Landfill site is the next best environmental alternative.

Whittier Audubon does not agree with the Final EIR that the biological impacts of the Project are made insignificant and avoidable by the proposed mitigation measures. The proposed project (consolidated well site, oil processing facility, gas plant, truck loading facility, north access road, and pipelines) has significant negative impacts on birds and other wildlife, which are inconsistent with the area's current usage and purpose, and which cannot be totally mitigated.

Impact on Core Habitat:

The La Canada Verde watershed is the designated Core Habitat of the Puente Hills Habitat Authority Preserve (per the Habitat Authority Resource Management Plan) provides for "... undisturbed breeding habitat for wildlife and native vegetation, which is recovering in the absence of human disturbance" (p. 4.2-35). The "habitat near the Project Site is known to provide some of the best habitat in the Preserve for bobcat" (p. 4.2-5). Construction of the oil wells and processing plant, and use of the North Access Road in the core habitat zone would

reverse the process of recovery which has been underway for many years. Simply because the area has recovered once from oil drilling disruption is not a justification for allowing destruction again, with the promise of restoration many years in the future.

The project will have temporary and permanent impacts of over 21 acres of undisturbed habitat in the Preserve. While this may seem like a small percentage of the overall Preserve, and even of the Core Habitat area, the impacts are amplified by the fact that the North Access Road divides the Core Habitat into two parts. This bisection of the Core Habitat causes the urban edge effects to protrude along the road as well as around the gas/oil pad and plant into the Core Habitat area, further reducing the undisturbed Core Habitat available for wildlife nursery and foraging.

The FEIR states several times that revenue from the oil project will be given to the Habitat Authority. This argument that the Habitat Authority will receive funds from the project for ongoing operations and habitat restoration is used as an overriding justification for the destruction and disruption of the existing Core Habitat Zone. In fact, this argument is given as a major reason that impacts to the environment will not be significant. The reasoning that destruction of part of the Core Habitat will bring about preservation and restoration of other areas is of doubtful logic.

Has the Habitat Authority identified other areas of the Preserve which could be restored and become an equivalent Core Habitat? These areas would need to be in the vicinity of existing core habitat, and of an equivalent size, and would need to be isolated from human impacts. If such an area has been identified, how many years would it take for restoration of the area to reach the point where the area could fully serve as a replacement for the current Core Habitat Zone? What wildlife corridor would exist for animals displaced from the current Core Habitat to move to a replacement area?

Insufficient or Inadequate Studies

Insects: In the response to Whittier Audubon's comments on the lack of insect studies in the project area, the Final EIR response is that a study was done in February 2009. A study done in February is not sufficient, as many species of insects will not be present in the winter. Surveys must be conducted in spring, summer and fall to identify whether there are any sensitive species of insects using the area.

Reptiles: No studies of reptiles in the affected areas seem to have been conducted, although there were searches for amphibians in Feb. and April 2010. The references (page 4.2-2) mention the USGS study published in 2006, which seems to have studied reptiles and amphibians in Sycamore Canyon and Hellman Wilderness Park, but perhaps not in the project area. That study found 4 sensitive species in the Whittier Hills: Arboreal Salamander, Black-bellied Slender Salamander, Coastal Western Whiptail, and Western Ring-necked Snake). The DEIR (Table 4.2-2 on p. 4.2-15) says that Coastal Western Whiptail has been seen in the project area. The FEIR Comments and Response section says that during the supplemental survey, a San Bernardino ringneck snake was also seen. This appears to have been an incidental sighting. Since two of the listed species have been seen on the site, it appears that sensitive species are present, and a focused study should have been conducted to determine the prevalence of the listed species.

The Response to Whittier Audubon's DEIR comments about studies cites Mitigation Measure BIO-4k as one of the reasons it is OK to not have done studies. BIO-4K calls for a biological monitor to be present during vegetation removal to salvage any wildlife which might be killed or injured by heavy equipment. This may salvage individuals, but does not necessarily mitigate for the destruction of habitat used by these animals. Without a study, it is not known how many individuals of these species may be present before construction begins.

Land Use & Policy

The project is at odds with several of the Goals in the Whittier General Plan regarding the preservation of open space and areas for "major habitat types, so as to maintain the ecosystem in a natural balance" (pp. 4.11-3 to 4.11-10). The repeated emphasis in the General Plan on the importance of open space and preservation of the Puente Hills is evidence of the importance that Whittier and its citizens place on this habitat and its preservation.

The project site has been protected from human disturbance as much as possible for over 20 years. As a result, it has become an important segment of the greater open space of the Preserve, and an essential part of the habitat for several species. Unless equivalent core habitat can be added, contiguous with the existing core habitat area (or of equivalent area and with wildlife corridors facilitating movement) it does not seem that the loss of this important habitat, and therefore the inconsistency with land use policy, can be mitigated.

The project is also in conflict with the Habitat Authority's Resource Management Plan, which designates the area as core habitat, which is to be protected from human disturbance, and is "for the sole purpose of providing undisturbed habitat for wildlife, which contributes to sustaining the overall ecological health of the Habitat Authority's jurisdiction" (p. 4.11-16). The Habitat Authority's Resource Management Plan was reviewed and approved in 2007 by Whittier's representatives on the Habitat Authority Board and the Citizen's Technical Advisory Committee.

The mitigation for Land Use issues measures do not resolve issues of Land Use Policy, since the project would still have major impacts on the core habitat and the goals of preservation and conservation and restoration of open space and native habitat. The FEIR is deficient in this area.

Submitted by:

Joan Powell
Conservation Chair, Whittier Area Audubon

Friends of the Hills stand on the Oil Drilling FEIR

Oct 16, 2011

Jeff Adams
Community Development Department
City of Whittier
13230 Penn St.
Whittier, CA 90602

Subject: Friends of the Hills Comments on Final Environmental Impact Report for the Whittier Main Oil Field Project

-The Friends of the Hills Board is against putting the oil drilling operation and road in the Core Habitat Area.

-We do not agree with the finding in the FEIR on page 7 of the Executive Summary that says, "There are no significant and unavoidable impacts to biological resources."

-A Core Habitat area in any management plan is irreplaceable because it is the "best place" to maintain biodiversity within a Preserve. How can its loss or degradation be mitigated? Won't there also be a negative impact on the Wildlife Corridor that could be considered significant during the 40 years of oil drilling.

-How can the FEIR claim that impacts to biological resources are less than significant with mitigation without stating how that will be accomplished? We think the FEIR is deficient because it doesn't identify where the Core Habitat replacement, within the Preserve, will be.

-A study of bobcats in Sycamore Canyon found that they avoided the area of oil drilling activity. This is an example of evidence to suggest the impact on

bobcats and other species of concern may be significant. Where in the FEIR are the studies to prove otherwise?

-Studies have shown that a biggest threat to some sensitive species in California isn't housing development but fire. We know of two explosions and fires on Honolulu Terrace here in Whittier, the most recent involving loss of human life. The FEIR claims that the threat of fire to the wildlands is less than significant. Neither of the fires on Honolulu Terrace was supposed to have happened, but they did. To claim there is no risk from fire that can't be mitigated goes against Whittier's recent history and it goes against the findings of scientific studies.

Respectfully Submitted,

Letty L Brooks
First Vice President, Friends of the Hills
13733 Gaylin Street
Whittier, CA 90601



COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294
(323) 890-4330

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

October 19, 2011

Steve Helvey, City Manager
City of Whittier
13230 Penn Street
Whittier, CA 90602

Dear Mr. Helvey:

SUBJECT: WHITTIER MAIN OILFIELD DEVELOPMENT PROJECT

Personnel from the Fire Prevention Division and the Forestry Division have surveyed the area for the proposed Whittier Main Oilfield Development Project and they have provided the following preliminary findings:

THIS PROJECT IS NOT CLEARED BY THE FIRE DEPARTMENT.

1. Fire apparatus access roads shall extend to within 150 feet of all portions of the exterior walls of all structures (FC 503.1.1).
2. Fire apparatus roads shall have an unobstructed width of not less than 20 feet, and an unobstructed vertical clearance clear to the sky. A minimum vertical clearance of 13 feet 6 inches may be allowed for protected tree species adjacent to access roads (FC 503.2.1).
3. Clear and remove flammable growth for a minimum of 10 feet on each side of fire access roads (FC 325.10).

SERVING THE UNINCORPORATED AREAS OF LOS ANGELES COUNTY AND THE CITIES OF:

AGSIRA HILLS
ARTESIA
AZUSA
BALIWIN PARK
BELL
BELL GARDENS
BELLFLOWER
BRADBURY

CALAMANS
CARSON
CERRITOS
CLAREMONT
COMMERCE
Covina
CUDAHY

DIAMOND BAR
DUARTE
EL MONTE
GARDENA
GLENDORA
HAWAIIAN GARDENS
HAWTHORNE

HIDDEN HILLS
HUNTINGTON PARK
INDUSTRY
INGLEWOOD
IRVINDALE
LA CANADA FLINTRIDGE
LA HABRA

LA BREA
LA PUENTE
LAKEWOOD
LANCASTER
LAWDALE
LONITA
LYNNWOOD

MALIBU
MAYWOOD
NORWALK
PALMDALE
PALOS VERDES ESTATES
PARAMOUNT
PICO RIVERA

POMONA
RANCHO PALOS VERDES
ROLLING HILLS
ROLLING HILLS ESTATES
ROSEMEAD
SAN DIMAS
SANTA CLARITA

SIGNAL HILL
SOUTH EL MONTE
SOUTH GATE
TEMPLE CITY
WALNUT
WEST HOLLYWOOD
WESTLAKE VILLAGE
WHITTIER

4. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities (FC 503.2.3).
5. The centerline turning radius of a fire apparatus access road shall be a minimum of 32 feet (FC 503.2.4).
6. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus (FC 503.2.5).
7. The grade of the fire apparatus access road shall be within the limits established by the Fire Code official based on the Fire Department's apparatus. Grades of ten percent or more shall be paved (FC 503.2.7).
8. The installation of security gates across a fire apparatus access road shall be in accordance with LACoFD, Regulation #5. Where security gates are installed, they shall have an approved means of emergency operation and shall be maintained in an operational state at all times (FC 503.6).
9. Provide an original Fire Flow Availability, Form 196, on the existing public fire hydrant on Catalina Avenue.
10. Final fire flow requirements will be determined with further submittal of plans and will depend on the size of proposed structures. The fire flow can be up to but no greater than 8,000 GPM.
11. Fire hydrants shall be installed every 300 feet.
12. Specific access and water systems requirements will be addressed with the submittal of a site plan.
13. Most of the Eucalyptus trees that will offer screening to the production facility will be allowed to remain and they fall outside of proposed fuel modification zones. However, some trees will need to be removed to accommodate the proposed road layout and to ensure that proper clearance of flammable growth on either side of the road way is in place.
14. The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak tree ordinance. Potential impacts in these areas should be addressed.

Steve Heivey, City Manager
October 19, 2011
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THE FOLLOWING REQUIREMENTS SHALL BE SATISFIED PRIOR TO ISSUANCE OF A BUILDING PERMIT:

1. All structures shall be equipped with automatic fire sprinkler systems that are designed and maintained in accordance with NFPA 13.
2. Fire protection water supplies shall be provided in accordance with the 2011 County of Los Angeles Fire Code. Fire hydrant locations shall be determined during the building plan check phase by Fire Prevention Engineering.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,



JOHN R. TODD, CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

JRT:TL:jt.cs

SHUTE, MIHALY
& WEINBERGER LLP

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GABRIEL M.B. ROSS
Attorney
ross@smwlaw.com

October 19, 2011

Via email to jadams@cityofwhittier.org

Honorable Planning Commissioners
City of Whittier
13230 Penn Street
Whittier, California 90602

Re: Whittier Main Oil Field Development Project Revised
Environmental Impact Report Final, State Clearinghouse No. SCH
#2010011049

Dear Commissioners:

On behalf of Hills For Everyone, I am writing in connection with the Final Environmental Impact Report and Conditional Use Permit for the Whittier Main Oil Filed Project. Previously, we have submitted letters dated December 6, 2010 and July 21, 2011, commenting on the Draft Environmental Impact Report and Revised Draft Environmental report, respectively, for the Project. These letters point out numerous flaws in the environmental review of the Project, including, for example, inadequacies in the EIRs' analysis of the Project's environmental impacts, its discussion of the Project's consistency with the City General Plan, and its handling of alternatives to the Project.

We have also pointed out that the City's own Zoning Code does not allow a conditional use permit to be granted for the Project, which would allow oil drilling in a habitat preserve zoned OS, for Open Space. The City code wisely does not allow this sort of industrial use in OS districts, as explained in our previous letters. The Zoning Code explicitly prohibits industrial uses within the OS zone. Zoning Code §18.09.060. The proposed oil and gas production facilities are plainly industrial uses and are thus banned in the OS zone. Elsewhere, the Zoning Code purports to allow oil and gas production in all zones by conditional use permit. Zoning Code §18.52.030(A). These two provisions of the Zoning Code are clearly in conflict. When such a conflict arises, the more specific provision, not the more general one, always applies. The particular

Jeff Adams
October 19, 2011
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requirements for the OS zone are more specific than the general provision for oil drilling citywide. Thus, the OS zone rules apply, and the Zoning Code therefore does not allow the permit required for the Project. We therefore urge the Planning Commission to reject the application for a conditional use permit.

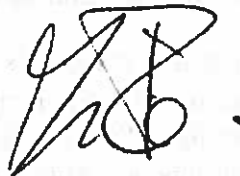
Moreover, we have made a preliminary review of the FEIR and found that it continues to fall short of CEQA's requirements. To provide just one example, we pointed out in our July 21, 2011 letter that the RDEIR failed to provide sufficient analysis of the Project's consistency with General Plan Policy 1.4, directing the City to "[w]ork with appropriate agencies to rehabilitate the oil fields or encourage the rehabilitation of these lands within the planning area for open space, recreation, or other beneficial resource conservation uses after site reclamation." The FEIR does nothing to correct this omission. This is just one of many failures in the Final EIR.

It is also important to note that a crucial portion of the FEIR, the City's responses to comments on the Draft and Recirculated Draft EIRs, remain unavailable to the public due to problems with the City web site, which we have reported to City staff. Although City staff have very helpfully acknowledged and worked to solve this problem, we cannot provide complete comments until this portion of the document is available.

In the meantime, we urge you to reject the Project in its current form and to take no action on any version of the Project until complete and thorough environmental review has been completed and provided to the public.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP



Gabriel M.B. Ross

City of Whittier

Planning Commission

RE: Matrix Oil application for Conditional Use Permit/Mineral Extraction in the Puente Hills Preserve

October 20, 2011

Dear Sirs:

Back when Proposition A passed, we thought we had saved the Whittier Hills permanently. That is what we intended with our votes, and that is what we still want today – the Whittier Hills undisturbed by drilling. We don't believe we need to drill for oil in the hills in order to save the Whittier Hills.

The only reason to approve this project is money, and every time someone from either Matrix or the City Council is quoted, the amount of money potentially coming to Whittier seems to go up. But the only entity that will truly be enriched from this project is Matrix Oil. Any money the City receives – after sharing with Los Angeles County - will come at a very high cost.

According to the Final EIR, the Penn Street route was chosen because the logical route to the project, Colima near Mar Vista Street, is too impacted with traffic (M-126). What that says to us is that maybe this project is just not a good fit in such a populated area, not that the City should go looking for a different, longer, more densely populated route.

In several places in both the EIR and the responses to comment letters, the amount of traffic that will be generated on Penn, Painter, Hadley, etc, is downplayed because it is "temporary." One response to a letter of concern in Appendix M states that the "Construction Phase" traffic on Penn will probably be comparable to when the Whittier Area Community Church did its most recent construction project (M-1259). Well, that was, as far as it impacted Penn, pretty temporary – we believe the worst of it lasted only a few weeks. But while it lasted it was awful. On a daily basis, trucks were parked way down Penn Street, idling their engines, waiting their turn to go up into the landfill.

In contrast, the "temporary" construction phase for this project is estimated by the Final EIR to be at least "2+ years" (ES-21), which could easily become three years. And since the whole 1290 acres is under lease to Matrix, and there is no limit to how many CUPs can be applied for and granted, or how many wells can be drilled, isn't it possible that the "Construction Phase" could go on many, many years beyond that? In effect, couldn't construction go on indefinitely? Will the "Operations and Maintenance Phase" ever really come into being? Who makes the decision as to when Matrix is in a construction phase, because as long as they are, it will be open season for traffic on Penn.

During the construction phase there are no limits on the type or number of vehicles, and the only mitigations offered to Penn Street residents read more like ways to keep the street open for Matrix's trucks than to provide any relief for residents. The traffic plan offers to coordinate with Whittier College so that as soon as the oil trucks are finished using the street, the sports fans attending the multitude of games planned at the college can begin using Penn as their first choice parking lot. This does not mitigate traffic for the residents – it just ensures that we will have too much traffic at all times throughout the day and into the evening. The EIR mentions that there are “occasional” weddings and parties at Penn Park, when in fact there are multiple weddings and birthday parties – some of them quite large - on most Saturdays and Sundays. Since truck traffic seems slated to occur Mon – Sat. (ES - 45), how exactly is that going to work? Where are all the limos and ice cream trucks that usually double park going to go? Is the City planning to shut down Penn Park parties on Saturdays in favor of Matrix and their interests?

The preparers of the EIR insist that Penn now operates at an acceptable level, but it does not, as any resident of the street could tell you. First of all, the traffic study conducted for the Final EIR was flawed in that it was done at a time of year when student and community use of the sports facilities is very low. In addition, the College regularly rents out its sports facilities to many other schools and organizations. This past summer, the gym was in use almost every weekend for various sports tournaments. The preparers of the EIR state that Whittier College only has four football games at home per year (M-1261). According to the Whittier College web site, this is an entirely true statistic. And if Whittier College were the only organization using their sports facilities, things might not be so bad. But like many statistics, this one little factoid does not come close to painting a complete picture of how often the different sports facilities are used, nor the amount of traffic that is generated, nor the fact that the College takes almost no responsibility for the pedestrian and vehicle traffic produced by these events.

In contrast to what will happen on Penn, some concrete traffic mitigation is rightly offered to the residents of Catalina, who are guaranteed no more than 40 daily trips on that street, and those trips are limited, for most of the project, to cars only. Unfortunately for those of us on Penn Street, the Catalina mitigation also assures those residents that if more than 40 trips are needed in one day, those excess vehicles will use Penn Street (M-32). Perhaps a true mitigation for the residents of Penn Street would involve enforcing “residents only” parking on the street at all times. We need some kind of relief from the traffic we already must endure, not more traffic.

Finally, why is the City in such haste to bring this project, which Councilman Henderson openly admits is complex (Whittier Daily News, 10/19/2011) to the Planning Commission and the City Council? The comment letters and responses alone came to over 1500 pages. I would like to have thoroughly read all the materials, but there was really too much to get through in such a short amount of time. All this haste only makes it seem as if there is something the City wants to hide from the public. Whether it is true or not, the way this whole process has been conducted unfortunately makes it appear as if Matrix Oil is calling the shots, and the City Council, Planning Commission, and City

staff are just doing what they are told by the folks with the money. If Mr. Henderson is to be believed, the City Council is apparently more concerned with safeguarding the rights of Matrix Oil in getting their project OK'd than they are in ensuring the rights of the citizens of Whittier to not only voice their opposition to this project, but to really be heard. That is truly disappointing.

Sincerely,
Paula and Ralph Vannucci
Penn Street Residents



October 20, 2011

Members of the Planning Commission
City of Whittier
13230 Pen Street
Whittier, CA 90602

SUBJECT: Comments On Behalf Of Open Space Legal Defense Fund (OSLDF) On The Final EIR For The Whittier Main Oil Field Development Project And On The Proposed Project, Submitted To The Planning Commission At The October Planning Commission Hearing On The Project And FEIR

Dear Members of the Planning Commission:

The following comments are being submitted by Open Space Legal Defense Fund (OSLDF). Included, as part of this submittal, is a twenty-minute video prepared by the group illustrating a number of the points contained in this comment letter. (Attachment A). Open Space Legal Defense Fund members request that this video be played at the public hearing, and ten members of the group will each cede their three-minute hearing comment time for this purpose.

As detailed in this letter, and OSLDF's prior comments on the Revised DEIR, the Final Environmental Impact Report (FEIR) for the project is fatally flawed. Inadequate responses have been provided in the FEIR to OSLDF's comments and the comments by agencies, other organizations and members of the public. The FEIR is disrespectful of public comments, displays additional project shifting, and contains additional reasons, beyond those previously documented in comments, why the EIR is fatally flawed and requires correction and recirculation.

This letter also contains comments on the proposed project, and documents why the required findings for issuance of a Conditional Use Permit cannot be made.

PROJECT SHIFTING

It is very unclear from the FEIR what the project actually is. During the course of the environmental review process there have been a number of versions of the project, each referred to as the Consolidated Central Site, and presented to the public as the environmentally superior alternative. Attachment B contains figures showing the changing nature of the project. The changing nature of the project is also documented in the video in Attachment A. There appears to be at least 7 versions of the consolidated central site design:

- **Version 1** – The Consolidated Central Site/Environmentally Superior Alternative from the Original DEIR (Figure 1, Attachment B); and,
- **Version 2** – The Revised CUP/NOP Version of the Consolidated Central Site (Figure 2, Attachment B); and,
- **Version 2b** – The Version of the Consolidated Central Site Contained in the Geotechnical Report Contained in Appendix L of the FEIR (Version 2 Plus Remedial Grading) (Figure 3, Attachment B); and,
- **Version 3** – The Version of the Consolidated Central Site Analyzed in the Revised DEIR (Figure 4, Attachment B); and,
- **Version 4** – The Version of the Consolidated Central Site Hidden In Appendix O Of The Final EIR And Called “Potential Project Design Modifications” (Figure 5, Attachment B); and,
- **Version 4b** – Version 4 With The Remedial Grading Required By the Geotechnical Report in Appendix L (Figure 6, Attachment B); and,
- **Version 5** – The Post-Approval Consolidated Central Site Redesign Specified in Mitigation Measure AE1-c.

Each of these versions of the Consolidate Central Site Plan would result in very different topographic modification, as detailed in the video included as Attachment A. There are significant differences in the amount of cut, fill and soil export for the various versions, yet the FEIR makes little or no distinction about the difference in impacts resulting from Versions 1, 2, 2b and 3. There is a limited, but inadequate analysis and description of Version 4 hidden the Appendix O. No information whatsoever is provided about what Version 5 would look like, other than it would avoid some trees. Clearly the different versions of the project would result in differences in the magnitude of impacts.

However, an assessment of such differences requires an honest assessment of project impacts, which is lacking in the RDEIR and FEIR.

The City's environmentally process has failed to separately distinguish the different versions of the site plans for the consolidated central site location, and has instead referred to each of these versions of the project as the Consolidated Central Site/Environmentally Superior Alternative. This is unacceptable under the California Quality Act (CEQA), which mandates a clear and stable project description and clearly identified and defined alternatives.

Additionally, some of the Mitigation Measures in the FEIR require alteration of the project. As detailed in OSLDF's comments on the RDEIR, the EIR does not contain an adequate analysis of the impacts of these mitigation measures. The responses to our comments, contained in Appendix M, are incomplete and inadequate and fail to address these legitimate concerns.

After reading the many pages of the RDEIR and FEIR, we still are not clear about the project under consideration by the Planning Commission.

PLANNING COMMISSION CONSIDERATION OF THE CONDITIONAL USE PERMIT IS PREMATURE

Part (iv) of Section 6.1 of the Lease Agreement states:

(iv) no Conditional Use Permit will be issued by the City of Whittier until Lessor has obtained a release from protected area status of that portion of the Leased Land upon which surface operations are allowed under an issued Conditional Use Permit from the Los Angeles County Proposition A District. (emphasis added)

Since the applicant has yet to comply with this requirement of the Lease Agreement, Planning Commission consideration of a Conditional Use Permit (CUP) is premature.

REGARDLESS, THE REQUIRED FINDINGS FOR A CONDITIONAL USE PERMIT CAN NOT BE MADE

Section 18.52.040 of the City's Zoning Code requires that a project must comply with five standards, in order to be eligible for a Conditional Use Permit (CUP). A project must comply with all five standards in order for the findings necessary for issuance of a

Conditional Use Permit to be made. As detailed below, the Proposed Project does not meet any of the five standards:

STANDARD 1: "THAT THE SITE PROPOSED FOR THE USE IS ADEQUATE IN SIZE, SHAPE AND TOPOGRAPHY; AND"

Evidence in the record demonstrates that the site is not adequate in size, shape or topography for the proposed use:

1. The proposed project analyzed in the body of the FEIR would require 180,000 cubic yards of cut and 31,000 cubic yards of fill, exclusive of roadway construction and remedial grading. This is an extreme amount of landform modification and indicates that the existing topography is not adequate for the use.
2. FEIR "Appendix O – Potential Project Design Modifications Assessment" - contains a revised version of the project (labeled herein as Version 4). Appendix O does not disclose the amount of landform modification (cut and fill) required for this modified version of the project. Appendix O does not provide the evidence required to demonstrate compliance with this standard.
3. There are a large number of abandoned wells on the project site. As currently designed, both the proposed project in the RDEIR and the revised project in FEIR Appendix O would result in construction on or in close proximity to a number of abandoned wells, as shown in Figures 7 In Attachment B). The Department of Conservation, Division of Oil, Gas & Geothermal Resources (DOGGR) has stated that "building over or in proximity of plugged and abandoned wells should be avoided if at all possible" (FEIR Appendix M at M-60). Both the version of the project analyzed in the Revised DEIR (Version 3) and the version hidden in Appendix O of the FEIR (Version 4) would result in construction over or in proximity to a number of wells (see Figures 8 and 9 in Attachment B). The FEIR does not address the potential impact of this construction on or near abandoned wells, or adequately address DOGGR comments DOGGR-5, or DOGGR-6. The inability to avoid construction on or in close proximity to abandoned wells is indication that the site proposed for the use is not adequate in size, shape or topography. (see Figures 8 and 9 in Attachment B).
4. According to the Comment Letter from the County of Los Angeles Fire Department which discusses acceptable fire access: "the maximum allowable grade shall not exceed 15% except where topography makes it impractical to keep within such grade. In such cases, an absolute maximum of 20% will be allowed for up to 150 feet in distance. The average maximum allowed grade, including topographical difficulties, shall be no more than 17%. Grade breaks shall not

exceed 10% in 10 feet" (Comment CLAFD-12, page M-48 FEIR Appendix M). According to Response to Comment CLAFD-12 on page M-181 of Appendix M: "The proposed Project would be submitted to the Fire Department for review and permits. Preliminary review indicates that the only portion exceeding a 15% grade is within the landfill, and this area would be improved to meet Fire Department requirements." It thus appears that project access requirements require modification of the existing topography. The existing topography of the site is not adequate for the project.

5. Portions of the project are located on land acquired with a deed restriction that would not allow for the proposed use. Specifically:

Chevron and the TPL agreed in the Declaration and Easement Of Restricted Use (Recorded Document 95-2043168 filed December 26, 1995) that: "1. Purpose. It is the purpose of this Declaration and Easement of Restricted Use to place an easement over a portion of the Sale Property, defined herein below as the Conservation Easement Area, *which land will be retained forever in a natural, undeveloped open space condition (subject to those uses permitted in this Declaration) and for Wildlife habitat and habitat restoration purposes and to prevent any use of the Conservation Easement Area that will impair or interfere with the conservation values of the Sale Property.* Subject to the uses specifically permitted in this Declaration, Grantor intends that this Declaration will limit the use of the Conservation Easement Area to activities consistent with the purpose stated above, including without limitation, those activities involving the preservation and enhancement of coastal state scrub habitat." (emphasis added) (Staff Analysis – Whittier Planning Commission October 19, 2011 CUP09-004, Attachment D, letter from Geralyn L. Skapik, Esq dated October 5, 2011 titled Supplemental Comments on the Revised Draft EIR for the Whittier Main Oil Field Development Project on behalf of Open Space Legal defense Fund (OSLDF)).

The City of Whittier acquired the property subject to the Declaration of Easement and Restricted Use. The proposed project does not avoid the land subject to Restricted Use; project features are located within the restricted use area. The project site is not adequate in size to allow for avoidance of restricted use areas.

6. The project site was acquired using Proposition A funds. As stated by the County in its comment letter: "Oil field development and appurtenant transmission and operations and maintenance activities would be incompatible with the specified use of lands acquired with Proposition A grant monies." (Page M-67 of FEIR

Appendix M). There is no evidence in the record which specifies how the City will comply with Section 16(b) of the authorizing statute under Proposition A (Sec Appendix M: OSLDF Comment OSLDF2-48 at M-390 and Response OSLDF-48 at M-902; OSLDF Comment OSLDF2-143 at M-417 and Response at OSLDF2-143 at M-911; and OSLDF Comment OSLDF2-144 and Response OSLDF2-144 at M-911). The City's own consultants have indicated that compensation acreage must be provided. According to the Community Conservations Solution Report (at page 2): "Proposition A required that changes of use of lands purchased with Proposition A funds be replaced to ensure that there is no net loss of parklands in the Puente Hills area." The report indicates that land used for the project "would need to be replaced with comparable or higher value open space or habitat." There is no evidence in the record that identifies the location or feasibility of acquiring required Proposition A compensation acreage (See OSLDF Comment OSLDF2-144 at M-417 and Response OSLDF-144 at M-911 and the Community Conservations Solutions (CSS) Report "Review of Whittier Oil Project for Consistency with Proposition A). Since no replacement acreage has been specified, the identified project area is not adequate for the project use, since there is no evidence in the record indicating the location, amount, availability, and feasibility of acquiring the required compensation acreage for the project, and that replacement acreage is not included as a part of the project.

The project does not meet this required standard and the Conditional Use Permit must be denied.

STANDARD 2: "THAT THE SITE PROPOSED FOR THE USE HAS SUFFICIENT ACCESS TO STREETS WHICH ARE ADEQUATE, IN WIDTH AND PAVEMENT TYPE, TO CARRY THE QUANTITY AND QUALITY OF TRAFFIC GENERATED BY THE PROPOSED USE; AND"

The evidence in the record supports a conclusion that the current site access and street system is not adequate in width and pavement type to carry the quantity and quality of traffic generated by the proposed use without substantial augmentation and expansion:

1. The project requires the construction of new roadways within the Habitat Preserve, in the form of the North Access Road (FEIR p. 2-20) and the Loop Road. The North Access fire road would be stabilized, upgraded and paved (FEIR p. 2-25). Approximately 4,100 feet of the existing Loop Trail would need to be widened and improved to convert it to serve as secondary access from Colima Road (FEIR p. 2-20).

2. The project requires the improvement and widening of approximately 1,800 feet of Catalina Avenue with the Habitat Preserve to meet LACoFD requirements (FEIR p. 2-20).
3. The project requires the provision of a wider turning radius at the northeast corner of Catalina Avenue (Mitigation T-1d).
4. The project requires restriping and enhancements for the northbound and southbound lanes of the intersection of Catalina Avenue and Mar Vista Street and parking restrictions on the east side of Catalina Avenue north of the intersection. (Mitigation T-1 a and d).

The project therefore does not meet this required standard and the Conditional Use Permit must be denied.

STANDARD 3. "THAT THE PROPOSED USE WILL NOT UNREASONABLY INTERFERE WITH THE USE, POSSESSION AND ENJOYMENT OF SURROUNDING AND ADJACENT PROPERTIES; AND STANDARD 4. "THAT THE PROPOSED USE WILL BE COMPATIBLE WITH THE PERMITTED USES OF SURROUNDING AND ADJACENT PROPERTIES; AND"

The evidence in the record support a conclusion that the project will unreasonably interfere with the use, possession and enjoyment of surrounding and adjacent properties:

1. The FEIR documents that the Project will result in significant and unavoidable impacts to: air quality during construction; climate change (greenhouse gas emissions); aesthetic; hydrology and water quality; and recreational impacts, in addition to the Project's unavoidable land use and policy consistency impacts. We, and a number of other commenters, have demonstrated the potential for a number of additional significant unmitigated impacts in our comment letter (OSLDF2, beginning on page M-323 of Appendix M to the FEIR). Our comments have not been adequately addressed in the FEIR.
2. The project will result in the closure of recreational access to the Arroyo San Miguel Trail on the west side of Colima Road during construction and drilling (for approximately 8 years). (Biological Resource Mitigation BIO-4n)
3. The Loop Trail will be closed to recreational use during the construction phase (approximately 2-3 month – FEIR p. 4.14-10) and will be converted from a trail to a roadway, altering the recreational experience.

4. With the project, and after mitigation, noise levels in parts of the preserve will exceed 60dBA, potentially affecting biological resources within the affected area. (Table 4.2-3, and comments from the Habitat Authority and OSLDF).
5. The project will increase noise levels within the Preserve and nearby residential areas. (Table 4.5-9 FEIR page 4.5-28).
6. A recent Whittier Daily News Article entitled "Matrix Drilling in Sycamore Canyon Poses Problems For Nearby Residents" by Mike Sprague documents the incompatibility of Matrix Oil operations at Sycamore Canyon facility with nearby residential uses. That article is included as Attachment C. In the article, Matrix's Vice President, Mike McCaskey downplayed the potential for similar impacts from the proposed project saying: "(i)n addition, the Whittier hills site is 2,000 feet away from homes." As shown in the Table O-2 from the FEIR reproduced below, Mr. McCaskey is incorrect: homes are located as close as 1,300 feet from Version 3 of the project and 1,240 feet from Version 4. The school playground is located 1,010 feet from the oil processing plant under Version 3 of the project and 990 feet under Version 4. In addition, drilling activity at the project site would be more intense than those at Sycamore Canyon, involving the drilling of up to 60 wells, as compared to the seven wells drilled at Sycamore Canyon over the last four years

Table O-2 Distance from Proposed Project Components to Sensitive Receptors

Project Component Location	Ocean View Residences	School Buildings	School Playground	San Lucas Drive Residences	Public Trails	Ranger Residence
Well Pad Cellars	1,240 (1,300)	1,670 (1,780)	1,250 (1,350)	1,670 (1,800)	800 (820)	990 (1,110)
Processing Oil Plant Equipment	1,080 (1,130)	1,410 (1,450)	990 (1,010)	1,340 (1,370)	400 (450)	700 (720)
Processing- Gas Plant Equipment	1,510 (1,490)	2,090 (2,100)	1,680 (1,670)	2,190 (2,260)	1,060 (1,220)	1,460 (1,520)

Numbers in parenthesis are the numbers from table 2-4 in Section 2 of the EIR (the proposed Project numbers from the EIR)

7. According to the socioeconomic study by AECOM included in Appendix H of the FEIR, the Project will result in a decrease in the value of nearby homes. AECOM estimates a \$857,438 decrease in home values due to project noise and a \$1,351,558 decrease in home values due to visual impacts. Table 16 from the AECOM study in FEIR Appendix H is reproduced below.



Table 16: Estimate of Potential Price Depreciation (2009 Dollars)

	High Scenario	Low Scenario
Noise Region	\$36,178,825	\$36,178,825
Assumed Noise Impact ¹	100%	100%
Noise Impacted Assessed Value	\$36,178,825	\$36,178,825
Noise Assumed Price Depreciation ²	-2.4%	-1.3%
Noise Value Depreciation	(\$857,438)	(\$481,178)
Property Tax (1%)	(\$8,574)	(\$4,812)
City Share (20%) ³	(\$1,715)	(\$962)
Viewshed Oil Rig Region (Outside Noise Region)	\$450,519,198	\$450,519,198
Assumed Visual Impact ⁴	5%	5%
Visual Impacted Assessed Value	\$22,525,960	\$22,525,960
Visual Assumed Price Depreciation ⁴	-6.0%	-3.0%
Visual Value Depreciation	(\$1,351,558)	(\$675,779)
Property Tax (1%)	(\$13,516)	(\$6,758)
City Share (20%)	(\$2,703)	(\$1,352)
Total Potential AV Decrease (Rounded)	(\$2,209,000)	(\$1,157,000)
Percent of 2009 AV Decrease	-0.04%	-0.01%

8. The evidence in comments letters, including the comment letter from OSLDF, contained in Appendix M, supports the conclusion that the Project would result in an impact to the Habitat Preserve's Core Habitat. The conclusion in the FEIR that the project will not result in unmitigated biological resource impacts, including impacts to Core Habitat, the Habitat Preserve's wildlife corridor function, the Core Habitat's nursery function, and federally designated Critical Habitat for the gnatcatcher, is not supported by common sense or the evidence.
9. The U.S. Department of the Interior has just released a draft of its study entitled: "San Gabriel Watershed and Mountains Special Resource Study and Environmental Assessment," dated September 2011. In that study, the National Park Service (NPS) determined that the Puente-Chino Hills meet the four criteria for National Significance and inclusion in the national park system. An excerpt

from the report, providing the basis for this determination is included as **Attachment D** of this letter. As stated in the Executive Summary of the report:

Puente-Chino Hills

The Puente-Chino Hills in the Los Angeles basin contain rare native plant communities. Although this area is somewhat of an island of open space surrounded by urbanized areas, the Puente-Chino Hills and the Santa Ana Mountains to the southeast together encompass about 500,000 acres of wildlands containing significant biological resources.

HIGH LEVELS OF BIODIVERSITY

- The Puente-Chino Hills are part of a biologically diverse regional wildlife corridor that provides habitat for ecological communities with an abundance of endemic, threatened, and rare plants and animals.
- Outstanding examples of southern California communities in the Puente-Chino Hills include coastal sage scrub, one of the most endangered plant communities in California, and the best remaining stands of California walnut-dominated forests and woodlands south of Ventura County.

Suitability

To be considered suitable for addition to the national park system, an area must represent a natural or cultural resource type that is not already adequately represented in the national park system, or is not comparably represented and protected for public enjoyment by other federal agencies; tribal, state, or local governments; or the private sector. The National Park Service determined that the San Gabriel Mountains and Puente-Chino Hills portions of the study area are suitable for inclusion in the national park system, based upon evaluation of the study area resources and their relative quality, character, and rarity. Together, the San Gabriel Mountains and Puente-Chino Hills contain a combination of themes and resources not found in any national park unit or comparably managed area.

Puente-Chino Hills

The Puente-Chino Hills have resources that are outstanding representations of habitat types not widely found in other national

park units or comparably managed sites. Represented within these themes are coastal sage scrub habitat and California walnut woodlands, both of which support rare and endangered plants and wildlife. Although coastal sage scrub is protected at several national park units, no other existing national park unit or comparably managed area protects a significant amount of the rare California walnut woodlands. Protected status for the Puente-Chino Hills within the study area would expand and enhance existing resource protection and ensure long-term conservation of the larger Puente-Chino Hills corridor. Located in close proximity to urban populations of the Los Angeles basin, universities and colleges, the Puente-Chino Hills provide excellent opportunities for interpretation, education, and scientific study.

Feasibility

To be feasible as a new unit of the national park system, an area must be: (1) of sufficient size and appropriate configuration to ensure sustainable resource protection and visitor enjoyment (taking into account current and potential impacts from sources beyond proposed park boundaries), and (2) capable of efficient administration by the National Park Service at a reasonable cost.

The proposed use is incompatible with the function of the Habitat Preserve Core Habitat function, and the functional loss of at least 31.94 acres of Core Habitat could potentially interfere with the Puente-Chino Hills function as parkland of national significance.

The project does not meet either of these two required standards and the Conditional Use Permit must be denied.

STANDARD 5. "THAT THE USE WILL, AS TO LOCATION, OPERATION AND DESIGN, BE CONSISTENT WITH THE GENERAL PLAN, ANY APPLICABLE SPECIFIC PLAN, AND THE WHITTIER ZONING REGULATIONS."

The evidence in the record and common sense support a conclusion that the project is not consistent with the General Plan or Whittier Zoning regulations:

1. The project is inconsistent with a number of key goals and policies in the General Plan, including but not limited to the following:

Environmental Resource Management Element

“Goal 1 – Preserve or conserve natural and cultural resources that have scientific, educational, economic, aesthetic, social and cultural value.”

Policy 1.2: the landform modification that would occur as a result of the project hardly constitutes soil conservation to retain native vegetation.

Despite the findings of the Revised DEIR, the proposed project would result in Significant Unavoidable aesthetic and hydrology and water quality impacts. As documented in the OSLDF2 comment letter contained in Appendix M, the project would result in impacts to federally designated Critical Habitat and RMP Core Habitat. This is a violation of Policy 1.3. The project is located and would divide core habitat and is thus not consistent with this policy.

Policy 1.4: rather than rehabilitate the oil fields for open space recreation or beneficial resource conservation, the proposed project reintroduces oil drilling within a habitat preserve and is therefore not consistent with this policy.

“Goal 3 – Secure a safe, healthful, and wholesome environment through careful planning and preservation of open space resources.”

The project would result in the loss of open space area. The proposed project also violates Policy 3.1 to “protect existing wildlife habitats through the preservation of open space” due to impacts to Critical and Core Habitat. The DEIR admits to 6 Significant Unavoidable Impacts and we have documented a number of other Significant Unavoidable Impacts in comment letter OSLDF2. Policy 3.2, which states, “future hillside development will be permitted or approved only if it involves minimal adverse impacts on the environment and natural topography,” is also clearly violated by this project by a project with somewhere between 30 and 40 acres of impacts to Critical and Core Habitat.

Land Use Element

Policy 1.1: Although the project would pay some monies to the Habitat Authority, this does not remove the impacts of the project on the Preserve.

Policy 1.2: since it is unclear how much of any revenues would accrue to the City vs the County and how those revenues would be used or restricted, the statement in the FEIR that oil revenues "would increase potential for civic improvements and future investment in the City" is without merit.

Policy 1.3: The OSLDF2 comment letter documents the on-going CEQA violations that have been a part of the City's review process for this project.

Policy 4.1: a project that involves 40 acres of impacts to a Habitat Preserve is hardly compatible with the environment.

Policy 4.4: there has been no demonstration that the City has worked with county, state and federal agencies on the design and review of this project.

Policy 4.5: the applicant should have submitted detailed construction drawings and grading plans as part of the CUP application, but has not, as detailed in OSLDF2.

Policy 5.1: the proposed project would reduce recreational opportunities within the City.

Policy 6.4: the project does not promote the preservation of important ecological resources, since it impacts critical and core habitat.

2. The project is also inconsistent with a number of Municipal Code sections. For example, given the location in proximity to both a school and single-family homes, it is clear that the phase of the project currently under consideration would violate Section 83.20.40 of the City's Municipal Code regarding noise. Section 83.20.40 of the City's Municipal Code - Loud, annoying and unnecessary noises—Enumerated – of the City's Municipal Code states, in part (emphasis added) that:

The city council finds the following to be loud, annoying and unnecessary noises, which are hereby declared to be in violation of this chapter; this list is deemed illustrative and

shall not be construed in any way to be an exclusive or all-inclusive list of the noises prohibited by this chapter, it being the intent and purpose of this chapter to include and prohibit all noises of the character described in this section. Where no specific distance is set for the determination of audibility, reference to noise disturbance shall be deemed to mean plainly audible at a distance of one hundred feet from the real property boundary of the source of the sound, if the sound occurs on privately owned property, or from the source of the sound, if the sound occurs on the public right-of-way, public property, or private property open to the public. References to "adjacent" or "neighboring" residences or units in this section shall mean those residences or units located next to or in close proximity to the source of the noise, and no specific distance standard shall be required for such locations.

J. Noise in Proximity to Schools, Courts, Churches or Hospitals. The creation of any excessive noise on any street adjacent to a school, institution of learning, church or court while such facilities are in use, or adjacent to any hospital which unreasonably interferes with the work of the institution or which disturbs or unduly annoys patients of the hospital; however, this subsection shall not apply unless conspicuous signs are displayed in such streets indicating that there is located in the vicinity a school, hospital, court or church.

M. Late night disturbances of any kind that are plainly audible by inhabitants or occupants of any adjacent or neighboring residential properties or units, or are plainly audible at a distance of fifty feet from a real property boundary, that occur during nighttime hours, shall be prima facie evidence of violation of this subsection.

The project does not meet this required standard and the Conditional Use Permit must be denied.

**THE RESOLUTION FOR APPROVAL OF THE CUP CONTAINS AN
INAPPROPRIATE USE OF OVERRIDING CONSIDERATIONS IN ORDER TO
JUSTIFY THE FINDINGS REQUIRED FOR A CUP**

The Resolution of the Planning Commission of the City of Whittier, California Approving Conditional Use Permit No. CUP09-004 included in the October 19, 2011 Planning Commission packet, inappropriately applies the concept of overriding considerations to required CUP findings. For example, Finding 3 states in part (emphasis added):

. . . Nevertheless, the EIR found that certain impacts cannot be reduced to less than significant levels and would remain significant and unavoidable. These impacts include air quality, aesthetics, hydrology and water quality, land use and policy consistency and recreation. However, *these potential impacts would be overridden by the benefits* of the restoration activities at the Preserve that would be undertaken as a result of the Project. Without the approval of the Project, the Preserve is unlikely to have funding that would allow continued restoration and preservation of the site. The Oil and Gas Lease between the City of Whittier and Matrix provides for continuing funding for the Habitat Authority with annual administrative fees and mitigation fees upon issuance and acceptance of a CUP. The Project would provide a stable source of funding for the Habitat Authority for as long as the wells produce oil and gas.

First, this misstates the record. The majority of the restoration that would be undertaken as a result of the Project is mitigation for project impacts, which would not occur, but for the project (See the FEIR Executive Summary pages ES-28 to ES-40 which detail the Biological Resource mitigation measures required to address the direct impacts of the proposed project).

Second, it is true that Section 2.2 of the Lease Agreement included as Appendix O to our OSDF2 comment letter (Appendix M at page M-575) requires that the Lessee shall pay the Habitat Authority a management fee of \$5,000 per month commencing on the date of acceptance of the CUP, increasing to \$7,000 per month once drilling begins, and a Habitat Enhancement Fee of one hundred thousand dollars per year (\$100,000). However, this is hardly a large windfall for the Puente Hills Landfill Native Habitat Preserve Authority (Habitat Authority) and does not really compensate for the additional management efforts necessitated by the Project or the harm to the larger Preserve.

This is evidenced by the comments in the Habitat Authority's comment letter on the Revised DEIR (comments PHLNHPA et. Seq.). It is clear that the Habitat Authority sees the Lease Agreement payments as inadequate to prevent harm to the preserve, without the provisions of mitigation, beyond that provided in the Revised DEIR. Specifically, that Habitat Authority states in its comment letter (beginning at Appendix M M-140):

The Habitat Authority would like to primarily focus attention to on its suggested mitigation measures regarding wildlife movement and native wildlife nursery sites that include, but are not limited to, implementing a bobcat study, building a wildlife overpass, supporting the designation of a new and/or expanded Core Habitat zone, and limiting recreation. Also, the DEIR inadequately described impacts to the Core Habitat. As a result several necessary mitigation measures were not incorporated into the document to minimize or avoid significant biological impacts. This caused the Proposed Project to miss its goal to, "Minimize impacts to the functioning of the Core Habitat of the Preserve." This may have also caused the Proposed Project to miss its goal to, "Minimize environmental impacts from the Project on the Preserve" (p. 2-2). There are also other impacts that are significant including but not limited to Noise/Vibration, Aesthetics, Land Use, and Recreation.

The Habitat Authority supports consideration of any alternatives that would place the Proposed Project outside of the Core Habitat or along the edge of the Preserve, and urges further analysis and consideration of an alternative with exclusive Catalina Avenue Access.

Overall, the Preserve represents a public investment of over \$48.5 million dollars, of which \$30.3 million was invested by the Habitat Authority, for acquisition (1,880 acres) for the purpose of biological preservation. The sustainability of the Habitat Authority-owned lands is biologically dependent on the nearby and adjacent open space lands owned by the City of Whittier. The Final EIR should address the importance of keeping the biological integrity of open space land within the Proposed Project area intact so it does not diminish the biological value of adjacent land owned by the Habitat Authority or other public agencies, such as other lands owned by the City of Whittier, County of Los Angeles or Sanitation Districts of Los Angeles County.

The Habitat Authority is concerned with the long-term viability of the functioning of the Core Habitat and consequently adjacent Habitat Authority-owned properties. Enacting the mitigation measures suggested or by supporting Project alternatives discussed in this letter will help to minimize negative impacts on the Preserve. (FEIR Appendix M at M-139 to M-140).

It is thus clear that the Habitat Authority does not view the proposed project as a positive for the Habitat Authority, and is merely hoping to avoid significant harm. In

addition, the FEIR rejects a number of the Habitat Authority's requested mitigation measures. The record does not provide evidence that payments to the Habitat Authority would outweigh the harm to Habitat Preserve. The record is more supportive of the conclusion that the Project represents net harm rather than a net benefit to the Habitat Preserve.

Third, the concept of overriding considerations is a CEQA concept, not a CUP concept. Overriding considerations may be used under CEQA to justify approval of a project with significant unmitigated impacts. However, no such use of overriding considerations applies to the consideration of a CUP application.

REASONS TO REJECT THE EIR

DEFECTS IN THE RDEIR HAVE NOT BEEN ADEQUATELY ADDRESSED IN THE FEIR

In our prior comment letter on the RDEIR (OSLDF2 in Appendix M) we documented the reasons why the RDEIR was legally deficient and why curing the defects in the document required recirculation. The responses to comments contained in Appendix M provide inadequate responses to the numerous issues raised by OSLDF and the other commenters. Perhaps, contrary to standard practice, this is why the comments and responses are hidden in an appendix to the FEIR, rather than being located in the body of the FEIR.

THERE ARE ADDITIONAL DEFECTS INTRODUCED IN THE FEIR

Comments and responses are a required component of an FEIR. It is inappropriate to hide the comments and responses in an appendix to the FEIR. FEIR page 1-11 indicates that appendices to the FEIR "are only available in electronic format on the CD attached to the inside front cover of the EIR notebook." Since appendices are typically a place for supplemental, not core information, it is far less likely that a Planning Commissioner or City Council person will find and read the comments and responses contained in Appendix M, particularly given the size of the agenda packet and the body of the existing FEIR they have before them.

Similarly, a new version of the project is hidden in "Appendix O - Potential Project Design Modifications Assessment." CEQA does not recognize the concept of design modifications; it recognizes the concept of projects, alternatives and mitigation measures. The version of the project hidden in Appendix O (Version 4) is either a project or an alternative. In either case it constitutes significant new information, requiring recirculation.

The version of the project contained in Appendix O is not an alternative or mitigation measure that clearly lessens the environmental impacts of the project. As stated on page O-19 of Appendix O:

Under the design modifications, the number of significant and unavoidable impacts would remain the same as the proposed Project. These would include:

1. Air Quality related to construction;
2. Air Quality related to GHG emissions;
3. Aesthetics related to the visual impacts of the drilling rig;
4. Hydrology related to the potential for oil spills;
5. Land Use related to the visual impacts of the drilling rig; and
6. Recreation related to the visual impacts of the drilling rig;

Of the remaining impacts in the FEIR, some impacts would be greater and some would be less under Version 4 of the project, the version analyzed in Appendix O, according to the analysis contained in Appendix O. This is not an alternative or revised version of the project that clearly lessens the environmental impacts of the project; no significant unmitigatable impacts are eliminated. Instead it is a project redesign or alternative that results in a different market-basket of impacts than the version of the project analyzed in the RDEIR. The FEIR deprives the public of the opportunity to comment on this significant new information – and the redesign of the project certainly qualifies as significant new information – or to vet the analysis of what the staff report clearly shows are changes in the actual project.

As a general rule, we are supportive of real efforts to reduce project impacts. However, the effectiveness of such efforts is impossible to evaluate without an accurate and real project description and assessment of impacts. The FEIR responses to comments display clear attempts to dodge the very real issues regarding the accuracy of the RDEIR's impact assessments, raised in the comment letters from OSLDF, agencies, organizations, and individuals. The following is an example of the kind of disingenuous response provided in the FEIR:

Comment OSLDF2-412 discussed the need for the RDEIR to identify that the project is inconsistent with the Resource Management Plan (RMP) for the Habitat Preserve and that this is an unavoidable impact of the project. The comment stated in part: "Any project which is located within the Core Habitat Management Area of the Habitat Authority's RMP would not be consistent with the RMP, since the Core Habitat area is intended to be off-limits to public or industrial use, and to be maintained for the sole purpose of providing undisturbed habitat for wildlife."

In response, FEIR Response to Comment OSLDF2-412 states: "The City of Whittier is the ultimate determinant of consistency issues with the RMP regarding the oil and gas development that is part of the proposed Project within the City's owned land that is part of the Preserve. The RMP has not been adopted by the City and the RMP does not carry the same weight as the City's General Plan and Zoning Ordinance."

This response is disingenuous for many reasons. First, a standard CEQA land use impact questions and threshold of significance is, will the project "conflict with any applicable habitat conservation plan or natural community conservation plan?" (per Appendix H of the CEQA Guidelines). Second, the RMP for the Habitat Preserve was adopted by the Habitat Authority Board, as evidenced by the Notice of Determination (NOD) for the RMP filed with the State Clearinghouse, which is included in Attachment E to this letter. Third, the Habitat Authority is a joint powers authority with four members: the City of Whittier, the County of Los Angeles, the Sanitation Districts of Los Angeles County, and the Hacienda Heights Improvement Association. The City of Whittier was thus one of the four members that approved the RMP.

REVISION AND RECIRCULATION OF A NEW DEIR IS REQUIRED

As detailed in our comment letter on the Revised DEIR (OSLDF2, included in FEIR Appendix M, beginning at page M321) and our Supplement Comments on the Revised DEIR (included in Attachment D of the October 19, 2011 Staff Analysis for Conditional Use Permit CUP09-004) the Revised DEIR for this project is fundamentally and basically inadequate and conclusory in nature. The document not only violates a number of key CEQA precepts, such as the prohibitions against piecemealing and post hoc rationalization, it also fails to identify a number of Significant Unavoidable Impacts, underestimates project impacts due to both failure to analyze the whole of an action and an inadequate and incomplete project description, and fails to address a number of the potential impact areas contained in the CEQA checklist. These defects have not been cured in the FEIR. The Revised DEIR is so fundamentally and completely inadequate that it must be completely rewritten.

In addition, the FEIR provides two additional reasons why the EIR must be redone and recirculated: the information added to the FEIR contained in Appendix O and new Mitigation Measure AE1-C.

THE DEIR IS SO FUNDAMENTALLY FLAWED THAT EVEN RECIRCULATION WILL NOT CURE THE DEFECTS IN THE PLANNING AND EIR PROCESS

However, simply responding to comments and recirculating the EIR will not cure the basic defects in the planning process. The City issued a Lease Agreement without

conducting appropriate environmental review or adequately considering the environmental, legal, economic, political and social consequences of the action. The only way to cure these fundamental breaches in the planning and EIR process is to cancel the Lease Agreement.

ADDITIONAL REASONS TO DENY THE PROJECT

The proposed phase 1 project and the project as a whole do not meet a number of the City's objectives for the project stated on RDEIR page ES-1:

Pursuant to Proposition A, the City arguably should be required to reimburse the full revenue stream from the proposed project, and any use of the revenue would be limited to Proposition A uses as specified in Section 16(a) of the authorizing statute under Proposition A. The City's objective of generating a substantial, long-term income stream for the City cannot be met.

Several years ago, the City told the public in its published briefing on the project that if, and only if, the project can be appropriately designed to meet the City's goals of absolute open space protection and preservation, would the City then consider the minimum drilling of test facilities to evaluate the potential for the extraction of these sub-surface minerals." The project will result in a loss of Critical and Core Habitat. A project with at least 6 significant unavoidable impacts doesn't meet this goal.

The proposed project is located within the Core Habitat portion of the Preserve, and will directly impact the viability and value of the Habitat Preserve. Both the Preserve and Core Habitat contribute to the viability of the larger wildlife corridor and the NPS's determination that the Puente-Chino Hills contain parkland of national significant. The proposed project will thus potentially affect the larger wildlife corridor and nationally significant parkland. According to the Habitat Authority's comment letter on the DEIR, the Habitat "Preserve is a public investment of over \$48.5 million dollars, of which \$30.3 million was invested by the Habitat Authority, for acquisition (1,880 acres) for the purpose of biological preservation." The phase 1 project and the project as a whole do not meet the City's objective of minimizing environmental impacts on the Preserve.

This project is potentially phase 1 of a larger project, as the Lease Agreement allows for an unlimited number of additional CUP applications for additional drill sites within the leased lands. Furthermore, as noted in Maintaining Ecological Connectivity Across the "Missing Middle" of the Puente-Chino Hills Wildlife Corridor (Conservation Biological Institute, 2005):

The Chino and Puente Hills form a peninsula of wild uplands that jut from the Santa Ana Mountains into the heart of one of the largest unbroken urban areas in North America. Created by shifting Earth

plates, this peninsula of wild in a sea of development supports a surprising diversity of native wildlife. Mountain lions still hunt mule deer in the area's diverse mosaic of grasslands, chaparral, coastal sage, and oak and walnut woodlands; roadrunners, California gnatcatchers, northern harriers, and other birds in decline throughout Southern California still persist here; as does a remarkably rich reptile and amphibian fauna.

Maintaining this diversity, and the web of healthy ecological interactions it represents, presumably requires keeping this range of hills fully connected by wild habitats along its 42 km (26 mi) length. Severing connections or blocking movement along this corridor with roads or housing projects threatens to extirpate species from this urban reserve system and degrade ecological health throughout this range of hills - thus eliminating a remarkable ecological classroom within easy reach of millions of people craving a connection with nature.

This loss would be doubly unfortunate given the tremendous public investment already made to conserve and restore biological open space and unfettered wildlife movement through this range of hills - from the Coal Canyon wildlife underpass at Highway 91, through Chino Hills State Park, Powder Canyon, Schabarum Park, and other private and public open space dedications to the western end of the Puente Hills (known locally as the Whittier Hills¹). According to the California Department of Parks and Recreation, nearly a quarter billion dollars have already been expended or committed to acquiring and restoring natural open space in the Puente-Chino Hills Wildlife Corridor (<http://hillsforeveryone.org/wildlife-corridor/state-investments.html>). But the benefits of these existing investments is severely threatened by proposed development projects - including new roads, housing developments, golf courses, and reservoirs.

The proposed phase 1 project and the project as a whole, would impact the value of this corridor and the nearly quarter billion dollar investment in its preservation.

The proposed project results in noise impacts on the Preserve's Habitat. According to the Revised DEIR Table 4.2-3 9.86 acres of the Preserve would be impacted by noise, including 9.42 acres of impact to areas that are currently not disturbed and contain habitat. It therefore does not meet the City's objective of minimizing noise impacts to surrounding areas.

As detailed in our comments on the RDEIR, the Traffic Impact Study included as a technical appendix to the Revised DEIR may understate the traffic impacts of the proposed phase I project. It is likely that the phase I project does not meet the City's objective of minimizing traffic impacts to surrounding areas. This is particularly true if one considers the impact of construction of the North/Landfill Access Road on the Habitat Preserve and potentially the landfill.

The proposed phase I project would be located in Core Habitat of the Preserve. The phase I project does not meet the City's objective of minimizing impacts to the functioning of the Core Habitat of the Preserve.

The proposed phase I project would introduce industrial uses into a recreational area, disrupting the area and resulting in the closure of trail segments. The proposed phase I project and alternatives, and the project as a whole, do not meet the City's objective of minimizing impacts to operational, recreational, and educational opportunities within the Preserve.

The proposed phase I project and alternatives would strike a blow to the heart of the Core Habitat area of the Preserve. The proposed phase I project and alternative and the project as a whole do not meet the City's objective of facilitating the long-term preservation and enhancement of the Preserve's ecological resources and native habitat

The proposed phase I project and the project as a whole do not meet the City's objective of maintaining reasonable fire safety levels for the community and open space, as the project places an oil facility and gas and oil pipelines within a extremely high fire hazard area and the project as currently designed does not have adequate fire flows.

The DEIR provides no remediation plan for the proposed project. Long-term remediation needs are unknown and costs are unclear. In addition, the City's potential liability from fires and other accidents is unclear.

The proposed project will impact residents directly and will interfere with their enjoyment of private and public property. The project will also impact some residents economically. According to the Socioeconomic Study contained in Appendix H of the DEIR, the residents in the immediate area of the project may experience a combined decrease in home value of \$2.2 million dollars. However, the analysis notes that it does not take into account the specific property value loss and the subsequent financial impact on individual property owners within the City. In addition, this study underestimates the economic impact of the project on City residents because the analysis is based on assessed housing prices, rather than current and pre-recession market prices.

As detailed in this comment letter, the proposed phase I project and alternatives do not meet the conditions necessary for obtaining a Conditional Use Permit. At a

Comments Submitted to the Planning Commission
By Open Space Legal Defense Fund
October 19, 2011
Page 23

minimum the Proposed Project (i.e. Version 3) and the Appendix O version of the project (i.e. Version 4) would result in 6 Significant Unmitigated Impacts and the alternative project would result in 6-8 Significant Unmitigated Impacts. As detailed in our comment letter contained in FEIR Appendix M, both would in fact result in substantially greater impacts than identified in the RDEIR.

The project applicant has not complied with the terms of the Lease Agreement. The Conditional Use Permit application that was submitted was not consistent with the limitations on the acreage contained in the Lease Agreement and the Revised CUP application was incomplete.

We therefore urge you to deny the Conditional Use Permit and reject the FEIR as inadequate. Please act as a representative of the community and deny this poorly articulated and ill-conceived project.

Sincerely,



Susan J. O'Carroll
President, Pareto Planning and Environmental Services

Attachments:

- A Open Space Legal Defense Fund Video Comments on the Project and FEIR
- B The project versions
- C Whittier Daily News Article: "Matrix drilling in Sycamore Canyon poses problems for nearby residents" dated October 16, 2011 by Mike Sprague, Staff Writer.
- D Excerpts from: "Draft San Gabriel Watershed and Mountains Special Resource Study and Environmental Assessment," September 2011, National Parks Service, U.S. Department of the Interior.
- E Notice of Determination for the Resource Management Plan,

ATTACHMENT A

OPEN SPACE LEGAL DEFENSE FUND
VIDEO COMMENTS ON THE PROJECT AND FEIR



ATTACHMENT B

THE PROJECT VERSIONS

THE PROJECT VERSIONS

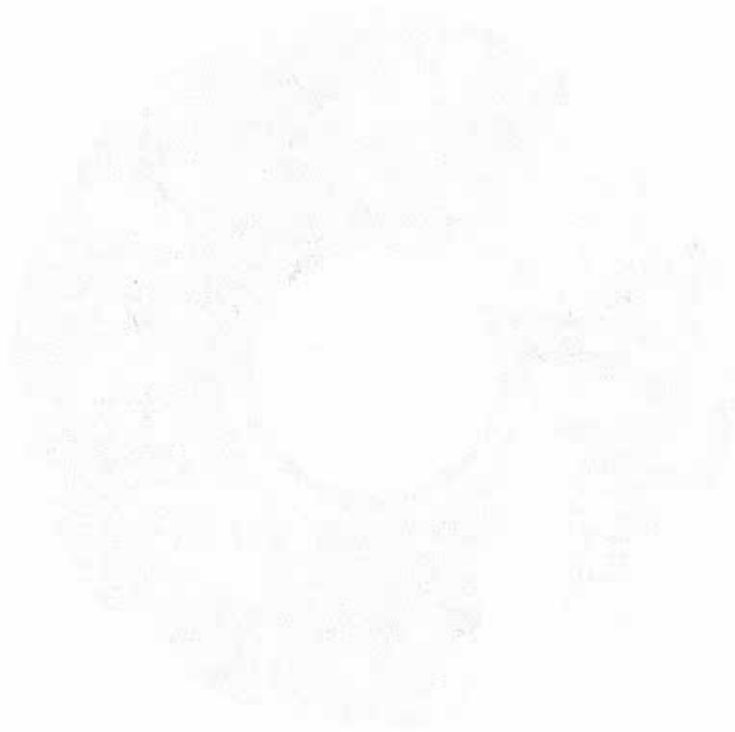


FIGURE 1 - THE CONSOLIDATED CENTRAL SITE/ENVIRONMENTALLY SUPERIOR ALTERNATIVE FROM THE ORIGINAL DEIR - (53,670 CY CUT, 30,500 CY FILL AND 22,170 CY OF SOIL EXPORT)

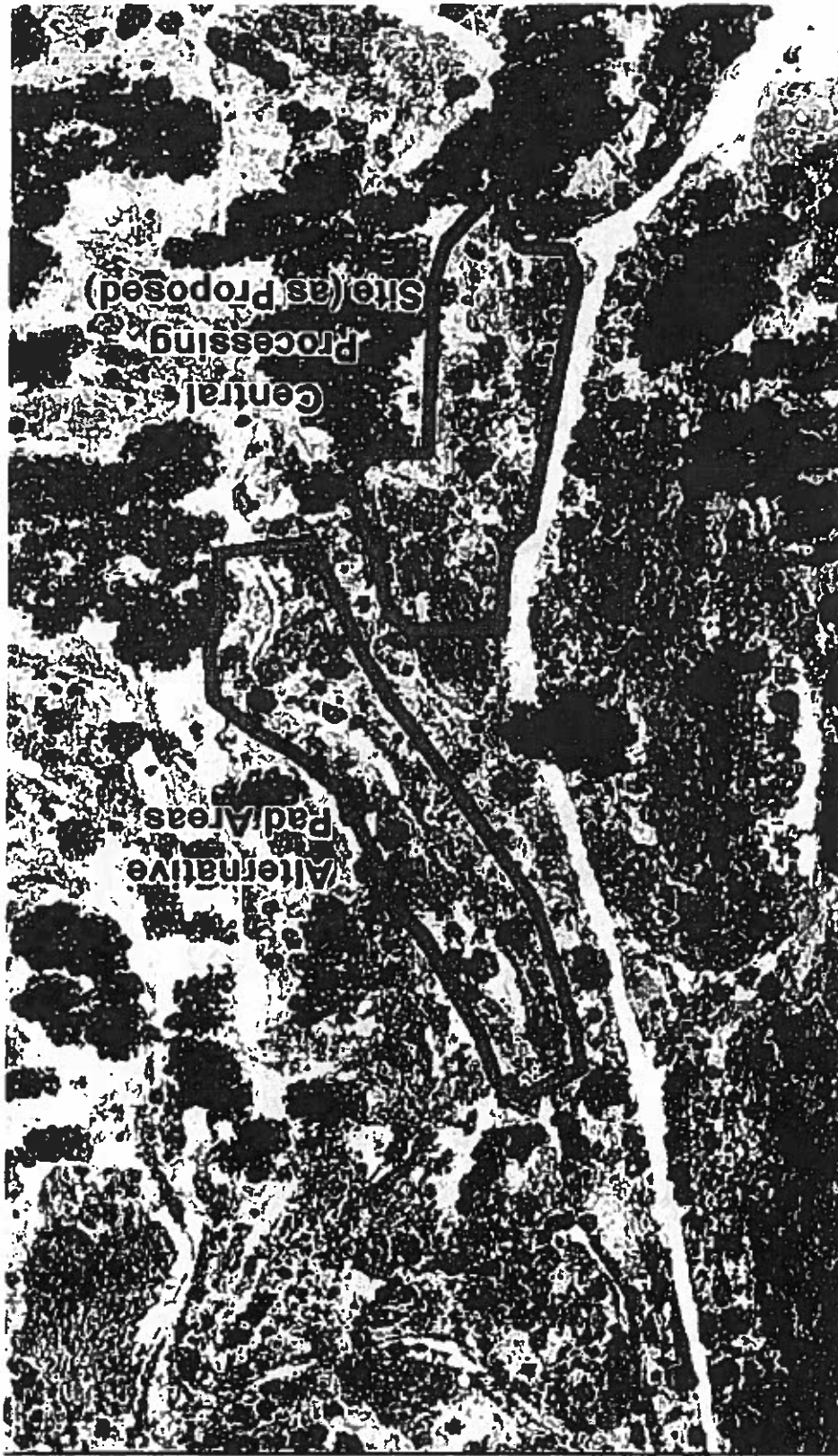


FIGURE 2 - THE REVISED CUP/NOP VERSION OF THE CONSOLIDATED CENTRAL SITE - (131,000 CY CUT, 43,500 CY FILL, AND 87,500 CY OF SOIL EXPORT)

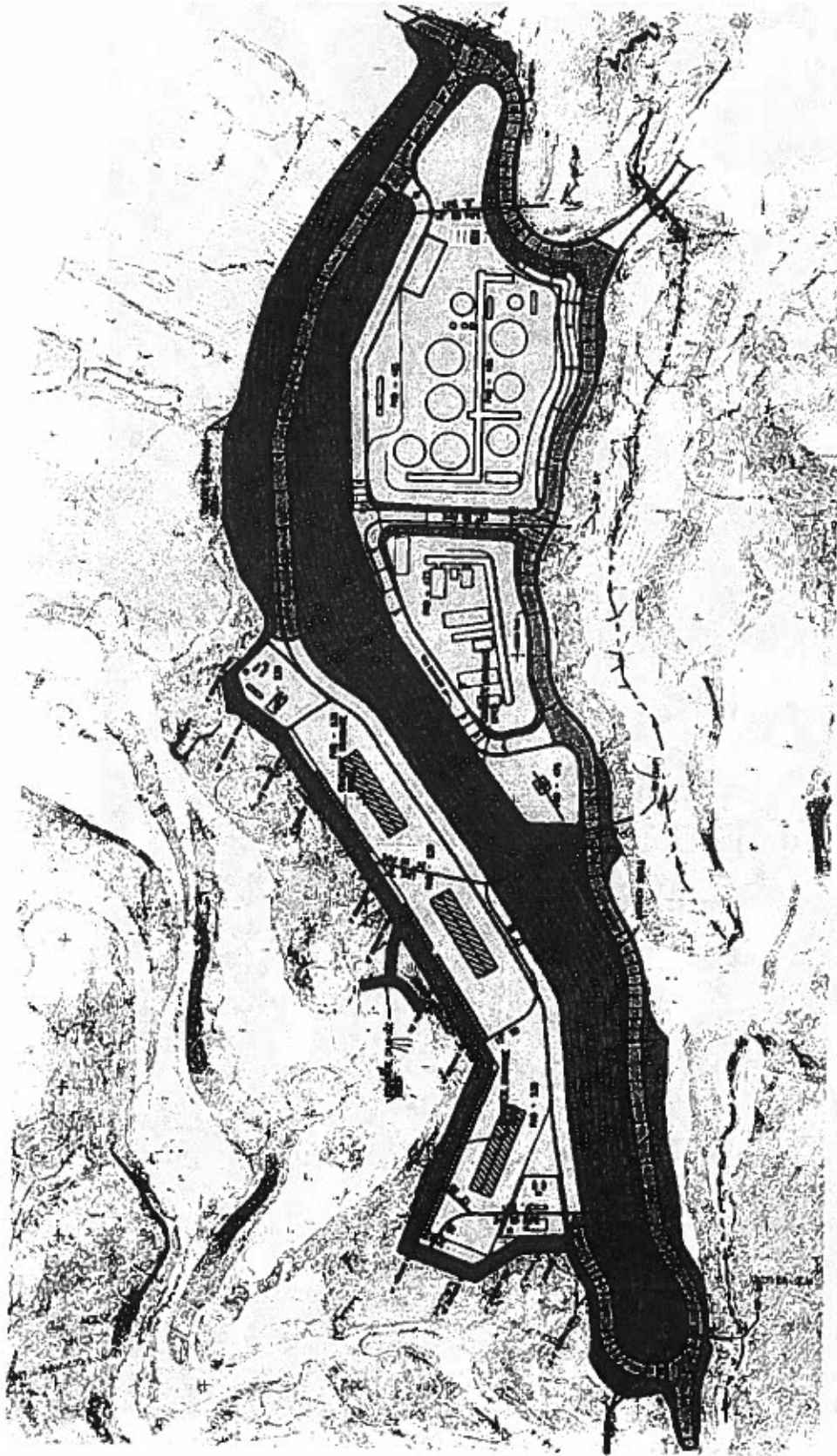


FIGURE 3: VERSION 2B - THE VERSION OF THE CONSOLIDATED CENTRAL SITE CONTAINED IN THE GEOTECHNICAL REPORT CONTAINED IN APPENDIX L OF THE FEIR (VERSION 2 PLUS REMEDIAL GRADING - (UNKNOWN CUT, FILL AND SOIL EXPORT)

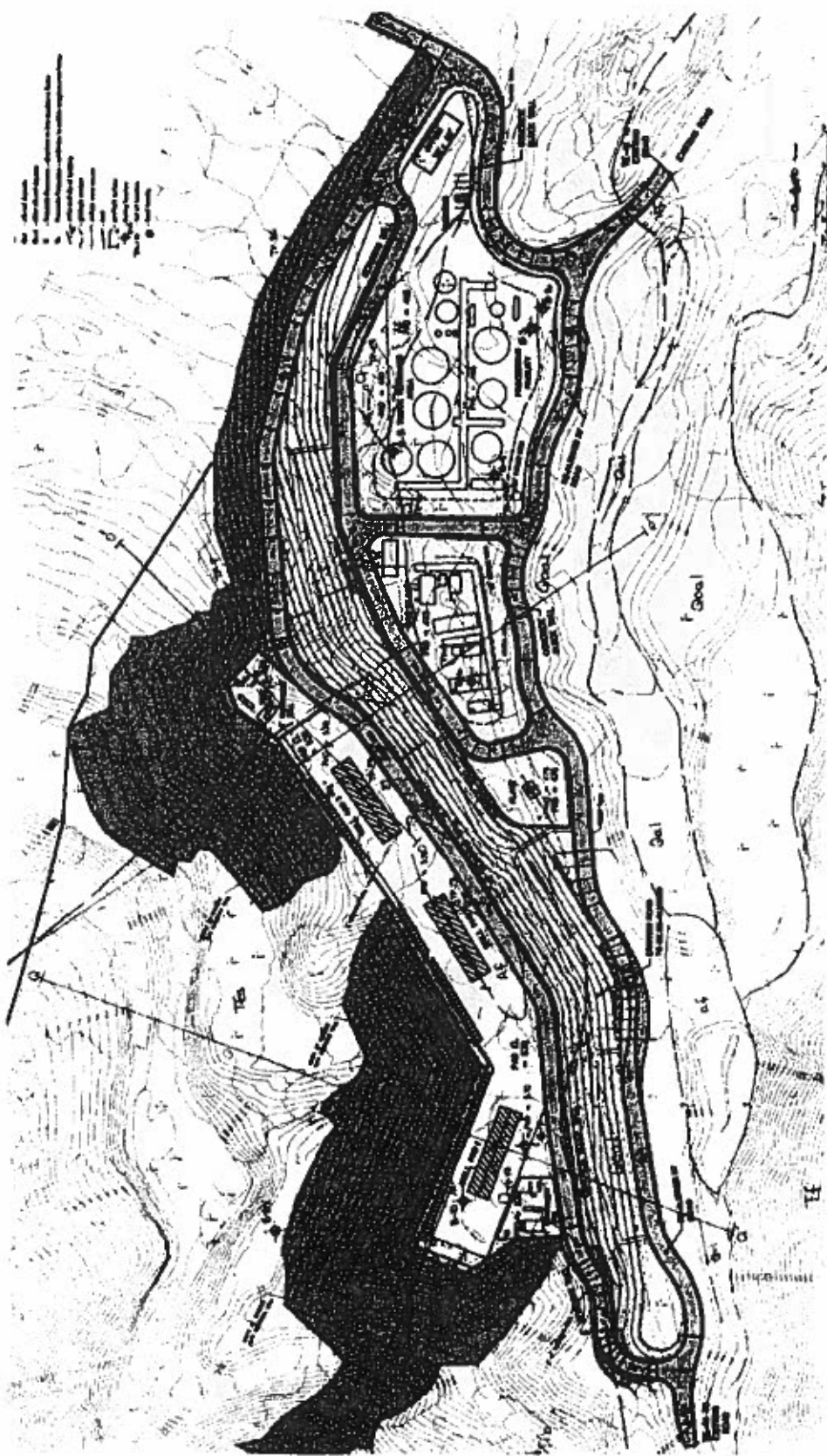
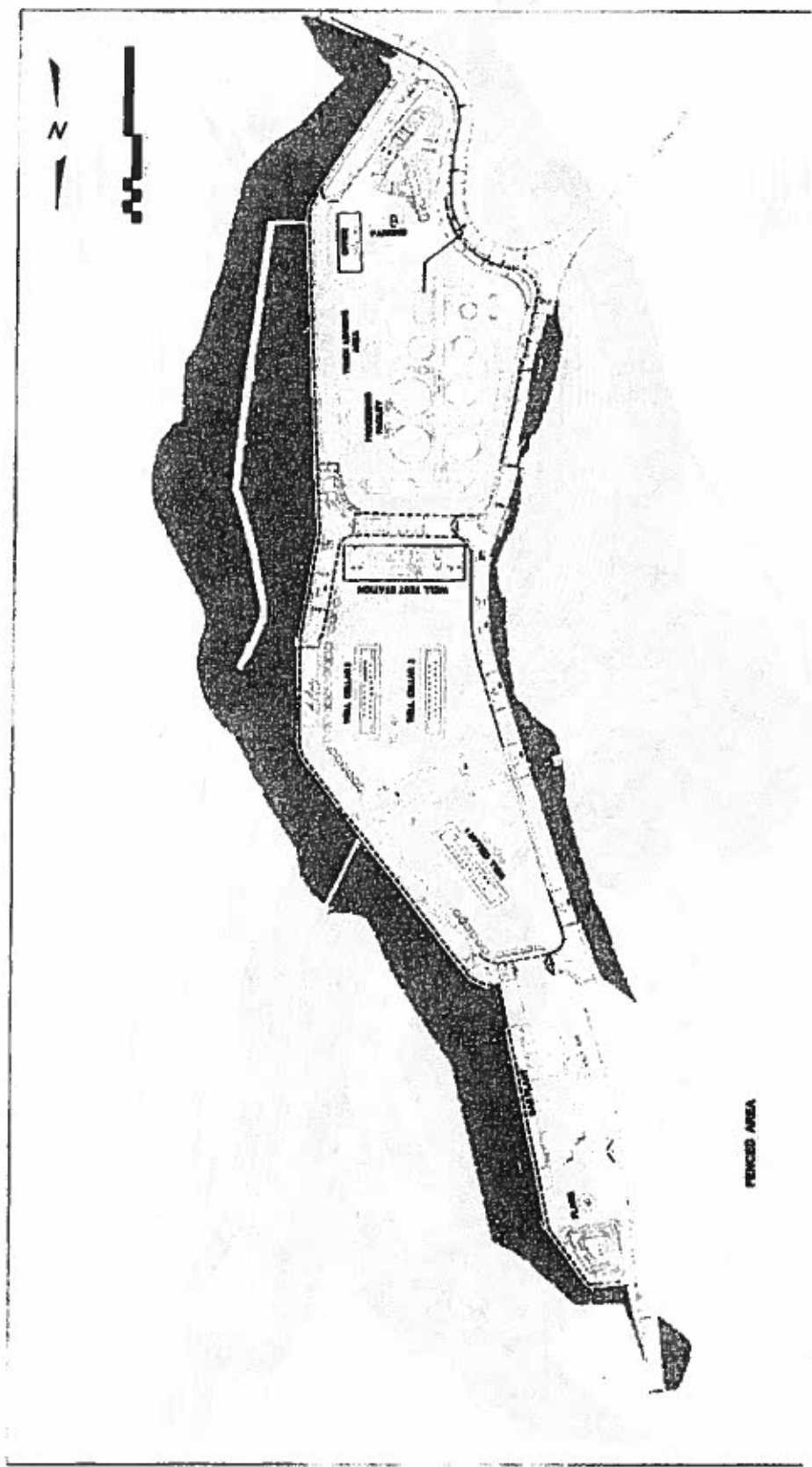


FIGURE 4: VERSION 3 - THE VERSION OF THE CONSOLIDATED CENTRAL SITE ANALYZED IN THE REVISED DEIR (180,000 CY CUT, 31,000 CY FILL, AND 149,000 CY OF SOIL EXPORT)



1. THE DEIR IS A PUBLIC DOCUMENT AND IS AVAILABLE TO THE PUBLIC. IT IS THE POLICY OF THE BUREAU OF RECLAMATION TO MAKE ALL INFORMATION CONTAINED HEREIN AVAILABLE TO THE PUBLIC.

FIGURE 5: VERSION 4 - THE VERSION OF THE CONSOLIDATED CENTRAL SITE HIDDEN IN APPENDIX O OF THE FINAL EIR AND CALLED "POTENTIAL PROJECT DESIGN MODIFICATIONS" - (UNKNOWN CUT, UNKNOWN FILL, APPENDIX O STATES ZERO SOIL EXPORT)

Modifications Layout

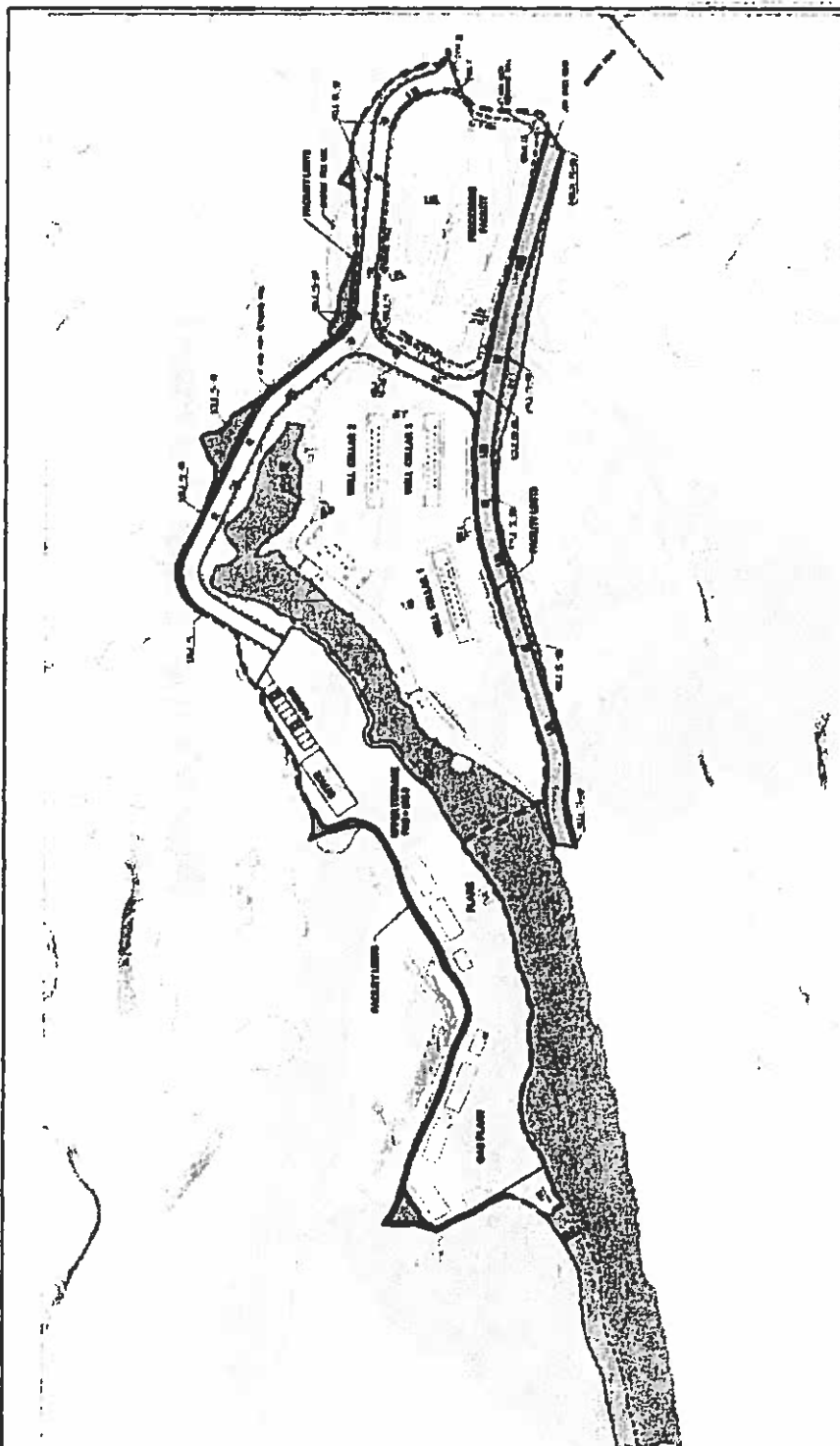
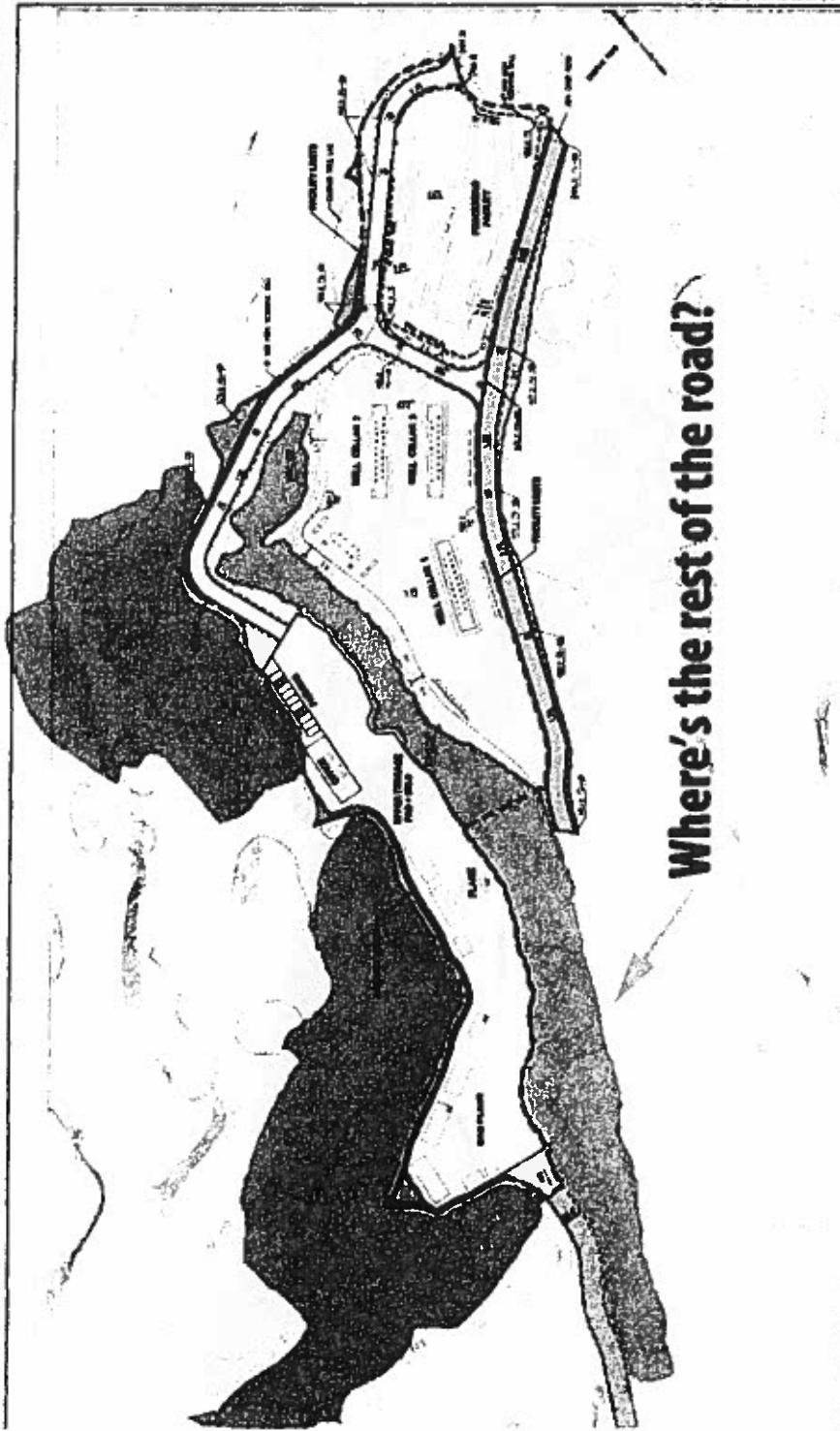


FIGURE 6: VERSION 4B - VERSION 4 WITH THE REMEDIAL GRADING REQUIRED BY THE GEOTECHNICAL REPORT IN APPENDIX L - (UNKNOWN CUT, FILL AND SOIL EXPORT)

Modifications Layout



Where's the rest of the road?

VERSION 5 - THE POST-APPROVAL CONSOLIDATED CENTRAL SITE REDESIGN SPECIFIED IN MITIGATION MEASURE AE1-C - (UNKNOWN DESIGN, CUT, FILL, OR SOIL EXPORT

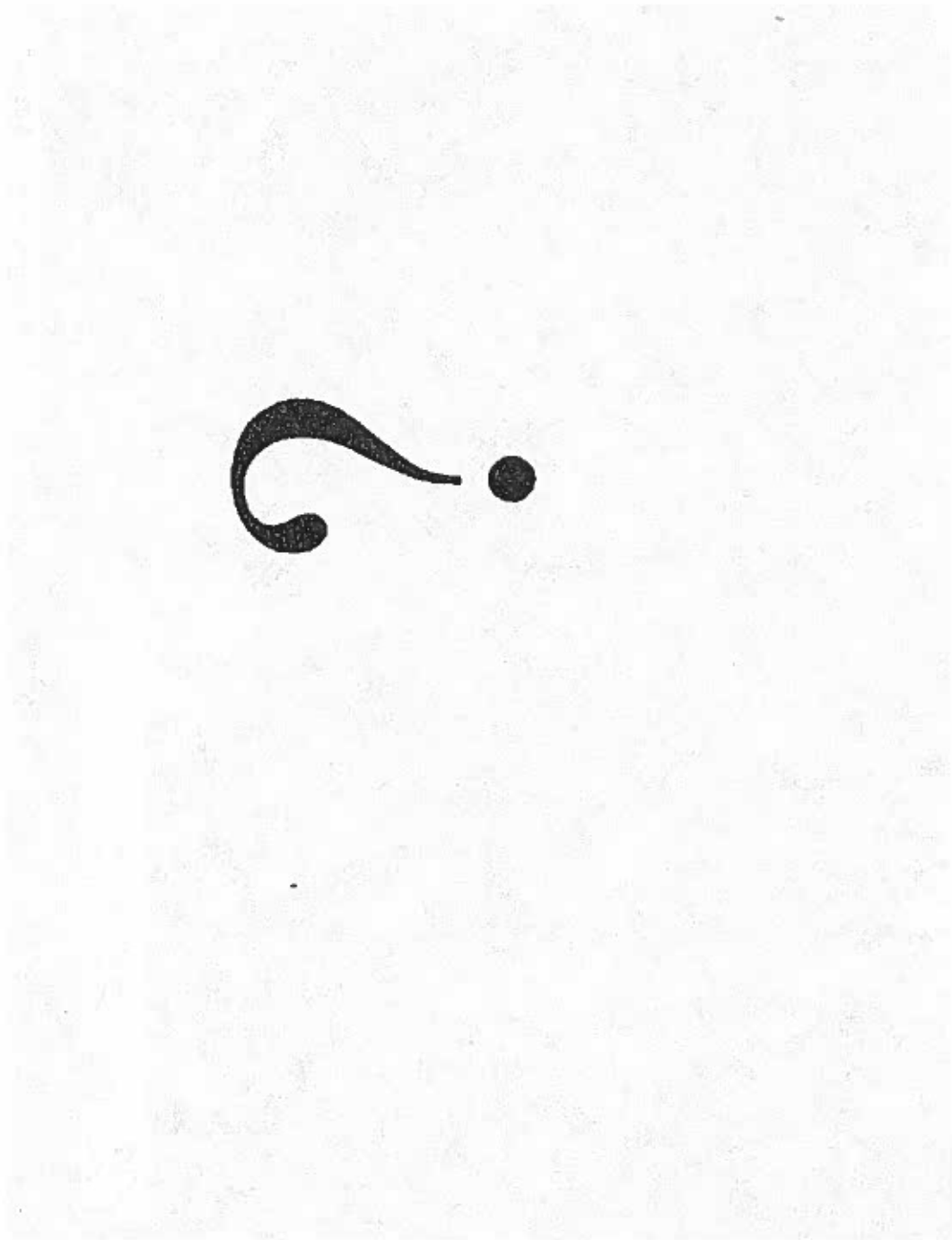
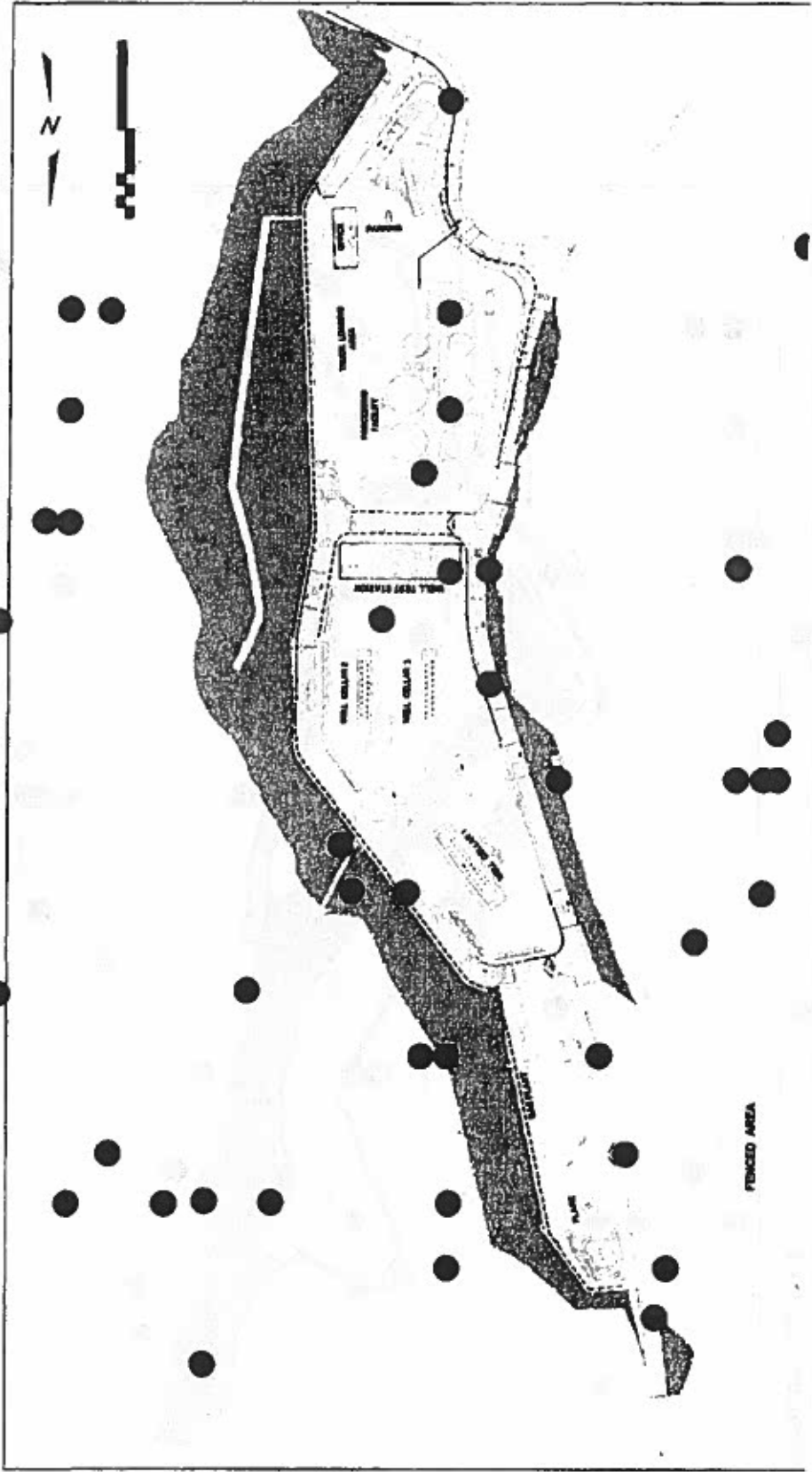


FIGURE 7: APPROXIMATE LOCATION OF ABANDONED WELLS IN PROJECT VICINITY (per DOGGR online mapping tool)



FIGURE 8: APPROXIMATE LOCATION OF ABANDONED WELLS IN RELATION TO CENTRAL SITE VERSION 3 (RDEIR VERSION)



U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
1000 East 17th Avenue, Denver, Colorado 80202-4800
303-733-9000

FIGURE 9: APPROXIMATE LOCATION OF ABANDONED WELLS IN RELATION TO CENTRAL SITE VERSION 4
(APPENDIX O VERSION)



33 35

D

ATTACHMENT C

**WHITTIER DAILY NEWS ARTICLE:
"MATRIX DRILLING IN SYCAMORE CANYON
POSES PROBLEMS FOR NEARBY RESIDENTS"
DATED OCTOBER 16, 2011
BY MIKE SPRAGUE, STAFF WRITER**

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- 5. Matrix drilling in Sycamore Canyon poses problems for nearby residents
- 6. Three women accused of home-invasion robbery near Whittier
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- 10. Whittier man, 78, inducted into senior hall of fame

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Matrix drilling in Sycamore Canyon poses problems for nearby residents

By Mike Serrano, Staff Writer
Posted: 10/16/2011 08:51:20 PM PDT

Editor's note: The Whittier Planning Commission will hold a public hearing Wednesday on whether to drill for oil. This is first of a three-part series that will look at several issues that have arisen since city officials proposed the idea 3 1/2 years ago.

WHITTIER - Cindy Grubb has lived in her condominium just above Sycamore Canyon near Workmen Mill Road for 20 years, and for most of it she wasn't concerned that there were oil wells 600 feet away.

But no more.

"Until they (started) the drilling and burn-off, it never affected me," she said. "(Now) it hurts my ears, the walls shake. It feels like an earthquake. The windows rattle. The (diesel) fumes are bad. You can hardly stay home when (drilling) is going."

Grubb isn't the only resident in the Showcase Villa Homeowners Association No. 7 who is complaining about the oil drilling done by Matrix Oil Co., the same company that wants to drill for oil in the Whittier hills.

Matrix Oil Co. bought the west Whittier field that includes the drilling operation in June 2001 from Venoco, and oil has been produced from that area since the 1970s.

But from 1978 until 2007, no new wells were drilled.

However, in the last four years, Matrix has drilled seven new wells.

During that time, residents who live nearest the field have become upset over noise and vibrations from the drilling.

Alexis Sokol, homeowners association president, said she estimates



Residents who live above Sycamore Canyon in Whittier are unhappy also at the noise and vibrations from drilling near their homes by the Matrix Oil Co. In the past four years, Matrix has drilled seven new oil wells at the 1-acre site. (Watchers Photo/Staff Photographer)

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that about 36 to 40 of the homeowners in the 100-unit condominium complex are affected.

"It really is dependent on where they live in the complex," Sokol said. "The people who live in proximity (to the oil drilling) are annoyed because it impacts them. But if we walked over to Terra Novera, there are people there who probably don't even know there are oil wells."

Mike McCaskey, vice president of Matrix Oil Co., said his company is trying to ensure the drilling doesn't impact residents by working to soundproof the area.

"If we can figure out a way to build a permanent sound wall we will do that," McCaskey said.

"Unfortunately, the site is very small (about 1 acre)," he said. "It's steady there, and we have

less to work with."

In comparison, the Whittier Hills site is more than 7 acres.

McCaskey said Matrix officials have met with residents about their concerns and paid to double-pane one person's windows.

"We did a lot of sound testing in the last drilling, and any future wells will be completely soundproofed," he said. "We have converted most wells to electric pumps to reduce noise."

Unfair comparison

McCaskey also said it's unfair to compare the Sycamore Canyon site with the one in the Whittier Hills that the Planning Commission will consider on Wednesday.

"We can build it from scratch," he said. "We can put a sound wall, put everything underground and have the newest type of flares."

In addition, the Whittier Hills site is 2,000 feet away from homes with hills in the way, making soundproofing easier, he said.

While the Showcase Villa condominiums are about 800 feet above the oil-drilling area, the Whittier Hills site is at the same elevation.

That also makes a difference, McCaskey said.

But Matrix has had problems at the Sycamore Canyon drilling operation.

The South Coast Air Quality Management District in June 2010 found that Matrix in 2009 had exceeded the permissible amount of days it is allowed to burn off unusable gas.

McCaskey said the company was forced to flare or burn off the gas more than planned because it didn't have access to a Southern California Gas Co. line.

In addition, there was a disagreement over measurement, McCaskey said.

"We measure it in total hours, and (AQMD) measured it in total days," he said. "We flared 13 more days than we were supposed to."

But that flaring is a pain, said Neal Kakuska, who of all the residents probably lives closest to the current oil-drilling area.

Kakuska, who filed the complaint with the AQMD, said he was notified by Matrix about the drilling before it began. The company offered to put him up in a hotel or buy him some headphones for sleeping.

He chose not to take the company up on the offer thinking it wouldn't be that bad. He found that he was wrong.

"It's very stressful," Kakuska said. "It diminishes the quality of my life. There are times I think I've got to get out of the house. Concussions are created by the flare. I can put my hand on the front door and feel it vibrate."

And the problems with the AQMD don't bring trust in Matrix, said Showcase Villa resident Ted Snyder.

"Although Matrix seems to be responsible in addressing problems that come to their attention, in several instances it has taken a third party, like the AQMD in our case," Snyder said.

"This does not inspire confidence in their corporate oversight and accountability," he said. "If the city of Whittier goes forward with plans for a new well site in the hills, I would recommend they demand greater personal accountability and more rigorous oversight by Matrix than seems to have been present here."

Fumes bother some

Bob Anderson, who has lived in the area for about 30 years, said the problem for him is the diesel fumes.

"It's not all the time, and more dependent on weather," he said.

"The only time it occurs is when the weather is stable, basically wintertime when we have clear evenings," he said. "I've occasionally had to lock the house and seal up all the cracks because the diesel fumes are so strong."

Anderson said of late, flaring hasn't been a problem like it was.

One complaint from residents may be unfounded.

John Montgomery said that when it rains, water comes down that smells like rotten eggs.

But Andrea Guilo, executive director of the Puente Hills Landfill Native Habitat Preservation Authority, confirmed that there is a former hot springs in the Sycamore Canyon area.

McCaskey said his company has a proposal to restore the creek, but it still must be approved by several state and federal agencies.

But even with all the problems, most of the residents say they don't really want to move.

"I have looked, but I love my view," Grubb said. "I keep hoping (the drilling) was going to quit. For a while, it was pretty good. The plume wasn't burning, but now they're back to doing it."

NEXT: What is "tracking"? Will this type of drilling be used in the Whittier Hills project? What do oil experts say?

ATTACHMENT D

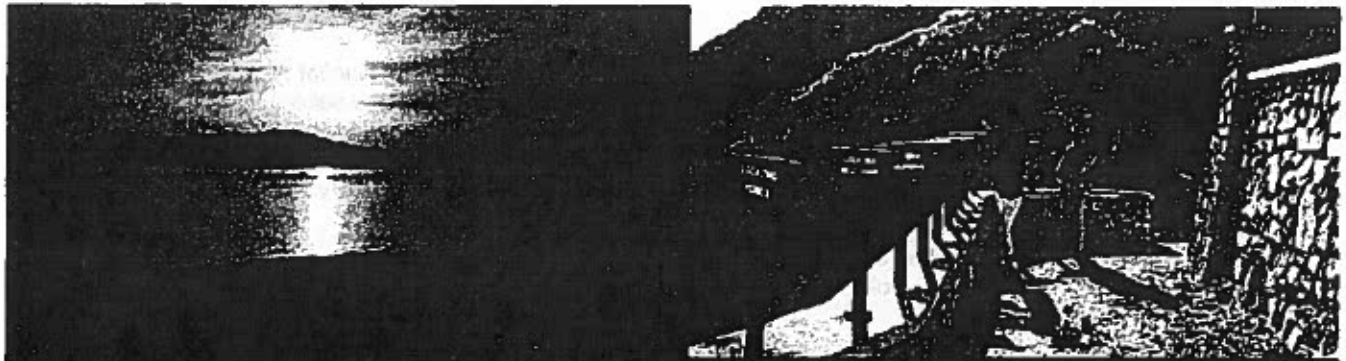
EXCERPTS FROM:

**“DRAFT SAN GABRIEL WATERSHED AND
MOUNTAINS SPECIAL RESOURCE STUDY AND
ENVIRONMENTAL ASSESSMENT”**

SEPTEMBER 2011

NATIONAL PARKS SERVICE

U.S. DEPARTMENT OF THE INTERIOR



Draft

San Gabriel Watershed and Mountains

Special Resource Study and Environmental Assessment

September 2011

Produced by the Pacific West Regional Office
Park Planning and Environmental Compliance
National Park Service
San Francisco, California

U.S. Department of the Interior
Washington, DC



Top, left to right: Frank G. Bonelli Regional Park, NPS photo; Inspiration Point, Angeles National Forest, NPS photo.
Bottom: Eaton Canyon Natural Area, NPS photo.

within a 90-minute drive to the San Gabriel Mountains. The mountains have a long history of research in geology, Mediterranean ecosystems, and astronomy.

- The San Gabriel Mountains retain a high degree of integrity and contain relatively unspoiled examples of significant resources, despite impacts in some areas from reservoirs, utilities, fire, roads, and recreational use.

Puente-Chino Hills

CRITERION 1: IT IS AN OUTSTANDING EXAMPLE OF A PARTICULAR TYPE OF RESOURCE.

Natural Resources

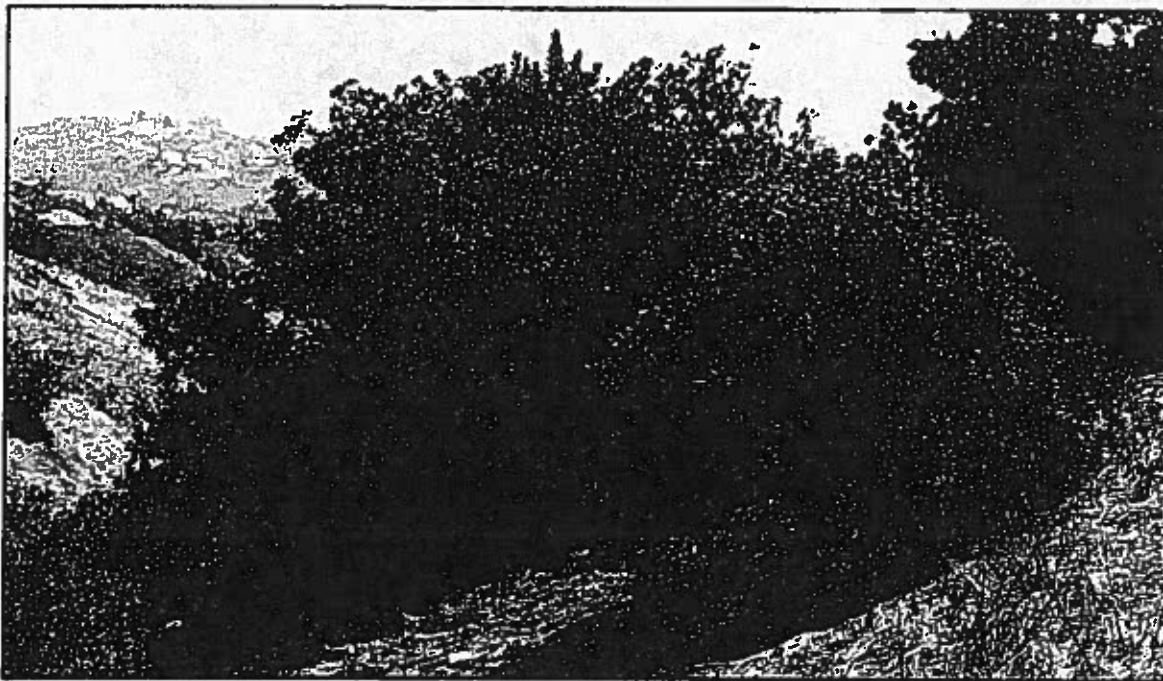
High levels of biodiversity. The Puente-Chino Hills in the Los Angeles basin contain a diversity of native plant communities. Although this area is somewhat of an island of open space within urbanized areas, the Puente Hills along with the Chino Hills and the Santa Ana Mountains to the southeast together encompass over 500,000 acres of wildlands containing significant biological resources (Noss, Beir and Shaw n.d.). Covering over 40,000 acres within the study area, the Puente-Chino Hills are an important component of this regional wildlife corridor (Puente Hills Landfill Native Habitat Authority 2007). This mountain system is associated with the active Whittier-Elsinore fault system. Maintaining this contiguous corridor is a high priority for state and local conservation agencies.

"When combined with other habitat types in the area, such as chaparral and oak/sycamore woodland, the vegetation provides habitat for a unique assemblage of plants and animals" (Puente Hills Landfill Native Habitat Preservation Authority 2007).

Despite its proximity to millions of people, the Puente-Chino Hills contain over 300 species of birds, deer herds, predators such as bobcats and coyotes, and one of the most diverse raptor populations in southern California. Twenty-two raptor species have been observed in the Puente-Chino Hills. Many of these species rely on connections to the larger regional corridor (Puente Hills Landfill Native Habitat Authority 2007).

Within the study area, the Puente-Chino Hills provide habitat for sensitive, rare, threatened or endangered species. Federally listed threatened or endangered plants and animals include Brauntern's milk vetch (*Astragalus leucolobus*), least Bell's vireo (*Vireo bellii pusillus*) (FE), southwestern willow flycatcher (*Empidonax traillii extimus*) and coastal California gnatcatcher (*Poliioptila californica californica*). The U.S. Fish and Wildlife Service has designated much of the Puente-Chino Hills as critical habitat for the California coastal gnatcatcher (Puente Hills Landfill Native Habitat Authority 2007, CDFG 2006, USFWS 2007, Scott and Cooper 1999).

Most of the Los Angeles basin's native plant communities have been destroyed by development.



California walnut. Photo courtesy of BonTerra Consulting.

However, excellent examples of coastal sage scrub and California walnut woodlands remain in the Puente-Chino Hills. Coastal sage scrub is one of the most threatened plant communities in California. Since 1945, the majority of coastal sage scrub vegetation in California has been lost to urban and agricultural land use (Kirkpatrick and Hutchinson 1980). Only 15% of coastal sage scrub's historic range remains in southern California. This habitat is of the highest priority for preservation (Davis et al. 1998, Mistretta 2007, personal communication, NPS 1973).

The Puente-Chino Hills are a transitional area for Venturan to Diegan coastal sage scrub communities. The California Natural Community Conservation Program identified the Puente-Chino Hills as a functioning biological unit of high conservation value for coastal sage scrub (Puente Hills Landfill Native Habitat Preservation Authority 2007, CDFG 1993).

California walnut (*Juglans californica*) woodlands and forests are found only in southern California. The historic distribution of California walnut woodlands and forests is limited to the areas between the Santa Clara River drainage in Ventura County on the north and the Chino Hills on the south. Outside this range, walnuts only occur interspersed with other foothill woodland species such as oaks (Quinn 1990).

Contiguous stands of walnut woodlands and forests once lined the Puente-Chino and San Jose Hills, favoring shale soils that have a high water-holding capacity. Walnut woodlands and forests provide habitat for deer, nesting birds, and rodents.

Today, California walnut woodland communities are in decline and residual stands are extremely limited. According to the California Natural Diversity Database (CNDDDB), walnut forests are only found in small areas of Ventura and Los Angeles Counties. The best remaining stands of California walnut-dominated forests and woodlands south of Ventura County are located in the San Jose and Puente-Chino Hills. These stands have adapted to their local site characteristics and differ from the Ventura County stands in morphology and canopy structure (Quinn 1990).

The CNDDDB has on record approximately 17,000 acres of remaining California walnut woodlands and forests. Approximately 2,300 acres are located in the study area. Only a small percentage (8%) of the California walnut woodlands and forests within the study area are in public ownership (CDFG 2006). Some of the prime examples are currently in

private ownership. (Quinn 1990).

In 1973, a National Park Service study identified a grove of walnut woodlands in Diamond Bar as a potential National Natural Landmark (NPS 1973). Although this particular woodland has been reduced somewhat by development, woodlands and forests in nearby Brea and Tonner Canyons remain outstanding examples of walnut woodlands (Quinn 1990; PCR Services Corporation 2006).

Native walnut trees played an important role in the history of the region. During the 1900s, walnut production was almost entirely from Southern California. Success was due in part to use of the native walnuts to hybridize commercial walnut trees. Hybridization with native walnut trees improved the walnut's resistance to heat. The Paradox Hybrid Walnut Tree in Whittier, a state historical landmark, was planted in 1907 by the University of California. This landmark tree represents the once flourishing walnut industry in Southern California.

Wildlife within the Puente Hills is diverse and abundant due to the large acreage of natural open space, the habitat types, and regional connectivity. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all the vegetation communities within the area and connected areas constitutes a functional ecosystem for a wide variety of wildlife species. This includes areas both within the Puente Hills as well as the regional ecosystem. Habitat in the Puente Hills supports migrating large mammals, over-wintering birds of prey and nesting songbirds, including the California gnatcatcher (PCR Services Corp. 2006).

Cultural Resources

Although there appear to be no nationally significant cultural resources in the Puente Chino Hills, the natural landscape contributes to the significance of the Juan Bautista de Anza National Historic Trail and the Old Spanish National Historic Trail. The Puente Hills also contain numerous cultural resources of state and local significances representing the Spanish/Mexican Rancho Period and historic oil industry sites.

Criterion 1 Conclusion

The Puente-Chino hills contain a high level of biodiversity and outstanding examples of southern California communities including coastal sage scrub, one of the most endangered plant communities in California, and the best remaining stands of California walnut-dominated forests and

woodlands in their southern limit of distribution. The Puente-Chino Hills meet criterion 1.

CRITERION 2: IT POSSESSES EXCEPTIONAL VALUE OR QUALITY IN ILLUSTRATING OR INTERPRETING THE NATURAL OR CULTURAL THEMES OF OUR NATION'S HERITAGE.

Land Ecosystems Themes

The Puente Hills resources possess exceptional value in illustrating NPS natural history themes. Chapter 4, *Suitability*, includes an evaluation of themes represented by resources in the study area in terms of their current representation in the National Park System.

The following sub-themes related to Land Ecosystems are represented in the Puente-Chino Hills:

- **Chaparral:** The Puente-Chino Hills contain exceptional examples of coastal sage scrub. A unique transition zone between northern and southern affinities, coastal sage scrub in the Puente-Chino Hills provides habitat for rare, threatened, and endangered species.
- **Dry Coniferous Forest:** The Puente-Chino Hills contain some of the best remaining examples of California walnut woodlands, a rare, endemic plant community.

Criterion 2 Conclusion

The Puente-Chino Hills possess exceptional quality in illustrating and interpreting natural themes of our nation's heritage, including: chaparral and dry coniferous forest. The Puente-Chino Hills meet criterion 2.

CRITERION 3: IT OFFERS SUPERLATIVE OPPORTUNITIES FOR PUBLIC ENJOYMENT, OR FOR SCIENTIFIC STUDY.

Opportunities for Public Enjoyment

Easily accessible to the millions of residents that surround them, the Puente-Chino Hills feature several thousand acres of parks and open space, and miles of local and regional trails. Recreational opportunities include hiking, biking, horseback riding, and birding. A recreational route of the Juan Bautista de Anza National Historic Trail follows the popular Skyline Trail which traverses the Puente-Chino Hills. Publicly owned and accessible stands of coastal sage scrub, walnut woodlands and forests can be found in Walnut Park, and the Puente Hills Landfill Native Habitat Preserve (Preserve).

The largest area of preserved open space in this

region of the study area is the Preserve. The Preserve offers superlative public enjoyment opportunities. In addition to traditional recreational activities such as hiking, jogging, mountain biking, and nature appreciation, the Preserve offers interpretation and outdoor education programs. Educational programs have included a Junior Ranger Program, guided hikes, campfire talks and lecture series. Interpretive panels, kiosks and signs describe wildlife, vegetation, historical descriptions, and public safety information.

Scientific Study

The Puente-Chino Hills have been studied by numerous universities and conservation agencies. The Habitat Authority's management plan encourages more opportunities for university-level research at the Preserve that would help to answer fundamental management questions regarding habitat and species of interest (Puente Hills Landfill Native Habitat Authority 2007).

The California Department of Fish and Game defined portions of the Puente-Chino Hills as a recovery and research area for the Natural Communities Conservation Planning (NCCP) program. The NCCP Program was initiated in 1991, and is administered by the California Department of Fish and Game. The focus of this program is the coastal sage scrub habitat of Southern California, home to the California gnatcatcher and approximately 100 other potentially threatened or endangered species. The Orange County portion of the Puente-Chino Hills is included in the Orange County Northern NCCP subregion. Recently Chevron set aside a 28-acre preserve as part of a permit to complete oil field abandonment operations in the area (California Department of Fish and Game 2008b).

Criterion 3 Conclusion

The Puente-Chino Hills feature public open spaces and miles of trails that provide opportunities such as hiking, biking, horseback riding, outdoor education and birding. Excellent opportunities are available for scientific research of native habitats and wildlife. The Puente-Chino Hills meet criterion 3.

CRITERION 4: IT RETAINS A HIGH DEGREE OF INTEGRITY AS A TRUE, ACCURATE, AND RELATIVELY UNSPOILED EXAMPLE OF A RESOURCE.

The Puente-Chino Hills have remained largely undeveloped despite the dense development that has occurred in the surrounding valleys and coastal plain. Lands in this hill system were historically used

for oil extraction, grazing, and recreation.

Despite its long history of use and proximity to urban development, the Puente-Chino Hills support many of southern California's native landscapes and sustain important habitat for numerous native animal species. Almost 17,000 acres of contiguous undeveloped open space within these hills contain significant native habitat. The Habitat Authority manages almost 4,000 acres in the western Puente-Chino Hills. The primary management objective is to protect biological diversity (Puente Hills Landfill Native Habitat Preservation Authority 2007). Large areas of undeveloped, privately owned land in the eastern Puente-Chino Hills contain some of the most significant natural resources and provide key linkages and connections to the larger wildlife corridor.

The slope, aspect and soil conditions of the Puente-Chino Hills favor walnut woodlands and forests. Significant contiguous stands line portions of the Puente-Chino Hills. These stands still retain the general pattern of walnut woodlands and forests documented over 50 years ago (Quinn 1990).

Plant communities found within the Puente-Chino Hills are becoming increasingly rare on a global scale, as are many of the wildlife and rare plant species. These species require walnut woodland, oak woodland, chaparral, native grassland, and coastal sage scrub habitats contained in the Puente-Chino Hills (Puente Hills Landfill Native Habitat Authority 2007).

"Biologically, this area preserves a microcosm of the California Floristic Province, an identified biodiversity hot spot in North America and a genetic reserve for the continent (Puente Hills Landfill Native Habitat Preservation Authority 2007)."

Some walnut woodlands in the far eastern end of the Puente Hills within the study area were impacted by the 2008 Freeway Complex fire. In total, this fire burned 30,305 acres including 90% of Chino Hills State Park. Most of the burned area was outside of the study area. The calculated acreage burned would make the fire the fourth largest fire on record in Orange County. Despite the fire damage, a 2010 field visit with California State Parks staff to Chino Hills State Park indicated that walnut woodlands and forests were making a strong recovery from the fire. Therefore, it is likely that the walnut woodlands in the eastern portion of the study area will also recover. California State Park officials stated that wildlife survival was aided by the contiguous open space which provided sufficient habitat during fire recovery. Potential

threats continued to further recovery include fire and the spread of non-native species.

Criterion 4 Conclusion

The Puente-Chino Hills contain large areas of native habitat and a high level of biodiversity despite the development that has occurred in the surrounding valleys and coastal plain. The Puente-Chino Hills meet criterion 4.

Overall Conclusions

The Puente-Chino Hills meet all four criteria for national significance:

- The Puente-Chino hills contain a high level of biodiversity and outstanding examples of southern California communities including coastal sage scrub, one of the most endangered plant communities in California, and the best remaining stands of California walnut-dominated forests and woodlands in their southern limit of distribution.
- The Puente-Chino Hills possess exceptional quality in illustrating and interpreting natural themes of our nation's heritage, including: chaparral, and dry coniferous forest.
- The Puente-Chino Hills feature public open spaces and miles of trails that provide opportunities such as hiking, biking, horseback riding, outdoor education and birding. Excellent opportunities are available for scientific research of native habitats and wildlife.
- The Puente-Chino Hills contain large areas of native habitat and a high level of biodiversity despite the development that has occurred in the surrounding valleys and coastal plain.

Other Significant Resources within the Study Area

Portions of the study area that were not included in the nationally significant regions are highly urbanized. There are nationally significant resources in these areas, many of which are fragmented, and therefore lack overall integrity.

Significant Natural Resources

Isolated pockets of rare native plant communities can be found in the San Gabriel Valley and Los Angeles Coastal Plain.

Coastal Sage Scrub. The San Jose Hills, located just north of the Puente-Chino Hills contain excellent examples of coastal sage scrub. These

ATTACHMENT E

NOTICE OF DETERMINATION FOR THE RESOURCE MANAGEMENT PLAN

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Puente Hills Landfill Native Habitat Preservation Authority Resource Management Plan

SCH Number: 2007051046**Document Type:** NOD - Notice of Determination**Project Lead Agency:** Puente Hills Landfill Native Habitat Preservation Authority

Project Description

The Habitat Authority is proposing to adopt a Resource Management Plan (RMP) to guide the long term management for the Habitat Authority's lands (Preserve). The RMP will be the primary management document for the Preserve, providing a defined vision and mission, long term goals and objectives, and management guidelines. It will guide the Habitat Authority on future policy, land use, budget, and capital improvement decisions relating to the Preserve. The major goals are to preserve, maintain, and enhance the Preserve by enhancing wildlife habitats, developing vegetation management practices, and provisions for safety, low impact recreational opportunities, and public access.

Contact Information

Primary Contact:

Andrea Gullo
Puente Hills Landfill Native Habitat Preservation Authority
(562) 945-9003
7702 Washington Avenue, Suite C
Whittier, CA 90602

Project Location

County: Los Angeles
City: La Habra Heights, Whittier
Region:
Cross Streets: Colima Road, Workman Mill Road, Harbor Blvd, Tumbull Canyon Road, Skyline Drive, East Road,
Latitude/Longitude:
Parcel No:
Township:
Range:
Section:
Base:
Other Location Info: City/Nearest Community: Hacienda Heights

Determinations

This is to advise that the Lead Agency Responsible Agency Puente Hills Landfill Native Habitat Preservation Authority has approved the project described above on 7/26/2007 and has made the following determinations regarding the project described above.

1. The project will will not have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.

A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.

3. Mitigation measures were were not made a condition of the approval of the project.

4. A Statement of Overriding Considerations was was not adopted for this project.

5. Findings were were not made pursuant to the provisions of CEQA.

Final EIR Available at: Habitat Authority offices AND www.habitatauthority.org

Date Received: 8/7/2007

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Members of the Planning Commission:

My name is Matt Berkehammer and I have been a resident of the Whittier area for over 26 years.

In your hands is placed an awesome responsibility.

Your decision will affect the health, safety, and well-being of residents of this community for literally generations to come.

Your responsibility is NOT to Matrix Oil or their silent partner, Clayton Williams Energy, a Texas-based oil company.

Steve Helvey, Whittier City Manager, asked recently in the Whittier Daily News, "What about the rights of Matrix Oil?"

Matrix Oil has NO inherent right to drill in our beautiful Whittier hills, protected "in perpetuity" as "Open Space" by Proposition A.

Oil companies are motivated by one thing, and one thing alone, their bottom line: to maximize their profits for the benefit of their shareholders.

Your responsibility is to the members of this community who live, work, and raise their children here – and want their future to be safe and secure.

Much mis-information and propaganda is being promoted about this project.

Matrix Oil has spent hundreds of thousands of dollars on full-page newspaper ads, slick brochures, and TV commercials to influence public opinion and your vote.

All these measures are beyond the reach of the average citizen or community organization.

Yet despite all their efforts, they are only able to muster a small handful of residents – most with moribund ties to the oil industry – to speak in favor of the project.

On the other hand, over 7000 signatures have been collected from community residents and presented to the City Council opposing the project.

The overwhelming majority of Whittier residents oppose this project, and you need to listen to their voices and their concerns.

All kinds of unsubstantiated claims about the benefits of this project are being made, from income to the City, to jobs for our residents.

But not a single dollar is GUARANTEED to the City from this project.

And show me where, in the 5000+ pages of material before you, a single job is GUARANTEED to the residents of this community.

One speaker who spoke yesterday extolled the safety of oil drilling, especially in Alaska, had the unmitigated gall to characterize opponents of this project as "environmental maniacs". Had this gentleman never heard of the Exxon-Valdez oil spill in 1989 which eventually covered 1,300 miles of coastline and 11,000 square miles of ocean, and which is still negatively

affecting the habitat today, 22 years later?

See: http://en.wikipedia.org/wiki/Exxon_Valdez_oil_spill

Had he never heard about the BP Deepwater Horizon Gulf of Mexico oil spill in 2010, which killed 11 men working on the platform and injured 17 others, and devastated an entire region?

See: http://en.wikipedia.org/wiki/Deepwater_Horizon_oil_spill

Had he never heard about the San Bruno gas pipeline explosion of last year, south of San Francisco, killing 8 people and destroying 38 homes with a 1000 foot tall wall of fire which devastated an entire community?

See: http://en.wikipedia.org/wiki/2010_San_Bruno_pipeline_explosion

Had he never heard about the regular pipeline accidents throughout the US which are almost a daily occurrence?

See: http://en.wikipedia.org/wiki/List_of_pipeline_accidents

And had he never heard about Herbert Delaney, the 49 year old oil worker whose life was snuffed out in a oil well explosion and fire right here on Honolulu Terrace in Whittier in 2005, at an oil well owned by none other than Matrix Oil?

See: <http://www.whittierhillsoilwatch.org/resources/HONOLULU%20TERRACE%20FIRE%200505%20DOL%20OSHA%20DOCS%20ON%20INCIDENT0001.pdf>

So much for Matrix Oil's safety record.

Do you really think that Matrix is any different than Exxon-Mobil, BP, or PG&E?

Do you think Whittier is immune?

Can we afford to let another tragedy like this, on perhaps a much larger scale, occur in our city?

Members of the Planning Commission:

You have a huge responsibility for the future economic development of this city. We need a well-balanced, diversified, environmentally friendly, and sustainable plan.

We do not need oil drilling in our hills to assure our city's economic viability. The risks are just too great.

You are being asked to put your stamp of approval on a "big lie": that destroying our hills is the only way to preserve our hills. What an absurd contradiction!

I call on you to have:

- the fortitude to withstand the intense lobbying efforts and propaganda that you are undoubtedly being subject to
- the integrity to fulfill your responsibility to the members of this community, and
- the courage to stand up, even to the members of the Whittier City Council who appointed you.

If you do, you will find that you have the everlasting support and gratitude of the overwhelming majority of the residents of this community.

I urge you to deny the permit!

Sycamore Canyon Oil Operation

What follows is a narrative describing events involving Matrix Oil Corporation operations in Sycamore Canyon from 2007 to present as they relate to noise and emissions at the site. My interest in these events grows from the proximity of my home to these operations.

The narrative highlights potential risks and impacts associated with noise and emissions in the proposed project. Depending on one's interpretation of these events, they may or may not also call into question Matrix's willingness and/or competence to comply with mitigating regulations to which it may agree.

My understanding is that the Sycamore Canyon drill site (also known as the Rideout Heights site) has been producing oil since the 70s. Matrix Oil bought the operation in 2001. In the past 4 years they've added 7 new wells to 3 that previously existed. The drilling produced noise that disturbed homeowners at Showcase Villas. The homeowner most impacted was Neal Kakuske, who lives at 5064 Tierra Antigua, and is closest to the drill site.

Matrix responded to complaints by Mr. Kakuske by providing him with noise-cancelling headphones and agreeing to pay a portion of the cost for new double-pane windows. According to Mr. Kakuske, Matrix also offered to put him up at a hotel for a period of time.

After the drilling was completed in 2008, Mr. Kakuske was further bothered by the noise produced by a flare that was used intermittently at the site to burn off gases. The flare is shrouded inside what appears to be a large metal tube, which partially obscures the flame and protects the surrounding environment. At the same time, the tube may amplify and add rumbling vibrations to the sound.

During 2008, Matrix violated an agreement with the South Coast Air Quality Management District (AQMD) by flaring for more than the 1392 hours (the equivalent of 58 days) per year allowed by its permit. The limitation is based not on noise (which is not regulated by the AQMD), but emissions. That duration of flaring corresponds to a maximum individual cancer risk of one in a million.

Neither the AQMD nor Matrix appear to have been aware of this violation until 2010. During an AQMD hearing on June 23, 2010, Matrix Vice President Jeff Kerns testified that the company was not monitoring the records and the records were "somewhat indecipherable."

In 2009, the AQMD visited the drill site in response to complaints from Mr. Kakuske, who had educated himself about some of the regulations under which Matrix operates. The AQMD issued a "notice to comply" requiring Matrix to improve their record-keeping regarding the flare.

Under normal operations, gas from the site is piped and sold to Southern California Gas Company (SoCal Gas). Flaring is only necessary when the gas mixture is not appropriate for some reason or due to an equipment malfunction. According to testimony at the aforementioned hearing, Matrix received notification from SoCal Gas in late 2009 or early 2010 that new equipment needed to be installed to monitor gas sent from the Matrix site.

Due to the new requirements, the gas company stopped receiving gas from the Sycamore Canyon site in late January, 2010 and the flare began operating 24 hours a day seven days a week. According to Matrix, equipment they purchased from SoCal Gas was not received in a timely manner, delaying installation and resulting in a period of flaring that lasted until April 1, 2010.

(next page)

During this period of flaring, Matrix rented a thermal oxidizer to test at the site. A thermal oxidizer is reputed to be quieter than a flare and to have no visible flame. It turned out, however, that the equipment Matrix leased at the recommendation of a vendor was not appropriate to the task and had insufficient capacity. The testing was still going on when, on March 29, Mr. Kakuske wrote a letter to the AQMD and members of the Whittier City Council saying that he had been monitoring the flare and that he believed Matrix had exceeded their permitted number of hours.

On April 1, 2010 the AQMD again visited the site and issued a "notice to comply" requesting flaring records. On that day, Matrix shut down pumping operations at the site and the flare fell silent. Operations did not resume until April 21. During that period, according to later testimony, Matrix was losing an average of \$20,000 a day in revenue.

On April 21 Matrix began pumping again at some of their wells, but instead of flaring the gas immediately, they idled some wells and diverted gas from the pumping wells into the idle wells, flaring only when the idle wells had reached capacity. Matrix says that this technique reduced production to about 50% of normal.

On May 4, AQMD issued a "notice of violation" to Matrix for exceeding their allowable hours of flaring in 2008 and 2010, and for installing a thermal oxidizer without a valid permit. A hearing before the AQMD Board was scheduled for June 23 to address an "Order of Abatement," in which new conditions would be set out for continued operations under the AQMD permit.

Separate from these actions, Councilman Bob Henderson arranged a meeting between Mr. Kakuske, Matrix Co-owner Mike McCaskey, and myself on May 14. Also in attendance was Mac MacFarland who is an independent public relations consultant for Matrix.

At the meeting, Mr. McCaskey explained much of the history I've just reviewed and assured both Mr. Kakuske and myself that Matrix was anxious to be a good neighbor. He described efforts they had made, including the testing of the thermal oxidizer and the installation of some baffling to reduce noise. He also said that he did not think that emissions from the flare are dangerous to the immediate neighborhood, but offered no supporting data for that belief. He further indicated that Matrix was paying a fee (read fine?) every time they flared, so they also had a financial disincentive to do so.

During the meeting, Mr. McCaskey said that Matrix operates 10 oil fields, although he was unable to list them and did not provide them subsequent to the meeting. An investigation of those locations and community response to those operations would, it seems to me, be useful to decision makers.

In the June 23 AQMD hearing, testimony came from two Showcase Villas residents, including Mr. Kakuske. I offered written testimony, but was not present. Matrix VP Kerns and several AQMD employees also testified during the day-long hearing. In the subsequent Order of Abatement, the hearing board required increased measurements, monitoring, maintenance and testing of the flare as well as limitations on the time-of-day and number of days per week that it could be operated. They required that Matrix continue to divert gas to idle wells as an alternative to flaring. They also put limitations on the allowable flare hours for the remainder of the year. It was estimated that the increased usage would raise the individual cancer risk to 2.5 per million.

(next page)

The order further required Matrix to investigate alternatives to the flare including the use of "micro-turbines" to generate electricity, and required them to be in daily contact with SoCal Gas to expedite the resumption of gas deliveries from the Sycamore Canyon site. In his concluding comments, one member of the hearing board characterized Matrix as a "sloppy operation" and pointed out that they had violated their permit only one year after agreeing to it.

Other interesting facts to emerge from the hearing included the fact that the City of Whittier is one of the royalty owners from the Sycamore Canyon site, although the site is outside city limits. It was reported that royalties from the site equaled 20% of gross revenues and that 90% of royalty owners are Whittier residents. We also discovered that gas produced at the Honolulu Terrace site travels through the Sycamore Canyon site and, when necessary, is flared there.

Testimony of AQMD officials reported that the permit produced for the thermal oxidizer had the permit number blocked out and that the permit did not match the equipment. Mr. McCaskey said that Matrix believed permitting for the thermal oxidizer was covered under a blanket permit until AQMD notified them otherwise. When asked why Matrix had not started idling wells and diverting gas sooner in order to avoid exceeding the allowable flaring hours in their permit, Mr. McCaskey responded that they had simply not thought of it.

At the June 23 hearing, the AQMD board scheduled a September 15 hearing to review the status and consider potential modifications to the order of abatement. I do not have the results of that hearing. However, I can report that shortly after the June 23 hearing, the flare almost completely ceased operation. We assume that Matrix is again piping its gas to SoCal Gas, although we don't know if there is another explanation.

We do know that in recent weeks Matrix began to drill new wells at the site. Quoting Bob Henderson, The Whittier Daily News reported that this is a demonstration project to see if Matrix can drill two new wells in a quiet way. Any visitor to Sycamore Canyon can determine how quiet this new drilling is. The flare is again operating intermittently and disturbing homeowners in closest proximity. I have, available for review, the letter from Mr. Kakuske that I identified in the above narrative, a response letter from a Matrix attorney, the initial draft Order of Abatement and tapes of the June 23 AQMD hearing. Attached are copies of the violation notice issued to Matrix on May 4, 2010.

Conclusion: I think our experiences near the Sycamore Canyon well site, and those of the residents on Honolulu Terrace, call into question Matrix's dependence on vendors and subcontractors. Our experience reveals a pattern whereby a third party, like a homeowner or the AQMD in our case, or a public accident — such as the explosion at the Honolulu Terrace site — has revealed deficiencies in their operation to which they were apparently unaware. In each case Matrix has demonstrated inadequate oversight and subsequently blamed their vendors. This does not inspire confidence in their choice of contractors or in their corporate oversight and accountability. If the City of Whittier goes forward with plans for a new well site in the hills, I would recommend you include in the contract provisions requiring personal accountability by Matrix owners for the maintenance and safety of the site, as well as rigorous oversight by employees who work directly for them.

Ted Snyder
5004 Tierra Antigua
Whittier, CA 90601

.0/20/2011

15155 Honolulu Terrace Whittier
MAILING ADDRESS
5020 Workman Mill Rd. CITY 131425
LOCATION ADDRESS OF VIOLATION
Whittier SN 562-699-2185
CITY SECTOR TELEPHONE #

YOU ARE HEREBY NOTIFIED THAT A VIOLATION OF CALIFORNIA HEALTH AND SAFETY CODE SECTION(S) _____

AND/OR SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE(S) _____

201, 203(a), 203(b)

HAS BEEN COMMITTED. SUCH VIOLATIONS MAY BE PUNISHED BY THE IMPOSITION OF THE CIVIL OR CRIMINAL PENALTIES PRESCRIBED BY ARTICLE 3, CHAPTER 4, PART 4, DIVISION 26 (BEGINNING WITH SECTION 42400) OF THE CALIFORNIA HEALTH AND SAFETY CODE. EACH DAY DURING WHICH THE VIOLATION OCCURS MAY BE PUNISHED AS A SEPARATE VIOLATION WHETHER OR NOT A NOTICE OF VIOLATION IS ISSUED ON EACH SUCH DAY.

Description of Violation: installing a portable thermal oxidizer to a permitted equipment, operating a portable thermal oxidizer without an AQMD permit, and exceeding permit condition of operating hours more than 58 days/yr in 2009 and 2010

BY Alicia Martinez TELEPHONE 562, 699-2185
INSPECTOR

SERVED TO: Silas Briones TITLE Production Sup

SERVED BY: Alicia Martinez DATE: 5, 4, 10

No. P 53875

OFFICE OF STATIONARY SOURCE COMPLIANCE

ORIGINAL

STANDARD FORMS (502) 941-7764

To: Planning Commission
City of Whittier

October 19, 2011

From: Michele Barnett
Whittier resident

Re: Mineral extraction project in the
Whittier Hills

I am writing to urge you NOT to grant a permit to Matrix Oil or any other company planning to develop the Whittier Hills in any way. The citizens of Whittier worked long and hard to secure the promise of protection for the hills forever. I remember the great relief everyone felt when this protection was finally assured. It was a promise of protection IN PERPETUITY, not "unless and until someone waved money" at the city council.

If you allow Matrix Oil to drill, you can say good-bye to the Whittier Hills. Once a precedent is set, expansion and further development is a foregone conclusion. Matrix will inevitably want to enlarge its project, and other companies will want to share in the profits as well. Concern for the environment and the wildlife will go out the window. The hills will be desecrated, and the pristine wilderness destroyed forever. There is no such thing as a "safe, quiet, environmentally friendly" oil drilling project. That is a myth.

Please.....do not be responsible for allowing such a disaster to occur. KEEP THE PROMISE and save and protect the Whittier Hills FOREVER.

Thank you.

Michele Barnett

Donna R. Black
Attorney At Law
1130 Tower Road
BeverlyHills, CA 90210
310.617.2855
donna@donnablacklaw.com

October 24, 2011

Mr. Jeff Adams
Ms. Kim Barlow
Ms. JoAnn Lombardo
City of Whittier
13230 Penn Street
Whittier, CA 90602

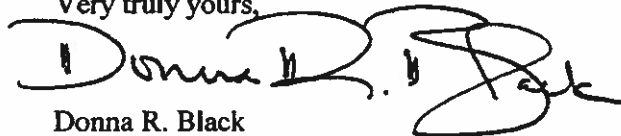
Re: Matrix Oil Corporation – Statement re: Fracing

Dear Mr. Adams, Ms. Barlow & Ms. Lombardo:

Attached for inclusion in the record is Matrix Oil Corporation's statement in response to questions raised regarding the technique known as fracing.

"Matrix understands the controversy surrounding the GasLand fracing controversy. The State of California and all Counties in California allow, regulate and issues permits for fracturing (aka "Stimulation") of underground oil and gas formations under the oversight and regulation per State Law of the Division of Oil, Gas and Geothermal Resources ("DOGGR"). Many such activities are required to properly test formation water well injectors, enable oil producers to limit or reduce sand inflow to wells or to test formations for isolation prior to abandoning the wells and also for cementing operations. As Matrix does not wish to compromise its operations and the ability of our company to produce oil in the Whittier Main Project with royalty to the City, it is stated herein that Matrix will only agree in its CUP recommendations to the City Council that it will prohibit activities in its operations that would undertake "Shale Gas Hydraulic Fracing" per methods used in other parts of the country that would use millions of gallons of water injected in a Whittier project well to fracture stimulate thick shale sections (claystone rock) for oil and gas development above 4000 feet below the surface."

Very truly yours,


Donna R. Black

Donna R. Black
Attorney At Law
1130 Tower Road
BeverlyHills, CA 90210
310.617.2855
donna@donnablacklaw.com

October 24, 2011

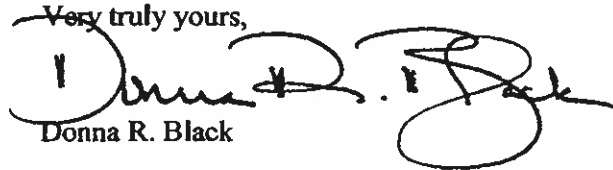
Mr. Jeff Adams
Ms. Kim Barlow
Ms. JoAnn Lombardo
City of Whittier
13230 Penn Street
Whittier, CA 90602

Re: Matrix Oil Corporation –
Request for Modifications to Draft Conditions of Approval
For CUP 09-004

Dear Mr. Adams, Ms. Barlow & Ms. Lombardo:

Enclosed for inclusion in the record are Matrix Oil Corporation's requested modifications to the Draft Conditions of Approval for CUP 09-004.

Very truly yours,


Donna R. Black

Attachment



To: Jeff Adams
Kim Barlow
JoAnn Lombardo
From: Mike McCaskey
Subject: Attachment A Draft Conditions
Date: October 24, 2011

Following our review of the Draft Conditions, we have the following comments.

Overall, all references in CUP09-004 to Sycamore Canyon operations need to be deleted as that site is covered by LA County ordinance and regulations and shall not be superseded by Whittier Main CUP without legal action.

Following are our comments for each Condition:

1. Accepted
2. Indemnity should be limited to 3rd party claim. Indemnity covered in Lease in 6.3 and 22e
3. Accepted
4. Accepted
5. Add to end of sentence: "and subsequent CUP's"
6. Sentence three add: First word "substantial" to modify to : "substantial deviations from the project...."
7. Second sentence add: "Substantial" failure to abide....
8. Accepted
9. Accepted
10. Accepted
11. Change "feasible" in last sentence to "reasonable". Also need some language to clarify that if we challenge a mitigation in the future, the entire CUP is not suspended
12. Accepted
13. Modify to: The Operator shall drill no more than 60 "active" wells. Add "active"
14. Add: "reasonably" to sentence....as "reasonably" determined by...
15. Accepted
16. Accepted
17. Add: "in excess of 10,000 tons/yr" as an action level. All laws or regulations regarding so-called "pollutants" need an action level
18. a.) Need approval by City Building Department and not Biology group or Habitat Authority
b.) Add: Detailed plans of retaining walls will be submitted after (not before) preliminary testing to determine best construction design

19. a.) The Matrix Lease provides funds for Habitat staff and fees to provide oversight, approximately \$250,000 per year
- b.) Matrix requests that the City use its royalty (estimated between 7.5MM\$ and 100MM\$ per year) to add staff
- c.) Matrix will hire/provide an Environmental Coordinator
- d.) Recommend to delete in entirety or modify as above
20. Accepted
21. After "...shall be permitted" insert: "by regularly scheduled vehicles"
22. Delete. Since Matrix does not intend to use the area by the ranger station as a temporary staging area, we request not to move the ranger station
23. Matrix will provide up to a certain area between 2 to 5 acres, if this is determined applicable to the project
24. Will establish a fund equal to the deductible amount of our insurance
25. Matrix will provide firefighting equipment only in the Consolidated site area and along the Catalina road entrance
26. Accepted
27. Accepted
28. Matrix will provide the name of a Project Superintendent or Foreman contact.
29. (1) Accepted
- (2) Delete. Not customary and not appropriate
- (3) Delete "loss of property value"
- (4) Delete "professional liability" as it does not apply
- (5) a. Delete. We do not have this condition per our current operations and this provision is not included in current lease
- b. Delete. Not applicable per our lease
- c. Delete. Not applicable per our lease
30. Accepted
31. Delete "additional" in second sentence
- (1) Delete. This standard is not applied to other businesses
- (2) Accepted
32. (1) Delete: "two way radios" All vehicles carry cell phones
- (2) Accepted
- (3) Accepted
- (4) Accepted
- (5) Accepted
- (6) Accepted
- (7) Accepted
- (8) Accepted
- (9) Change to 15 mph. Allows trucks to safely brake while moving down hill

- (10) Accepted
- (11) Accepted
- 33. Delete. This is not part of the lease. DOGGR will review and permit all wells
- 34. (1) Delete. If Matrix is fined for a violation, after regulatory agency review, we will pay the fine, as is standard practice
 - (2) Accepted
- 35. Delete. Already regulated by other agencies
- 36. Leave first sentence and delete remainder of paragraph. There is no code like this in LA County.
- 37. Accepted
- 38. Accepted
- 39. Accepted
- 40. Accepted
- 41. Accepted
- 42. Delete. Not applicable
- 43. Delete. Not applicable
- 44. (1) Accepted
 - (2) Delete "automatic deluge system"
 - (3) Accepted
- 45. (1) a. Accepted
 - b. Accepted
 - c. Delete. Not applicable. This is a standard for housing building code
 - d. Accepted
 - (2) Accepted
 - (3) Accepted
 - (4) Accepted
 - (5) Modify to set standard above Richter Scale level that causes structural damage or severe earth movement (suggest 7.0) or require standards consistent with current earthquake code for buildings
- 46. Accepted
- 47. (1) a. Accepted
 - b. Accepted
 - c. Accepted
 - (2) Add at the end: "....unless violating OSHA standards"
 - (3) Accepted
 - (4) Accepted
 - (5) Delete. Does not apply
 - (6) Accepted
 - (7) Replace "prohibited" with "minimized"

- (8) Accepted
- 48. Accepted
- 49. Accepted
- 50. Accepted
- 51. (1) Delete first sentence
 - (2) Accepted
 - (3) Accepted
 - (4) Accepted
- 52. Accepted
- 53. Accepted
- 54. Delete in its entirety as this site is not under any required action by the LARWQCB at this time
- 55. Accepted
- 56. Accepted
- 57. Accepted
- 58. Change last sentence to: "Operator shall maintain 24 hour surveillance"
- 59. (1) Accepted
 - (2) Insert after ..."sewer": "unless permitted by the Sanitation District".....
 - (3) Accepted
- 60. Accepted
- 61. Accepted
- 62. Accepted
- 63. (1) Insert after "dehydration": "and removal of inerts to pipeline quality"....
 - (2) Accepted
 - (3) Accepted
 - (4) Accepted
 - (5) Accepted
 - (6) a thru e: Accepted
 - (7) Accepted
 - (8) Accepted
 - (9) Accepted
- 64. (1) Accepted
 - (2) Suggest to change "eight" to "two"
 - (3) Insert after "Hours of Operation": "Unless specified in our lease"....
 - (4) Accepted
 - (5) Accepted
- 65. (1) Accepted
 - (2) Delete. Not applicable
 - (3) Accepted

- (4) Accepted
- (5) Accepted
- 66. Accepted
- 67. Accepted
- 68. Delete entirely. All of our wells will be in concrete bottom well cellars. This appears to apply to conventional oilfields with wells scattered throughout the lease
- 69. Delete first paragraph. Not applicable
 - (1) Accepted
 - (2) Accepted
 - (3) Accepted
 - (4) Accepted
 - (5) Accepted
 - (6) Delete. Not applicable
 - (7) Accepted
- 70. Accepted
- 71. (1) Accepted
 - (2) Delete. We will agree to City/Habitat required biology mitigation that defines an area to offset our facility/use impacts
 - (3) Delete the word "minimum" prior to "3:1 ratio"
 - (4) Accepted
- 72. Accepted
- 73. (1) Need to clarify who can halt activities
 - (2) Delete "to the maximum extent feasible" in the first sentence
 - (3) Delete "and using approved equipment for specific areas"
 - (4) Delete
- 74. (1) Accepted
 - (2) Accepted
 - (3) Delete. Contradicts other ingress/egress provisions for safe 24 hour operation
- 75. Delete. Poorly written and appears to contradict current draft conservation easement

Matrix Oil Project
Planning Commission Hearing Oct. 24, 2011
By: OSLEDF

Jones, Jill M.

From: Pedersen, Curt [CPedersen@lsabos.org]
Sent: Wednesday, December 09, 2009 9:31 AM
To: shelvey@cityofwhittier.org
Cc: Avila, Andrea; Stibel, Erin
Subject: Prop A Letter

Steve, County Counsel has responded there is no language in the proposition, the Grant Agreement, or the Procedural Guide, which contemplates the way excess, non-recreational income is to be handled. Therefore the issues you raise are policy decisions for the Open Space District.
County Counsel also opines that "Funds" are not limited to the initial grant award amount, but could include royalties or non-recreational income. The original amount of the grant need not be used as a cap for non-recreational income to the Open Space District.

Please let me know if you would like to discuss further with County Counsel or the Open Space District.

Curt Pedersen
Chief of Staff
Los Angeles County Supervisor Don Knabe
(313) 974-1048

From: shelvey@cityofwhittier.org [mailto:shelvey@cityofwhittier.org]
Sent: Monday, November 16, 2009 9:21 PM
To: Pedersen, Curt
Cc: bobhenderson@insure.com
Subject: Prop A letter

Curt
Thanks again for the information relating to our Proposition A issues and our mineral extraction project. One thing that we're still very uncertain about is the potential position of the County on the required use of the funds generated from the mineral extraction in excess of our current Parks and Recreation operational needs. Under the current thinking are we allowed to accumulate the funds for future Parks and Recreation uses (operating or capital) or is the County suggesting that any money in excess is given to the County? If so, what is the maximum diversion that would be suggested? Would it exceed the \$9mm originally allocated to Whittier for the purchase of the Chevron and Unocal properties?
We appreciate your advice.
Steve

12/7/2010

"Brandon"
24-OCT-11



I worked for an environmental service company for 8 years, and in the Environmental Health and Safety field for a total of over 10 years. While at the environmental company, I worked in the Environmental Health and Safety department for 6 years. At that company, we managed hazardous waste. We are the department that hires consultants to write Environmental Impact Reports (EIR's). And we paid well for our reports to look as clean and amicable as they possibly can.

During my work at the environmental service company, I worked with other EHS folks at an array of industries – superfund sites, pharmaceutical, aerospace, food processing, battery manufacturing, landfill, refineries... What I have to say comes from experience.

I'm going to talk about what really happens in refineries. I have yet to see one that is clean and "mitigated". It's loud, it's dirty, and it smells bad.

- I've seen tanks come out – I've seen what lies under tanks. The dirt is green, brown, black, with the consistency of toothpaste, and the smell is unGodly.

- When there were leaks, they'd say let's fix it later, it's cheaper to pay fines for violations. Or simply, "there is no leak".

- When there were odors, we used green apple odorant. It comes in 55 gallon drums. We sprayed it in the air because it masks sulfide odors. Why? It's cheap

- I noticed that there were chemicals brought in from outside to be used at the refinery. I also noticed that there is no mention of this activity in the Matrix EIR. Not even an MSDS.

- **Propose some conditions: 1) They need above ground tanks with impermeable secondary containment to capture over 100% of largest tank capacity. 2) We need to know what hazardous chemicals will be used 500 feet from the nearest residence, and that Matrix will notify those residences of a release.

Subcontractors. Oil companies use a lot of contractors. You should see the demographic – gangs, tattoos, a bunch of thugs in Nomex suits.

- The EIR states Matrix employee "screening". Not contractor screening.

- Do we want this in Whittier neighborhoods? Will it bring crime to our neighborhoods? Will your jaw be busted up after you ask a worker to slow down on your street?

Turn Arouds – That wasn't mentioned. That's when they shutdown 1-2 times per year to make repairs

- That's huge workforce of the contractors I mentioned. Even more thugs in Nomex suits.

We'll have a "small" processing facility in Whittier, they say— How easy are expansions? Is it just a small change in the building permit? Are we opening the doorway to further develop 1300 acres into a full blown refinery?

Folks, are we trying to turn our green hills into the hills of the Santa Susanna Field Facility near Van Nuys? (Google that to see that happened there) Frankly, Whittier narrowly avoided Aerojet's groundwater contamination from Iwrindale. This is our drinking water, our air, and our neighborhoods we are talking about.

****Propose condition: Need to limit size and scope of facility indefinitely**

Processing facility within 500 feet of a drinking water reservoir – diesel exhaust and air emissions – benzene, ammonia, arsenic, lead, sulfides, particulates – most of these are carcinogens. It even says so in the EIR. Within 500 feet? Are you serious??

Mitigation – we use that word a lot – What's it really mean? That's something we do to cover up something else that's ugly.

- mitigation costs money and gets in the way of operations
- Noise barriers, for example – There's picture in EIR, but ask any guy will be turning the wrenches; "mitigation" is in his way – he the one who really does the work. He doesn't sit behind a desk and write EIR's all day. He's going to move the barriers so he can finish on schedule.
- cover the 125ft well with beautification shields – Have a look along Brea Canyon road at the rusting towers near the south end. That's "mitigation".
- Ask residents near Whittier and Puente Hills landfill how "mitigation" works for them. Sweet smell of garbage lingers every day. Are we going to go to work smelling worse than when we get home.
- The guy making \$13 an hour doesn't care how much you don't like the smell, or the noise, or the spills while you sit down and have dinner with your family. He's only there for 8 hours, but you are there all night.
- Truth is corporations will do the cheapest thing acceptable by society. Green apple is cheap and effective to mask sulfide odors. The chemical release is still there, but it smells oh-so fresh.

****Proposed condition; When it does stink, and I have to go to work smelling like a refinery, I want \$100 in my pocket to cover my dry-cleaning. Compensation must be offered to affected parties.**

Schools and access – Ocean View, East Whittier Middle, Whittier College, Hoover, Broadoaks, St Marks PreSchool. (There's already a jet fuel pipeline in East Whittier's playground. How many of you are aware of that?)

-Do we want more diesel exhaust carcinogens? Releases of hydrogen sulfide? They said there definitively would be in the EIR.

-Do we want employees speeding through our streets to make it to work on time? Will you allow it in the air your kids breathe and on the streets where your kids go to school? You have a choice.

****Propose condition: Matrix must use a significant percentage of green energy to conduct operations.**

The EIR says the City Whittier is responsible for enforcing compliance with environmental regulations. We're a small town. Look at our City Hall. Does our Planning Commission understand API tank standards? Hydrocarbon ground plume dispersion? Non attainment areas and exhaust emissions? DTSC permit-by-rule? AQMD RECLAIM Rule Applicability? Liquid freeboard and hydrocarbon air emissions? SPCC applicability to oil handling and pumping operations? 40 CFR versus 22 CCR applicability? Industrial Hygiene? 3rd party atmospheric monitoring?

****Propose conditions; 1) Matrix needs to pay a predetermined minimum expenditure for their "mitigations" 2) If any of the regulatory laws not consistently met, Matrix must forfeit lease and return our land. Folks, 3 strikes and you're out.**

Lessons learned in industrial setting: Since we are talking about building on top of a fault capable of magnitude 7.0 or greater, let's look at some recent events:

- Fukushima Daiichi in Japan (greatest industrial disaster in history of mankind),
- North Anna Nuclear plant by Washington DC (Google that one too),
- BP Spill in the Gulf of Mexico ("mitigation" worked out well there didn't it),
- The Exxon-Valdez spill in Alaska. We exceeded equipment "design specifications" in all of these.

Whittier's infrastructure is designed for a small community; our hospitals, our police, our fire departments, our emergency response, sewers, water supply, our natural gas.

- Our clean water will be used by Matrix.
- Our sewers will be flooded by Matrix.
- If we have another explosion at Matrix, our resources are sent to the emergency at Matrix.

That means we get the little fire truck that isn't up extinguishing the hills, or the paramedic from Montebello that is an hour away due to truck traffic on Penn Street. Because ours are at the Matrix plant.

When that earthquake comes, and it will, the bottom line is that Whittier needs its resources to care for its community.

****Proposed condition: Matrix needs to cover Whittier's infrastructure growth expenditures to cover their needs, and increase revenue to the city for use of our resources. They need to help expand our hospitals, police force, fire departments, and repair broken water mains.**

Let's look at topography: Where do spills go from the proposed plant? Downhill, of course. What's downhill from the proposed plant? Houses. Families. Your house and your family.

What shocks me most after reading the EIR is that Whittier didn't even impose conditions on Matrix's use of our land. We're willingly allowing Matrix to use and abuse us and our city. And I didn't even talk about the pipeline.

I have a homework assignment for you folks; a list of keywords to Google. That is being passed around. Grab one and apply what you see. This is what we will be doing to our neighbors, friends, and families.

Type these keyword groups into Google and read some of the headlines and articles:

- 1) Beverly Hills High School oil drilling
- 2) Diesel exhaust health effects
- 3) Whittier investigation Matrix oil
- 4) Matrix Oil Sycamore residents
- 5) Wilmington refinery ground plume pollution
- 6) Whittier groundwater pollution
- 7) Wikipedia list pipeline accidents
- 8) refinery property value odor
- 9) oil drilling leaks frequency
- 10) plant earthquake design
- 11) Santa Susanna Field Facility
- 12) oil incident groundwater
- 13) benzene diesel
- 14) arsenic diesel
- 15) oil drilling earthquakes Martin Chapman
- 16) refinery safety record
- 17) oil deaths
- 18) corruption oil
- 19) most profitable companies

From: Trina Miller
Sent: Monday, October 25, 2010 9:58 AM
To: Mike McCaskey; Esther Feldman; matt@englanderassociates.com
Subject: FW: Send to Esther, Mike and Matt?

FYI

From: Trina Miller
Sent: Monday, October 25, 2010 9:13 AM
To: Steve Helvey
Subject: Send to Esther, Mike and Matt?

Steve:

The second article was in today's paper and doesn't talk about Whittier but still the wing nuts will read it - you decide if it needs to go to the usual three!



_1025090533_0 _1025090706_0
01.pdf 01.pdf

*Trina Miller
City Manager's Office
13230 Penn Street
Whittier, CA 90602*

*wk 562-464-3306
fax 562-464-3570*

This electronic transmission, and any documents attached hereto, may contain confidential and/or legally privileged information. The information is intended for the sole use of the recipient named above. If you have received this electronic message in error, please notify the sender and delete the electronic message. Any disclosure, copying, distribution, or use of the contents of information received in error is strictly prohibited.

From: "greg@nordbaks.com" <greg@nordbaks.com>
Date: Thu, 19 Aug 2010 15:39:21 -0700
To: Steve Helvey<shelvey@cityofwhittier.org>; Mike McCaskey<MMcCaskey@matrixoil.com>; Bob Henderson<bob@hendersonsinsure.com>
ReplyTo: "greg@nordbaks.com" <greg@nordbaks.com>
Subject: Re: W.H.O.W. Presentation

Steve a few thoughts but first let me say I plan on attending the meeting on the 31st (although I don't seem to be invited), Christine is a good friend of mine. I don't intend to participate but we all know it's highly unlikely I

won't say something.

- 1.) I don't see why would change our tac now and start to defend or debate this in public. I can assure you WOW will find something to use against us should we participate.
- 2.) I'm dissapointed the School District is for lack of a better statement "not giving us the professional courtesy" and hear our presentation before they allow WOW a public forum.
- 3.) I like the fact that Matrix has started a poll which I assume is the start of a public relations program. They have a sizable investment and I feel they have a right to present the facts where WOW is being less than honest without crossing a line.
- 4.) If we feel there needs to be resonance at this school board meeting, I think it should be in a printed fact sheet in response to WOW's already inaccurate printed and verbal comments.

Again to have anyone present to engage in a circus type debate is a loser for the City and Matrix.

Just my thoughts.

Greg

Sent from my Verizon Wireless BlackBerry

2 for WWR

Commissioners Copy

Talking Points:

BENEFITS:

This is a vastly improved project that will protect the preserve and benefit every resident of Whittier. — *opinion*

It will have strict oversight by the City, County, State and Federal authorities. — *police themselves*

It will be small, unobtrusive and quiet. — *Not small: over 44 acres.*

Out of the preserves 3,860 acres, will only be 6.9 acre site. That is 0.5% of the Preserve. — *not accurate*

The project is located behind hills, down in a canyon, surrounded by trees — *not down*

From this small site, the City will receive, at a minimum, \$7.5 million a year — *hypothetical*

It will benefit every resident in the city. — *opinion*

Our City needs new source of revenue in order to maintain vital City Services. Too many car dealerships and stores have closed, hurting the City's budget. — *can't be used for this*

It will create Millions of dollars a year in new revenue that we badly need — *hypothetical*

Whittier Oil project will help stabilize our economy. — *opinion / hypothetical*

ENVIRONMENT AND THE PRESERVE:

The Whittier Oil project will have strict environmental protection measures, which will be enforced by City, County, State and Federal authorities. — *self police*

They will use the most advanced technology and go beyond the normal standards of safety and monitoring. — *opinion*

Without this project, there will be no money to fund the Habitat Authority and to maintain and protect the Preserve. Currently the funding for this comes from the Savage Landfill, which is scheduled to close in 2013. — *wrong info. La Puente Hills Landfill.*

Matrix will be required to post a bond to ensure that the preserve is returned to its natural state after the project is no longer in operation. — *when? not stated anywhere. (5+ yrs?)*

All the wells are underground in soundproof concrete cellars. — *opinion*

Matrix will invest in restoring native habitat. (one truth!)

The EIR showed that there are no biological impacts. Wildlife and residents are safe. — *can not be ensured. Also opinion.*

HEALTH:

In Beverly Hills, they have had oil wells on the high school campus for about 50 years. Erin Brockovitch tried to sue the school district claiming health issues. She could not produce any expert or evidence of cancer clusters or health impacts. She lost and had to pay the school district for their legal fees.

There is no oil refinery in the project. All oil and gas will be sent away in an underground pipeline for refining. *(oil and gas processing facility)*

They have reduced truck trips by almost 10,000. *— where & how the dirt will be processed or deposited is not mentioned in FDIR. (flaw)*

Noise is not an issue. The site is four football fields away from nearest residence, down in a canyon, shielded by trees and sound walls. *FDIR failed to clarify what material will be used on the soundwall.*
Matrix will be using the best sound proofing technology available. *(same as above; what type needs to be stated.)*
They will have specific hours of operation to minimize sound. *operations will be 24/7 for the first 5 yrs.*
All wells are underground in soundproof cement bunkers. *questionable/opinion*
Sound walls will be built to contain surface sounds. *what material will guarantee this?*

HOME VALUES:

With improved City Services, our home values will improve too. Look at other cities that have oil revenue like Beverly Hills and Signal Hill. *money can't be used for city services.*

It is important to our home values. *(? opinion)* *→ fallacy.*
EIR shows that home values will not be affected. *— not true; check FDIR.*

The fact is: with the new city revenue, we will be able to enhance our quality of city services, and the value of our homes will increase too. *misinformation*

10/24/11

It seems that The Whittier City Council has gone down this the path with tunnel vision choosing to ignore scientific data and the wishes of the vast majority of the public.

Rather they cling to their position in spite of the consequences. Unwilling to admit the possibility that in their haste and quest for money this whole folly was an ill advised undertaking from the start. After spending \$100,000's to on legal maneuvers defending this position. What else could the city have spent that money on ? Perhaps extending library hours, and more after school programs.

Do they believe that this is in the spirit of Prop A ? Do they honestly believe Prop A would have passed if it clearly stated the "oil drilling" could resume at a future date. As stated by several sparkers last week there is no guarantee that Whittier will get more than a small of share of any income. YET we will assume all of the risk. Will the sub contractors end up being relatives of someone on the council. I wonder who will really benefit.

Matrix has tried to sell this after doing extensive marketing research and spending big bucks to learn how to spin this so people would find it acceptable. They try to say this is really good for the people in Whittier.

Let's see just how good:

A tremendous increase in truck traffic and pollution for years.

The impact of tearing up a major transit corridor and the related traffic problems for years.

The loss of property values.

Being known as an "oil town" while most cities pride themselves on becoming Greener.

And, lastly what price can you put on the health of the citizens. If your child or grandchild develops asthma or cancer from exposure to these addition pollutants and toxins . Is there any amount of potential revenue that is worth it.

I would like to know if Matrix has been required to set up a multi-million dollar escrow account for all costs related to accidents, lawsuits and cleanup or should they or their subs file bankruptcy at a future date.

Please do not rubber stamp this project. We need checks and balances. This is your job tonight. To not be influenced by the lure of easy money. It is clear that the current EIR is deeply flawed from the omission of current census data; to the ridiculous traffic study. I have seen the city do longer, more extensive studies at intersections regarding a stop sign. Realistically you need a study over at least 4 days and over several months – when school is session Monday thru Friday from 7 am – 7 pm. What are they afraid of that they seem to feel they have manipulate the data to fit their outcome. At the very least you should require a new EIR before moving forward with the CUP.

I know there are those in Whittier who dream of the good ole days to them oil drilling is one of those fond memories. OF course we didn't understand the health risks back then – we do Now!

Well wake up. Snap out of it ! We should not go backwards. !

No permit at this time. Thank you.

Andrew Bellamy

WHOW; A Statement to Planning Commission **Hollywillow6@aol.com**
10-20-11 **by Holly Overin**

I sense that the decision to permit oil drilling by a Texas oil company naming themselves Matrix has already been decided upon by a handful of our elected and appointed officials who are attempting to do their duty to fatten the financial books of Whittier. Your focus on commerce is understandable. It's your job and what we people say to you in 3 minute blurbs won't in the long run make much difference. Money is talking louder and in longer transactions with a political process that has long been the step child of corporate persuasion and control. I can see how the second EIR study has been carefully fashioned to enable Matrix to rework some aesthetic, mostly cosmetic changes to the plan, I fear that in consolidating the wells by using slant drilling to extend to the outlying portions of gas and oil, embedded in the folding and shifting geologic layers, a greater earthquake danger might be resultant over a straight vertical pump line. You remember, I hope that Whittier has its very own seismic fault and when the last big quake occurred, the oil fields in the hills were already dismantled. Whittier also already has a superfund site in clean up delay mode of underground toxic groundwater made by the Alpha Omega Tank company's dumping of equipment scrubbing solvents such as Chromium 6 that runs in a toxic plume underground all the way to Downey. Erin Brockovich did win a law suit regarding solvents seeping into the groundwater and destroying the health of people living around a nearby plant. I think the defendant was PG&E. Not in Beverly Hills but a desert town, California City. Many groundwater aquifers in southland canyons have been destroyed due to companies trucking and dumping their waste waters there. In the 90ties I lived in one, Kagel Canyon. It has a natural spring but no one can drink the water. While living there, we consented to be participants in a blind study conducted by UCLA students over the hazards of living on and over an otherwise toxic zone. This kind of out of sight, out of mind chemical exploitation has been going on for some time and continues today. After all, we live in a

MERLE ALLEN COMPANY

GENERAL INSURANCE

127 NORTH BRIGHT AVENUE

WHITTIER, CALIFORNIA

PHONE OXbow 8-9581



423

synthetic society. We are an integral part of our environment, our health and sanity, fashioned by it. There has been minimal mention of where Matrix waste waters will be stored. What I heard was either gas waste trucking out to an unknown destination or some EIR confusion about a possible Puente Hills landfill reception? The technical details of this report by Mr, McCaskey and the EIR are noticeably absent. Truthfully, I find it difficult to trust any oil company, knowing what I know, having read what I have read of corporate negligence here and around the world. Their employed messengers use careful words with personas seemingly humble in public view, but, Whittier might now have plenty of electric auto dealerships on the Blvd if oil companies hadn't killed that enterprise in the last 15 years. And Whittier might even have had the red line transport system at almost every corner within walking distance if those same companies hadn't killed the prospect of truly accessible public transport in the last 100 years. We have found ourselves victims of our addiction to oil because the alternatives presented to us by media and public servants, were deceptively narrowed in the management of private finance over the common and public good.

I believe that the city of Whittier in view of a prop A public trust preserve voted for...by its people, should take the high road now, in transitioning away from oil dependency and in light of scientific verifications about climate destabilization due to the burning of fossil fuels. I am a participant in a 'Transition' group studying those ideas. I am also a member of the United Nations Association in Whittier. I am a member of Whittier Area Coalition for Peace and Justice and I stand independently with other independent groups like WHOW to remind this body to take more into consideration than just the bottom line which leads us ultimately to the bottom of the barrel, a sure thing for 'junkies jones-ing' on a non-renewable resource. Thank you for allowing me the three minutes you give to each and everyone of us who is willing to take it. However, I find it sad... that litigation is the only financial tool which will enable you to hear what we grassroots have to say.

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WHITTIER, CALIFORNIA
PHONE OXbow 8-9581



24 October 2011

My name is Charell Charlie. I live in Pico Rivera but I spend much of my time in Whittier because most of my friends live here.

I intend to address the big picture but first I want to say that I was alarmed to learn that there is a school for autistic and Asperger kids so close to the site. My 17 year old son has Asperger syndrome. I know how hypersensitive these kids are to noise and smells so I'm very worried by how this project would severely impair the learning environment for these special kids.

Sugar is to yeast as petroleum is to humans.

This is how we get alcohol using yeast and some form of sugar, such as grape juice: The yeast feeds on the sugar, which causes the yeast to thrive... at first, and their population surges exponentially. But then they become poisoned by their own waste, which is alcohol, and they all die.

Mankind is thriving, at the moment, and we have just passed 7 BILLION HUMANS on the planet. Thanks to our recent ability to harness petroleum, our standard of living has soared. Virtually everything we touch and use is made from petroleum... AND it's one of the *most* polluting industries there is! Life without oil is unimaginable for most. Yet we did alright without it before we had it.

But now we are, as President Bush said, "addicted to oil." When someone is addicted do we say "Go ahead, use all the drugs you can get until you can't get anymore or you're DEAD" ???

We simply MUST transition to renewable energy as soon as possible. Sucking more oil out of the ground will only delay our progress.

FACT: Addicts behave badly. Oil companies are the largest businesses on Earth and *they* are addicted to power and control. Their lobbyists have perverted our tax code so they pay NO taxes and get huge subsidies as well. *There's* you Big government spending! These Corporate Welfare Kings use very devious "persuasion management" tactics. They know how to con the gullible by using talking points and playing on emotions like love of God and country. They skew opinion polls by skillfully wording questions so I wouldn't be so sure that pro-drilling folks are in the majority. Pro-drilling Council members might soon find themselves out of office.

The small percentage scientists who are Climate Change deniers are in the pocket of Big Oil... REAL scientists say we will soon reach the tipping point when nothing we do can stop Global Warming... A major reason why we must leave it in the ground!

In short, I do not trust oil companies. I wouldn't trust any promise of large sums for Whittier. They are using us like any addict would to get their next fix.

Unlike yeast, humans can chose to control their behavior. I implore you to choose wisely so that your progeny will not curse your name.

One more thing: ^{the}

The major point of Occupy Movement that is sweeping the country is because our representatives have been serving Big Business instead of US!

We are the 99%!

"Humanity would need five Earths to produce the resources needed if everyone lived as profligately as Americans."*

*<http://www.independent.co.uk/environment/mankind-using-earths-resources-faster-than-replenished-1827047.html>

Submitted by:
Lupe Sahagun
all opinions and false informat.

Talking Points:

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It will have strict oversight by the City, County, State and Federal authorities.

It will be small, unobtrusive and quiet.

Out of the preserves 3,860 acres, will only be 6.9 acre site. That is 0.5% of the Preserve.

The project is located behind hills, down in a canyon, surrounded by trees

From this small site, the City will receive, at a minimum, \$7.5 million a year

It will benefit every resident in the city.

Our City needs new source of revenue in order to maintain vital City Services. Too many car dealerships and stores have closed, hurting the City's budget.

It will create Millions of dollars a year in new revenue that we badly need.

Whittier Oil project will help stabilize our economy.

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They will use the most advanced technology and go beyond the normal standards of safety and monitoring.

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Matrix will be required to post a bond to ensure that the preserve is returned to its natural state after the project is no longer in operation.

All the wells are underground in soundproof, concrete cellars.

Matrix will invest in restoring native habitat.

The EIR showed that there are no biological impacts. Wildlife and residents are safe.

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There is no oil refinery in the project. All oil and gas will be sent away in an underground pipeline for refining.

They have reduced truck trips by almost 10,000.

NOISE:

Noise is not an issue. The site is four football fields away from nearest residence, down in a canyon, shielded by trees and sound walls.

Matrix will be using the best sound proofing technology available

They will have specific hours of operation to minimize sound

All wells are underground in soundproof, cement bunkers.

Sound walls will be built to contain surface sounds.

HOME VALUES:

With improved City Services, our home values will improve too. Look at other cities that have oil revenue like Beverly Hills and Signal Hill.

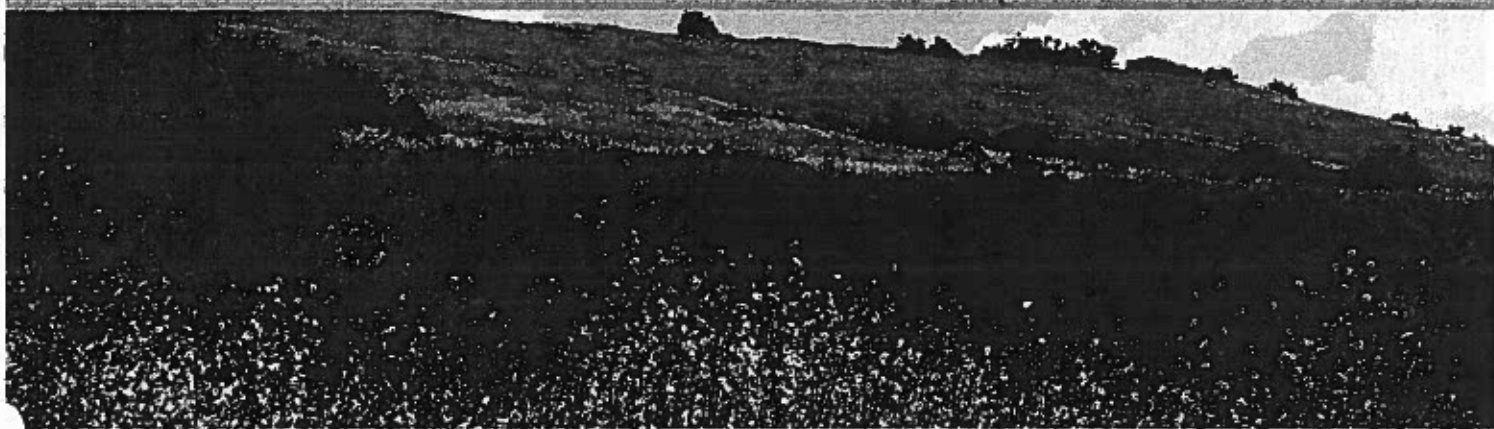
It is important to our home values.

EIR shows that home values will not be affected.

The fact is: with the new city revenue, we will be able to enhance our quality of city services, and the value of our homes will increase too.

Answers

to your Questions about
The Whittier Main Field
Oil Project



Will Whittier residents and our community benefit from allowing oil and gas extraction in the Preserve?

Yes. The Whittier Main Field Oil Project will give the City long-term financial stability, which benefits the entire community. An independent economic analysis was conducted and conservatively estimates that at a minimum:

- *\$7.5 million in new revenues per year could be generated for the City, adding hundreds of millions to the City budget over the life of the project.*¹
- *20 to 60 million barrels of oil can safely be recovered from the estimated hundreds of millions of barrels of oil still located in sandstone reservoirs deep beneath the City land.*
- *Each additional 1,000 barrels of oil could generate an additional \$7.7 million a year for public services. The project is designed for a maximum rate of 10,000 barrels oil a day.*

The Whittier Main Field Oil Project will create a new long-term source of revenue that can be invested in City services, such as Police and Parks and Recreation.

This new money will help enhance the quality of life for every resident of Whittier.



Q:

What did the Final Environmental Impact Report find?

A:

The Final EIR found that the project could operate safely, cleanly and quietly with specific, mandated modifications and the use of the most advanced technology. The Final EIR confirmed:

- There are no significant and unavoidable impacts to biological resources.²
- Impacts to air quality that are less than significant with mitigation that would occur during operational activities.³
- There are no significant and unavoidable impacts related to safety, risk of upset and hazardous materials.⁴
- There are no significant and unavoidable impacts to geological resources.⁵
- There are no significant and unavoidable impacts to noise and vibration.⁶
- There are no significant and unavoidable impacts to transportation and circulation.⁷
- There are no significant and unavoidable impacts to wastewater.⁸

The Final EIR concludes that by adhering to State mandated requirements and meeting the mitigation demands of the Final EIR, the cumulative impacts of the project are less than significant.

¹ AECOM Project No. 10642745.01, Page 64

² October 2011 Whittier Project EIR Final, ES-7

³ October 2011 Whittier Project EIR Final, ES-7

⁴ October 2011 Whittier Project EIR Final, ES-8

⁵ October 2011 Whittier Project EIR Final, ES-8

⁶ October 2011 Whittier Project EIR Final, ES-8

⁷ October 2011 Whittier Project EIR Final, ES-10

⁸ October 2011 Whittier Project EIR Final, ES-10

Will the value of my home be adversely affected?

No. This question was thoroughly studied in the Final EIR by comparing the historical home values at the Matrix Honolulu Terrace operation, Matrix Sycamore Canyon operation and the Elabra Heights oil operation. The study, conducted by AECOM Technical Services, concluded:

"...we found no adverse effect on home values within the determined influence areas and there does not appear to be any notable negative impact to home values in comparison to the larger City and County trends."⁹

Additionally the new site will be four football fields away from nearest homes and will be shielded from view by hillsides and soundproofing shielding.

Can the City of Whittier allow oil drilling on the Preserve even though it used Proposition A County bond money to purchase the land?

Yes. Esther Feldman, the author of Proposition A, and a leading environmentalist, provided her analysis to the City Council regarding the City's right to recover oil from the Preserve. Ms. Feldman concluded that "Proposition A's intent and goals can be preserved and that the proposed oil and gas project can be carried out in a manner that is consistent with Proposition A and its implementing documents."¹⁰

AECOM Project No. 10842745.01 Page 6
Community Conservation Solutions Review of Proposed
Whittier Oil Project for Consistency with Proposition A, Page 2

Q: **Can the City legally profit from the oil extracted from the Preserve?**

A: **Yes.** In a detailed legal opinion delivered to the City Council, Carlyle Hall, considered one of California's foremost environmental and land use attorneys, emphatically stated that Whittier has the right to lease the land for oil and gas extraction and receive payments from the lease.

Q: **Will the new oil project be safe for the environment, the Preserve and the residents of Whittier?**

A: **Yes.** The Final EIR requires that strict environmental protection measures be enforced on the site at all times to make sure that people and wildlife are fully protected and that no damage is done to the preserve. All the wells and test stations will be underground in concrete, protected cellars.

The Whittier Main Field Oil Project can be safely, cleanly and quietly operated.

Q: **How much of the Preserve will be part of the project and where will it be located?**

A:

- The entire Preserve is 3,860 acres.
- The actual project site is only 7 acres [0.25%] of the entire 3,860 acre Preserve.
- Less than 1% (under 3 acres) of land outside of the 7 acre production site may be impacted/disturbed by development or use (in-place roads, brush clearance, or pipeline route) - all involved land will be restored/improved after development is completed.
- Project is surrounded by hills and trees in an area already off-limits to the public.
- The project is 4 football fields away from the nearest residence.

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P-3 86*****ECRWSS**C070

[REDACTED]
OR CURRENT RESIDENT
[REDACTED]

Working with independent experts and Whittier residents, Matrix Oil has redesigned its Consolidated Central Plan to protect the public and reduce impact to the environment. The improvements include:

- A single Consolidated Site design with one walled side for better sound-proofing;
- Relocating the gas-processing equipment approximately 700 feet farther into the canyon and away from public view;
- Relocating the drilling rig and lowering the rig top by more 50% to reduce visual impacts;
- Eliminating all truck hauling of excavated soil to landfills via city streets, eliminating 9,700 truck trips;
- Redesigning the site perimeter to leave a large grove of trees in place around the site to further reduce visibility impacts;
- Redesigning the site to eliminate up to 90% of perimeter re-sloping of the hillside to reduce impacts to biology.

Matrix Oil will be required by law to help restore and improve native wildlife habitat in the Preserve. The project would be strictly monitored by an independent conservation organization as well as by City, County, and Federal authorities.

Our goal is to balance Whittier's environmental and economic future.

Join the hundreds of your friends and neighbors who support the Whittier Oil Project. Please visit: **www.whittieroil.com** for more information.

Whittier Main Field Oil Project

6745 So. Washington Ave., #200, Whittier, CA 90601

www.whittieroil.com

Toll-Free: (877) 779-3847

Printed on recycled paper with soy based inks

Whittier Main Field Project

- Yes, I support the Whittier Oil Project
- Yes, I want a lawn sign
- Yes, I will host a coffee for our neighbors
- Yes, you may use my name in endorsement mail and ads
- Yes, keep me informed through email:

Name (PLEASE PRINT)

X

Signature

Email

Address

City

State

Zip

Phone

www.whittieroil.com

434



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WHITTIER CA 90601-9909**



**Whittier Main Oil Field Development Project
Conditional Use Permit CUP#09-004**

CONDITIONS OF APPROVAL

GENERAL CONDITIONS

1. **Mitigation Measures.** All mitigation measures set forth in the project CEQA documents, and included as Attachment A, shall be satisfied by the Operator (Matrix Oil Corporation), at the Operator's expense; and the development must operate within the development assumptions utilized for the CEQA review.
2. **Indemnification, Protection and Defense.** The Operator and its successors in interest shall indemnify, protect, defend (with legal counsel reasonably acceptable to the City), and hold harmless, the City, and any agency or instrumentality thereof, and its elected and appointed officials, officers, employees, and agents from and against any and all liabilities, claims, actions, causes of action, proceedings, suits, damages, judgments, liens, levies, costs, and expenses of whatever nature, including reasonable attorney's fees and disbursements (collectively "Claims") arising out of or in any way relating this project, any discretionary approvals granted by the City related to the development of the project, or the environmental review conducted under California Environmental Quality Act, Public Resources Code Section 21000 et seq., for the project. If the City Attorney is required to enforce any conditions of approval, all costs, including attorney's fees, shall be paid for by the Operator.
3. **Injunctive Relief.** In addition to any administrative remedies or enforcement provided hereunder, the City may seek and obtain temporary, preliminary, and permanent injunctive relief to prohibit violation of the conditions set forth herein or to mandate compliance with the conditions herein. All remedies and enforcement procedures set forth herein shall be in addition to any other legal or equitable remedies provided by law.
4. **Governmental Compliance.** The Operator shall comply with requirements of all Federal, State, County, and local agencies as are applicable to this project.
5. **All oilfield development and operations shall substantially adhere to the approved project plans and description as reviewed and accepted by the Planning Commission on October ___ 2011.**
6. **Project Description.** The procedures, operating techniques, design, equipment and other descriptions provided by the Operator in: 1) its CUP application to the City and in subsequent clarifications and additions to that application; and 2) as described in the project EIR and any subsequent environmental review, are incorporated herein

Agenda related writings or documents provided to a majority of the Planning Commission members and available to the public on 10-20-11, after distribution of the 10-19-11 agenda packet.

as permit conditions and shall be required elements of the project. Since these procedures were part of the project description which received environmental analysis, a failure to include such procedures in the actual project could result in significant unanticipated environmental impacts. Deviations from the project description, environmental review or conditions of approval may require further environmental review and a modification to the CUP. Therefore, modifications of these procedures shall not be permitted without a determination of substantial conformity or a new or modified permit. The use of the lease area and the size, shape, arrangement and location of buildings, structures and landscaped areas shall be in substantial conformity with the approved Conditional Use Permit CUP09-004.

7. **Grounds for Permit Modification or Revocation.** Failure to abide by and faithfully comply with any conditions for the granting of this permit shall constitute grounds for the modification or revocation of this permit by the approval authority.
8. **Conditions Separately Remain in Force.** In the event that any condition contained herein is determined to be invalid, then all remaining conditions shall remain in force.
9. **Conflicts between Conditions.** In the event that any condition contained herein is determined to be in conflict with any other condition contained herein, then where principles of law do not provide to the contrary, the condition most protective of natural environmental resources and public health and safety shall prevail to the extent feasible.
10. **Changes to Conditions.** The Whittier City Council shall have the authority, in a noticed public hearing, to specify or change the Whittier City Department responsible for any conditions contained herein.
11. **Challenges to Mitigation or Condition.** In the event that any condition imposing a fee, exaction, dedication or other mitigation measure is challenged by the Operator in an action filed in a court of law or threatened to be filed therein which action is brought in the time period provided for by Code of Civil Procedures Section 1094.6 or other applicable law, this approval shall be suspended pending dismissal of such action, the expiration of the limitation period applicable to such action, or final resolution of such action. If any condition is invalidated by a court of law, the entire project shall be reviewed by the Planning Commission and no approval shall be issued unless substitute feasible mitigation conditions/measures are imposed.
12. **Applicability of Conditions to Construction and Operations.** These permit conditions are intended to apply to the project during all phases. The term "operations" shall be understood to encompass construction, drilling and re-drilling and operation phases unless such an interpretation would be inappropriate.
13. **Maximum Number of Wells.** The Operator shall drill no more than 60 wells in the Oil Field project area.

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14. **Infrastructure.** The Operator shall have suitable infrastructure in place, as determined by the City, to support oil operations.
15. **Traffic Management Plan.** Prior to any project excavation or construction activities related to the project site, the Operator shall prepare for review and approval of the City a Traffic Management Plan to reduce project traffic impacts on substantially affected residential streets, including at a minimum affected portions of Penn Street and Catalina Street.
16. **Off-Site Staging Area and Car/Van Pooling.** To reduce vehicle and truck traffic to and from the site, the Operator shall plan for and utilize off-site staging area and car/van pooling to greatest extent possible. These plans shall be subject to review by the City of Whittier Community Development Director (Director).
17. **Greenhouse Gas Off-Set:** Prior to any project excavation or construction related activities related to the project site, the Operator shall prepare for review and approval of the City a plan to reduce greenhouse gas (GHG) emissions generated by the project. Strategies included in the plan may include plantings of trees in the project area and along the Greenway Trail, and/or purchase of credits offsite.
18. **Retaining Walls.** Prior to any project excavation or construction related activities related to the project site, the Operator shall provide detailed plans of retaining walls for review and approval of the City and Habitat Authority.
19. **Environmental Compliance Coordinator.** The Operator shall recommend and fund the Environmental Compliance Coordinators. The number of Environmental Compliance Coordinators shall be determined by the City and shall take into account the level of Oil Operations at the Oil Field. The Environmental Compliance Coordinator(s) shall be approved by, and shall report to, the Director. The responsibilities of the Environmental Compliance Coordinator(s) shall be set forth in implementation guidelines that may be developed by the City for the Oil Field and shall generally include:
 - (1) On-site, day-to-day monitoring of construction, drilling and redrilling, and operational activities as determined by the Director.
 - (2) Taking steps to ensure that the Operator, and all employees, contractors and other persons working in the Oil Field, have knowledge of, and are in compliance with all applicable provisions of this section.
 - (3) Evaluating the adequacy of Drilling, Redrilling, and construction impact mitigations, and proposing improvements to the Operator or contractors, and the City.

- (4) Reporting responsibilities to the various City agencies with oversight responsibility at the Oil Field, as well as other agencies such as DOGGR, and SCAQMD.

20. Special Training for Vendors and Employees.

- (1) Prior to any project excavation or construction related activities, Operator shall provide all contractors, subcontractors, oil tankers and workers with an operational manual that will include instructions about Preserve rules; permitted parking areas; smoking prohibition; appropriate location and placement of temporary living trailers, offices as well as guard station posts; guidelines for environmentally friendly operations (i.e. do not push dirt in drainages, do not trim riparian vegetation, etc.). The operational manual shall be reviewed and approved by the Director and Habitat Authority.
- (2) The Operator shall arrange for an on-going special training program to ensure that all employees and vendors are trained to comply with the operational manual, including all environmental and biological compliance and monitoring requirements.

21. Landfill Road Restrictions. No use of the Landfill Road shall be permitted during the hours from one half (1/2) hour before sunset to 1/2 hour after sunrise, to protect animals with nocturnal foraging/hunting habits.

22. Ranger Station. The ranger station shall be relocated to a location acceptable to the Director and Habitat Authority prior to Project construction. This temporary location shall remain operational as determined by the Director and Habitat Authority.

23. Colima Tunnel. The area around the west end of Colima tunnel where Eucalyptus trees have been previously removed shall be revegetated to provide better cover and to attract more animals to use the tunnel ~~(west end)~~ prior to Project construction. The revegetation area shall include weedy patches connecting the tree removal area, encompassing approximately 25 acres. Phasing of the revegetation shall be as directed by the City and Habitat Authority.

24. Spill Clean-up Fund. The Operator shall establish a fund, letter of credit or similar mechanism in an amount acceptable to the City to guarantee that funds will be immediately available to undertake clean-up activities in case of a spill.

25. Fire Fighting Apparatus. The Operator shall provide adequate firefighting apparatus to fight oil related fires within all areas of the Preserve on which oil related operations will occur, including pipelines and roads. The type, amount and location of firefighting apparatus shall be determined by the County Fire Department and City.

26. During all construction, drilling and redrilling and operational phases, the Operator shall ensure that protective fencing is in place as required by the City and Habitat Authority.
27. **24-Hour Emergency Contact.** Prior to issuance of the Permit for Phase 1, the Operator shall provide to City, Habitat Authority and County Fire Department the current name and position, title, address, and 24-hour telephone numbers of the person in charge of the facility, person in charge of construction, and other representatives who shall receive all orders and notices, as well as all communications regarding matters of condition and permit compliance at the site and who shall have authority to implement an emergency facility shutdown.
28. **Oilfield Public Relations Contact.** The Oilfield shall provide for an on-site public relations officer to be available at all phases of project construction and operation. The officer's name and phone number shall be posted for easy access to the public, including on the City's website.
29. **Administrative Items:** The following provisions shall apply throughout the Oil Field project area.
 - (1) **Costs of Implementing and Enforcing Conditions.** The Operator shall be fully responsible for all reasonable costs and expenses incurred by the City or any City contractors, consultants, or employees, in implementing, monitoring, or enforcing this section, including but not limited to, costs for permitting, permit conditions implementation, mitigation monitoring, reviewing and verifying information contained in reports, undertaking studies, research and inspections, administrative support, and including the fully burdened cost of time spent by City employees on such matters.
 - (2) **Draw-Down Account.** The Operator shall maintain a draw-down account with the City, from which actual costs will be billed and deducted for the purpose of defraying the expenses involved in the City's review and verification of the information contained in any required reports and any other activities of the City, including but not limited to: enforcement, permitting, inspection, coordination of compliance monitoring, administrative support, technical studies, and the hiring of independent consultants. The initial amount to be deposited by the Operator shall be \$500,000. In the first year, if withdrawals from the account have reduced its balance to less than 50 percent of the amount of the initial deposit (\$250,000), the Operator shall deposit \$50,000 in supplemental funds within 30 business days of notification. After the first year, if the balance in the draw-down account is reduced at any time to \$50,000, the Operator shall deposit \$50,000 in supplemental funds on each occasion that the account is reduced to \$50,000 or less within 30 business days of notification. There is no limit to the number of supplemental deposits that may be required. At the discretion of the Operator, the amount of an initial or

supplemental deposit may exceed the minimum amounts specified in this subsection. The Director may, from time to time, increase the minimum \$50,000 figure to account for inflation or the City's experience in obtaining funds from the account.

- (3) **Indemnification.** The Operator shall enter into an agreement with the City to indemnify and hold harmless the City, its elected and appointed officials, agents, officers and employees from any claim, action or proceeding for damages arising from its Oil Operations, including water, air or soil contamination, health impacts, or loss of property value during the Oil Operations, Abandonment and post-Abandonment of the Oil Operations with terms approved by, and in a form acceptable to, the City Manager.
- (4) **Insurance Requirements.** Within 90 days of the effective date of this section or such time as may be extended by the Director for good cause shown, and without limiting the Operator's indemnification of the City as required in the preceding subsection, the Operator shall provide evidence of insurance coverage that meets City requirements as required and approved by the City Manager including identifying the City and its elected and appointed officers and employees as additional insureds. Such coverage shall be maintained so long as Oil Operations are conducted within the City and until such time as all Abandonment requirements are met and certified by the appropriate local, state, and federal agencies. Such insurance coverage shall include but is not necessarily limited to the following: general liability, auto liability; professional liability; and environmental impairment liability coverage insuring clean-up costs, and endorsing for 'Sudden and Accidental' contamination or pollution. Such coverage shall be in an amount sufficient to meet all applicable state and federal requirements, with no special limitations. At the Operator's request and only with City approval by the City Manager, the Operator may self-insure all or any part of the above coverage obligations in lieu of purchasing commercial coverage. These insurance requirements shall be in addition to all other indemnification, insurance and performance security required by federal, state and local regulations and permits.
- (5) **Performance Security.** The Operator shall be subject to the following provisions:
 - a. **Performance Bond.** Prior to issuance of the first drilling permit pursuant to this section, the Operator shall provide to the Director, a faithful performance bond or financial instrument in the sum to be determined by the City Manager, payable to the City and executed by a corporate surety acceptable to the City and licensed to transact business as a surety in the State of California. Such bond shall be conditioned upon the faithful performance by Operator of duties related to well abandonment, site restoration and environmental cleanup and shall be in a format and include terms approved by the City Manager.

- b. **Change of Operator.** The performance bond shall continue in force for one (1) year following any sale, transfer, assignment, or other change of Operator of the Oil Field, or of the current Operator's termination of activities at the oil field. The City may release said bond prior to the end of the one (1) year period upon satisfaction by said Operator of all its obligations. Notwithstanding the foregoing, the performance bond shall not be terminated or released upon the sale, transfer, assignment, or other change of Operator until the new Operator has delivered a replacement bond complying with the provisions of this section.
- c. **Funding Options.** At its sole option, the City may accept Certificates of Deposit, Cash Deposits, or U.S. Government Securities in lieu of commercial bonds to meet the above bonding requirements on terms approved by the City Manager.

30. **Record Keeping.** As to any condition which requires for its effective enforcement the inspection of records or facilities by City or its agents, the Operator shall make such records available or provide access to such facilities upon reasonable notice from City. The City agrees to keep such information confidential where permitted by law and requested by the Operator in writing.

31. **Periodic Review.** The City shall conduct a comprehensive review of the provisions of this section at least every five (5) years to determine if the provisions of this section are adequately protecting the health, safety and general welfare. Such reviews shall, among other things, consider whether additional provisions should be added, appended or removed. One of the main goals of the periodic review shall be to evaluate if proven technological advances that would further reduce impacts of Oil Operations on neighboring land uses should be incorporated into the provisions of this section.

(1) **Review Requirements.** Each review shall include a report by a hearing officer designated by the Director, which shall be prepared after public notice and an opportunity for public comment. The report shall include a comprehensive analysis of the effectiveness of this section, and shall review and consider enforcement activity, operational records, and any other issues relating to Oil Operations. A draft of the report shall be provided to the Operator for review and comment. All comments on the draft report from the Operator shall be submitted to the hearing officer in writing, and will be considered, if timely received, before the report is finalized. The final report by the hearing officer shall include a recommendation as to whether the Director should prepare a proposed amendment to this section for submission to the City Council.

(2) **Early Reviews.** An earlier review may be requested by the Director at any time, if more than three (3) material violations occur within any twelve (12) month period and the Director and responsible agencies determine that resolution of the violations requires an amendment to this section.

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32. Operational Procedures

- (1) All oilfield vehicles on the Oil Field project area shall carry two-way radios, fire extinguishers, and other emergency equipment.
- (2) If damages due to natural events such as earthquakes or floods occur on the Oil Field project area, the affected area shall be repaired to previous or comparable conditions.
- (3) The Oil Field project area shall remain in safe conditions at all times. Operator shall also be responsible for maintaining any affected adjacent areas in safe condition subject to the review and approval of the City and Habitat Authority (i.e. Operator shall pay for all costs associated with stabilizing an affected adjacent slope outside the leased area to guarantee safe site conditions or to reduce potential property damages.)
- (4) Operator shall provide quarterly written, emailed reports to the City, Habitat Authority and on-site or supervising ranger describing project activities. The reports shall contain a list of contractor company names.
- (5) Operator will ensure that the oil operations site manager and on-site or supervising ranger exchange phone numbers.
- (6) Operator shall be responsible for cleanup of trash produced by oil field activities along the roadways and surrounding areas
- (7) Operator shall provide all contractors, subcontractors and oil tankers with adequate directions and maps for accessing the site. Proper sign posting of the Oil Field shall be provided so that oil contractors are aware of the proper entrance.
- (8) The Operator shall clearly identify on site the boundaries of the oil field project area with fencing and in a manner acceptable to the Habitat Authority to avoid confusion over use area for staging, storing, stockpiling, etc.
- (9) The Operator shall ensure that roadside/ trailside signs are used as necessary to warn vehicles and hikers, such as "Watch for truck traffic"; "Watch for pedestrians/wildlife". Speed limit signs shall be posted along roads used by oilfield vehicles. Posted speeds shall be a maximum of 10 miles per hour.
- (10) The Operator shall be responsible for graffiti cleanup along roads used by oilfield vehicles and on any signs/gates/fencing related to their operation.
- (11) The Operator shall report any illegal activity or vandalism to the Habitat Authority and City in a timely manner.

33. **Director's Review Required.** The Operator shall apply for and receive approval of a Director's Review prior to any new Drilling and Redrilling. The Director's review shall also apply to emergency actions determined by the Director as necessary to prevent an imminent hazard, or to other immediate measures required for the purposes of protecting health and safety. No new Permits for Drilling or Redrilling shall be approved by the Director unless the subject wells have been approved as part of the annual drilling plan. Approval shall not be granted until copies of all related permits have been submitted to the Director; other permits including, but not limited to the permits required by DOGGR, the County Fire Department; the City Department of Public Works, the County Sanitation District, RWQCB, SCAQMD and other pertinent agencies identified by the Director.

34. **Enforcement:** In addition to the provisions of Chapter 1.08 of the City of Whittier Municipal Code, the Operator shall be subject to the following enforcement provisions:

(1) **Civil Penalties and Performance Security.** The Operator shall be subject to a penalty for violation of any requirement of this section as determined by, and at the discretion of, the Director in an amount not less than \$1,000 or more than \$10,000 per day per violation, but in no event, in an amount beyond that authorized by state law. For this purpose, the Operator shall deposit the sum of \$100,000 in an interest-bearing trust fund with the City within thirty days of the effective date of this section, to establish a draw down account. A written notice of violation and the associated penalty will be sent to the Operator. If the noted violation is not corrected within thirty days to the satisfaction of the Director, the penalty amount cited in the written notice will be deducted from the account. If the violation is corrected within 30 days but recurs any time within a six-month period, the penalty will be deducted from the account upon each recurrence and the Operator will be notified of such deduction. Once the deposit has been depleted by 50 percent of the initial amount (\$50,000), the Operator shall deposit additional funds sufficient to bring the balance up to the amount of the initial deposit (\$100,000) within 10 business days of notification. There is no limit to the number of supplemental deposits that may be required while the Operator conducts Oil Operations within the City. If the Operator is dissatisfied with the action of the Director, the Operator may file an appeal with a Hearing Officer designated by the Director within 15 days after notice is mailed. Upon receiving a notice of appeal, the Hearing Officer shall take one of the following actions.

- a. Affirm the action of the Director;
- b. Refer the matter back to the Director for further review with or without instructions; or
- c. Set the matter for public hearing and, after hearing, affirm, modify or reverse the action of the Director.

The decision of the Hearing Officer shall be final.

- (2) Right of Entry. Any officer or employee of the County of Los Angeles, or his or her duly appointed representative, whose duties require the inspection of the Oil Field premises shall have the right and privilege at all reasonable times, to enter upon any premises upon or from which any Oil Operations are being conducted for which any permit is required under this section, for the purpose of making any of the inspections pursuant to this section, or in any other ordinance of the County, or for any other lawful purpose, but for safety reasons, shall be accompanied by the Operator or a designee of the Operator and shall wear all appropriate personal protection equipment in accordance with the Operator's established health and safety policies.

OPERATIONAL CONDITIONS

35. Odors, Liquids or Visible Emissions. The Operator shall ensure that all normal Project facility operations will be conducted in such a manner so as not to generate offensive odors, fumes, noxious liquids or visible emissions of smoke.
36. Sour Gas Contingency Plan. The Operator shall prepare a sour gas contingency plan which addresses the actions that will be taken in the event that hydrogen sulfide is encountered during the drilling and production operations. This plan shall require that the facility be shut down if hydrogen sulfide above 4 ppm is encountered during production and outline what additional measures will be taken if hydrogen sulfide is encountered during production to prevent a hazardous release. No operation with sour gas shall be allowed as part of this permit. The Operator shall distribute copies of the plan to applicable City Departments and the City Fire Department. All plan recipients are to be notified of contingency plan changes via formal contingency plan updates.
37. Pipeline Construction Confined to Right-of-Way. All pipeline construction activities, including work areas and staging and storage areas of pipe, shall be confined to the approved right-of-way both within the Preserve and outside the site on oil and gas pipelines.
38. Submittal of As Built Drawings. Within one year after initial start-up of the project (Phase 1), and again within one year of commencement of Phase 2 operations, The Operator shall submit as-built drawings of the entire facility(s) to City. Any facility modifications required for Phase 3 operations shall also be documented on facility as-built drawings within one year of their construction. The Operator shall submit as many sets of drawings (up to ten sets) as requested by the City.
39. Solid Waste Disposal. Solid waste generated on the site shall be transported to a City-approved landfill or hazardous waste facility as may be appropriate.

40. **Water Conservation Measures.** The design of all new and/or modified onsite facilities shall incorporate the use of cost-effective water-conserving fixtures.
41. **Energy Conservation Measures.** Throughout the project life, as equipment is added or replaced, cost-effective energy conservation techniques shall be incorporated into project design.
42. **Meteorological Station.** The Operator shall maintain and operate a meteorological station at the Oil Field in good operating condition and in compliance with all applicable EPA and SCAQMD rules, regulations and guidelines, and to the satisfaction of the Director. The Operator shall conduct an audit of the meteorological station on an annual basis and submit the results of the audit to the SCAQMD and the Director. The Operator shall maintain the data files for the meteorological station for a period of not less than ten years. All such data shall be available upon request to the SCAQMD and the Director.
43. **Updated Health Risk Assessment.** After every five (5) years of operation of the meteorological station, the Operator shall provide the previous five (5) years of metrological data to the SCAQMD and the Director. If the SCAQMD or the Director determines that the previous five (5) years of metrological data from the Oil Field could result in significant changes to the Health Risk Assessment that was conducted as part of the Environmental Impact Report, then the City may elect to re-run the health risk assessment using the previous five (5) years of metrological data from the metrological station.
44. **Safety and Risk of Upset.** The Operator shall at all times conduct oil operations in a manner that minimizes risk of accidents and the release of hazardous materials, and shall comply with the following provisions:
- (1) **Natural Gas Liquid Blending.** Natural gas liquids at the gas plant shall be blended with the oil to the maximum allowable pipeline system vapor pressure. Natural gas liquids storage shall be limited to the volume allowed in the Risk Management Plan approved by the Fire Department.
 - (2) **Propane and Natural Gas Liquids Bullet Fire-Proofing.** The Operator shall install and maintain fire-proofing insulation on all propane and natural gas liquids bullets within the oil field. The fire-proofing insulation shall have a minimum two-hour fire rating and otherwise be acceptable to the Fire Chief. All propane and natural gas liquid bullets shall be equipped with an automatic deluge system.
 - (3) **Secondary Containment for Oil.** The Operator shall comply with the following provisions:

- a. The Operator shall ensure that all existing oil tank areas in the oil field, unless determined by the Director to be infeasible, and all the new oil tank areas shall have secondary containment (berms and walls) that can contain at least 110 percent of the largest oil tank volume in order to reduce the likelihood of oil spills entering the retention basins. In the event the Director determines that it would be infeasible to provide 110 percent containment for a particular existing oil tank, the Operator shall provide such containment as the Director determines is feasible.
- b. All retention basins in the oil field shall be adequately sized, and maintained to handle a 100-year storm event plus a potential spill of the volume of the largest tank that would drain into each basin.
- c. All above ground piping in the Oil Field that contains or could contain Oil shall be protected by basins or secondary containment (berms and/or walls).

45. Geotechnical. The Operator shall comply with the following provisions:

(1) Grading. The Operator shall comply with all of the following provisions:

- a. All proposed grading shall be subject to prior review and approval by the Director of Public Works.
- b. Grading involving up to 5,000 cubic yards may be undertaken pursuant to a City Master Grading Plan stamped by a registered professional engineer and a California-certified engineering geologist and approved by the Director of Public Works.
- c. No slope of cut or fill shall have a gradient steeper than two to one (2:1) unless specifically approved by a site specific geotechnical report.
- d. Cuts and fills shall be minimized to avoid erosion and visual impacts.

(2) Geotechnical Investigations. The Operator shall comply with the following provisions:

- a. A site-specific geotechnical investigation shall be completed for grading in excess of 5,000 cubic yards, unless approved pursuant to a Master Grading Plan approved by the Director of Public Works, and for any grading that supports or impacts a critical facility as determined by the Director. The investigation shall be completed by a California-certified engineering geologist and submitted to the Director of Public Works for review and approval, in conjunction with an application for a revised grading permit.

- b. A site-specific geotechnical investigation shall be completed for all proposed Permanent Structures. The investigation shall include analysis and recommendations associated with potential seismically induced ground failure, such as differential settlement and lateral spreading. The geotechnical investigation shall be completed by a California Certified Engineering Geologist and submitted to the Director of Public Works, for review and approval.

(3) Erosion Control. The Operator shall comply with the following provisions:

- a. The Operator shall comply with all provisions of an Erosion Control Plan that has been approved by the Director. The Erosion Control Plan shall be reviewed by the Operator every two (2) years to determine if modifications to the Plan are required. Any modifications to the Erosion Control Plan shall be submitted to the Director for review and approval. The Erosion Control Plan shall include any measures requested by the Director.
- b. Erosion shall be controlled on all slopes, creeks and banks so that no mud or other substances are washed onto public streets or surrounding property. Such control measures may consist of planting and irrigation, dams, cribbing, riprap, sand bagging, netting, berms, or other devices.

(4) Restoration of Slopes. Slopes shall be restored to their original grade once the use that required the grading of the slope has been discontinued. However, if restoration of a slope would negatively affect existing drainage patterns or slope stability, the slope shall be restored to a grade that avoids these negative effects.

(5) Oil Field Accelerometer. The Operator shall operate and maintain an accelerometer at the oil field to determine site-specific ground accelerations as a result of any seismic event in the region (Los Angeles/Orange County and offshore waters of the Santa Monica Bay and San Pedro Channel). Readings from the accelerometer shall be recorded at the oil field, and transmitted in real-time to the Caltech Seismological Laboratory. The Operator shall cease operations and inspect all oil field pipelines, storage tanks, and other infrastructure following any seismic event that exceeds a ground acceleration at the oil field of 13 percent of gravity (0.13 g) and promptly notify the Director. The Operator shall not reinstitute operations at the oil field and associated pipelines until it can reasonably be determined that all oil field infrastructure is structurally sound.

46. Pipeline Management Plan. The Operator shall maintain and implement a Pipeline Management Plan that meets the requirements of DOGGR regulations.

47. Noise Attenuation. All oil operations on the oil field shall be conducted in a manner that minimizes noise, and shall comply with the following provisions:

(1) Noise Limits. The Operator shall comply with the following provisions:

a. All oil operations on the oil field shall comply with the noise provisions of Chapter 8.32 of Title 8 of the City of Whittier Municipal Code, with the exception of drilling, redrilling, and reworking, which are exempt from the provisions of the said Chapter.

~~b. Hourly, A-weighted equivalent noise levels associated with Drilling, Redrilling and Reworking shall not elevate existing baseline levels by more than five (5) dBA at any Developed Area. For daytime activities (7:00 a.m. to 7:00 p.m.) existing baseline noise levels shall be defined as the maximum daytime equivalent noise level (eq) at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. For nighttime activities (7:00 p.m. to 7:00 a.m.), existing baseline noise levels shall be defined as the minimum nighttime equivalent noise level (43.1) at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. Updated baseline noise levels may be set, and additional monitoring sites may be established, from time to time by the Director. In no case shall baseline noise levels include any Drilling, Redrilling or Reworking operations.~~

b. Noise produced by Oil Operations shall include no Pure Tones when measured at a Developed Area.

(2) Backup Alarms. Backup alarms on all vehicles operating within the Oil Field shall be disabled between the hours of 8:00 p.m. and 8:00 a.m. During periods when the backup alarms are disabled, the Operator shall employ alternate, low-noise methods for ensuring worker safety during vehicle backup, such as the use of spotters.

(3) Equipment Servicing. All noise producing Oil Field Equipment shall be regularly serviced and repaired to minimize increases in Pure Tones and other noise output over time. The Operator shall maintain an equipment service log for all noise producing equipment.

(4) Deliveries to the Oil Field. Deliveries to the Oil Field shall not be permitted after 7:00 p.m. and before 7:00 a.m., Monday through Friday; between 8:00 a.m. and 5:00 p.m. on Saturdays and no activities on Sundays or federal holidays, except in cases of emergency.

(5) Deliveries within the Oil Field. Deliveries to areas of the Oil Field located within 500 feet of any residential property shall not be permitted after 5:00 p.m. or before 7:00 a.m. except in cases of emergency. Deliveries to such areas on

Sundays or legal holidays shall not be permitted after 5:00 p.m. and before 9:00 a.m., except in cases of emergency.

- (6) **Construction Equipment.** All construction equipment shall be selected for low-noise output. All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
- (7) **Construction Equipment Idling.** Unnecessary idling of internal combustion engines near noise-sensitive areas is prohibited.
- (8) **Worker Notification.** The Operator shall instruct employees and subcontractors about the noise condition provisions prior to commencement of each and every Drilling, Redrilling, Reworking, and construction operation, and shall annually certify to the Director that such employees and subcontractors have been properly trained to comply with such noise provisions. The Operator shall prominently post quiet mode policies at every Drilling and Redrilling site.

48. **Vibration Reduction.** All oil operations on the oil field shall be conducted in a manner that minimizes vibration. Additionally, vibration levels from Oil Operations at the Oil Field shall not exceed a velocity of 0.25 mm/s over the frequency range 1 to 100 Hz at any Developed Area.

49. **Signs.** All signage shall comply with the following provisions:

- (1) **Perimeter Identification Signs.** Identification signs, at intervals acceptable to the Director, shall be posted and maintained in good condition along the Outer Boundary Line fence and along the fences adjoining the public roads that pass through the Oil Field. Each sign shall prominently display current and reliable emergency contact information that will enable a person to promptly reach at all times, a representative of the Operator who will have the expertise to assess any potential problem and recommend a corrective course of action. Each sign shall also have the number of the Operator's 24-hour emergency contact, City Code Enforcement contact and the number of SCAQMD that can be called if odors are detected.
- (2) **Main Entrance Sign.** A sign shall be posted and maintained in good condition at the main entrance of the Oil Field prominently displaying a telephone number by which persons may contact a representative of the Operator at all times to register complaints regarding Oil Field operations.
- (3) **Other Required Signs.** All identification signs, warning signs, no trespassing signs, and other signs required by County, State and Federal regulations shall be properly posted and maintained in all required locations and in good condition.

(4) Well Identification Signs. Well identification signs including the Well name and Well number shall be posted and maintained in good condition at each Well location

(5) No Littering Signs. "No littering" signs shall be prominently posted and maintained in good condition on all Oil Field entrance gates.

50. Painting. All Oil Operation related structures visible from public roadways and surrounding properties within the Oil Field shall be painted or otherwise surfaced or textured with a color that is compatible with the surrounding areas, and has been approved by the Director. The painting or other surfacing of all structures covered by this subsection shall thereafter be maintained in good condition.

51. Well Cellars. All cellars shall be constructed in accordance with the most current American Petroleum Institute standards. In addition, the Operator shall comply with the following provisions:

(1) Cellar Fluids. Well cellars shall be kept free of all Oil, water, or debris at all times. During Drilling, Redrilling and Reworking, the cellar shall be kept free of excess Fluids by a pump which discharges into a waste Tank, mud pit, vacuum truck, or other approved disposal system.

(2) Access to Multi-Well Cellars. All multi-well cellars exceeding three (3) feet in depth and 25 feet in length shall have two (2) means of entrance and exit and an additional exit for every 50 feet in length thereafter. At least one (1) means of entrance or exit for all multi-Well cellars of 25 feet in length shall be a stairway constructed to California Division of Industrial Safety standards.

(3) Single Cellar Covers. All single cellars shall be covered with open grating and have no openings larger than three (3) inches at any point. Covers shall be capable of supporting vehicle weight or guardrails shall be erected to prevent vehicle access.

(4) Cellar Ladder Openings. All openings for ladders through grating shall be designed to allow exit from underside without obstruction, and shall be kept free of storage of any type. Said opening shall not be less than 24 inches on either side.

52. Sumps. The Operator shall comply with all of the following provisions:

(1) Sump Clean Out. All sumps that are used, or installed, or maintained for use in connection with any Well, and which have not been used for 90 days for the operation of or the Drilling, Redrilling or Reworking of such Well or any other Well in the vicinity, shall be cleaned out, and all Oil, rotary mud and rubbish removed.

(2) Sump Fencing. Around each sump of any depth, there shall be erected and continuously maintained a fence that encloses the sump in a manner that is satisfactory to the Director. This provision shall not apply to sumps that are constantly and immediately attended while Drilling, Redrilling and Reworking operations are proceeding.

53. Water Management Plan. The Operator shall comply with all provisions of a Water Management Plan that has been approved by the Director and the Director of Public Works. The Plan shall include best management practices, water conservation measures, the use of a drip irrigation system, and shall include provisions for the use of surface water runoff in the retention basins for dust suppression and landscaping. The Plan shall also address the availability of reclaimed water for use at the Oil Field. The Water Management Plan shall be reviewed by the Operator every three years to determine if modifications to the Plan are required. The Operator shall make changes to the Plan if requested by the Director or the Director of Public Works. Any modifications to the Water Management Plan shall be submitted to the Director and the Director of Public Works for review and approval. The water management plan shall include any elements requested by the Director or the Director of Public Works.

54. Groundwater Monitoring. The Operator shall develop, implement, and carry out a groundwater quality monitoring program for the Oil Field that is acceptable to the Director and consistent with all requirements of the Regional Water Quality Control Board. Pursuant to the approved program, the Operator shall install and maintain groundwater monitoring Wells in the vicinity of each surface water retention basin, which is permitted by the Regional Water Quality Control Board. Such monitoring Wells shall be completed as determined by a California Certified Professional Geologist. The Regional Water Quality Control Board and the Director shall be regularly advised of the results of such monitoring, and shall be immediately advised if such monitoring indicates a potential problem.

55. Fencing. All portions of the Oil Field on which Oil Operations are conducted shall be enclosed with a fence that at a minimum is compliant with DOGGR regulations codified at California Code of Regulations Title 14, Article 3, Sections 1778 and 1779, or as may be subsequently amended by the State.

56. Storage of Equipment. There shall be no storage at the Oil Field of material, equipment, machinery or vehicles which are not essential to the Oil Operations. All non-essential equipment shall be removed from the Oil Field within 30 days of the date they become non-essential, unless a time extension is granted by the Director.

57. Oil Field Cleanup and Maintenance. The Operator shall maintain the site in a clean and orderly condition and shall comply with the following provisions:

(1) Equipment Removal. All facilities that have reached the end of their useful economic life shall be properly decommissioned and removed from the Oil Field within one year. Areas not slated for future use shall be restored and revegetated

within 90 days of termination of use, unless such restoration and revegetation would interfere with fire safety or access to Oil Operations.

(2) **Equipment Maintenance.** All equipment, improvements, facilities and other personal property or fixtures located on the Oil Field, shall be maintained in good condition to the satisfaction of the Director and the Director of Public Works.

(3) **Site Debris and Vegetation.** The Operator shall keep the lease area free of debris and vegetation overgrowth to the satisfaction of the Director.

58. **Security.** All unmanned entrances to the Oil Field shall be equipped with sliding gates which shall be kept closed at all times except when authorized vehicles are entering or leaving the Oil Field. The Operator shall have a security guard on duty 24 hours per day.

59. **Oil Field Waste Removal.** The Operator shall comply with the following provisions:

(1) **Waste Collection.** All Drilling, Redrilling and Reworking waste shall be collected in portable steel bins compliant with United States Department of Transportation standards. Any Drilling, Redrilling, and Reworking wastes that are not intended to be injected into a Class II Well, as permitted by DOGGR, shall be removed from the Oil Field no later than 30 days following completion of the Drilling, Redrilling and Reworking. This provision does not apply to active sumps and mud pits.

(2) **Waste Discharge.** No Oil Field waste shall be discharged into any sewer, storm drain, irrigation system, stream, or creek, street, highway, or drainage canal. Nor shall any such wastes be discharged on the ground provided that the foregoing shall not prohibit the proper use of active Drilling sumps and mud pits.

(3) **Recycling Plan.** The Operator shall comply with all provisions of a Recycling Plan that has been approved by the Director. The recycling plan shall include any elements requested by the Director.

60. **Sanitation.** The Operator shall comply with the following provisions:

(1) **Garbage and Refuse.** The Oil Field shall be maintained in a clean, sanitary condition, free from accumulations of garbage, refuse and other wastes.

(2) **Toilets and Wash Facilities.** Sanitary toilet and washing facilities shall be installed at any site where personnel are permanently stationed. Portable facilities shall be provided wherever crews are temporarily employed. Such facilities shall be maintained in a clean and sanitary condition at all times.

61. **Storage of Hazardous Materials.** The Operator shall comply with all provisions of a Hazardous Materials Business Plan that has been submitted to the Fire Chief. The

Operator shall deliver to the Fire Chief for review and approval an updated Hazardous Material Business Plan on an annual basis. This Plan shall provide the location of where hazardous materials are stored at the Oil Field. Hazardous materials shall be stored in an organized and orderly manner, and identified as may be necessary to aid in preventing accidents, and shall be reasonably protected from sources of external corrosion or damage to the satisfaction of the Fire Chief.

62. Drilling, Redrilling and Reworking Operations. The Operator shall comply with all of the following provisions:

- (1) DOGGR Regulations. All DOGGR regulations related to Drilling, Redrilling and Reworking operations.
- (2) Number of Drilling and Redrilling Rigs. No more than ~~three~~ ~~(3)~~ one (1) Drilling or Redrilling rigs shall be present within the Oil Field at any one time.
- (3) Annual Drilling, Redrilling, Well Abandonment and Well Pad Restoration Plan. Before the end of each calendar year, the Operator shall develop and deliver to the Director an Annual Drilling, Redrilling, Well Abandonment and Well Pad Restoration Plan to the Director, which shall describe all Drilling, Redrilling, Well Abandonment, and Well pad restoration activities that may be conducted during the upcoming calendar year. The Operator may at any time submit to the Director proposed amendments to the then current Annual Plan. No Drilling, Redrilling or Abandonment activity may be commenced unless it is described in a current Annual Plan (or an amendment thereto) which has been approved, by the Director. The Director shall complete the review of the Annual Plan (and any amendments) within 45 days of receipt, and shall either approve the Annual Plan or provide the Operator with a list of deficiencies. The Annual Plan shall comply with the provisions of this subsection, and shall include the following:
 - a. The maximum number of Wells proposed to be Drilled or Redrilled;
 - b. Approximate location of all Wells proposed to be Drilled or Redrilled;
 - c. Approximate location of all proposed new Well pads, including their size and dimensions;
 - d. Estimated target depth of all proposed Wells and their estimated bottom hole locations;
 - e. A discussion of the steps that have been taken to maximize use of existing Well pads, maximize use of Redrilled Wells, and maximize the consolidation of Wells;
 - f. Location of all proposed Wells Abandonments, if known in accordance with DOGGR integrity testing program of Idle Wells;

- g. Location of all Well pads proposed to be abandoned and restored;
- h. A proposed schedule and phasing of the Drilling, Redrilling, Well Abandonment, Well pad abandonment and restoration activities;
- i. A discussion of the latest equipment and techniques that are proposed for use as part of the Drilling and Redrilling program to reduce environmental impacts; and
- j. A topographic vertical profile showing proposed location of new Wells that is reflective of local terrain conditions and that addresses the potential visibility of existing and proposed Wells and other production facilities from residential and recreation areas.

(4) **Drill Rig Engines.** All engines used for Drilling and Redrilling operations shall be operated by muffled internal-combustion engines or by electric motors.

(5) **Fire Safety Regulations.** All Drilling, Redrilling and Reworking shall be in conformance with applicable fire and safety regulations.

(6) **New Technology.** Proven reasonable and feasible technological improvements which are capable of reducing the environmental impacts of Drilling and Redrilling shall be considered as they become, from time to time, available.

(7) **Derricks and Portable Masts.** All Derricks and portable masts used for Drilling, Redrilling and Reworking shall meet the standards and specifications of the American Petroleum Institute as they presently exist or as may be amended.

(8) **Equipment Removal.** All Drilling and Redrilling equipment shall be removed from the site within 90 days following the completion of Drilling or Redrilling activities or as otherwise directed by the Director.

(9) **Drill Site Conditions.** All Drilling Sites shall be maintained in a neat and orderly fashion.

(10) **Belt Guards.** Belt guards shall be required over all drive belts on Drilling, Redrilling and Reworking equipment. Guarding shall be as required by, Title 8 of the California Code of Regulations, Section 6622, or as may be subsequently amended.

63. Processing Operations. The Operator shall comply with the following provisions:

(1) **Limits on Processing Operations.** Unless otherwise expressly required by DOGGR, the only Processing operations permitted at the Well Site shall be: the dehydration of Oil and Gas produced from the Well; the storage, handling,

recycling and transportation of such materials; and those Processing operations required for water injection purposes.

- (2) Refining. No refining shall be conducted within the Oil Field.
- (3) Well Pump Motors. All Well pumping units shall be operated by electric motors.
- (4) Well Pumps. Downhole submersible pumps for production Wells must be used wherever feasible.
- (5) Removal by Pipeline Only. All Oil, Gas and other hydrocarbons, produced from any Well in the Oil Field shall be shipped and transported through pipelines, except in case of an emergency or when access to a pipeline becomes unavailable. Excluded from this requirement are the three test wells, propane and other related natural gas liquids that are in amounts in excess of what can be blended into the pipeline. Should any pipeline through which Oil or Gas is currently transported become unavailable for the safe transportation of said products due to maintenance problems with the pipeline, or lack of sufficient capacity within the pipeline to handle the volume of Oil and Gas needing transportation, or because the owner or Operator of such pipeline elects to discontinue transporting Oil or Gas through such pipeline, then the Operator shall within 180 days of the date the existing pipeline becomes unavailable, seek to acquire a private right of way or easement, or shall file an application for a right of way, easement, encroachment permit or franchise for the construction of a replacement pipeline and shall diligently prosecute such application until such pipeline is completed. During any emergency situation, or during such time as any existing pipeline becomes unsafe or unavailable, Oil and Gas may be transported by truck until the emergency situation is resolved or until a replacement pipeline shall be permitted and constructed in accord with all applicable laws and regulations.
- (6) Pipelines. The Operator shall comply with the following provisions:
 - a. New pipelines that remove Oil or Gas from the Oil Field shall be buried below the surface of the ground;
 - b. All pipelines which are not enclosed within a fence shall be placed underground or covered with materials approved by the Fire Chief. Said covers shall be maintained in a neat, orderly, secure manner;
 - c. Any and all water or brine produced during pipeline construction shall be injected in accordance with DOGGR requirements, or disposed of in accordance with other local, state or federal regulations;
 - d. New pipeline corridors shall be consolidated with existing pipelines or electrical transmission corridors where feasible; and

e. Upon completion of pipeline construction, the site shall be restored to the approximate previous grade and condition.

(7) Active Pipeline Plot Plan. The Operator shall submit to the Fire Chief a plot plan depicting the approximate location of all active pipelines regulated by the United States Department of Transportation or California State Fire Marshall owned and used by the operation that are located outside the Outer Boundary Line, including waste water, and trunk and gathering lines to transport Oil or petroleum products. The plot plan shall be submitted within 30 days of the installation of any new pipelines or the relocation of an existing pipeline.

(8) Machinery Enclosures. The Operator shall maintain enclosures around machinery with moving parts consisting of a fence, screening or housing.

(9) Opening Protections. The Operator shall cap, close or protect the openings in all Oil Wells, test holes and similar excavation.

64. Well Reworking Operations. The Operator shall comply with the following provisions:

(1) DOGGR Regulations. The Operator shall comply with all DOGGR regulations related to Well Reworking operations.

(2) Number of Reworking Rigs. No more than eight (8) Reworking rigs shall be present within the Oil Field at any one time, unless an emergency condition requires additional Reworking rigs. This does not include equipment used for Well Maintenance or Well Abandonment.

(3) Hours of Operation. With exception of emergencies, Well Reworking operations shall not be allowed after 7:00 p.m. or before 7:00 a.m., nor on Sundays or legal holidays.

(4) Specifications. Reworking rigs shall meet the standards and specifications of the American Petroleum Institute.

(5) Equipment Removal. Reworking rigs shall be removed from the Oil Field within seven (7) days following the completion of Reworking operations unless such rig will be used on another Well at the Oil Field within five (5) days.

65. Tanks. The Operator shall comply with the following provisions:

(1) New Tank Specifications. All new Tanks and appurtenances shall be designed, constructed, installed and maintained in accordance with current County Fire Code, American Petroleum Institute, DOGGR, California Division of Industrial Safety, and Environmental Protection Agency Standards, applicable provisions of

Title 14 of the California Code of Regulations, Section 1774, and applicable CalARP Program requirements.

- (2) **Setbacks.** No new storage Tank, excluding a replacement Tank, shall be constructed closer than 500 feet from any Developed Area, or closer than 200 feet from a public road. No building shall be constructed within 50 feet of any Oil storage Tank.
- (3) **Vapor Recovery.** Oil, Wash, and Produced Water Tanks shall be vapor tight and shall be equipped with a vapor recovery system.
- (4) **Specifications for New Tank Piping, Valves, Fittings and Connections.** All new Tank piping, valves, fittings and connections including normal and emergency relief venting, shall be installed and maintained in accordance with current American Petroleum Institute standards to the satisfaction of SCAQMD and DOGGR.
- (5) **Detection of Tank Bottom Leaks.** The Operator shall design, implement and comply with a program, approved by the Fire Chief, for controlling and detecting Tank bottom leaks on all Tanks at the Oil Field. The Operator may use a combination of methods including but not limited to diversion walls, dikes, Tank foundations of concrete or gravel and, a Tank bottom leak detection system in compliance with, Title 14 of the California Code and Regulations, Section 1773, or any subsequently enacted State regulations regarding tank bottom leaks.

66. **Well and Production Reporting.** The Operator shall deliver annual production reports to the Director and the Fire Chief. The reports shall provide the following information:

- (1) A copy of all DOGGR Forms 110 and 110B submitted during the previous 12 months.
- (2) Number and mapped location of Wells Drilled or Redrilled, including Well identification numbers.
- (3) Number and mapped location of water injection Wells, including Well identification numbers.
- (4) Number and mapped location of Idled Wells, including Well identification numbers and the date each Well was idled.
- (5) Number and mapped location of Abandoned Wells, including date each Well was Abandoned and/or re-abandoned.
- (6) Any additional information requested by the Director or the Fire Chief.

67. **Idle Well Testing and Maintenance.** The Operator shall comply with Title 14, of the California Code of Regulations, Section 1723.9 regarding testing and Maintenance of Idle Wells, or any subsequent enacted State regulations regarding testing and maintenance of Idled Wells. The Operator shall carry out all additional tests, remedial operations and mitigation measures required by DOGGR if any idle wells do not meet the test standards.

68. **Abandoned Well Testing.** The Operator shall conduct annual hydrocarbon vapor testing of areas within the Oil Field that contain Abandoned Wells. The testing shall be done using a soil Gas vapor probe, or another method approved by the Director. The results of the testing shall be submitted to the Director and DOGGR on an annual basis. Abandoned Wells that are found to be leaking hydrocarbons that could affect health and safety shall be reported to the Director and DOGGR within 24-hours of the Abandoned Well Test. If directed by DOGGR, the Operator shall re-abandon the Well in accordance with DOGGR rules and regulations. If the test results for an Abandoned Well area is at or below the background levels for two (2) consecutive years that area shall thereafter be tested every five (5) years.

69. **Well and Well Pad Abandonment.** If DOGGR orders the Operator to plug and abandon any Wells on the Oil Field, the Operator shall deliver to the Fire Department, on a timely basis, all Notices of Intent to Plug and Abandon a Well that the Operator files with DOGGR and shall commence promptly and proceed diligently with the plugging and abandonment operations in accordance with DOGGR rules and regulations and the terms of the DOGGR permit to plug and abandon the Well. Well Abandonment may commence once all necessary permits and approvals are obtained. If the Well pad associated with the Abandoned Well does not contain other production, injection or Idle Wells, and will not be used for future Drilling, then the Operator shall promptly abandon the Well pad consistent with the following provisions:

(1) **Closure of Sumps.** The Operator shall clean out all sumps, cellars and ditches and level and fill all sumps and depressions pursuant to DOGGR requirements. If sumps are lined with concrete, bottoms and walls shall be broken up and removed. Sumps shall be closed in accordance with Regional Water Quality Control Board and California Department of Toxic Substances Control requirements.

(2) **Well Pad Site Cleanup.** The Operator shall leave the site entirely free of Oil, rotary mud, Oil soaked earth, asphalt, tar, concrete, litter, debris and other substances to the satisfaction of DOGGR and in accordance with federal requirements.

(3) **Contaminated Materials.** All contaminated soils and materials within the Well pad boundaries shall be removed and treated or disposed of in accordance with all local, County, State, and Federal regulations.

- (4) **Well Pad Revegetation.** The Well pad shall be revegetated as approved by the City and Habitat Authority.
- (5) **City Request for Review of Well Status.** The Director may periodically review the status of the Operator's Wells and submit to DOGGR a list of Wells the Director believes should to be plugged and abandoned as specified in Public Resources Code Section 3206.5 or any subsequently enacted State Law related to a local jurisdiction's right to request State-agency review of Idle Wells.
- (6) **Reduced Throughput Triggering Review.** When Oil or Gas throughput is less than 2,000 barrels per day, the Director shall conduct a public hearing to determine if shut down of the Oil Field or other actions are appropriate.
- (7) **Abandonment Procedures.** Within 180 days of permanent facility shut down, the Operator shall submit an Abandonment Plan to DOGGR and submit to the Director for review and approval a time line for facility removal, site assessment and remediation as necessary. The Operator shall begin abandonment of the site no later than 20 days after the Director's approval of the timeline, and shall provide to the Director quarterly updates on the abandonment process until such time as the Oil Field is abandoned and restored. The Operator and Landowners shall post a performance bond to insure compliance with all provisions of this subsection, and shall continue to pay property taxes at the rates assessed during Oil Field operation until all site restoration work has been fully completed, as determined by the Director.

70. **Monitoring and Compliance:** The following provisions shall apply throughout the Oil Field project area.

- (1) **Environmental Quality Assurance Program (EQAP).** The Operator shall comply with all provisions of an Environmental Quality Assurance Program (EQAP) that has been approved by the Director. The following provisions relate to the EQAP:
 - a. **EQAP Requirements.** The EQAP shall provide a detailed description of the steps the Operator shall take to assure compliance with all provisions of this section, including but not limited to all of the monitoring programs called for by this section.
 - b. **Annual EQAP Reports.** Within 60 days of the end of each calendar year, the Operator shall submit to the Director an annual EQAP report that reviews the Operator's compliance with the provisions of the EQAP over the previous year and addresses such other matters as may be requested by the Director. The Annual EQAP Report shall include the following:
 - i. A complete list and description of any and all instances where the provisions of the EQAP, or any of the monitoring programs referred to

therein or in this section, were not fully and timely complied with, and an analysis to how compliance with such provisions can be improved over the coming year.

ii. Results and analyses of all data collection efforts conducted by the Operator over the previous year pursuant to the provisions of this section.

c. EQAP Updates. The EQAP shall be updated as necessary and submitted to the Director for approval along with the annual EQAP report. The Director shall complete the review of EQAP updates as soon as practicable, and shall either approve the updated EQAP or provide the Operator with a list of specific items that must be included in the EQAP prior to approval. The Operator shall respond to any request for additional information within 30 days of receiving such request from the Director, unless extended by the Director.

(2) Safety Inspection, Maintenance and Quality Assurance Program ("SIMQAP"). The Operator shall comply with all provisions of a Safety Inspection, Maintenance and Quality Assurance Program (SIMQAP) that has been approved by the Director and the Fire Chief.

a. SIMQAP Requirements. The SIMQAP shall, at a minimum provide for:

i. Inspection of construction techniques;

ii. Regular maintenance and safety inspections;

iii. Periodic safety audits;

iv. Corrosion monitoring and leak detection; and

v. Inspections of all trucks carrying hazardous and/or flammable material prior to loading.

b. SIMQAP Updates. The Operator shall periodically review and revise the SIMQAP to incorporate changes in procedures, and new safety and maintenance technologies and procedures. The Operator shall make such revisions at least every five years, or more frequently, if the Operator determines changes are necessary or if requested by the Director or the Fire Chief. The Operator shall submit SIMQAP updates to the Director and the Fire Chief for their review and approval. The Director shall complete the review of SIMQAP updates as soon as practicable, and shall either approve the updated SIMQAP or provide the Operator with a list of specific items that must be included in the SIMQAP prior to approval. The Operator shall

respond to any request for additional information within 30 days of receiving such request from the Director, unless extended by the Director.

- c. **Worker Notification.** The Operator shall ensure that all persons working on the Oil Field comply with all provisions of the currently approved SIMQAP.
 - d. **Inspections.** The SIMQAP shall provide for involvement of the City staff or the Environmental Compliance Coordinator in all inspections required by this section.
- (3) **Annual Emergency Response Drills of the County Fire Department.** The Operator shall demonstrate the effectiveness of the Emergency Response Action Plan by responding to one planned emergency response drill per year which shall be conducted in conjunction with the County Fire Department. Emergency response drills required by other agencies that involve County Fire can be used to satisfy this provision. In addition, the Operator shall demonstrate the effectiveness of the Emergency Response Action Plan by responding to not more than two (2) unannounced drills each year which may be called by the County Fire Department at the Oil Field. If critical operations are then underway at the Oil Field, the Operator need not respond to an unannounced drill to the extent such a response would, as a result of such critical operations, create an undue risk of personal injury or property damage, but in such case the Operator must promptly explain the nature of the critical operations, why response is not possible, and when the critical operations will be completed.
- (4) **Noise Monitoring.** The City shall retain an independent qualified acoustical engineer to monitor ambient noise levels in the areas surrounding the Oil Field as determined necessary by the Director. The monitoring shall be conducted unannounced and within a time frame specified by the Director. Should noise from the Oil Operations exceed the noise thresholds specified in the Noise Reduction Plan, required pursuant to Attachment A, no new Drilling, or Redrilling permits shall be issued by the City until the Operator in consultation with the Director identifies the source of the noise and the Operator takes the steps necessary to assure compliance with thresholds specified in the Noise Reduction Plan. The results of all such monitoring shall be promptly posted on the Oil Field Web site.
- (5) **Complaints.** All complaints related to Oil Operations received by the Operator shall be reported on the same business day to the Environmental Compliance Coordinator and to the Director. . In addition, the Operator shall maintain a written log of all complaints and provide that log to the Director, on a quarterly basis. Depending upon the nature of the complaint, the Operator shall report the complaint to the SCAQMD, DOGGR, and any other appropriate agencies with oversight authority regarding the complaint at issue. If the complaint is received after normal business hours, it shall be reported to the Environmental

Compliance Coordinator and the agencies at the opening of the next business day.

HABITAT PROTECTION / RESTORATION CONDITIONS

71. Habitat Mitigation/Restoration

- (1) **Temporary Impacts.** The project proponent shall restore all temporarily impacted areas. For temporary impacts to native vegetation, temporary impact areas shall be restored to the same type of native vegetation. For non-native vegetation, temporary impacts areas shall be restored to appropriate native vegetation. When oil operations have ceased at the leased area, facilities will be removed and restored to appropriate native habitats.
- (2) **Ongoing Exotic Eradication/Habitat Enhancement.** The project proponent shall implement an exotic eradication/habitat enhancement program within designated priority areas within the oil field. This may include, but not be limited to the removal of eucalyptus trees, pepper trees, castor bean, tree tobacco, hemlock, fennel, thistle, and non-native grasses. The eradication program will be reviewed and approved by the Habitat Authority, and will be funded through a Mitigation Fund. The Operator shall establish the Mitigation Fund and ensure annual contributions of \$30,000 (with annual CPI increases). Any unspent funds shall be rolled over to the following year. The Habitat Authority shall have the ability use the fund for related plantings, including distribution of native seeds.
- (3) **Impacts to Jurisdictional Waters.** For any impacts to jurisdictional waters, the project proponent will obtain all necessary regulatory permits prior to the issuance of a grading permit, including if necessary a Section 404 permit, Section 401 Water Quality Certification, and a Section 1602 Streambed Alteration Agreement. Impacts to jurisdictional waters (and any associated riparian vegetation and/or wetlands) will be mitigated for at a minimum 3:1 ratio, or as required by the regulatory agencies (whichever is higher). If mitigation needs to occur outside the leased area for oil operations then standard access fees applied by the Habitat Authority will apply (see Habitat Authority website for details.)
- (4) **Wildlife Movement.** For access roads to be re-graded for the project or for existing roads with significant increased activity, the proponent shall install corrugated pipe culverts to facilitate the movement of smaller vertebrates, including rodents, reptiles, and amphibians; as directed and approved by the Habitat Authority Ecologist.

72. Fuel Modification

- (1) Impacts to native habitats as a result of fuel modification (including thinning) will be treated as an impact subject to mitigation requirements.

- (2) All plantings within fuel modification zones will consist of non-invasive species, with priority given to native species.
- (3) Access roads will be cleared of vegetation on a regular basis for purposes of fuel modification in accordance with fire department requirements at the expense of the Operator.
- (4) In addition to clearance for annual fuel modification, roads will be maintained for safe and functional use by the Operator at all times.

73. Noise Attenuation for Wildlife

- (1) During construction, including drilling, activities adjacent to sensitive habitats, including potential nesting gnatcatchers, raptors, etc., will be monitored using permanently installed noise meters. If actual levels (measured from the edge of the leased area) exceed allowable levels (to be determined), construction activities may be temporarily halted until additional measures can be implemented to further reduce noise levels. Noise restrictions may also be imposed by regulatory agencies (e.g., Service, CDFG, etc.) as part of any regulatory permits and/or take authorizations.
- (2) Noise levels attributed to operations will be minimized to the maximum extent feasible. Facilities shall be constructed to eliminate noise impacts on surrounding habitats, or at least minimize noise projected into adjacent open space. A standard for noise shall be set to regulate noise projected from the edge of the leased area (e.g., 60 db hourly average or to be determined).
- (3) Vehicle traffic shall be restricted to defined access routes, and using approved equipment for specific areas.
- (4) With the exception of delivering construction and other equipment, access to construction/drilling sites will be using approved vehicles only. Wherever feasible, the Operator shall use hybrid (electric or other low noise) vehicles for all non-construction equipment access.

74. Unauthorized Access

- (1) Unauthorized access into the Preserve will not be allowed. Personnel must remain inside the leased areas and identified roadways at all times.
- (2) All operations shall occur within the defined lease area. All temporary staging areas, including the placement of construction trailers, shall be reviewed with the Habitat Authority to minimize biological impacts. Temporary use areas outside the leased area require a permit through the Habitat Authority (and approval by the City).

~~(3) There will be no access for oil Operators after sunset, unless during temporary new drilling operations, for emergency or safety purposes.~~

75. Conservation Easement: Oil leased area will be defined and separate from Conservation Easement area, which will remain in place over the balance of the City-owned Preserve land.

**Whittier Main Oil Field Development Project
Conditional Use Permit CUP#09-004**

MODIFIED CONDITIONS OF APPROVAL (October 20, 2011)

23. Colima Tunnel. The area around the west end of Colima tunnel where Eucalyptus trees have been previously removed shall be revegetated to provide better cover and to attract more animals to use the tunnel ~~(west end) prior to Project construction.~~ The revegetation area shall include weedy patches connecting the tree removal area, encompassing approximately 25 acres. Phasing of the revegetation shall be as directed by the City and Habitat Authority.

47. Noise Attenuation. All oil operations on the oil field shall be conducted in a manner that minimizes noise, and shall comply with the following provisions:

(1) Noise Limits. The Operator shall comply with the following provisions:

a. All oil operations on the oil field shall comply with the noise provisions of Chapter 8.32 of Title 8 of the City of Whittier Municipal Code, with the exception of drilling, redrilling, and reworking, which are exempt from the provisions of the said Chapter.

~~b. Hourly, A-weighted equivalent noise levels associated with Drilling, Redrilling and Reworking shall not elevate existing baseline levels by more than five (5) dBA at any Developed Area. For daytime activities (7:00 a.m. to 7:00 p.m.) existing baseline noise levels shall be defined as the maximum daytime equivalent noise level (eq) at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. For nighttime activities (7:00 p.m. to 7:00 a.m.), existing baseline noise levels shall be defined as the minimum nighttime equivalent noise level (43.1) at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. Updated baseline noise levels may be set, and additional monitoring sites may be established, from time to time by the Director. In no case shall baseline noise levels include any Drilling, Redrilling or Reworking operations.~~

b. Noise produced by Oil Operations shall include no Pure Tones when measured at a Developed Area.

(2) Backup Alarms. Backup alarms on all vehicles operating within the Oil Field shall be disabled between the hours of 8:00 p.m. and 8:00 a.m. During periods when the backup alarms are disabled, the Operator shall employ alternate, low-noise methods for ensuring worker safety during vehicle backup, such as the use of spotters.

Modified Oil Field Conditions
October 20, 2011

Agenda related writings or documents provided to a majority of the Planning Commission members and available to the public on 10-20-11, after distribution of the 10-19-11 agenda packet.

- (3) **Equipment Servicing.** All noise producing Oil Field Equipment shall be regularly serviced and repaired to minimize increases in Pure Tones and other noise output over time. The Operator shall maintain an equipment service log for all noise producing equipment.
- (4) **Deliveries to the Oil Field.** Deliveries to the Oil Field shall not be permitted after 7:00 p.m. and before 7:00 a.m., Monday through Friday; between 8:00 a.m. and 5:00 p.m. on Saturdays and no activities on Sundays or federal holidays, except in cases of emergency.
- (5) **Deliveries within the Oil Field.** Deliveries to areas of the Oil Field located within 500 feet of any residential property shall not be permitted after 5:00 p.m. or before 7:00 a.m. except in cases of emergency. Deliveries to such areas on Sundays or legal holidays shall not be permitted after 5:00 p.m. and before 9:00 a.m., except in cases of emergency.
- (6) **Construction Equipment.** All construction equipment shall be selected for low-noise output. All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
- (7) **Construction Equipment Idling.** Unnecessary idling of internal combustion engines near noise-sensitive areas is prohibited.
- (8) **Worker Notification.** The Operator shall instruct employees and subcontractors about the noise condition provisions prior to commencement of each and every Drilling, Redrilling, Reworking, and construction operation, and shall annually certify to the Director that such employees and subcontractors have been properly trained to comply with such noise provisions. The Operator shall prominently post quiet mode policies at every Drilling and Redrilling site.

62. **Drilling, Redrilling and Reworking Operations.** The Operator shall comply with all of the following provisions:

- (1) **DOGGR Regulations.** All DOGGR regulations related to Drilling, Redrilling and Reworking operations.
- (2) **Number of Drilling and Redrilling Rigs.** No more than ~~three~~ (3) one (1) Drilling or Redrilling rigs shall be present within the Oil Field at any one time.
- (3) **Annual Drilling, Redrilling, Well Abandonment and Well Pad Restoration Plan.** Before the end of each calendar year, the Operator shall develop and deliver to the Director an Annual Drilling, Redrilling, Well Abandonment and Well Pad Restoration Plan to the Director, which shall describe all Drilling, Redrilling, Well Abandonment, and Well pad restoration activities that may be conducted during the upcoming calendar year. The Operator may at any time submit to the Director proposed amendments to the then current Annual Plan. No Drilling, Redrilling or

Abandonment activity may be commenced unless it is described in a current Annual Plan (or an amendment thereto) which has been approved, by the Director. The Director shall complete the review of the Annual Plan (and any amendments) within 45 days of receipt, and shall either approve the Annual Plan or provide the Operator with a list of deficiencies. The Annual Plan shall comply with the provisions of this subsection, and shall include the following:

- a. The maximum number of Wells proposed to be Drilled or Redrilled;
- b. Approximate location of all Wells proposed to be Drilled or Redrilled;
- c. Approximate location of all proposed new Well pads, including their size and dimensions;
- d. Estimated target depth of all proposed Wells and their estimated bottom hole locations;
- e. A discussion of the steps that have been taken to maximize use of existing Well pads, maximize use of Redrilled Wells, and maximize the consolidation of Wells;
- f. Location of all proposed Wells Abandonments, if known in accordance with DOGGR integrity testing program of Idle Wells;
- g. Location of all Well pads proposed to be abandoned and restored;
- h. A proposed schedule and phasing of the Drilling, Redrilling, Well Abandonment, Well pad abandonment and restoration activities;
- i. A discussion of the latest equipment and techniques that are proposed for use as part of the Drilling and Redrilling program to reduce environmental impacts; and
- j. A topographic vertical profile showing proposed location of new Wells that is reflective of local terrain conditions and that addresses the potential visibility of existing and proposed Wells and other production facilities from residential and recreation areas.

(4) Drill Rig Engines. All engines used for Drilling and Redrilling operations shall be operated by muffled internal-combustion engines or by electric motors.

(5) Fire Safety Regulations. All Drilling, Redrilling and Reworking shall be in conformance with applicable fire and safety regulations.

(6) New Technology. Proven reasonable and feasible technological improvements which are capable of reducing the environmental impacts of Drilling and Redrilling shall be considered as they become, from time to time, available.

- (7) Derricks and Portable Masts. All Derricks and portable masts used for Drilling, Redrilling and Reworking shall meet the standards and specifications of the American Petroleum Institute as they presently exist or as may be amended.
- (8) Equipment Removal. All Drilling and Redrilling equipment shall be removed from the site within 90 days following the completion of Drilling or Redrilling activities or as otherwise directed by the Director.
- (9) Drill Site Conditions. All Drilling Sites shall be maintained in a neat and orderly fashion.
- (10) Belt Guards. Belt guards shall be required over all drive belts on Drilling, Redrilling and Reworking equipment. Guarding shall be as required by, Title 8 of the California Code of Regulations, Section 6622, or as may be subsequently amended.

71. Habitat Mitigation/Restoration

- (1) Temporary Impacts. The project proponent shall restore all temporarily impacted areas. For temporary impacts to native vegetation, temporary impact areas shall be restored to the same type of native vegetation. For non-native vegetation, temporary impacts areas shall be restored to appropriate native vegetation. When oil operations have ceased at the leased area, facilities will be removed and restored to appropriate native habitats.
- (2) Ongoing Exotic Eradication/Habitat Enhancement. The project proponent shall implement an exotic eradication/habitat enhancement program within designated priority areas within the oil field. This may include, but not be limited to the removal of eucalyptus trees, pepper trees, castor bean, tree tobacco, hemlock, fennel, thistle, and non-native grasses. The eradication program will be reviewed and approved by the Habitat Authority, and will be funded through a Mitigation Fund. The Operator shall establish the Mitigation Fund and ensure annual contributions of \$30,000 (with annual CPI increases). Any unspent funds shall be rolled over to the following year. The Habitat Authority shall have the ability use the fund for related plantings, including distribution of native seeds.
- (3) Impacts to Jurisdictional Waters. For any impacts to jurisdictional waters, the project proponent will obtain all necessary regulatory permits prior to the issuance of a grading permit, including if necessary a Section 404 permit, Section 401 Water Quality Certification, and a Section 1602 Streambed Alteration Agreement. Impacts to jurisdictional waters (and any associated riparian vegetation and/or wetlands) will be mitigated for at a minimum 3:1 ratio, or as required by the regulatory agencies (whichever is higher). If mitigation needs to occur outside the leased area for oil operations then standard access

fees applied by the Habitat Authority will apply (see Habitat Authority website for details.)

- (4) Wildlife Movement. For access roads to be re-graded for the project or for existing roads with significant increased activity, the proponent shall install corrugated pipe culverts to facilitate the movement of smaller vertebrates, including rodents, reptiles, and amphibians; as directed and approved by the Habitat Authority Ecologist.

74. Unauthorized Access

- (1) Unauthorized access into the Preserve will not be allowed. Personnel must remain inside the leased areas and identified roadways at all times.
- (2) All operations shall occur within the defined lease area. All temporary staging areas, including the placement of construction trailers, shall be reviewed with the Habitat Authority to minimize biological impacts. Temporary use areas outside the leased area require a permit through the Habitat Authority (and approval by the City).
- ~~(3) There will be no access for oil Operators after sunset, unless during temporary new drilling operations, for emergency or safety purposes.~~

**Whittier Main Oil Field Development Project
Conditional Use Permit CUP#09-004**

CONDITIONS OF APPROVAL

GENERAL CONDITIONS

1. **Mitigation Measures.** All mitigation measures set forth in the project CEQA documents, and included as Attachment A, shall be satisfied by the Operator (Matrix Oil Corporation), at the Operator's expense; and the development must operate within the development assumptions utilized for the CEQA review.
2. **Indemnification, Protection and Defense.** The Operator and its successors in interest shall indemnify, protect, defend (with legal counsel reasonably acceptable to the City), and hold harmless, the City, and any agency or instrumentality thereof, and its elected and appointed officials, officers, employees, and agents from and against any and all liabilities, claims, actions, causes of action, proceedings, suits, damages, judgments, liens, levies, costs, and expenses of whatever nature, including reasonable attorney's fees and disbursements (collectively "Claims") arising out of or in any way relating this project, any discretionary approvals granted by the City related to the development of the project, or the environmental review conducted under California Environmental Quality Act, Public Resources Code Section 21000 et seq., for the project. If the City Attorney is required to enforce any conditions of approval, all costs, including attorney's fees, shall be paid for by the Operator.
3. **Injunctive Relief.** In addition to any administrative remedies or enforcement provided hereunder, the City may seek and obtain temporary, preliminary, and permanent injunctive relief to prohibit violation of the conditions set forth herein or to mandate compliance with the conditions herein. All remedies and enforcement procedures set forth herein shall be in addition to any other legal or equitable remedies provided by law.
4. **Governmental Compliance.** The Operator shall comply with requirements of all Federal, State, County, and local agencies as are applicable to this project.
5. All oilfield development and operations shall substantially adhere to the approved project plans and description as reviewed and accepted by the Planning Commission on October ____ 2011.
6. **Project Description.** The procedures, operating techniques, design, equipment and other descriptions provided by the Operator in: 1) its CUP application to the City and in subsequent clarifications and additions to that application; and 2) as described in the project EIR and any subsequent environmental review, are incorporated herein

as permit conditions and shall be required elements of the project. Since these procedures were part of the project description which received environmental analysis, a failure to include such procedures in the actual project could result in significant unanticipated environmental impacts. Deviations from the project description, environmental review or conditions of approval may require further environmental review and a modification to the CUP. Therefore, modifications of these procedures shall not be permitted without a determination of substantial conformity or a new or modified permit. The use of the lease area and the size, shape, arrangement and location of buildings, structures and landscaped areas shall be in substantial conformity with the approved Conditional Use Permit CUP09-004.

7. **Grounds for Permit Modification or Revocation.** Failure to abide by and faithfully comply with any conditions for the granting of this permit shall constitute grounds for the modification or revocation of this permit by the approval authority.
8. **Conditions Separately Remain in Force.** In the event that any condition contained herein is determined to be invalid, then all remaining conditions shall remain in force.
9. **Conflicts between Conditions.** In the event that any condition contained herein is determined to be in conflict with any other condition contained herein, then where principles of law do not provide to the contrary, the condition most protective of natural environmental resources and public health and safety shall prevail to the extent feasible.
10. **Changes to Conditions.** The Whittier City Council shall have the authority, in a noticed public hearing, to specify or change the Whittier City Department responsible for any conditions contained herein.
11. **Challenges to Mitigation or Condition.** In the event that any condition imposing a fee, exaction, dedication or other mitigation measure is challenged by the Operator in an action filed in a court of law or threatened to be filed therein which action is brought in the time period provided for by Code of Civil Procedures Section 1094.6 or other applicable law, this approval shall be suspended pending dismissal of such action, the expiration of the limitation period applicable to such action, or final resolution of such action. If any condition is invalidated by a court of law, the entire project shall be reviewed by the Planning Commission and no approval shall be issued unless substitute feasible mitigation conditions/measures are imposed.
12. **Applicability of Conditions to Construction and Operations.** These permit conditions are intended to apply to the project during all phases. The term "operations" shall be understood to encompass construction, drilling and re-drilling and operation phases unless such an interpretation would be inappropriate.
13. **Maximum Number of Wells.** The Operator shall drill no more than 60 wells in the Oil Field project area.

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14. Infrastructure. The Operator shall have suitable infrastructure in place, as determined by the City, to support oil operations.
15. Traffic Management Plan. Prior to any project excavation or construction activities related to the project site, the Operator shall prepare for review and approval of the City a Traffic Management Plan to reduce project traffic impacts on substantially affected residential streets, including at a minimum affected portions of Penn Street and Catalina Street.
16. The Operator and its successors in interest shall submit a fair share contribution/cost offset to the Whittier Utility Authority associated with the loss of revenue of landfill fees should waste hauler truck trips on Penn Street be reduced to account for an equivalent quantity of truck trips generated from and for the Whittier Main Oil Field Development Project in order to maintain existing, equivalent overall truck trip traffic along Penn Street. The frequency and amount of the fair share contribution shall be determined by the Director of Public Works and Executive Director, and updated as appropriate, to ensure a consistent revenue stream to the Whittier Utility Authority's Solid Waste Collection Account.
17. Off-Site Staging Area and Car/Van Pooling. To reduce vehicle and truck traffic to and from the site, the Operator shall plan for and utilize off-site staging area and car/van pooling to greatest extent possible. These plans shall be subject to review by the City of Whittier Community Development Director (Director).
18. Greenhouse Gas Off-Set: Prior to any project excavation or construction related activities related to the project site, the Operator shall prepare for review and approval of the City a plan to reduce greenhouse gas (GHG) emissions generated by the project. Strategies included in the plan may include plantings of trees in the project area and along the Greenway Trail, and/or purchase of credits offsite.
19. Retaining Walls. Prior to any project excavation or construction related activities related to the project site, the Operator shall provide detailed plans of retaining walls for review and approval of the City and Habitat Authority.
20. Environmental Compliance Coordinator. The Operator shall recommend and fund the Environmental Compliance Coordinators. The number of Environmental Compliance Coordinators shall be determined by the City and shall take into account the level of Oil Operations at the Oil Field. The Environmental Compliance Coordinator(s) shall be approved by, and shall report to, the Director. The responsibilities of the Environmental Compliance Coordinator(s) shall be set forth in implementation guidelines that may be developed by the City for the Oil Field and shall generally include:
 - (1) On-site, day-to-day monitoring of construction, drilling and re-drilling, and operational activities as determined by the Director.

(2) Taking steps to ensure that the Operator, and all employees, contractors and other persons working in the Oil Field, have knowledge of, and are in compliance with all applicable provisions of this section.

(3) Evaluating the adequacy of Drilling, Redrilling, and construction impact mitigations, and proposing improvements to the Operator or contractors, and the City.

(4) Reporting responsibilities to the various City agencies with oversight responsibility at the Oil Field, as well as other agencies such as DOGGR, and SCAQMD.

21. Special Training for Vendors and Employees.

(1) Prior to any project excavation or construction related activities, Operator shall provide all contractors, subcontractors, oil tankers and workers with an operational manual that will include instructions about Preserve rules; permitted parking areas; smoking prohibition; appropriate location and placement of temporary living trailers, offices as well as guard station posts; guidelines for environmentally friendly operations (i.e. do not push dirt in drainages, do not trim riparian vegetation, etc.). The operational manual shall be reviewed and approved by the Director and Habitat Authority.

(2) The Operator shall arrange for an on-going special training program to ensure that all employees and vendors are trained to comply with the operational manual, including all environmental and biological compliance and monitoring requirements.

22. The Operator shall improve, at their cost, the internal landfill access road(s) to the satisfaction of the Director of Public Works and enter into a Reciprocal Access Agreement subsequent to the Design but prior to the Construction Phase of the Project. The Agreement shall be subject to review and approval by the City Council and shall include, but not be limited to, the specific design and construction of the required road improvements and it's related on-going maintenance, and construction coordination with on-going Savage Canyon Landfill operations.

23. Landfill Road Restrictions. No use of the Landfill Road shall be permitted during the hours from one half (1/2) hour before sunset to 1/2 hour after sunrise, to protect animals with nocturnal foraging/hunting habits.

24. Ranger Station. The ranger station shall be relocated to a location acceptable to the Director and Habitat Authority prior to Project construction. This temporary location shall remain operational as determined by the Director and Habitat Authority.

25. Colima Tunnel. The area around the west end of Colima tunnel where Eucalyptus trees have been previously removed shall be revegetated to provide better cover and to attract more animals to use the tunnel ~~(west end)~~ prior to Project construction. The revegetation area shall include weedy patches connecting the tree removal area, encompassing approximately 25 acres. Phasing of the revegetation shall be as directed by the City and Habitat Authority.
26. Spill Clean-up Fund. The Operator shall establish a fund, letter of credit or similar mechanism in an amount acceptable to the City to guarantee that funds will be immediately available to undertake clean-up activities in case of a spill.
27. Fire Fighting Apparatus. The Operator shall provide adequate firefighting apparatus to fight oil related fires within all areas of the Preserve on which oil related operations will occur, including pipelines and roads. The type, amount and location of firefighting apparatus shall be determined by the County Fire Department and City.
28. During all construction, drilling and re-drilling and operational phases, the Operator shall ensure that protective fencing is in place as required by the City and Habitat Authority.
29. 24-Hour Emergency Contact. Prior to issuance of the Permit for Phase 1, the Operator shall provide to City, Habitat Authority and County Fire Department the current name and position, title, address, and 24-hour telephone numbers of the person in charge of the facility, person in charge of construction, and other representatives who shall receive all orders and notices, as well as all communications regarding matters of condition and permit compliance at the site and who shall have authority to implement an emergency facility shutdown.
30. Oilfield Public Relations Contact. The Oilfield shall provide for an on-site public relations officer to be available at all phases of project construction and operation. The officer's name and phone number shall be posted for easy access to the public, including on the City's website.
31. Administrative Items: The following provisions shall apply throughout the Oil Field project area.
- (1) Costs of Implementing and Enforcing Conditions. The Operator shall be fully responsible for all reasonable costs and expenses incurred by the City or any City contractors, consultants, or employees, in implementing, monitoring, or enforcing this section, including but not limited to, costs for permitting, permit conditions implementation, mitigation monitoring, reviewing and verifying information contained in reports, undertaking studies, research and inspections, administrative support, and including the fully burdened cost of time spent by City employees on such matters.

- (2) **Draw-Down Account.** The Operator shall maintain a draw-down account with the City, from which actual costs will be billed and deducted for the purpose of defraying the expenses involved in the City's review and verification of the information contained in any required reports and any other activities of the City, including but not limited to: enforcement, permitting, inspection, coordination of compliance monitoring, administrative support, technical studies, and the hiring of independent consultants. The initial amount to be deposited by the Operator shall be \$500,000. In the first year, if withdrawals from the account have reduced its balance to less than 50 percent of the amount of the initial deposit (\$250,000), the Operator shall deposit \$50,000 in supplemental funds within 30 business days of notification. After the first year, if the balance in the draw-down account is reduced at any time to \$50,000, the Operator shall deposit \$50,000 in supplemental funds on each occasion that the account is reduced to \$50,000 or less within 30 business days of notification. There is no limit to the number of supplemental deposits that may be required. At the discretion of the Operator, the amount of an initial or supplemental deposit may exceed the minimum amounts specified in this subsection. The Director may, from time to time, increase the minimum \$50,000 figure to account for inflation or the City's experience in obtaining funds from the account.
- (3) **Indemnification.** The Operator shall enter into an agreement with the City to indemnify and hold harmless the City, its elected and appointed officials, agents, officers and employees from any claim, action or proceeding for damages arising from its Oil Operations, including water, air or soil contamination, health impacts, or loss of property value during the Oil Operations, Abandonment and post-Abandonment of the Oil Operations with terms approved by, and in a form acceptable to, the City Manager.
- (4) **Insurance Requirements.** Within 90 days of the effective date of this section or such time as may be extended by the Director for good cause shown, and without limiting the Operator's indemnification of the City as required in the preceding subsection, the Operator shall provide evidence of insurance coverage that meets City requirements as required and approved by the City Manager including identifying the City and its elected and appointed officers and employees as additional insureds. Such coverage shall be maintained so long as Oil Operations are conducted within the City and until such time as all Abandonment requirements are met and certified by the appropriate local, state, and federal agencies. Such insurance coverage shall include but is not necessarily limited to the following: general liability, auto liability; professional liability; and environmental impairment liability coverage insuring clean-up costs, and endorsing for 'Sudden and Accidental' contamination or pollution. Such coverage shall be in an amount sufficient to meet all applicable state and federal requirements, with no special limitations. At the Operator's request and only with City approval by the City Manager, the Operator may self-insure all or any part of the above coverage obligations in lieu of purchasing commercial

coverage. These insurance requirements shall be in addition to all other indemnification, insurance and performance security required by federal, state and local regulations and permits.

(5) **Performance Security.** The Operator shall be subject to the following provisions:

a. **Performance Bond.** Prior to issuance of the first drilling permit pursuant to this section, the Operator shall provide to the Director, a faithful performance bond or financial instrument in the sum to be determined by the City Manager, payable to the City and executed by a corporate surety acceptable to the City and licensed to transact business as a surety in the State of California. Such bond shall be conditioned upon the faithful performance by Operator of duties related to well abandonment, site restoration and environmental cleanup and shall be in a format and include terms approved by the City Manager.

b. **Change of Operator.** The performance bond shall continue in force for one (1) year following any sale, transfer, assignment, or other change of Operator of the Oil Field, or of the current Operator's termination of activities at the oil field. The City may release said bond prior to the end of the one (1) year period upon satisfaction by said Operator of all its obligations. Notwithstanding the foregoing, the performance bond shall not be terminated or released upon the sale, transfer, assignment, or other change of Operator until the new Operator has delivered a replacement bond complying with the provisions of this section.

c. **Funding Options.** At its sole option, the City may accept Certificates of Deposit, Cash Deposits, or U.S. Government Securities in lieu of commercial bonds to meet the above bonding requirements on terms approved by the City Manager.

32. **Record Keeping.** As to any condition which requires for its effective enforcement the inspection of records or facilities by City or its agents, the Operator shall make such records available or provide access to such facilities upon reasonable notice from City. The City agrees to keep such information confidential where permitted by law and requested by the Operator in writing.

33. **Periodic Review.** The City shall conduct a comprehensive review of the provisions of this section at least every five (5) years to determine if the provisions of this section are adequately protecting the health, safety and general welfare. Such reviews shall, among other things, consider whether additional provisions should be added, appended or removed. One of the main goals of the periodic review shall be to evaluate if proven technological advances that would further reduce impacts of Oil Operations on neighboring land uses should be incorporated into the provisions of this section.

- (1) **Review Requirements.** Each review shall include a report by a hearing officer designated by the Director, which shall be prepared after public notice and an opportunity for public comment. The report shall include a comprehensive analysis of the effectiveness of this section, and shall review and consider enforcement activity, operational records, and any other issues relating to Oil Operations. A draft of the report shall be provided to the Operator for review and comment. All comments on the draft report from the Operator shall be submitted to the hearing officer in writing, and will be considered, if timely received, before the report is finalized. The final report by the hearing officer shall include a recommendation as to whether the Director should prepare a proposed amendment to this section for submission to the City Council.
- (2) **Early Reviews.** An earlier review may be requested by the Director at any time, if more than three (3) material violations occur within any twelve (12) month period and the Director and responsible agencies determine that resolution of the violations requires an amendment to this section.

34. Operational Procedures

- (1) All oilfield vehicles on the Oil Field project area shall carry two-way radios, fire extinguishers, and other emergency equipment.
- (2) If damages due to natural events such as earthquakes or floods occur on the Oil Field project area, the affected area shall be repaired to previous or comparable conditions.
- (3) The Oil Field project area shall remain in safe conditions at all times. Operator shall also be responsible for maintaining any affected adjacent areas in safe condition subject to the review and approval of the City and Habitat Authority (i.e. Operator shall pay for all costs associated with stabilizing an affected adjacent slope outside the leased area to guarantee safe site conditions or to reduce potential property damages.)
- (4) Operator shall provide quarterly written, emailed reports to the City, Habitat Authority and on-site or supervising ranger describing project activities. The reports shall contain a list of contractor company names.
- (5) Operator will ensure that the oil operations site manager and on-site or supervising ranger exchange phone numbers.
- (6) Operator shall be responsible for cleanup of trash produced by oil field activities along the roadways and surrounding areas
- (7) Operator shall provide all contractors, subcontractors and oil tankers with adequate directions and maps for accessing the site. Proper sign posting of the

Oil Field shall be provided so that oil contractors are aware of the proper entrance.

- (8) The Operator shall clearly identify on site the boundaries of the oil field project area with fencing and in a manner acceptable to the Habitat Authority to avoid confusion over use area for staging, storing, stockpiling, etc.
- (9) The Operator shall ensure that roadside/ trailside signs are used as necessary to warn vehicles and hikers, such as "Watch for truck traffic"; "Watch for pedestrians/wildlife". Speed limit signs shall be posted along roads used by oilfield vehicles. Posted speeds shall be a maximum of 10 miles per hour.
- (10) The Operator shall be responsible for graffiti cleanup along roads used by oilfield vehicles and on any signs/gates/fencing related to their operation.
- (11) The Operator shall report any illegal activity or vandalism to the Habitat Authority and City in a timely manner.

35. Director's Review Required. The Operator shall apply for and receive approval of a Director's Review prior to any new Drilling and Redrilling. The Director's review shall also apply to emergency actions determined by the Director as necessary to prevent an imminent hazard, or to other immediate measures required for the purposes of protecting health and safety. No new Permits for Drilling or Redrilling shall be approved by the Director unless the subject wells have been approved as part of the annual drilling plan. Approval shall not be granted until copies of all related permits have been submitted to the Director; other permits including, but not limited to the permits required by DOGGR, the County Fire Department; the City Department of Public Works, the County Sanitation District, RWQCB, SCAQMD and other pertinent agencies identified by the Director.

36. Enforcement: In addition to the provisions of Chapter 1.08 of the City of Whittier Municipal Code, the Operator shall be subject to the following enforcement provisions:

- (1) Civil Penalties and Performance Security. The Operator shall be subject to a penalty for violation of any requirement of this section as determined by, and at the discretion of, the Director in an amount not less than \$1,000 or more than \$10,000 per day per violation, but in no event, in an amount beyond that authorized by state law. For this purpose, the Operator shall deposit the sum of \$100,000 in an interest-bearing trust fund with the City within thirty days of the effective date of this section, to establish a draw down account. A written notice of violation and the associated penalty will be sent to the Operator. If the noted violation is not corrected within thirty days to the satisfaction of the Director, the penalty amount cited in the written notice will be deducted from the account. If the violation is corrected within 30 days but recurs any time within a six-month period, the penalty will be deducted from the account upon each recurrence and

the Operator will be notified of such deduction. Once the deposit has been depleted by 50 percent of the initial amount (\$50,000), the Operator shall deposit additional funds sufficient to bring the balance up to the amount of the initial deposit (\$100,000) within 10 business days of notification. There is no limit to the number of supplemental deposits that may be required while the Operator conducts Oil Operations within the City. If the Operator is dissatisfied with the action of the Director, the Operator may file an appeal with a Hearing Officer designated by the Director within 15 days after notice is mailed. Upon receiving a notice of appeal, the Hearing Officer shall take one of the following actions.

- a. Affirm the action of the Director;
- b. Refer the matter back to the Director for further review with or without instructions; or
- c. Set the matter for public hearing and, after hearing, affirm, modify or reverse the action of the Director.

The decision of the Hearing Officer shall be final.

- (2) Right of Entry. Any officer or employee of the County of Los Angeles, or his or her duly appointed representative, whose duties require the inspection of the Oil Field premises shall have the right and privilege at all reasonable times, to enter upon any premises upon or from which any Oil Operations are being conducted for which any permit is required under this section, for the purpose of making any of the inspections pursuant to this section, or in any other ordinance of the County, or for any other lawful purpose, but for safety reasons, shall be accompanied by the Operator or a designee of the Operator and shall wear all appropriate personal protection equipment in accordance with the Operator's established health and safety policies.

OPERATIONAL CONDITIONS

37. Odors, Liquids or Visible Emissions. The Operator shall ensure that all normal Project facility operations will be conducted in such a manner so as not to generate offensive odors, fumes, noxious liquids or visible emissions of smoke.

38. Sour Gas Contingency Plan. The Operator shall prepare a sour gas contingency plan which addresses the actions that will be taken in the event that hydrogen sulfide is encountered during the drilling and production operations. This plan shall require that the facility be shut down if hydrogen sulfide above ~~4 ppm~~ 20 ppm is encountered during production and outline what additional measures will be taken if hydrogen sulfide is encountered during production to prevent a hazardous release. No operation with sour gas shall be allowed as part of this permit. The Operator shall distribute copies of the plan to applicable City Departments and the City Fire

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Department. All plan recipients are to be notified of contingency plan changes via formal contingency plan updates.

39. Pipeline Construction Confined to Right-of-Way. All pipeline construction activities, including work areas and staging and storage areas of pipe, shall be confined to the approved right-of-way both within the Preserve and outside the site on oil and gas pipelines.
40. Submittal of As Built Drawings. Within one year after initial start-up of the project (Phase 1), and again within one year of commencement of Phase 2 operations, The Operator shall submit as-built drawings of the entire facility(s) to City. Any facility modifications required for Phase 3 operations shall also be documented on facility as-built drawings within one year of their construction. The Operator shall submit as many sets of drawings (up to ten sets) as requested by the City.
41. Solid Waste Disposal. Solid waste generated on the site shall be transported to a City-approved landfill or hazardous waste facility as may be appropriate.
42. Water Conservation Measures. The design of all new and/or modified onsite facilities shall incorporate the use of cost-effective water-conserving fixtures.
43. Energy Conservation Measures. Throughout the project life, as equipment is added or replaced, cost-effective energy conservation techniques shall be incorporated into project design.
44. Meteorological Station. The Operator shall maintain and operate a meteorological station at the Oil Field in good operating condition and in compliance with all applicable EPA and SCAQMD rules, regulations and guidelines, and to the satisfaction of the Director. The Operator shall conduct an audit of the meteorological station on an annual basis and submit the results of the audit to the SCAQMD and the Director. The Operator shall maintain the data files for the meteorological station for a period of not less than ten years. All such data shall be available upon request to the SCAQMD and the Director.
45. Updated Health Risk Assessment. After every five (5) years of operation of the meteorological station, the Operator shall provide the previous five (5) years of metrological data to the SCAQMD and the Director. If the SCAQMD or the Director determines that the previous five (5) years of metrological data from the Oil Field could result in significant changes to the Health Risk Assessment that was conducted as part of the Environmental Impact Report, then the City may elect to re-run the health risk assessment using the previous five (5) years of metrological data from the metrological station.
46. Safety and Risk of Upset. The Operator shall at all times conduct oil operations in a manner that minimizes risk of accidents and the release of hazardous materials, and shall comply with the following provisions:

- (1) Natural Gas Liquid Blending. Natural gas liquids at the gas plant shall be blended with the oil to the maximum allowable pipeline system vapor pressure. Natural gas liquids storage shall be limited to the volume allowed in the Risk Management Plan approved by the Fire Department.
- (2) Process Hazards Analysis (PHA). The Operator shall provide for a PHA to be conducted on all processes at the field and pipeline routes, to address potential releases of flammable gasses, spills of crude oil, oily water or releases that could cause odors.
- (3) Propane and Natural Gas Liquids Bullet Fire-Proofing. The Operator shall install and maintain fire-proofing insulation on all propane and natural gas liquids bullets within the oil field. The fire-proofing insulation shall have a minimum two-hour fire rating and otherwise be acceptable to the Fire Chief. All propane and natural gas liquid bullets shall be equipped with an automatic deluge system.
- (4) Secondary Containment for Oil. The Operator shall comply with the following provisions:
 - a. The Operator shall ensure that all existing oil processing areas ~~and tank areas in the oil field~~, unless determined by the Director to be infeasible, and ~~all the new oil tank areas~~ shall have secondary containment (berms and walls) that can contain at least 110 percent of the largest oil tank volume in order to reduce the likelihood of oil spills entering the retention basins. In the event the Director determines that it would be infeasible to provide 110 percent containment for a particular existing oil tank, the Operator shall provide such containment as the Director determines is feasible.
 - ~~b. All retention basins in the oil field shall be adequately sized, and maintained to handle a 100-year storm event plus a potential spill of the volume of the largest tank that would drain into each basin.~~
 - b. All above ground piping in the Preserve Oil Field that contains or could contain Oil shall be protected by basins or secondary containment (berms and/or walls).

47. Geotechnical. The Operator shall comply with the following provisions:

- (1) Grading. The Operator shall comply with all of the following provisions:
 - a. All proposed grading shall be subject to prior review and approval by the Director of Public Works.

- b. Grading involving up to 5,000 cubic yards may be undertaken pursuant to a City Master Grading Plan stamped by a registered professional engineer and a California-certified engineering geologist and approved by the Director of Public Works.
 - c. No slope of cut or fill shall have a gradient steeper than two to one (2:1) unless specifically approved by a site specific geotechnical report.
 - d. Cuts and fills shall be minimized to avoid erosion and visual impacts.
- (2) Geotechnical Investigations. The Operator shall comply with the following provisions:
- a. A site-specific geotechnical investigation shall be completed for grading in excess of 5,000 cubic yards, unless approved pursuant to a Master Grading Plan approved by the Director of Public Works, and for any grading that supports or impacts a critical facility as determined by the Director. The investigation shall be completed by a California-certified engineering geologist and submitted to the Director of Public Works for review and approval, in conjunction with an application for a revised grading permit.
 - b. A site-specific geotechnical investigation shall be completed for all proposed Permanent Structures. The investigation shall include analysis and recommendations associated with potential seismically induced ground failure, such as differential settlement and lateral spreading. The geotechnical investigation shall be completed by a California Certified Engineering Geologist and submitted to the Director of Public Works, for review and approval.
- (3) Erosion Control. The Operator shall comply with the following provisions:
- a. The Operator shall comply with all provisions of an Erosion Control Plan that has been approved by the Director. The Erosion Control Plan shall be reviewed by the Operator every two (2) years to determine if modifications to the Plan are required. Any modifications to the Erosion Control Plan shall be submitted to the Director for review and approval. The Erosion Control Plan shall include any measures requested by the Director.
 - b. Erosion shall be controlled on all slopes, creeks and banks so that no mud or other substances are washed onto public streets or surrounding property. Such control measures may consist of planting and irrigation, dams, cribbing, riprap, sand bagging, netting, berms, or other devices.

(4) Restoration of Slopes. Slopes shall be restored to their original grade once the use that required the grading of the slope has been discontinued. However, if restoration of a slope would negatively affect existing drainage patterns or slope stability, the slope shall be restored to a grade that avoids these negative effects.

(5) Oil Field Accelerometer. The Operator shall operate and maintain an accelerometer at the oil field to determine site-specific ground accelerations as a result of any seismic event in the region (Los Angeles/Orange County and offshore waters of the Santa Monica Bay and San Pedro Channel). Readings from the accelerometer shall be recorded at the oil field, and transmitted in real-time to the Caltech Seismological Laboratory. The Operator shall cease operations and inspect all oil field pipelines, storage tanks, and other infrastructure following any seismic event that exceeds a ground acceleration at the oil field of 13 percent of gravity (0.13 g) and promptly notify the Director. The Operator shall not reinstitute operations at the oil field and associated pipelines until it can reasonably be determined that all oil field infrastructure is structurally sound.

48. Pipeline Management Plan. The Operator shall maintain and implement a Pipeline Management Plan that meets the requirements of DOGGR regulations.

49. Noise Attenuation. All oil operations on the oil field shall be conducted in a manner that minimizes noise, and shall comply with the following provisions:

(1) Noise Limits. The Operator shall comply with the following provisions:

a. All oil operations on the oil field shall comply with the noise provisions of Chapter 8.32 of Title 8 of the City of Whittier Municipal Code, with the exception of drilling, redrilling, and reworking, which are exempt from the provisions of the said Chapter.

b. Hourly, A-weighted equivalent noise levels associated with Drilling, Redrilling and Reworking shall not elevate existing baseline levels by more than three (3) ~~five~~ (5) dBA at any Developed Area, or five (5) dBA at any recreational area, trail or other public area. For daytime activities (7:00 a.m. to 7:00 p.m.) existing baseline noise levels shall be defined as the maximum daytime equivalent noise level (eq) at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. For nighttime activities (7:00 p.m. to 7:00 a.m.), existing baseline noise levels shall be defined as the minimum nighttime equivalent noise level (43.1) at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. Updated baseline noise levels may be set, and additional monitoring sites may be established, from time to time by the Director. In no case shall baseline noise levels include any Drilling, Redrilling or Reworking, or construction or operational operations.

c. Noise produced by Oil Operations shall include no Pure Tones when measured at a Developed Area. (Pure Tones are defined in the EIR.)

(2) Backup Alarms. Backup alarms on all vehicles operating within the Oil Field shall be disabled between the hours of 8:00 p.m. and 8:00 a.m. During periods when the backup alarms are disabled, the Operator shall employ alternate, low-noise methods for ensuring worker safety during vehicle backup, such as the use of spotters.

(3) Equipment Servicing. All noise producing Oil Field Equipment shall be regularly serviced and repaired to minimize increases in Pure Tones and other noise output over time. The Operator shall maintain an equipment service log for all noise producing equipment.

(4) Deliveries to the Oil Field. Deliveries to the Oil Field shall not be permitted after 7:00 p.m. and before 7:00 a.m., Monday through Friday; between 8:00 a.m. and 5:00 p.m. on Saturdays and no activities on Sundays or federal holidays, except in cases of emergency.

~~(5) Deliveries within the Oil Field. Deliveries to areas of the Oil Field located within 500 feet of any residential property shall not be permitted after 5:00 p.m. or before 7:00 a.m. except in cases of emergency. Deliveries to such areas on Sundays or legal holidays shall not be permitted after 5:00 p.m. and before 9:00 a.m., except in cases of emergency.~~

(5) Construction Equipment. All construction equipment shall be selected for low-noise output. All construction equipment powered by internal combustion engines shall be properly muffled and maintained.

(6) Construction Equipment Idling. Unnecessary idling of internal combustion engines near noise-sensitive areas is prohibited.

(7) Worker Notification. The Operator shall instruct employees and subcontractors about the noise condition provisions prior to commencement of each and every Drilling, Redrilling, Reworking, and construction operation, and shall annually certify to the Director that such employees and subcontractors have been properly trained to comply with such noise provisions. The Operator shall prominently post quiet mode policies at every Drilling and Redrilling site.

50. Vibration Reduction. All oil operations on the oil field shall be conducted in a manner that minimizes vibration. Additionally, vibration levels from Oil Operations at the Oil Field shall not exceed a velocity of 0.25 mm/s over the frequency range 1 to 100 Hz at any Developed Area.

51. Signs. All signage shall comply with the following provisions:

(1) Perimeter Identification Signs. Identification signs, at intervals acceptable to the Director, shall be posted and maintained in good condition along the Outer Boundary Line fence and along the fences adjoining the public roads that pass through the Oil Field. Each sign shall prominently display current and reliable emergency contact information that will enable a person to promptly reach at all times, a representative of the Operator who will have the expertise to assess any potential problem and recommend a corrective course of action. Each sign shall also have the number of the Operator's 24-hour emergency contact, City Code Enforcement contact and the number of SCAQMD that can be called if odors are detected.

(2) Main Entrance Sign. A sign shall be posted and maintained in good condition at the main entrance of the Oil Field prominently displaying a telephone number by which persons may contact a representative of the Operator at all times to register complaints regarding Oil Field operations.

(3) Other Required Signs. All identification signs, warning signs, no trespassing signs, and other signs required by County, State and Federal regulations shall be properly posted and maintained in all required locations and in good condition.

~~(4) Well Identification Signs. Well identification signs including the Well name and Well number shall be posted and maintained in good condition at each Well location~~

(4) No Littering Signs. "No littering" signs shall be prominently posted and maintained in good condition on all Oil Field entrance gates.

52. Painting. All Oil Operation related structures visible from public roadways and surrounding properties within the Oil Field shall be painted or otherwise surfaced or textured with a color that is compatible with the surrounding areas, and has been approved by the Director. The painting or other surfacing of all structures covered by this subsection shall thereafter be maintained in good condition.

53. Well Cellars. All cellars shall be constructed in accordance with the most current American Petroleum Institute standards. In addition, the Operator shall comply with the following provisions:

(1) Cellar Fluids. Well cellars shall be kept free of all Oil, water, or debris at all times. During Drilling, Redrilling and Reworking, the cellar shall be kept free of excess Fluids by a pump which discharges into a waste Tank, mud pit, vacuum truck, or other approved disposal system.

(2) Access to Multi-Well Cellars. All multi-well cellars exceeding three (3) feet in depth and 25 feet in length shall have two (2) means of entrance and exit and an additional exit for every 50 feet in length thereafter. At least one (1) means of

entrance or exit for all multi-Well cellars of 25 feet in length shall be a stairway constructed to California Division of Industrial Safety standards.

(3) Single Cellar Covers. All single cellars shall be covered with open grating and have no openings larger than three (3) inches at any point. Covers shall be capable of supporting vehicle weight or guardrails shall be erected to prevent vehicle access.

(4) Cellar Ladder Openings. All openings for ladders through grating shall be designed to allow exit from underside without obstruction, and shall be kept free of storage of any type. Said opening shall not be less than 24 inches on either side.

54. Sumps. The Operator shall comply with all of the following provisions:

(1) Sump Clean Out. All sumps that are used, or installed, or maintained for use in connection with any Well, and which have not been used for 90 days for the operation of or the Drilling, Redrilling or Reworking of such Well or any other Well in the vicinity, shall be cleaned out, and all Oil, rotary mud and rubbish removed.

~~(2) Sump Fencing. Around each sump of any depth, there shall be erected and continuously maintained a fence that encloses the sump in a manner that is satisfactory to the Director. This provision shall not apply to sumps that are constantly and immediately attended while Drilling, Redrilling and Reworking operations are proceeding.~~

55. Water Management Plan. The Operator shall comply with all provisions of a Water Management Plan that has been approved by the Director and the Director of Public Works. The Plan shall include best management practices, water conservation measures and, the use of a drip irrigation system, ~~and shall include provisions for the use of surface water runoff in the retention basins for dust suppression and landscaping.~~ The Plan shall also address the availability of reclaimed water for use at the Oil Field. The Water Management Plan shall be reviewed by the Operator every three years to determine if modifications to the Plan are required. The Operator shall make changes to the Plan if requested by the Director or the Director of Public Works. Any modifications to the Water Management Plan shall be submitted to the Director and the Director of Public Works for review and approval. The water management plan shall include any elements requested by the Director or the Director of Public Works.

56. Groundwater Monitoring. The Operator shall develop, implement, and carry out a groundwater quality monitoring program for the Oil Field that is acceptable to the Director and consistent with all requirements of the Regional Water Quality Control Board. Pursuant to the approved program, the Operator shall install and maintain groundwater monitoring ~~Wells in the vicinity of each surface water retention basin, which is permitted by the Regional Water Quality Control Board.~~ Such monitoring

Wells shall be completed as determined by a California Certified Professional Geologist. The Regional Water Quality Control Board and the Director shall be regularly advised of the results of such monitoring, and shall be immediately advised if such monitoring indicates a potential problem.

57. Fencing. All portions of the Oil Field on which Oil Operations are conducted shall be enclosed with a fence that at a minimum is compliant with DOGGR regulations codified at California Code of Regulations Title 14, Article 3, Sections 1778 and 1779, or as may be subsequently amended by the State.

58. Storage of Equipment. There shall be no storage at the Oil Field of material, equipment, machinery or vehicles which are not essential to the Oil Operations. All non-essential equipment shall be removed from the Oil Field within 30 days of the date they become non-essential, unless a time extension is granted by the Director.

59. Oil Field Cleanup and Maintenance. The Operator shall maintain the site in a clean and orderly condition and shall comply with the following provisions:

(1) Equipment Removal. All facilities that have reached the end of their useful economic life shall be properly decommissioned and removed from the Oil Field within one year. Areas not slated for future use shall be restored and revegetated within 90 days of termination of use, unless such restoration and revegetation would interfere with fire safety or access to Oil Operations.

(2) Equipment Maintenance. All equipment, improvements, facilities and other personal property or fixtures located on the Oil Field, shall be maintained in good condition to the satisfaction of the Director and the Director of Public Works.

(3) Site Debris and Vegetation. The Operator shall keep the lease area free of debris and vegetation overgrowth to the satisfaction of the Director.

60. Security. All unmanned entrances to the Oil Field shall be equipped with sliding gates which shall be kept closed at all times except when authorized vehicles are entering or leaving the Oil Field. The Operator shall have a security guard on duty 24 hours per day.

61. Oil Field Waste Removal. The Operator shall comply with the following provisions:

(1) Waste Collection. All Drilling, Redrilling and Reworking waste shall be collected in portable steel bins compliant with United States Department of Transportation standards. Any Drilling, Redrilling, and Reworking wastes that are not intended to be injected into a Class II Well, as permitted by DOGGR, shall be removed from the Oil Field no later than 30 days following completion of the Drilling, Redrilling and Reworking. This provision does not apply to active sumps and mud pits.

(2) Waste Discharge. No Oil Field waste shall be discharged into any sewer, storm drain, irrigation system, stream, or creek, street, highway, or drainage canal. Nor shall any such wastes be discharged on the ground provided that the foregoing shall not prohibit the proper use of active Drilling sumps and mud pits.

(3) Recycling Plan. The Operator shall comply with all provisions of a Recycling Plan that has been approved by the Director. The recycling plan shall include any elements requested by the Director.

62. Sanitation. The Operator shall comply with the following provisions:

(1) Garbage and Refuse. The Oil Field shall be maintained in a clean, sanitary condition, free from accumulations of garbage, refuse and other wastes.

(2) Toilets and Wash Facilities. Sanitary toilet and washing facilities shall be installed at any site where personnel are permanently stationed. Portable facilities shall be provided wherever crews are temporarily employed. Such facilities shall be maintained in a clean and sanitary condition at all times.

63. Storage of Hazardous Materials. The Operator shall comply with all provisions of a Hazardous Materials Business Plan that has been submitted to the Fire Chief. The Operator shall deliver to the Fire Chief for review and approval an updated Hazardous Material Business Plan on an annual basis. This Plan shall provide the location of where hazardous materials are stored at the Oil Field. Hazardous materials shall be stored in an organized and orderly manner, and identified as may be necessary to aid in preventing accidents, and shall be reasonably protected from sources of external corrosion or damage to the satisfaction of the Fire Chief.

64. Drilling, Redrilling and Reworking Operations. The Operator shall comply with all of the following provisions:

(1) DOGGR Regulations. All DOGGR regulations related to Drilling, Redrilling and Reworking operations.

(2) Number of Drilling and Redrilling Rigs. No more than ~~three~~ one (1) Drilling or Redrilling rigs shall be present within the Oil Field at any one time.

~~(3) Annual Drilling, Redrilling, Well Abandonment and Well Pad Restoration Plan. Before the end of each calendar year, the Operator shall develop and deliver to the Director an Annual Drilling, Redrilling, Well Abandonment and Well Pad Restoration Plan to the Director, which shall describe all Drilling, Redrilling, Well Abandonment, and Well pad restoration activities that may be conducted during the upcoming calendar year. The Operator may at any time submit to the Director proposed amendments to the then current Annual Plan. No Drilling, Redrilling or Abandonment activity may be commenced unless it is described in a current Annual Plan (or an amendment thereto) which has been approved, by the~~

~~Director. The Director shall complete the review of the Annual Plan (and any amendments) within 45 days of receipt, and shall either approve the Annual Plan or provide the Operator with a list of deficiencies. The Annual Plan shall comply with the provisions of this subsection, and shall include the following:~~

- ~~a. The maximum number of Wells proposed to be Drilled or Redrilled;~~
- ~~b. Approximate location of all Wells proposed to be Drilled or Redrilled;~~
- ~~c. Approximate location of all proposed new Well pads, including their size and dimensions;~~
- ~~d. Estimated target depth of all proposed Wells and their estimated bottom hole locations;~~
- ~~e. A discussion of the steps that have been taken to maximize use of existing Well pads, maximize use of Redrilled Wells, and maximize the consolidation of Wells;~~
- ~~f. Location of all proposed Wells Abandonments, if known in accordance with DOGGR integrity testing program of Idle Wells;~~
- ~~g. Location of all Well pads proposed to be abandoned and restored;~~
- ~~h. A proposed schedule and phasing of the Drilling, Redrilling, Well Abandonment, Well pad abandonment and restoration activities;~~
- ~~i. A discussion of the latest equipment and techniques that are proposed for use as part of the Drilling and Redrilling program to reduce environmental impacts; and~~
- ~~j. A topographic vertical profile showing proposed location of new Wells that is reflective of local terrain conditions and that addresses the potential visibility of existing and proposed Wells and other production facilities from residential and recreation areas.~~

(3) Drill Rig Engines. All engines used for Drilling and Redrilling operations shall be operated by muffled internal-combustion engines or by electric motors.

(4) Fire Safety Regulations. All Drilling, Redrilling and Reworking shall be in conformance with applicable fire and safety regulations.

(5) New Technology. Proven reasonable and feasible technological improvements which are capable of reducing the environmental impacts of Drilling and Redrilling shall be considered as they become, from time to time, available.

- (6) Derricks and Portable Masts. All Derricks and portable masts used for Drilling, Redrilling and Reworking shall meet the standards and specifications of the American Petroleum Institute as they presently exist or as may be amended.
- (7) Equipment Removal. All Drilling and Redrilling equipment shall be removed from the site within 90 days following the completion of Drilling or Redrilling activities or as otherwise directed by the Director.
- (8) Drill Site Conditions. All Drilling Sites shall be maintained in a neat and orderly fashion.
- (9) Belt Guards. Belt guards shall be required over all drive belts on Drilling, Redrilling and Reworking equipment. Guarding shall be as required by, Title 8 of the California Code of Regulations, Section 6622, or as may be subsequently amended.

65. Processing Operations. The Operator shall comply with the following provisions:

- (1) Limits on Processing Operations. Unless otherwise expressly required by DOGGR, the only Processing operations permitted at the Well Site shall be: the dehydration of Oil and Gas produced from the Well; the storage, handling, recycling and transportation of such materials; and those Processing operations required for water injection purposes.
- (2) Refining. No refining shall be conducted within the Oil Field.
- (3) Well Pumps ~~Meters~~. All Well pumping units shall be downhole submersible pumps operated by electric motors.
- (4) ~~Well Pumps~~. ~~Downhole submersible pumps for production Wells must be used wherever feasible.~~
- (4) Removal by Pipeline Only. All Oil, Gas and other hydrocarbons, produced from any Well in the Oil Field shall be shipped and transported through pipelines, except in case of an emergency or when access to a pipeline becomes unavailable. Excluded from this requirement are the three test wells, propane and other related natural gas liquids that are in amounts in excess of what can be blended into the pipeline. Should any pipeline through which Oil or Gas is ~~currently~~ transported become unavailable for the safe transportation of said products due to maintenance problems with the pipeline, or lack of sufficient capacity within the pipeline to handle the volume of Oil and Gas needing transportation, or because the owner or Operator of such pipeline elects to discontinue transporting Oil or Gas through such pipeline, then the Operator shall within 180 days of the date the existing pipeline becomes unavailable, seek to acquire a private right of way or easement, or shall file an application for a right of way, easement, encroachment permit or franchise for the construction of a

replacement pipeline and shall diligently prosecute such application until such pipeline is completed. During any emergency situation, or during such time as any existing pipeline becomes unsafe or unavailable, Oil and Gas may be transported by truck until the emergency situation is resolved or until a replacement pipeline shall be permitted and constructed in accord with all applicable laws and regulations.

(5) Pipelines. The Operator shall comply with the following provisions:

- a. New pipelines that remove Oil or Gas from the Oil Field shall be buried below the surface of the ground;
- b. All pipelines which are not enclosed within a fence shall be placed underground or covered with materials approved by the Fire Chief. Said covers shall be maintained in a neat, orderly, secure manner;
- c. Any and all water or brine produced during pipeline construction shall be injected in accordance with DOGGR requirements, or disposed of in accordance with other local, state or federal regulations;
- d. New pipeline corridors shall be consolidated with existing pipelines or electrical transmission corridors where feasible; and
- e. Upon completion of pipeline construction, the site shall be restored to the approximate previous grade and condition.

~~(6) Gas Metering Station Active Pipeline Plot Plan. The Operator shall submit to the Director and Fire Chief a site and building plans of the gas metering station for review and approval. of the plot plan depicting the approximate location of all active pipelines regulated by the United States Department of Transportation or California State Fire Marshall owned and used by the operation that are located outside the Outer Boundary Line, including waste water, and trunk and gathering lines to transport Oil or petroleum products. The plot plan shall be submitted within 30 days of the installation of any new pipelines or the relocation of an existing pipeline.~~

~~(7) Machinery Enclosures. The Operator shall maintain enclosures around machinery with moving parts consisting of a fence, screening or housing.~~

~~(8) Opening Protections. The Operator shall cap, close or protect the openings in all Oil Wells, test holes and similar excavation.~~

66. Well Reworking Operations. The Operator shall comply with the following provisions:

- (1) DOGGR Regulations. The Operator shall comply with all DOGGR regulations related to Well Reworking operations.
- (2) Number of Reworking Rigs. No more than one (1) eight (8) Reworking rigs shall be present within the Oil Field at any one time, unless an emergency condition requires additional Reworking rigs. ~~This does not include equipment used for Well Maintenance or Well Abandonment.~~
- (3) Hours of Operation. With exception of emergencies, Well Reworking operations shall not be allowed after 7:00 p.m. or before 7:00 a.m., nor on Sundays or legal holidays.
- (4) Specifications. Reworking rigs shall meet the standards and specifications of the American Petroleum Institute.
- (5) Equipment Removal. Reworking rigs shall be removed from the Oil Field within seven (7) days following the completion of Reworking operations unless such rig will be used on another Well at the Oil Field within five (5) days.

67. Tanks. The Operator shall comply with the following provisions:

- (1) New Tank Specifications. All new Tanks and appurtenances shall be designed, constructed, installed and maintained in accordance with current County Fire Code, American Petroleum Institute, DOGGR, California Division of Industrial Safety, and Environmental Protection Agency Standards, applicable provisions of Title 14 of the California Code of Regulations, Section 1774, and applicable CalARP Program requirements.
- (2) Setbacks. No new storage Tank, excluding a replacement Tank, shall be constructed closer than 500 feet from any Developed Area, or closer than 200 feet from a public road. No building shall be constructed within 50 feet of any Oil storage Tank.
- (3) Vapor Recovery. Oil, Wash, and Produced Water Tanks shall be vapor tight and shall be equipped with a vapor recovery system.
- (4) Specifications for New Tank Piping, Valves, Fittings and Connections. All new Tank piping, valves, fittings and connections including normal and emergency relief venting, shall be installed and maintained in accordance with current American Petroleum Institute standards to the satisfaction of SCAQMD and DOGGR.
- (5) Detection of Tank Bottom Leaks. The Operator shall design, implement and comply with a program, approved by the Fire Chief, for controlling and detecting Tank bottom leaks on all Tanks at the Oil Field. The Operator may use a combination of methods including but not limited to diversion walls, dikes, Tank

foundations of concrete or gravel and, a Tank bottom leak detection system in compliance with, Title 14 of the California Code and Regulations, Section 1773, or any subsequently enacted State regulations regarding tank bottom leaks.

68. Well and Production Reporting. The Operator shall deliver annual production reports to the Director and the Fire Chief by June 30 of each year. The reports shall cover previous year activities and projections for coming year, and shall provide the following information:

- (1) A copy of all DOGGR Forms 110 and 110B submitted during the previous 12 months.
- (2) Number and mapped location of all Wells Drilled or Redrilled, including Well identification numbers and size and dimensions.
- (3) Number and mapped location of water injection Wells, including Well identification numbers.
- (4) Number and mapped location of Idled Wells, including Well identification numbers and the date each Well was idled.
- (5) Number and mapped location of Abandoned Wells, including date each Well was Abandoned and/or re-abandoned.
- (6) The number of Wells Drilled or Redrilled in the previous year, including location, size and dimensions and type, configuration, engine size and total height of drilling rigs used during the previous year.
- (7) A proposed schedule and phasing of the Drilling, Redrilling, Well Abandonment, Well pad abandonment and restoration activities;-
- (8) The maximum number of Wells proposed to be Drilled or Redrilled in the coming year including location, size and dimensions; and type, configuration, engine size and total height of proposed drilling rig to be used during the coming year.
- (9) Estimated target depth of all proposed Wells and their estimated bottom hole locations in the past year (actual) and the coming year (proposed).
- (10) A discussion of the latest equipment and techniques that are proposed for use as part of the Drilling and Redrilling program to reduce environmental impacts;
- (11) Any additional information requested by the Director or the Fire Chief.

69. Idle Well Testing and Maintenance. The Operator shall comply with Title 14, of the California Code of Regulations, Section 1723.9 regarding testing and Maintenance

of Idle Wells, or any subsequent enacted State regulations regarding testing and maintenance of Idled Wells. The Operator shall carry out all additional tests, remedial operations and mitigation measures required by DOGGR if any idle wells do not meet the test standards.

~~70. Abandoned Well Testing. The Operator shall conduct annual hydrocarbon vapor testing of areas within the Oil Field that contain Abandoned Wells. The testing shall be done using a soil Gas vapor probe, or another method approved by the Director. The results of the testing shall be submitted to the Director and DOGGR on an annual basis. Abandoned Wells that are found to be leaking hydrocarbons that could affect health and safety shall be reported to the Director and DOGGR within 24 hours of the Abandoned Well Test. If directed by DOGGR, the Operator shall re-abandon the Well in accordance with DOGGR rules and regulations. If the test results for an Abandoned Well area is at or below the background levels for two (2) consecutive years that area shall thereafter be tested every five (5) years.~~

70. Well and Well Pad Abandonment. If DOGGR orders the Operator to plug and abandon any Wells on the Oil Field, the Operator shall deliver to the Fire Department, on a timely basis, all Notices of Intent to Plug and Abandon a Well that the Operator files with DOGGR and shall commence promptly and proceed diligently with the plugging and abandonment operations in accordance with DOGGR rules and regulations and the terms of the DOGGR permit to plug and abandon the Well. Well Abandonment may commence once all necessary permits and approvals are obtained. If the Well pad associated with the Abandoned Well does not contain other production, injection or Idle Wells, and will not be used for future Drilling, then the Operator shall promptly abandon the Well pad consistent with the following provisions:

~~(1) Closure of Sumps. The Operator shall clean out all sumps, collars and ditches and level and fill all sumps and depressions pursuant to DOGGR requirements. If sumps are lined with concrete, bottoms and walls shall be broken up and removed. Sumps shall be closed in accordance with Regional Water Quality Control Board and California Department of Toxic Substances Control requirements.~~

(2) Well Pad Site Cleanup. The Operator shall leave the site entirely free of Oil, rotary mud, Oil soaked earth, asphalt, tar, concrete, litter, debris and other substances to the satisfaction of DOGGR and in accordance with federal requirements.

(3) Contaminated Materials. All contaminated soils and materials within the Well pad boundaries shall be removed and treated or disposed of in accordance with all local, County, State, and Federal regulations.

(4) Well Pad Revegetation. The Well pad shall be revegetated as approved by the City and Habitat Authority.

(5) City Request for Review of Well Status. The Director may periodically review the status of the Operator's Wells and submit to DOGGR a list of Wells the Director believes should to be plugged and abandoned as specified in Public Resources Code Section 3206.5 or any subsequently enacted State Law related to a local jurisdiction's right to request State-agency review of Idle Wells.

~~(6) Reduced Throughput Triggering Review. When Oil or Gas throughput is less than 2,000 barrels per day, the Director shall conduct a public hearing to determine if shut down of the Oil Field or other actions are appropriate.~~

(7) Abandonment Procedures. Within 180 days of permanent facility shut down, the Operator shall submit an Abandonment Plan to DOGGR and submit to the Director for review and approval a time line for facility removal, site assessment and remediation as necessary. The Operator shall begin abandonment of the site no later than 20 days after the Director's approval of the timeline, and shall provide to the Director quarterly updates on the abandonment process until such time as the Oil Field is abandoned and restored. The Operator and Landowners shall post a performance bond to insure compliance with all provisions of this subsection, and shall continue to pay property taxes at the rates assessed during Oil Field operation until all site restoration work has been fully completed, as determined by the Director.

71. Monitoring and Compliance: The following provisions shall apply throughout the Oil Field project area.

(1) Environmental Quality Assurance Program (EQAP). The Operator shall comply with all provisions of an Environmental Quality Assurance Program (EQAP) that has been approved by the Director. The following provisions relate to the EQAP:

a. EQAP Requirements. The EQAP shall provide a detailed description of the steps the Operator shall take to assure compliance with all provisions of this section, including but not limited to all of the monitoring programs called for by this section.

b. Annual EQAP Reports. Within 60 days of the end of each calendar year, the Operator shall submit to the Director an annual EQAP report that reviews the Operator's compliance with the provisions of the EQAP over the previous year and addresses such other matters as may be requested by the Director. The Annual EQAP Report shall include the following:

i. A complete list and description of any and all instances where the provisions of the EQAP, or any of the monitoring programs referred to therein or in this section, were not fully and timely complied with, and

an analysis to how compliance with such provisions can be improved over the coming year.

- ii. Results and analyses of all data collection efforts conducted by the Operator over the previous year pursuant to the provisions of this section.

- c. EQAP Updates. The EQAP shall be updated as necessary and submitted to the Director for approval along with the annual EQAP report. The Director shall complete the review of EQAP updates as soon as practicable, and shall either approve the updated EQAP or provide the Operator with a list of specific items that must be included in the EQAP prior to approval. The Operator shall respond to any request for additional information within 30 days of receiving such request from the Director, unless extended by the Director.

(2) Safety Inspection, Maintenance and Quality Assurance Program ("SIMQAP"). The Operator shall comply with all provisions of a Safety Inspection, Maintenance and Quality Assurance Program (SIMQAP) that has been approved by the Director and the Fire Chief.

- a. SIMQAP Requirements. The SIMQAP shall, at a minimum provide for:

- i. Inspection of construction techniques;
- ii. Regular maintenance and safety inspections;
- iii. Periodic safety audits;
- iv. Corrosion monitoring and leak detection; and
- v. Inspections of all trucks carrying hazardous and/or flammable material prior to loading.

- b. SIMQAP Updates. The Operator shall periodically review and revise the SIMQAP to incorporate changes in procedures, and new safety and maintenance technologies and procedures. The Operator shall make such revisions at least every five years, or more frequently, if the Operator determines changes are necessary or if requested by the Director or the Fire Chief. The Operator shall submit SIMQAP updates to the Director and the Fire Chief for their review and approval. The Director shall complete the review of SIMQAP updates as soon as practicable, and shall either approve the updated SIMQAP or provide the Operator with a list of specific items that must be included in the SIMQAP prior to approval. The Operator shall respond to any request for additional information within 30 days of receiving such request from the Director, unless extended by the Director.

- c. **Worker Notification.** The Operator shall ensure that all persons working on the Oil Field comply with all provisions of the currently approved SIMQAP.
 - d. **Inspections.** The SIMQAP shall provide for involvement of the City staff or the Environmental Compliance Coordinator in all inspections required by this section.
- (3) **Annual Emergency Response Drills of the County Fire Department.** The Operator shall demonstrate the effectiveness of the Emergency Response Action Plan by responding to one planned emergency response drill per year which shall be conducted in conjunction with the County Fire Department. Emergency response drills required by other agencies that involve County Fire can be used to satisfy this provision. In addition, the Operator shall demonstrate the effectiveness of the Emergency Response Action Plan by responding to not more than two (2) unannounced drills each year which may be called by the County Fire Department at the Oil Field. If critical operations are then underway at the Oil Field, the Operator need not respond to an unannounced drill to the extent such a response would, as a result of such critical operations, create an undue risk of personal injury or property damage, but in such case the Operator must promptly explain the nature of the critical operations, why response is not possible, and when the critical operations will be completed.
- (4) **Noise Monitoring.** The City shall retain an independent qualified acoustical engineer to monitor ambient noise levels in the areas surrounding the Oil Field as determined necessary by the Director. The monitoring shall be conducted unannounced and within a time frame specified by the Director. Should noise from the Oil Operations exceed the noise thresholds specified in the Noise Reduction Plan, required pursuant to Attachment A, no new Drilling, or Redrilling permits shall be issued by the City until the Operator in consultation with the Director identifies the source of the noise and the Operator takes the steps necessary to assure compliance with thresholds specified in the Noise Reduction Plan. The results of all such monitoring shall be promptly posted on the Oil Field Web site.
- (5) **Complaints.** All complaints related to Oil Operations received by the Operator shall be reported on the same business day to the Environmental Compliance Coordinator and to the Director. In addition, the Operator shall maintain a written log of all complaints and provide that log to the Director, on a quarterly basis. Depending upon the nature of the complaint, the Operator shall report the complaint to the SCAQMD, DOGGR, and any other appropriate agencies with oversight authority regarding the complaint at issue. If the complaint is received after normal business hours, it shall be reported to the Environmental Compliance Coordinator and the agencies at the opening of the next business day.

HABITAT PROTECTION / RESTORATION CONDITIONS

72. Habitat Mitigation/Restoration

- (1) **Temporary Impacts.** The project proponent shall restore all temporarily impacted areas. For temporary impacts to native vegetation, temporary impact areas shall be restored to the same type of native vegetation. For non-native vegetation, temporary impacts areas shall be restored to appropriate native vegetation. When oil operations have ceased at the leased area, facilities will be removed and restored to appropriate native habitats.
- (2) **Ongoing Exotic Eradication/Habitat Enhancement.** The project proponent shall implement an exotic eradication/habitat enhancement program within designated priority areas within the oil field. This may include, but not be limited to the removal of eucalyptus trees, pepper trees, castor bean, tree tobacco, hemlock, fennel, thistle, and non-native grasses. The eradication program will be reviewed and approved by the Habitat Authority, and will be funded through a Mitigation Fund. The Operator shall establish the Mitigation Fund and ensure annual contributions of \$30,000 (with annual CPI increases). Any unspent funds shall be rolled over to the following year. The Habitat Authority shall have the ability use the fund for related plantings, including distribution of native seeds.
- (3) **Impacts to Jurisdictional Waters.** For any impacts to jurisdictional waters, the project proponent will obtain all necessary regulatory permits prior to the issuance of a grading permit, including if necessary a Section 404 permit, Section 401 Water Quality Certification, and a Section 1602 Streambed Alteration Agreement. Impacts to jurisdictional waters (and any associated riparian vegetation and/or wetlands) will be mitigated for at a minimum 3:1 ratio, or as required by the regulatory agencies (whichever is higher). If mitigation needs to occur outside the leased area for oil operations then standard access fees applied by the Habitat Authority will apply (see Habitat Authority website for details.)
- (4) **Wildlife Movement.** For access roads to be re-graded for the project or for existing roads with significant increased activity, the proponent shall install corrugated pipe culverts to facilitate the movement of smaller vertebrates, including rodents, reptiles, and amphibians; as directed and approved by the Habitat Authority Ecologist.

73. Fuel Modification

- (1) Impacts to native habitats as a result of fuel modification (including thinning) will be treated as an impact subject to mitigation requirements.
- (2) All plantings within fuel modification zones will consist of non-invasive species, with priority given to native species.

- (3) Access roads will be cleared of vegetation on a regular basis for purposes of fuel modification in accordance with fire department requirements at the expense of the Operator.
- (4) In addition to clearance for annual fuel modification, roads will be maintained for safe and functional use by the Operator at all times.

74. Noise Attenuation for Wildlife

- (1) During construction, including drilling, activities adjacent to sensitive habitats, including potential nesting gnatcatchers, raptors, etc., will be monitored using permanently installed noise meters. If actual levels (measured from the edge of the leased area) exceed allowable levels (~~to be determined~~), construction activities may be temporarily halted until additional measures can be implemented to further reduce noise levels. Noise restrictions may also be imposed by regulatory agencies (e.g., Service, CDFG, etc.) as part of any regulatory permits and/or take authorizations.
- (2) Noise levels attributed to operations will be minimized to the maximum extent feasible. Facilities shall be constructed to eliminate noise impacts on surrounding habitats, or at least minimize noise projected into adjacent open space. A standard for noise shall be set to regulate noise projected from the edge of the leased area (e.g., 60 db hourly average or to be determined).
- (3) Vehicle traffic shall be restricted to defined access routes, and using approved equipment for specific areas.
- (4) With the exception of delivering construction and other equipment, access to construction/drilling sites will be using approved vehicles only. Wherever feasible, the Operator shall use hybrid (electric or other low noise) vehicles for all non-construction equipment access.

75. Unauthorized Access

- (1) Unauthorized access into the Preserve will not be allowed. Personnel must remain inside the leased areas and identified roadways at all times.
- (2) All operations shall occur within the defined lease area. All temporary staging areas, including the placement of construction trailers, shall be reviewed with the Habitat Authority to minimize biological impacts. Temporary use areas outside the leased area require a permit through the Habitat Authority (and approval by the City).
- ~~(3) There will be no access for oil Operators after sunset, unless during temporary new drilling operations, for emergency or safety purposes.~~

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76. Conservation Easement: Oil leased area will be defined and separate from Conservation Easement area, which will remain in place over the balance of the City-owned Preserve land.

**Whittier Main Oil Field Development Project
Conditional Use Permit CUP#09-004**

MODIFIED CONDITIONS OF APPROVAL (October 24, 2011)

- 16.[New] The Operator and its successors in interest shall submit a fair share contribution/cost offset to the Whittier Utility Authority associated with the loss of revenue of landfill fees should waste hauler truck trips on Penn Street be reduced to account for an equivalent quantity of truck trips generated from and for the Whittier Main Oil Field Development Project in order to maintain existing, equivalent overall truck trip traffic along Penn Street. The frequency and amount of the fair share contribution shall be determined by the Director of Public Works and Executive Director, and updated as appropriate, to ensure a consistent revenue stream to the Whittier Utility Authority's Solid Waste Collection Account.
22. [New] The Operator shall improve, at their cost, the internal landfill access road(s) to the satisfaction of the Director of Public Works and enter into a Reciprocal Access Agreement subsequent to the Design but prior to the Construction Phase of the Project. The Agreement shall be subject to review and approval by the City Council and shall include, but not be limited to, the specific design and construction of the required road improvements and its related on-going maintenance, and construction coordination with on-going Savage Canyon Landfill operations.
253. [Previously introduced at October 19, 2011 Planning Commission Hearing] Colima Tunnel. The area around the west end of Colima tunnel where Eucalyptus trees have been previously removed shall be revegetated to provide better cover and to attract more animals to use the tunnel (west end) prior to Project construction. The revegetation area shall include weedy patches connecting the tree removal area, encompassing approximately 25 acres. Phasing of the revegetation shall be as directed by the City and Habitat Authority.
386. Sour Gas Contingency Plan. The Operator shall prepare a sour gas contingency plan which addresses the actions that will be taken in the event that hydrogen sulfide is encountered during the drilling and production operations. This plan shall require that the facility be shut down if hydrogen sulfide above ~~4 ppm~~ 20 ppm is encountered during production and outline what additional measures will be taken if hydrogen sulfide is encountered during production to prevent a hazardous release. No operation with sour gas shall be allowed as part of this permit. The Operator shall distribute copies of the plan to applicable City Departments and the City Fire Department. All plan recipients are to be notified of contingency plan changes via formal contingency plan updates.
464. Safety and Risk of Upset. The Operator shall at all times conduct oil operations in a manner that minimizes risk of accidents and the release of hazardous materials, and shall comply with the following provisions:

Modified Oil Field Conditions
October 24, 2011

Agenda related writings or documents provided to a majority of the Planning Commission members and available to the public on 10-24-11 after distribution of the 10-19-11 agenda packet.

(1) Natural Gas Liquid Blending. Natural gas liquids at the gas plant shall be blended with the oil to the maximum allowable pipeline system vapor pressure. Natural gas liquids storage shall be limited to the volume allowed in the Risk Management Plan approved by the Fire Department.

(2) Process Hazards Analysis (PHA). The Operator shall provide for a PHA to be conducted on all processes at the field and pipeline routes, to address potential releases of flammable gasses, spills of crude oil, oily water or releases that could cause odors.

(3) Propane and Natural Gas Liquids Bullet Fire-Proofing. The Operator shall install and maintain fire-proofing insulation on all propane and natural gas liquids bullets within the oil field. The fire-proofing insulation shall have a minimum two-hour fire rating and otherwise be acceptable to the Fire Chief. All propane and natural gas liquid bullets shall be equipped with an automatic deluge system.

(4) Secondary Containment for Oil. The Operator shall comply with the following provisions:

a. The Operator shall ensure that all ~~existing oil processing areas tank areas in the oil field~~, unless determined by the Director to be infeasible, and ~~all the new oil tank areas~~ shall have secondary containment (berms and walls) that can contain at least 110 percent of the largest oil tank volume in order to reduce the likelihood of oil spills entering the retention basins. In the event the Director determines that it would be infeasible to provide 110 percent containment for a particular existing oil tank, the Operator shall provide such containment as the Director determines is feasible.

~~b. All retention basins in the oil field shall be adequately sized, and maintained to handle a 100-year storm event plus a potential spill of the volume of the largest tank that would drain into each basin.~~

b. All above ground piping in the Preserve Oil Field that contains or could contain Oil shall be protected by basins or secondary containment (berms and/or walls).

497. Noise Attenuation. All oil operations on the oil field shall be conducted in a manner that minimizes noise, and shall comply with the following provisions:

(1) Noise Limits. The Operator shall comply with the following provisions:

a. All oil operations on the oil field shall comply with the noise provisions of Chapter 8.32 of Title 8 of the City of Whittier Municipal Code, with the exception of drilling, redrilling, and reworking, which are exempt from the provisions of the said Chapter.

- b. Hourly, A-weighted equivalent noise levels associated with Drilling, Testing and Operations and ~~Reworking~~ shall not elevate existing baseline levels by more than three (3) ~~five (5)~~ dBA at any Developed Area, or five (5) dBA at any recreational area, trail or other public area. For daytime activities (7:00 a.m. to 7:00 p.m.) existing baseline noise levels shall be defined as the maximum daytime equivalent noise level (eq) at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. For nighttime activities (7:00 p.m. to 7:00 a.m.), existing baseline noise levels shall be defined as the minimum nighttime equivalent noise level (43.1) at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. Updated baseline noise levels may be set, and additional monitoring sites may be established, from time to time by the Director. In no case shall baseline noise levels include any Drilling, Redrilling or Reworking, or construction or operational operations.
- c. Noise produced by Oil Operations shall include no Pure Tones when measured at a Developed Area. (Pure Tones are defined in the EIR.)
- (2) Backup Alarms. Backup alarms on all vehicles operating within the Oil Field shall be disabled between the hours of 8:00 p.m. and 8:00 a.m. During periods when the backup alarms are disabled, the Operator shall employ alternate, low-noise methods for ensuring worker safety during vehicle backup, such as the use of spotters.
- (3) Equipment Servicing. All noise producing Oil Field Equipment shall be regularly serviced and repaired to minimize increases in Pure Tones and other noise output over time. The Operator shall maintain an equipment service log for all noise producing equipment.
- (4) Deliveries to the Oil Field. Deliveries to the Oil Field shall not be permitted after 7:00 p.m. and before 7:00 a.m., Monday through Friday; between 8:00 a.m. and 5:00 p.m. on Saturdays and no activities on Sundays or federal holidays, except in cases of emergency.
- ~~(5) Deliveries within the Oil Field. Deliveries to areas of the Oil Field located within 500 feet of any residential property shall not be permitted after 5:00 p.m. or before 7:00 a.m. except in cases of emergency. Deliveries to such areas on Sundays or legal holidays shall not be permitted after 5:00 p.m. and before 9:00 a.m., except in cases of emergency.~~
- (5) Construction Equipment. All construction equipment shall be selected for low-noise output. All construction equipment powered by internal combustion engines shall be properly muffled and maintained.

(6) Construction Equipment Idling. Unnecessary idling of internal combustion engines near noise-sensitive areas is prohibited.

(7) Worker Notification. The Operator shall instruct employees and subcontractors about the noise condition provisions prior to commencement of each and every Drilling, Redrilling, Reworking, and construction operation, and shall annually certify to the Director that such employees and subcontractors have been properly trained to comply with such noise provisions. The Operator shall prominently post quiet mode policies at every Drilling and Redrilling site.

5149.Signs. All signage shall comply with the following provisions:

(1) Perimeter Identification Signs. Identification signs, at intervals acceptable to the Director, shall be posted and maintained in good condition along the Outer Boundary Line fence and along the fences adjoining the public roads that pass through the Oil Field. Each sign shall prominently display current and reliable emergency contact information that will enable a person to promptly reach at all times, a representative of the Operator who will have the expertise to assess any potential problem and recommend a corrective course of action. Each sign shall also have the number of the Operator's 24-hour emergency contact, City Code Enforcement contact and the number of SCAQMD that can be called if odors are detected.

(2) Main Entrance Sign. A sign shall be posted and maintained in good condition at the main entrance of the Oil Field prominently displaying a telephone number by which persons may contact a representative of the Operator at all times to register complaints regarding Oil Field operations.

(3) Other Required Signs. All identification signs, warning signs, no trespassing signs, and other signs required by County, State and Federal regulations shall be properly posted and maintained in all required locations and in good condition.

~~(4) Well Identification Signs. Well identification signs including the Well name and Well number shall be posted and maintained in good condition at each Well location~~

(4) No Littering Signs. "No littering" signs shall be prominently posted and maintained in good condition on all Oil Field entrance gates.

542.Sumps. The Operator shall comply with all of the following provisions:

(1) Sump Clean Out. All sumps that are used, or installed, or maintained for use in connection with any Well, and which have not been used for 90 days for the operation of or the Drilling, Redrilling or Reworking of such Well or any other Well in the vicinity, shall be cleaned out, and all Oil, rotary mud and rubbish removed.

~~(2) Sump Fencing. Around each sump of any depth, there shall be erected and continuously maintained a fence that encloses the sump in a manner that is satisfactory to the Director. This provision shall not apply to sumps that are constantly and immediately attended while Drilling, Redrilling and Reworking operations are proceeding.~~

553.Water Management Plan. The Operator shall comply with all provisions of a Water Management Plan that has been approved by the Director and the Director of Public Works. The Plan shall include best management practices, water conservation measures and, the use of a drip irrigation system, ~~and shall include provisions for the use of surface water runoff in the retention basins for dust suppression and landscaping.~~ The Plan shall also address the availability of reclaimed water for use at the Oil Field. The Water Management Plan shall be reviewed by the Operator every three years to determine if modifications to the Plan are required. The Operator shall make changes to the Plan if requested by the Director or the Director of Public Works. Any modifications to the Water Management Plan shall be submitted to the Director and the Director of Public Works for review and approval. The water management plan shall include any elements requested by the Director or the Director of Public Works.

564.Groundwater Monitoring. The Operator shall develop, implement, and carry out a groundwater quality monitoring program for the Oil Field that is acceptable to the Director and consistent with all requirements of the Regional Water Quality Control Board. Pursuant to the approved program, the Operator shall install and maintain groundwater monitoring ~~Wells in the vicinity of each surface water retention basin, which is permitted by the Regional Water Quality Control Board.~~ Such monitoring Wells shall be completed as determined by a California Certified Professional Geologist. The Regional Water Quality Control Board and the Director shall be regularly advised of the results of such monitoring, and shall be immediately advised if such monitoring indicates a potential problem.

642.Drilling, Redrilling and Reworking Operations. The Operator shall comply with all of the following provisions:

(1) DOGGR Regulations. All DOGGR regulations related to Drilling, Redrilling and Reworking operations.

(2) [Previously introduced at October 19, 2011 Planning Commission Hearing] Colima Number of Drilling and Redrilling Rigs. No more than ~~three~~ one (1) Drilling or Redrilling rigs shall be present within the Oil Field at any one time.

~~(3) Annual Drilling, Redrilling, Well Abandonment and Well Pad Restoration Plan. Before the end of each calendar year, the Operator shall develop and deliver to the Director an Annual Drilling, Redrilling, Well Abandonment and Well Pad Restoration Plan to the Director, which shall describe all Drilling, Redrilling, Well Abandonment, and Well pad restoration activities that may be conducted during~~

~~the upcoming calendar year. The Operator may at any time submit to the Director proposed amendments to the then current Annual Plan. No Drilling, Redrilling or Abandonment activity may be commenced unless it is described in a current Annual Plan (or an amendment thereto) which has been approved, by the Director. The Director shall complete the review of the Annual Plan (and any amendments) within 45 days of receipt, and shall either approve the Annual Plan or provide the Operator with a list of deficiencies. The Annual Plan shall comply with the provisions of this subsection, and shall include the following:~~

- ~~a. The maximum number of Wells proposed to be Drilled or Redrilled;~~
- ~~b. Approximate location of all Wells proposed to be Drilled or Redrilled;~~
- ~~c. Approximate location of all proposed new Well pads, including their size and dimensions;~~
- ~~d. Estimated target depth of all proposed Wells and their estimated bottom hole locations;~~
- ~~e. A discussion of the steps that have been taken to maximize use of existing Well pads, maximize use of Redrilled Wells, and maximize the consolidation of Wells;~~
- ~~f. Location of all proposed Wells Abandonments, if known in accordance with DOGGR integrity testing program of Idle Wells;~~
- ~~g. Location of all Well pads proposed to be abandoned and restored;~~
- ~~h. A proposed schedule and phasing of the Drilling, Redrilling, Well Abandonment, Well pad abandonment and restoration activities;~~
- ~~i. A discussion of the latest equipment and techniques that are proposed for use as part of the Drilling and Redrilling program to reduce environmental impacts; and~~
- ~~j. A topographic vertical profile showing proposed location of new Wells that is reflective of local terrain conditions and that addresses the potential visibility of existing and proposed Wells and other production facilities from residential and recreation areas.~~

(3) Drill Rig Engines. All engines used for Drilling and Redrilling operations shall be operated by muffled internal-combustion engines or by electric motors.

(4) Fire Safety Regulations. All Drilling, Redrilling and Reworking shall be in conformance with applicable fire and safety regulations.

- (5) New Technology. Proven reasonable and feasible technological improvements which are capable of reducing the environmental impacts of Drilling and Redrilling shall be considered as they become, from time to time, available.
- (6) Derricks and Portable Masts. All Derricks and portable masts used for Drilling, Redrilling and Reworking shall meet the standards and specifications of the American Petroleum Institute as they presently exist or as may be amended.
- (7) Equipment Removal. All Drilling and Redrilling equipment shall be removed from the site within 90 days following the completion of Drilling or Redrilling activities or as otherwise directed by the Director.
- (8) Drill Site Conditions. All Drilling Sites shall be maintained in a neat and orderly fashion.
- (9) Belt Guards. Belt guards shall be required over all drive belts on Drilling, Redrilling and Reworking equipment. Guarding shall be as required by, Title 8 of the California Code of Regulations, Section 6622, or as may be subsequently amended.

653. Processing Operations. The Operator shall comply with the following provisions:

- (1) Limits on Processing Operations. Unless otherwise expressly required by DOGGR, the only Processing operations permitted at the Well Site shall be: the dehydration of Oil and Gas produced from the Well; the storage, handling, recycling and transportation of such materials; and those Processing operations required for water injection purposes.
- (2) Refining. No refining shall be conducted within the Oil Field.
- ~~(3) Well Pumps Meters. All Well pumping units shall be downhole submersible pumps operated by electric motors.~~
- ~~(4) Well Pumps. Downhole submersible pumps for production Wells must be used wherever feasible.~~
- (4) Removal by Pipeline Only. All Oil, Gas and other hydrocarbons, produced from any Well in the Oil Field shall be shipped and transported through pipelines, except in case of an emergency or when access to a pipeline becomes unavailable. Excluded from this requirement are the three test wells, propane and other related natural gas liquids that are in amounts in excess of what can be blended into the pipeline. Should any pipeline through which Oil or Gas is currently transported become unavailable for the safe transportation of said products due to maintenance problems with the pipeline, or lack of sufficient capacity within the pipeline to handle the volume of Oil and Gas needing transportation, or because the owner or Operator of such pipeline elects to

discontinue transporting Oil or Gas through such pipeline, then the Operator shall within 180 days of the date the existing pipeline becomes unavailable, seek to acquire a private right of way or easement, or shall file an application for a right of way, easement, encroachment permit or franchise for the construction of a replacement pipeline and shall diligently prosecute such application until such pipeline is completed. During any emergency situation, or during such time as any existing pipeline becomes unsafe or unavailable, Oil and Gas may be transported by truck until the emergency situation is resolved or until a replacement pipeline shall be permitted and constructed in accord with all applicable laws and regulations.

(5) Pipelines. The Operator shall comply with the following provisions:

- a. New pipelines that remove Oil or Gas from the Oil Field shall be buried below the surface of the ground;
- b. All pipelines which are not enclosed within a fence shall be placed underground or covered with materials approved by the Fire Chief. Said covers shall be maintained in a neat, orderly, secure manner;
- c. Any and all water or brine produced during pipeline construction shall be injected in accordance with DOGGR requirements, or disposed of in accordance with other local, state or federal regulations;
- d. New pipeline corridors shall be consolidated with existing pipelines or electrical transmission corridors where feasible; and
- e. Upon completion of pipeline construction, the site shall be restored to the approximate previous grade and condition.

~~(6) Gas Metering Station Active Pipeline Plot Plan. The Operator shall submit to the Director and Fire Chief a site and building plans of the gas metering station for review and approval, of the plot plan depicting the approximate location of all active pipelines regulated by the United States Department of Transportation or California State Fire Marshall owned and used by the operation that are located outside the Outer Boundary Line, including waste water, and trunk and gathering lines to transport Oil or petroleum products. The plot plan shall be submitted within 30 days of the installation of any new pipelines or the relocation of an existing pipeline.~~

~~(7) Machinery Enclosures. The Operator shall maintain enclosures around machinery with moving parts consisting of a fence, screening or housing.~~

~~(8) Opening Protections. The Operator shall cap, close or protect the openings in all Oil Wells, test holes and similar excavation.~~

664. Well Reworking Operations. The Operator shall comply with the following provisions:

- (1) DOGGR Regulations. The Operator shall comply with all DOGGR regulations related to Well Reworking operations.
- (2) Number of Reworking Rigs. No more than one (1) eight (8) Reworking rigs shall be present within the Oil Field at any one time, unless an emergency condition requires additional Reworking rigs. ~~This does not include equipment used for Well Maintenance or Well Abandonment.~~
- (3) Hours of Operation. With exception of emergencies, Well Reworking operations shall not be allowed after 7:00 p.m. or before 7:00 a.m., nor on Sundays or legal holidays.
- (4) Specifications. Reworking rigs shall meet the standards and specifications of the American Petroleum Institute.
- (5) Equipment Removal. Reworking rigs shall be removed from the Oil Field within seven (7) days following the completion of Reworking operations unless such rig will be used on another Well at the Oil Field within five (5) days.

686. Well and Production Reporting. The Operator shall deliver annual production reports to the Director and the Fire Chief by June 30 of each year. The reports shall cover previous year activities and projections for coming year, and shall provide the following information:

- (1) A copy of all DOGGR Forms 110 and 110B submitted during the previous 12 months.
- (2) Number and mapped location of all Wells Drilled or Redrilled, including Well identification numbers and size and dimensions.
- (3) Number and mapped location of water injection Wells, including Well identification numbers.
- (4) Number and mapped location of Idled Wells, including Well identification numbers and the date each Well was idled.
- (5) Number and mapped location of Abandoned Wells, including date each Well was Abandoned and/or re-abandoned.
- (6) The number of Wells Drilled or Redrilled in the previous year, including location, size and dimensions and type, configuration, engine size and total height of drilling rigs used during the previous year.

- (7) A proposed schedule and phasing of the Drilling, Redrilling, Well Abandonment, Well pad abandonment and restoration activities;-
- (8) The maximum number of Wells proposed to be Drilled or Redrilled in the coming year including location, size and dimensions; and type, configuration, engine size and total height of proposed drilling rig to be used during the coming year.
- (9) Estimated target depth of all proposed Wells and their estimated bottom hole locations in the past year (actual) and the coming year (proposed).
- (10) A discussion of the latest equipment and techniques that are proposed for use as part of the Drilling and Redrilling program to reduce environmental impacts;
- (11) Any additional information requested by the Director or the Fire Chief.

~~70[69]. Abandoned Well Testing. The Operator shall conduct annual hydrocarbon vapor testing of areas within the Oil Field that contain Abandoned Wells. The testing shall be done using a soil Gas vapor probe, or another method approved by the Director. The results of the testing shall be submitted to the Director and DOGGR on an annual basis. Abandoned Wells that are found to be leaking hydrocarbons that could affect health and safety shall be reported to the Director and DOGGR within 24-hours of the Abandoned Well Test. If directed by DOGGR, the Operator shall re-abandon the Well in accordance with DOGGR rules and regulations. If the test results for an Abandoned Well area is at or below the background levels for two (2) consecutive years that area shall thereafter be tested every five (5) years.~~

7169. Well and Well Pad Abandonment. If DOGGR orders the Operator to plug and abandon any Wells on the Oil Field, the Operator shall deliver to the Fire Department, on a timely basis, all Notices of Intent to Plug and Abandon a Well that the Operator files with DOGGR and shall commence promptly and proceed diligently with the plugging and abandonment operations in accordance with DOGGR rules and regulations and the terms of the DOGGR permit to plug and abandon the Well. Well Abandonment may commence once all necessary permits and approvals are obtained. If the Well pad associated with the Abandoned Well does not contain other production, injection or Idle Wells, and will not be used for future Drilling, then the Operator shall promptly abandon the Well pad consistent with the following provisions:

- ~~(1) Closure of Sumps. The Operator shall clean out all sumps, cellars and ditches and level and fill all sumps and depressions pursuant to DOGGR requirements. If sumps are lined with concrete, bottoms and walls shall be broken up and removed. Sumps shall be closed in accordance with Regional Water Quality Control Board and California Department of Toxic Substances Control requirements.~~

- (2) Well Pad Site Cleanup. The Operator shall leave the site entirely free of Oil, rotary mud, Oil soaked earth, asphalt, tar, concrete, litter, debris and other substances to the satisfaction of DOGGR and in accordance with federal requirements.
- (3) Contaminated Materials. All contaminated soils and materials within the Well pad boundaries shall be removed and treated or disposed of in accordance with all local, County, State, and Federal regulations.
- (4) Well Pad Revegetation. The Well pad shall be revegetated as approved by the City and Habitat Authority.
- (5) City Request for Review of Well Status. The Director may periodically review the status of the Operator's Wells and submit to DOGGR a list of Wells the Director believes should be plugged and abandoned as specified in Public Resources Code Section 3206.5 or any subsequently enacted State Law related to a local jurisdiction's right to request State-agency review of Idle Wells.
- ~~(6) Reduced Throughput Triggering Review. When Oil or Gas throughput is less than 2,000 barrels per day, the Director shall conduct a public hearing to determine if shut down of the Oil Field or other actions are appropriate.~~

724. [Previously introduced at October 19, 2011 Planning Commission Hearing]
Habitat Mitigation/Restoration

- (1) Temporary Impacts. The project proponent shall restore all temporarily impacted areas. For temporary impacts to native vegetation, temporary impact areas shall be restored to the same type of native vegetation. For non-native vegetation, temporary impacts areas shall be restored to appropriate native vegetation. When oil operations have ceased at the leased area, facilities will be removed and restored to appropriate native habitats.
- (2) Ongoing Exotic Eradication/Habitat Enhancement. The project proponent shall implement an exotic eradication/habitat enhancement program within designated priority areas within the oil field. This may include, but not be limited to the removal of eucalyptus trees, pepper trees, castor bean, tree tobacco, hemlock, fennel, thistle, and non-native grasses. The eradication program will be reviewed and approved by the Habitat Authority, and will be funded through a Mitigation Fund. The Operator shall establish the Mitigation Fund and ensure annual contributions of \$30,000 (with annual CPI increases). Any unspent funds shall be rolled over to the following year. The Habitat Authority shall have the ability use the fund for related plantings, including distribution of native seeds.
- (3) Impacts to Jurisdictional Waters. For any impacts to jurisdictional waters, the project proponent will obtain all necessary regulatory permits prior to the issuance of a grading permit, including if necessary a Section 404 permit,

Section 401 Water Quality Certification, and a Section 1602 Streambed Alteration Agreement. Impacts to jurisdictional waters (and any associated riparian vegetation and/or wetlands) will be mitigated for at a minimum 3:1 ratio, or as required by the regulatory agencies (whichever is higher). If mitigation needs to occur outside the leased area for oil operations then standard access fees applied by the Habitat Authority will apply (see Habitat Authority website for details.)

- (4) Wildlife Movement. For access roads to be re-graded for the project or for existing roads with significant increased activity, the proponent shall install corrugated pipe culverts to facilitate the movement of smaller vertebrates, including rodents, reptiles, and amphibians; as directed and approved by the Habitat Authority Ecologist.

743. [Previously introduced at October 19, 2011 Planning Commission Hearing] Noise Attenuation for Wildlife

- (1) During construction, including drilling, activities adjacent to sensitive habitats, including potential nesting gnatcatchers, raptors, etc., will be monitored using permanently installed noise meters. If actual levels (measured from the edge of the leased area) exceed allowable levels (~~to be determined~~), construction activities may be temporarily halted until additional measures can be implemented to further reduce noise levels. Noise restrictions may also be imposed by regulatory agencies (e.g., Service, CDFG, etc.) as part of any regulatory permits and/or take authorizations.
- (2) Noise levels attributed to operations will be minimized to the maximum extent feasible. Facilities shall be constructed to eliminate noise impacts on surrounding habitats, or at least minimize noise projected into adjacent open space. A standard for noise shall be set to regulate noise projected from the edge of the leased area (e.g., 60 db hourly average or to be determined).
- (3) Vehicle traffic shall be restricted to defined access routes, and using approved equipment for specific areas.
- (4) With the exception of delivering construction and other equipment, access to construction/drilling sites will be using approved vehicles only. Wherever feasible, the Operator shall use hybrid (electric or other low noise) vehicles for all non-construction equipment access.

754. Unauthorized Access

- (1) Unauthorized access into the Preserve will not be allowed. Personnel must remain inside the leased areas and identified roadways at all times.

(2) All operations shall occur within the defined lease area. All temporary staging areas, including the placement of construction trailers, shall be reviewed with the Habitat Authority to minimize biological impacts. Temporary use areas outside the leased area require a permit through the Habitat Authority (and approval by the City).

~~(3) There will be no access for oil Operators after sunset, unless during temporary new drilling operations, for emergency or safety purposes.~~

**Whittier Main Oil Field Development Project
Conditional Use Permit CUP#09-004**

CONDITIONS OF APPROVAL

GENERAL CONDITIONS

1. **Mitigation Measures.** All mitigation measures set forth in the project CEQA documents, and included as Attachment A, shall be satisfied by the Operator (Matrix Oil Corporation), at the Operator's expense; and the development must operate within the development assumptions utilized for the CEQA review.
2. **Indemnification, Protection and Defense.** The Operator and its successors in interest shall indemnify, protect, defend (with legal counsel reasonably acceptable to the City), and hold harmless, the City, and any agency or instrumentality thereof, and its elected and appointed officials, officers, employees, and agents from and against any and all liabilities, claims, actions, causes of action, proceedings, suits, damages, judgments, liens, levies, costs, and expenses of whatever nature, including reasonable attorney's fees and disbursements (collectively "Claims") arising out of or in any way relating this project, any discretionary approvals granted by the City related to the development of the project, or the environmental review conducted under California Environmental Quality Act, Public Resources Code Section 21000 et seq., for the project. If the City Attorney is required to enforce any conditions of approval, all costs, including attorney's fees, shall be paid for by the Operator.
3. **Injunctive Relief.** In addition to any administrative remedies or enforcement provided hereunder, the City may seek and obtain temporary, preliminary, and permanent injunctive relief to prohibit violation of the conditions set forth herein or to mandate compliance with the conditions herein. All remedies and enforcement procedures set forth herein shall be in addition to any other legal or equitable remedies provided by law.
4. **Governmental Compliance.** The Operator shall comply with requirements of all Federal, State, County, and local agencies as are applicable to this project.
5. All oilfield development and operations shall substantially adhere to the approved project plans and description as reviewed and accepted by the Planning Commission on October ___ 2011.
6. **Project Description.** The procedures, operating techniques, design, equipment and other descriptions provided by the Operator in: 1) its CUP application to the City and in subsequent clarifications and additions to that application; and 2) as described in the project EIR and any subsequent environmental review, are incorporated herein

Agenda related writings or documents provided to a majority of the Planning Commission 10/25 members and available to the public on 10-26-11, after distribution of the 10-19-11 agenda packet.

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as permit conditions and shall be required elements of the project. Since these procedures were part of the project description which received environmental analysis, a failure to include such procedures in the actual project could result in significant unanticipated environmental impacts. Deviations from the project description, environmental review or conditions of approval may require further environmental review and a modification to the CUP. Therefore, modifications of these procedures shall not be permitted without a determination of substantial conformity or a new or modified permit. The use of the lease area and the size, shape, arrangement and location of buildings, structures and landscaped areas shall be in substantial conformity with the approved Conditional Use Permit CUP09-004.

7. Grounds for Permit Modification or Revocation. Failure to abide by and faithfully comply with any conditions for the granting of this permit shall constitute grounds for the modification or revocation of this permit by the approving authority.
8. Conditions Separately Remain in Force. In the event that any condition contained herein is determined to be invalid, then all remaining conditions shall remain in force.
9. Conflicts between Conditions. In the event that any condition contained herein is determined to be in conflict with any other condition contained herein, then where principles of law do not provide to the contrary, the condition most protective of natural environmental resources and public health and safety shall prevail to the extent feasible.
10. Changes to Conditions. The Whittier City Council shall have the authority, in a noticed public hearing, to specify or change the Whittier City Department responsible for monitoring or enforcement of any conditions contained herein.
11. Challenges to Mitigation or Condition. In the event that any condition imposing a fee, exaction, dedication or other mitigation measure is challenged by the Operator in an action filed in a court of law or threatened to be filed therein which action is brought in the time period provided for by Code of Civil Procedures Section 1094.6 or other applicable law, this approval shall be suspended pending dismissal of such action, the expiration of the limitation period applicable to such action, or final resolution of such action. If any condition is invalidated by a court of law, the entire project shall be reviewed by the Planning Commission and no approval shall be issued unless substitute feasible mitigation conditions/measures are imposed.
12. Applicability of Conditions to Construction and Operations. These permit conditions are intended to apply to the project during all phases. The term "operations" shall be understood to encompass construction, drilling and redrilling and operation phases unless such an interpretation would be inappropriate.
13. Maximum Number of Wells. The Operator shall drill no more than 60 wells in the Oil Field project area.

14. Infrastructure. The Operator shall have suitable infrastructure in place, as reasonably determined by the City, to support oil operations.

15. Traffic Management Plan. Prior to any project excavation or construction activities related to the project site, the Operator shall prepare for review and approval of the City a Traffic Management Plan to reduce project traffic impacts on substantially affected residential streets, including at a minimum affected portions of Penn Street and Catalina Street.

16. The Operator and its successors in interest shall submit a fair share contribution/cost offset to the Whittier Utility Authority associated with the loss of revenue of landfill fees should waste hauler truck trips on Penn Street be reduced to account for an equivalent quantity of truck trips generated from and for the Whittier Main Oil Field Development Project in order to maintain existing, equivalent overall truck trip traffic along Penn Street. The frequency and amount of the fair share contribution shall be determined by the Director of Public Works and Executive Director, and updated as appropriate, to ensure a consistent revenue stream to the Whittier Utility Authority's Solid Waste Collection Account.

Comment [A1]:

~~17. Off-Site Staging Area and Car/Van Pooling. To reduce vehicle and truck traffic to and from the site, the Operator shall plan for and utilize off-site staging area and car/van pooling to greatest extent possible. These plans shall be subject to review by the City of Whittier Community Development Director (Director).~~

~~18. Greenhouse Gas Off-Set. Prior to any project excavation or construction related activities related to the project site, the Operator shall prepare for review and approval of the City a plan to reduce greenhouse gas (GHG) emissions generated by the project. Strategies included in the plan may include plantings of trees in the project area and along the Greenway Trail, and/or purchase of credits offsite.~~

~~19.~~ 17. Retaining Walls. Prior to any project excavation or construction related activities related to the project site, the Operator shall provide detailed plans of retaining walls for review and approval of the City and Habitat Authority.

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~~20.~~ 18. Environmental Compliance Coordinator. The City Operator shall hire the Environmental Compliance Coordinators, the costs of which shall be recommend and reimbursed by Operator fund the Environmental Compliance Coordinators. The number of Environmental Compliance Coordinators shall be determined by the City and shall take into account the level of Oil Operations at the Oil Field. The Environmental Compliance Coordinator(s) shall be approved by, and shall report to, the City Manager or Designee ~~Director~~. The responsibilities of the Environmental Compliance Coordinator(s) shall be set forth in implementation guidelines that may be developed-determined by the City for the Oil Field and shall generally include:

(1) On-site, day-to-day monitoring of construction, drilling and redrilling, and operational activities as determined by the City Manager or Designee ~~Director~~.

- (2) Taking steps to ensure that the Operator, and all employees, contractors and other persons working in the Oil Field, have knowledge of, and are in compliance with all applicable provisions of this conditional use section.
- (3) Evaluating the adequacy of Drilling, Redrilling, and construction impact mitigations, and proposing improvements to the Operator or contractors, and the City.
- (4) Reporting responsibilities to the various City departments/agencies with oversight responsibility at the Oil Field, as well as other agencies such as DOGGR, and SCAQMD.

24-19. Special Training for Vendors and Employees.

- (1) Prior to any project excavation or construction related activities, Operator shall provide all contractors, subcontractors, oil tankers and workers with an operational manual that will include instructions about Preserve rules; permitted parking areas; smoking prohibition; appropriate location and placement of temporary living trailers, offices as well as guard station posts; guidelines for environmentally friendly operations (i.e. do not push dirt in drainages, do not trim riparian vegetation, etc.). The operational manual shall be reviewed and approved by the City Manager or Designee/Director and Habitat Authority.
- (2) The Operator shall arrange for an on-going special training program to ensure that all employees and vendors are trained to comply with the operational manual, including all environmental and biological compliance and monitoring requirements.

22-20. The Operator shall improve, at theirits cost, the internal landfill access road(s) to the satisfaction of the Director of Public Works and enter into a Reciprocal Access Agreement subsequent to the Design but prior to the Construction Phase of the Project. The Agreement shall be subject to review and approval by the City Council and shall include, but not be limited to, the specific design and construction of the required road improvements and #stheir related on-going maintenance, and construction coordination with on-going Savage Canyon Landfill operations.

23-21. Landfill Road Restrictions. No use of the Landfill Road shall be permitted during the hours from one half (1/2) hour before sunset to 1/2 hour after sunrise, to protect animals with nocturnal foraging/hunting habits, except for emergencies.

24-22. Ranger Station. A suitable offsite facility shall be obtained by Operator, at Operator's expense, to provide temporary accommodations in place of the The ranger station during construction. shall be relocated to aThe location shall be subject to approval acceptable toof the City Manager or Designee/Director and

Habitat Authority prior to Project construction. This temporary location shall remain operational as determined by the City Manager Director Designee and Habitat Authority. Following completion of construction, Operator shall restore the existing ranger station to at least its pre-existing usable condition to the satisfaction of the City Manager or Designee.

25-23. Colima Tunnel. The area around the west end of Colima tunnel where Eucalyptus trees have been previously removed shall be revegetated to provide better cover and to attract more animals to use the tunnel (west end) prior to Project construction. The revegetation area shall include weedy patches connecting the tree removal area, encompassing approximately 25 acres. Phasing of the revegetation shall be as directed by the City and Habitat Authority.

26-24. Spill Clean-up Fund. The Operator shall establish a fund, letter of credit or similar mechanism in an amount acceptable to the City to guarantee that funds will be immediately available to undertake clean-up activities in case of a spill. The minimum amount of such fund shall be the deductible amount of any policy of liability, pollution or well control drilling insurance required in this permit.

27-25. Fire Fighting Apparatus. The Operator shall provide adequate firefighting apparatus to fight oil related fires within all areas of the Preserve on which oil related operations will occur, including pipelines and roads. The type, amount and location of firefighting apparatus shall be determined by the County Fire Department and City.

28-26. During all construction, drilling and re-drilling and operational phases, the Operator shall ensure that protective fencing is in place as required by the City and Habitat Authority.

29-27. 24-Hour Emergency Contact. Prior to issuance of the Permit for Phase 1, the Operator shall provide to City, Habitat Authority and County Fire Department the current name and position, title, address, and 24-hour telephone numbers of the person in charge of the facility, person in charge of construction, and other representatives who shall receive all orders and notices, as well as all communications regarding matters of condition and permit compliance at the site and who shall have authority to implement an emergency facility shutdown.

30-28. Oilfield Public Relations Contact. The Oilfield shall provide for an on-site public relations officer to be available at all phases of project construction and operation. The officer's name and phone number shall be posted for easy access to the public, including on the City's website.

31-29. Administrative Items: The following provisions shall apply throughout the Oil Field project area.

(1) Costs of Implementing and Enforcing Conditions. The Operator shall be fully responsible for all reasonable costs and expenses incurred by the City or any City contractors, consultants, or employees, in implementing, monitoring, or enforcing this permit, including but not limited to, costs for permitting, permit conditions implementation, mitigation monitoring, reviewing and verifying information contained in reports, undertaking studies, research and inspections, administrative support, and including the fully burdened cost of time spent by City employees on such matters.

(2) Draw-Down Account. The Operator shall maintain a draw-down account with the City, from which actual costs will be billed and deducted for the purpose of defraying the expenses involved in the City's review and verification of the information contained in any required reports and any other activities of the City, including but not limited to: enforcement, permitting, inspection, coordination of compliance monitoring, administrative support, technical studies, and the hiring of independent consultants. The initial amount to be deposited by the Operator shall be \$500,000. In the first year, if withdrawals from the account have reduced its balance to less than 50 percent of the amount of the initial deposit (\$250,000), the Operator shall deposit \$50,000 in supplemental funds within 30 business days of notification. After the first year, if the balance in the draw-down account is reduced at any time to \$50,000 or less, the Operator shall deposit \$50,000 in supplemental funds on each occasion that the account is reduced to \$50,000 or less within 30 business days of notification. There is no limit to the number of supplemental deposits that may be required. At the discretion of the Operator, the amount of an initial or supplemental deposit may exceed the minimum amounts specified in this subsection. The City Manager or Designee may, from time to time, increase the minimum \$50,000 figure to account for inflation or the City's experience in obtaining funds from the account.

(3) Indemnification. The Operator shall enter into an agreement with the City to indemnify and hold harmless the City, its elected and appointed officials, agents, officers and employees from any claim, action or proceeding for damages arising from its Oil Operations, including water, air or soil contamination, health impacts, or loss of property value during the Oil Operations, Abandonment and post-Abandonment of the Oil Operations with terms approved by, and in a form acceptable to, the City Manager.

(3)(4) Insurance Requirements.

General Liability, Pollution Legal Liability, and Well Control Drilling Insurance

Operator shall demonstrate to the City that it carries on the Matrix Project General Liability Insurance, in an aggregate amount of not less than \$15,000,000 combined limits, \$15,000,000 in Well Control Drilling Insurance.

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and a policy of Pollution Legal Liability Insurance in an aggregate amount of not less than \$30,000,000 combined limits. This insurance shall provide coverage for claims for bodily injury, environmental or property damage that result from pollution conditions at, on or emanating from the Matrix facilities. The Pollution Legal Liability Insurance policy may not contain an exclusion of onsite remediation costs if such an exclusion would exclude, remove or impair coverage for onsite remediation performed in response to a governmental order, demand, warning or other legally enforceable requirement. Should an exclusion exist in the policy, Operator shall post a bond to cover costs associated with remediation.

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The insurance policies must be secured through an insurance company having a Best's rating of "A - VII" or better. Operator shall submit one or more certificates of insurance to P&D to be approved by the City Risk Manager. The General Liability and Pollution Legal Liability Insurance policies shall be in place prior to issuance of the Permit and shall remain in full force and effect until revocation of the permit. Operator shall submit certificates of insurance 30 days in advance of the renewal anniversary of each policy. Such certificate(s) shall evidence the coverages described above, shall name the City of Whittier as an additional insured as to each policy provided, and shall afford the City 60 days advance notice of cancellation or non-renewal. The City Risk Manager may adjust the aggregate coverage amount specified above over time depending on factors such as inflation, modifications to State and Federal oil spill financial responsibility guidelines, and project modifications. In making such adjustments, the City Risk Manager shall give due regard to the cost and availability of such coverage, and shall allow Operator a reasonable period of time in which to place such coverage.

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The Well Control Drilling Insurance policy shall only be required to be in effect while drilling operations are being conducted. Operator may satisfy the Well Control Drilling Insurance requirement by having its drilling contractor or subcontractors supply the required insurance, so long as the aggregate insurance maintains the total required.

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(4) Insurance Requirements. Within 90 days of the effective date of this section or such time as may be extended by the Director for good cause shown, and without limiting the Operator's indemnification of the City as required in the preceding subsection, the Operator shall provide evidence of insurance coverage that meets City requirements as required and approved by the City Manager including identifying the City and its elected and appointed officers and employees as additional insureds. Such coverage shall be maintained so long as Oil Operations are conducted within the City and until such time as all Abandonment requirements are met and certified by the appropriate local, state, and federal agencies. Such insurance coverage shall include but is not necessarily limited to the following: general liability, auto liability, professional liability, and environmental impairment liability coverage insuring clean-up costs, and endorsing for 'Sudden and Accidental' contamination or pollution. Such coverage shall be in an amount sufficient to meet all applicable state and

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~~federal requirements, with no special limitations. At the Operator's request and only with City approval by the City Manager, the Operator may self insure all or any part of the above coverage obligations in lieu of purchasing commercial coverage. These insurance requirements shall be in addition to all other indemnification, insurance and performance security required by federal, state and local regulations and permits.~~

(5) Performance Security. The Operator shall be subject to the following provisions:

- a. Performance Bond. Prior to issuance of the first drilling permit pursuant to this section, the Operator shall provide to the City Manager or Designee~~Director~~, a faithful performance bond or financial instrument in the sum to be determined by the City Manager, payable to the City and executed by a corporate surety acceptable to the City and licensed to transact business as a surety in the State of California. Such bond shall be conditioned upon the faithful performance by Operator of duties related to well abandonment, site restoration and environmental cleanup and shall be in a format and include terms approved by the City Manager.
- b. Change of Operator. The performance bond shall continue in force for one (1) year following any sale, transfer, assignment, or other change of Operator of the Oil Field, or of the current Operator's termination of activities at the oil field. The City may release said bond prior to the end of the one (1) year period upon satisfaction by said Operator of all its obligations. Notwithstanding the foregoing, the performance bond shall not be terminated or released upon the sale, transfer, assignment, or other change of Operator until the new Operator has delivered a replacement bond complying with the provisions of this section.
- c. Funding Options. At its sole option, the City may accept Certificates of Deposit, Cash Deposits, or U.S. Government Securities in lieu of commercial bonds to meet the above bonding requirements on terms approved by the City Manager.

~~32.30.~~ Record Keeping. As to any condition which requires for its effective enforcement the inspection of records or facilities by City or its agents, the Operator shall make such records available or provide access to such facilities upon reasonable notice from City. The City agrees to keep such information confidential where permitted by law and requested by the Operator in writing.

~~33.31.~~ Periodic Review. The City shall conduct a comprehensive review of the ~~conditions of approval provisions of this section~~ at least every five (5) years ~~from CUP issuance~~ to determine if the ~~provisions of this section~~ conditions of approval are adequately protecting the health, safety and general welfare. Such reviews shall, among other things, consider whether additional ~~provisions~~ conditions should be

added, appended or removed. One of the main goals of the periodic review shall be to evaluate if proven technological advances that would further reduce impacts of Oil Operations on neighboring land uses should be incorporated into the conditions of provisions approval of this section.

(1) Review Requirements. Each review shall include a report from a Consultant designated by a hearing officer designated by the City Manager or Designee Director, which shall be prepared after public notice and an opportunity for public comment. The report shall include a comprehensive analysis of the effectiveness of theis conditions of approval section, and shall review and consider enforcement activity, operational records, and any other issues relating to Oil Operations. A draft of the report shall be provided to the Operator for review and comment. All comments on the draft report from the Operator shall be submitted to the City Manage or Designee hearing officer in writing, and will be considered, if timely received, before the report is finalized. The final report by the hearing officer Consultant shall include a recommendation as to whether the Community Development Director should prepare a proposed amendment to theis section conditions of approval for submission to the Planning Commission, with review or appeal rights to the City Council.

(2) Early Reviews. An earlier review may be requested by the City Manager or Designee Director at any time, if more than three (3) material violations occur within any twelve (12) month period and the City Manager or Designee Director and responsible agencies determine that resolution of the violations requires an amendment to theis conditions of approval section.

34-32. Operational Procedures

- (1) All oilfield vehicles on the Oil Field project area shall carry two-way radios, fire extinguishers, and other emergency equipment.
- (2) If damages due to natural events such as earthquakes or floods occur on the Oil Field project area, the affected area shall be repaired to previous or comparable conditions.
- (3) The Oil Field project area shall remain in safe conditions at all times. Operator shall also be responsible for maintaining any affected adjacent areas in safe condition subject to the review and approval of the City and Habitat Authority (i.e. Operator shall pay for all costs associated with stabilizing an affected adjacent slope outside the leased area to guarantee safe site conditions or to reduce potential property damages.)
- (4) Operator shall provide quarterly written, emailed reports to the City, Habitat Authority and on-site or supervising ranger describing project activities. The reports shall contain a list of contractor company names.

- (5) Operator will ensure that the oil operations site manager and on-site or supervising ranger exchange phone numbers.
- (6) Operator shall be responsible for cleanup of trash produced by oil field activities along the roadways and surrounding areas
- (7) Operator shall provide all contractors, subcontractors and oil tankers with adequate directions and maps for accessing the site. Proper sign posting of the Oil Field shall be provided so that oil contractors are aware of the proper entrance.
- (8) The Operator shall clearly identify on site the boundaries of the oil field project area with fencing and in a manner acceptable to the Habitat Authority to avoid confusion over use area for staging, storing, stockpiling, etc.
- (9) The Operator shall ensure that roadside/ trallside signs are used as necessary to warn vehicles and hikers, such as "Watch for truck traffic"; "Watch for pedestrians/wildlife". Speed limit signs shall be posted along roads used by oilfield vehicles. Posted speeds shall be a maximum of 10 miles per hour.
- (10) The Operator shall be responsible for graffiti cleanup along roads used by oilfield vehicles and on any signs/gates/fencing related to their operation.
- (11) The Operator shall report any illegal activity or vandalism to the Habitat Authority and City in a timely manner.

~~36-33. City Manager~~ Director's Review Required. The Operator shall ~~apply for and receive approval of a Director's Review prior to not conduct~~ any new Drilling and Redrilling. ~~The Director's review shall also apply to emergency actions determined by the Director as necessary to prevent an imminent hazard, or to other immediate measures required for the purposes of protecting health and safety. No new Permits for Drilling or Redrilling shall be approved by the Director unless the subject wells have been approved as part of the annual drilling plan, and until Approval shall not be granted until~~ copies of all related permits have been submitted to the City Manager or Designee Director; ~~other permits~~ including, but not limited to the permits required by DOGGR, the County Fire Department; the City Department of Public Works, the County Sanitation District, RWQCB, SCAQMD and other pertinent agencies identified by the City Manager or Designee Director.

~~36-34. Enforcement:~~ In addition to the provisions of Chapter 1.08 of the City of Whittier Municipal Code, the Operator shall be subject to the following enforcement provisions:

- (1) Civil Penalties and Performance Security. The Operator shall be subject to a penalty for violation of any requirement of this ~~section~~ conditional use permit as determined by, and at the discretion of, the Director of Public Works in an

amount not less than \$1,000 or more than \$10,000 per day per violation, but in no event, in an amount beyond that authorized by state law. For this purpose, the Operator shall deposit the sum of \$100,000 in an interest-bearing trust fund with the City within thirty days of the effective date of this section, to establish a draw down account. A written notice of violation and the associated penalty will be sent to the Operator. If the noted violation is not corrected within thirty days to the satisfaction of the Director of Public Works, the penalty amount cited in the written notice will be deducted from the account. If the violation is corrected within 30 days but recurs any time within a six-month period, the penalty will be deducted from the account upon each recurrence and the Operator will be notified of such deduction. Once the deposit has been depleted by 50 percent of the initial amount (\$50,000), the Operator shall deposit additional funds sufficient to bring the balance up to the amount of the initial deposit (\$100,000) within 10 business days of notification. There is no limit to the number of supplemental deposits that may be required while the Operator conducts Oil Operations within the City. If the Operator is dissatisfied with the action of the Director of Public Works, the Operator may file an appeal with a Hearing Officer in accordance with the City's Municipal Code designated by the Director within 15 days after notice is mailed. Upon receiving a notice of appeal, the Hearing Officer decision maker shall take one of the following actions.

- a. Affirm the action of the Director of Public Works;
- b. Refer the matter back to the Director of Public Works for further review with or without instructions; or
- c. Set the matter for public hearing and, after hearing, affirm, modify or reverse the action of the Director of Public Works.

The decision on appeal f the Hearing Officer shall be final as provided in the Whittier Municipal Code.

- (2) Right of Entry. Any officer or employee of the County of Los Angeles City, or his or her duly appointed representative, whose duties require the inspection of the Oil Field premises shall have the right and privilege at all reasonable times, to enter upon any premises upon or from which any Oil Operations are being conducted for which any permit is required under this section conditional use permit, for the purpose of making any of the inspections pursuant to this section, the permit, or in any other ordinance of the City county, or for any other lawful purpose, but for safety reasons, shall be accompanied by the Operator or a designee of the Operator and shall wear all appropriate personal protection equipment in accordance with the Operator's established health and safety policies.

OPERATIONAL CONDITIONS

- 37-35. Odors, Liquids or Visible Emissions. The Operator shall ensure that all normal Project facility operations will be conducted in such a manner so as not to generate offensive odors, fumes, noxious liquids or visible emissions of smoke.
- 38-36. Sour Gas Contingency Plan. The Operator shall prepare a sour gas contingency plan which addresses the actions that will be taken in the event that hydrogen sulfide is encountered during the drilling and production operations. This plan shall require that the facility be shut down if hydrogen sulfide above ~~4 ppm~~ 20 ppm is encountered during production and outline what additional measures will be taken if hydrogen sulfide is encountered during production to prevent a hazardous release. No operation with sour gas shall be allowed as part of this permit. The Operator shall distribute copies of the plan to applicable City Departments and the County Fire Department. All plan recipients are to be notified of contingency plan changes via formal contingency plan updates.
- 39-37. Pipeline Construction Confined to Right-of-Way. All pipeline construction activities, including work areas and staging and storage areas of pipe, shall be confined to the approved right-of-way both within the Preserve and outside the site on oil and gas pipelines.
- 40-38. Submittal of As Built Drawings. Within one year after initial start-up of the project (Phase 1), and again within one year of commencement of Phase 2 operations, The Operator shall submit as-built drawings of the entire facility(s) to City. Any facility modifications required for Phase 3 operations shall also be documented on facility as-built drawings within one year of their construction. The Operator shall submit as many sets of drawings (up to ten sets) as may be requested by the City.
- 44-39. Solid Waste Disposal. Solid waste generated on the site shall be transported to a City-approved landfill or hazardous waste facility as may be appropriate.
- 42-40. Water Conservation Measures. The design of all new and/or modified onsite facilities shall incorporate the use of cost-effective water-conserving fixtures.
- 43-41. Energy Conservation Measures. Throughout the project life, as equipment is added or replaced, cost-effective energy conservation techniques shall be incorporated into project design.
- 44-42. Meteorological Station. The Operator shall maintain and operate a meteorological station at the Oil Field in good operating condition and in compliance with all applicable EPA and SCAQMD rules, regulations and guidelines, and to the satisfaction of the Director of Public Works. The Operator shall conduct an audit of the meteorological station on an annual basis and submit the results of the audit to the SCAQMD and the Director of Public Works. The Operator shall maintain the data files for the meteorological station for a period of not less than ten years. All such

data shall be available upon request to the SCAQMD and the Director of Public Works.

45-43. Updated Health Risk Assessment. After every five (5) years of operation of the meteorological station, the Operator shall provide the previous five (5) years of meteorological data to the SCAQMD and the Director of Public Works. If the SCAQMD or the Director of Public Works determines that the previous five (5) years of meteorological data from the Oil Field could result in significant changes to the Health Risk Assessment that was conducted as part of the Environmental Impact Report, then the City may elect to re-run the health risk assessment using the previous five (5) years of meteorological data from the meteorological station.

46-44. Safety and Risk of Upset. The Operator shall at all times conduct oil operations in a manner that minimizes risk of accidents and the release of hazardous materials, and shall comply with the following provisions:

(1) Natural Gas Liquid Blending. Natural gas liquids at the gas plant shall be blended with the oil to the maximum allowable pipeline system vapor pressure. Natural gas liquids storage shall be limited to the volume allowed in the Risk Management Plan approved by the County Fire Department.

(2) Process Hazards Analysis (PHA). The Operator shall provide for a PHA to be conducted on all processes at the field and pipeline routes, to address potential releases of flammable gasses, spills of crude oil, oily water or releases that could cause odors.

~~(3) Propane and Natural Gas Liquids Bullet Fire Proofing. The Operator shall install and maintain fire proofing insulation on all propane and natural gas liquids bullets within the oil field. The fire proofing insulation shall have a minimum two-hour fire rating and otherwise be acceptable to the Fire Chief. All propane and natural gas liquid bullets shall be equipped with an automatic deluge system.~~

(4)(3) Secondary Containment for Oil. The Operator shall comply with the following provisions:

a. The Operator shall ensure that all existing oil processing areas tank areas in the oil field, unless determined by the Director of Public Works to be infeasible, and all the new oil tank areas shall have secondary containment (berms and walls) that can contain at least 110 percent of the largest oil tank volume in order to reduce the likelihood of oil spills entering the retention basins. In the event the Director of Public Works determines that it would be infeasible to provide 110 percent containment for a particular existing oil tank, the Operator shall provide such containment as the Director of Public Works determines is feasible.

~~b. All retention basins in the oil field shall be adequately sized, and maintained to handle a 100-year storm event plus a potential spill of the volume of the largest tank that would drain into each basin.~~

b. All above ground piping in the Preserve Oil Field that contains or could contain Oil shall be protected by basins or secondary containment (berms and/or walls).

| 47.45 Geotechnical. The Operator shall comply with the following provisions:

(1) Grading. The Operator shall comply with all of the following provisions:

a. All proposed grading shall be subject to prior review and approval by the Director of Public Works.

b. Grading involving up to 5,000 cubic yards may be undertaken pursuant to a City Master Grading Plan stamped by a registered professional engineer and a California-certified engineering geologist and approved by the Director of Public Works.

~~e. No slope of cut or fill shall have a gradient steeper than two to one (2:1) unless specifically approved by a site specific geotechnical report.~~

d.c. Cuts and fills shall be minimized to avoid erosion and visual impacts.

(2) Geotechnical Investigations. The Operator shall comply with the following provisions:

a. A site-specific geotechnical investigation shall be completed for grading in excess of 5,000 cubic yards, unless approved pursuant to a Master Grading Plan approved by the Director of Public Works, and for any grading that supports or impacts a critical facility as determined by the Director. The investigation shall be completed by a California-certified engineering geologist and submitted to the Director of Public Works for review and approval, in conjunction with an application for a revised grading permit.

b. A site-specific geotechnical investigation shall be completed for all proposed Permanent Structures. The investigation shall include analysis and recommendations associated with potential seismically induced ground failure, such as differential settlement and lateral spreading. The geotechnical investigation shall be completed by a California Certified Engineering Geologist and submitted to the Director of Public Works, for review and approval.

(3) Erosion Control. The Operator shall comply with the following provisions:

- a. The Operator shall comply with all provisions of an Erosion Control Plan that has been approved by the Director of Public Works. The Erosion Control Plan shall be reviewed by the Operator every two (2) years to determine if modifications to the Plan are required. Any modifications to the Erosion Control Plan shall be submitted to the Director for review and approval. The Erosion Control Plan shall include any measures requested by the Director.
- b. Erosion shall be controlled on all slopes, creeks and banks so that no mud or other substances are washed onto public streets or surrounding property. Such control measures may consist of planting and irrigation, dams, cribbing, riprap, sand bagging, netting, berms, or other devices.

(4) Restoration of Slopes. Slopes shall be restored to their original grade once the use that required the grading of the slope has been discontinued. However, if restoration of a slope would negatively affect existing drainage patterns or slope stability, the slope shall be restored to a grade that avoids these negative effects.

(5) Oil Field Accelerometer. The Operator shall operate and maintain an accelerometer at the oil field to determine site-specific ground accelerations as a result of any seismic event in the region (Los Angeles/Orange County and offshore waters of the Santa Monica Bay and San Pedro Channel). Readings from the accelerometer shall be recorded at the oil field, and transmitted in real-time to the Caltech Seismological Laboratory. The Operator shall cease operations and inspect all oil field pipelines, storage tanks, and other infrastructure following any seismic event that exceeds a ground acceleration at the oil field of 135 percent of gravity (0.153 g) and promptly notify the Director of Public Works. The Operator shall not reinstitute operations at the oil field and associated pipelines until it can reasonably be determined that all oil field infrastructure is structurally sound.

~~48-46~~ Pipeline Management Plan. The Operator shall maintain and implement a Pipeline Management Plan that meets the requirements of DOGGR regulations.

~~49-47~~ Noise Attenuation. All oil operations on the oil field shall be conducted in a manner that minimizes noise, and shall comply with the following provisions:

(1) Noise Limits. The Operator shall comply with the following provisions:

- a. All oil operations on the oil field shall comply with the noise provisions of Chapter 8.32 of Title 8 of the City of Whittier Municipal Code, with the exception of drilling, re-drilling, and reworking, which are exempt from the provisions of ~~the~~ said Chapter.

- b. Hourly, A-weighted equivalent noise levels associated with Drilling, Redrilling and Reworking shall not elevate existing baseline levels by more than three (3) ~~five (5)~~ dBA at any Developed Area, or five (5) dBA at any recreational area, trail or other public area. For daytime activities (7:00 a.m. to 7:00 p.m.) existing baseline noise levels shall be defined as the maximum daytime equivalent noise level (eq) at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. For nighttime activities (7:00 p.m. to 7:00 a.m.), existing baseline noise levels shall be defined as the minimum nighttime equivalent noise level (43.1) at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. Updated baseline noise levels may be set, and additional monitoring sites may be established, from time to time by the Director of Public Works. In no case shall baseline noise levels include any Drilling, Redrilling or Reworking, or construction or operational operations.
- c. Noise produced by Oil Operations shall include no Pure Tones when measured at a Developed Area. (Pure Tones are defined in the EIR.)
- (2) Backup Alarms. Backup alarms on all vehicles operating within the Oil Field shall be disabled between the hours of 8:00 p.m. and 8:00 a.m. During periods when the backup alarms are disabled, the Operator shall employ alternate, low-noise methods for ensuring worker safety during vehicle backup, such as the use of spotters.
- (3) Equipment Servicing. All noise producing Oil Field Equipment shall be regularly serviced and repaired to minimize increases in Pure Tones and other noise output over time. The Operator shall maintain an equipment service log for all noise producing equipment.
- (4) Deliveries to the Oil Field. Deliveries to the Oil Field shall not be permitted after 7:00 p.m. and before 7:00 a.m., Monday through Friday; between 8:00 a.m. and 5:00 p.m. on Saturdays and no activities on Sundays or federal holidays, except in cases of emergency.
- ~~(5) Deliveries within the Oil Field. Deliveries to areas of the Oil Field located within 500 feet of any residential property shall not be permitted after 5:00 p.m. or before 7:00 a.m. except in cases of emergency. Deliveries to such areas on Sundays or legal holidays shall not be permitted after 5:00 p.m. and before 9:00 a.m., except in cases of emergency.~~
- (5) Construction Equipment. All construction equipment shall be selected for low-noise output. All construction equipment powered by internal combustion engines shall be properly muffled and maintained.

(6) Construction Equipment Idling. Unnecessary idling of internal combustion engines near noise-sensitive areas is prohibited.

(7) Worker Notification. The Operator shall instruct employees and subcontractors about the noise condition provisions prior to commencement of each and every Drilling, Redrilling, Reworking, and construction operation, and shall annually certify to the City Manager or Designee Director that such employees and subcontractors have been properly trained to comply with such noise provisions. The Operator shall prominently post quiet mode policies at every Drilling and Redrilling site.

~~60-48.~~ Vibration Reduction. All oil operations on the oil field shall be conducted in a manner that minimizes vibration. Additionally, vibration levels from Oil Operations at the Oil Field shall not exceed a velocity of 0.25 mm/s over the frequency range 1 to 100 Hz at any Developed Area.

~~61-49.~~ Signs. All signage shall comply with the following provisions:

(1) Perimeter Identification Signs. Identification signs, at intervals acceptable to the Director of Community Development, shall be posted and maintained in good condition along the Outer Boundary Line fence and along the fences adjoining the public roads that pass through the Oil Field. Each sign shall prominently display current and reliable emergency contact information that will enable a person to promptly reach at all times, a representative of the Operator who will have the expertise to assess any potential problem and recommend a corrective course of action. Each sign shall also have the number of the Operator's 24-hour emergency contact, City Code Enforcement contact and the number of SCAQMD that can be called if odors are detected.

(2) Main Entrance Sign. A sign shall be posted and maintained in good condition at the main entrance of the Oil Field prominently displaying a telephone number by which persons may contact a representative of the Operator at all times to register complaints regarding Oil Field operations.

(3) Other Required Signs. All identification signs, warning signs, no trespassing signs, and other signs required by County, State and Federal regulations shall be properly posted and maintained in all required locations and in good condition.

~~(4) Well Identification Signs. Well identification signs including the Well name and Well number shall be posted and maintained in good condition at each Well location~~

(4) No Littering Signs. "No littering" signs shall be prominently posted and maintained in good condition on all Oil Field entrance gates.

52-50. Painting. All Oil Operation related structures visible from public roadways and surrounding properties within the Oil Field shall be painted or otherwise surfaced or textured with a color that is compatible with the surrounding areas, and has been approved by the City Manager or Designee/Director. The painting or other surfacing of all structures covered by this provisionsubsection shall thereafter be maintained in good condition.

53-51. Well Cellars. All cellars shall be constructed in accordance with the most current American Petroleum Institute standards. In addition, the Operator shall comply with the following provisions:

- (1) **Cellar Fluids.** Well cellars shall be kept free of all Oil, water, or debris at all times. During Drilling, Redrilling and Reworking, the cellar shall be kept free of excess Fluids by a pump which discharges into a waste Tank, mud pit, vacuum truck, or other approved disposal system.
- (2) **Access to Multi-Well Cellars.** All multi-well cellars exceeding three (3) feet in depth and 25 feet in length shall have two (2) means of entrance and exit and an additional exit for every 50 feet in length thereafter. At least one (1) means of entrance or exit for all multi-Well cellars of 25 feet in length shall be a stairway constructed to California Division of Industrial Safety standards.
- (3) **Single Cellar Covers.** All single cellars shall be covered with open grating and have no openings larger than three (3) inches at any point. Covers shall be capable of supporting vehicle weight or guardrails shall be erected to prevent vehicle access.
- (4) **Cellar Ladder Openings.** All openings for ladders through grating shall be designed to allow exit from underside without obstruction, and shall be kept free of storage of any type. Said opening shall not be less than 24 inches on either side.

54-52. Sumps. The Operator shall comply with all of the following provisions:

- (1) **Sump Clean Out.** All sumps that are used, or installed, or maintained for use in connection with any Well, and which have not been used for 90 days for the operation of or the Drilling, Redrilling or Reworking of such Well or any other Well in the vicinity, shall be cleaned out, and all Oil, rotary mud and rubbish removed.
- (2) **Sump Fencing.** ~~Around each sump of any depth, there shall be erected and continuously maintained a fence that encloses the sump in a manner that is satisfactory to the Director. This provision shall not apply to sumps that are constantly and immediately attended while Drilling, Redrilling and Reworking operations are proceeding.~~

66-53. Water Management Plan. The Operator shall comply with all provisions of a Water Management Plan that has been approved by the ~~Director~~City Manager or Designee and the Director of Public Works. The Plan shall include best management practices, water conservation measures ~~and~~ the use of a drip irrigation system, ~~and shall include provisions for the use of surface water runoff in the retention basins for dust suppression and landscaping.~~ The Plan shall also address the availability of reclaimed water for use at the Oil Field. The Water Management Plan shall be reviewed by the Operator every three years to determine if modifications to the Plan are required. The Operator shall make changes to the Plan if requested by the City Manager or Designee~~Director~~ or the Director of Public Works. Any modifications to the Water Management Plan shall be submitted to the City Manager or Designee~~Director~~ and the Director of Public Works for review and approval. The water management plan shall include any elements requested by the City Manager or Designee~~Director~~ or the Director of Public Works.

66-54. Groundwater Monitoring. The Operator shall develop, implement, and carry out a groundwater quality monitoring program for the Oil Field that is acceptable to the Director of Public Works and consistent with all requirements of the Regional Water Quality Control Board. Pursuant to the approved program, the Operator shall install and maintain groundwater monitoring Wells~~Wells in the vicinity of each surface water retention basin, which is permitted by the Regional Water Quality Control Board.~~ Such monitoring Wells shall be located and completed as determined by a California Certified Professional Geologist. The Regional Water Quality Control Board and the Director of Public Works shall be regularly advised of the results of such monitoring, and shall be immediately advised if such monitoring indicates a potential problem.

67-55. Fencing. All portions of the Oil Field on which Oil Operations are conducted shall be enclosed with a fence that at a minimum is compliant with DOGGR regulations codified at California Code of Regulations Title 14, Article 3, Sections 1778 and 1779, or as may be subsequently amended by the State.

68-56. Storage of Equipment. There shall be no storage at the Oil Field of material, equipment, machinery or vehicles which are not essential to the Oil Operations. All non-essential equipment shall be removed from the Oil Field within 30 days of the date they become non-essential, unless a time extension is granted by the Director of Public Works.

69-57. Oil Field Cleanup and Maintenance. The Operator shall maintain the site in a clean and orderly condition and shall comply with the following provisions:

- (1) **Equipment Removal.** All facilities that have reached the end of their useful economic life shall be properly decommissioned and removed from the Oil Field within one year. Areas not slated for future use shall be restored and revegetated within 90 days of termination of use, unless such restoration and revegetation would interfere with fire safety or access to Oil Operations.

(2) Equipment Maintenance. All equipment, improvements, facilities and other personal property or fixtures located on the Oil Field, shall be maintained in good condition to the satisfaction of the ~~Director~~ City Manager or Designee and the Director of Public Works.

(3) Site Debris and Vegetation. The Operator shall keep the lease area free of debris and vegetation overgrowth to the satisfaction of the Director of Public Works.

~~60-58~~ Security. All unmanned entrances to the Oil Field shall be equipped with sliding gates which shall be kept closed at all times except when authorized vehicles are entering or leaving the Oil Field. The Operator shall ~~have a security guard on duty~~ maintain 24 hours per day surveillance. In addition, Oil Processing Facilities shall be manned 24 hours per day.

~~61-59~~ Oil Field Waste Removal. The Operator shall comply with the following provisions:

(1) Waste Collection. All Drilling, Redrilling and Reworking waste shall be collected in portable steel bins compliant with United States Department of Transportation standards. Any Drilling, Redrilling, and Reworking wastes that are not intended to be injected into a Class II Well, as permitted by DOGGR, shall be removed from the Oil Field no later than 30 days following completion of the Drilling, Redrilling and Reworking. This provision does not apply to active sumps and mud pits.

(2) Waste Discharge. No Oil Field waste shall be discharged into any sewer unless permitted by the Sanitation District, or into any storm drain, irrigation system, stream, or creek, street, highway, or drainage canal. Nor shall any such wastes be discharged on the ground provided that the foregoing shall not prohibit the proper use of active Drilling sumps and mud pits.

(3) Recycling Plan. The Operator shall comply with all provisions of a Recycling Plan that has been approved by the Director of Public Works. The recycling plan shall include any elements requested by the Director.

~~62-60~~ Sanitation. The Operator shall comply with the following provisions:

(1) Garbage and Refuse. The Oil Field shall be maintained in a clean, sanitary condition, free from accumulations of garbage, refuse and other wastes.

(2) Toilets and Wash Facilities. Sanitary toilet and washing facilities shall be installed at any site where personnel are permanently stationed. Portable facilities shall be provided wherever crews are temporarily employed. Such facilities shall be maintained in a clean and sanitary condition at all times.

~~63-61.~~ Storage of Hazardous Materials. The Operator shall comply with all provisions of a Hazardous Materials Business Plan that has been submitted to the Fire Chief. The Operator shall deliver to the Fire Chief for review and approval an updated Hazardous Material Business Plan on an annual basis. This Plan shall provide the location of where hazardous materials are stored at the Oil Field. Hazardous materials shall be stored in an organized and orderly manner, and identified as may be necessary to aid in preventing accidents, and shall be reasonably protected from sources of external corrosion or damage to the satisfaction of the Fire Chief.

~~64-62.~~ Drilling, Redrilling and Reworking Operations. The Operator shall comply with all of the following provisions:

(1) DOGGR Regulations. All DOGGR regulations related to Drilling, Redrilling and Reworking operations.

(2) Number of Drilling and Redrilling Rigs. No more than ~~three~~ one (1) Drilling or Redrilling rigs shall be present within the Oil Field at any one time.

~~(3) Annual Drilling, Redrilling, Well Abandonment and Well Pad Restoration Plan. Before the end of each calendar year, the Operator shall develop and deliver to the Director an Annual Drilling, Redrilling, Well Abandonment and Well Pad Restoration Plan to the Director, which shall describe all Drilling, Redrilling, Well Abandonment, and Well pad restoration activities that may be conducted during the upcoming calendar year. The Operator may at any time submit to the Director proposed amendments to the then current Annual Plan. No Drilling, Redrilling or Abandonment activity may be commenced unless it is described in a current Annual Plan (or an amendment thereto) which has been approved, by the Director. The Director shall complete the review of the Annual Plan (and any amendments) within 45 days of receipt, and shall either approve the Annual Plan or provide the Operator with a list of deficiencies. The Annual Plan shall comply with the provisions of this subsection, and shall include the following:~~

- ~~a. The maximum number of Wells proposed to be Drilled or Redrilled;~~
- ~~b. Approximate location of all Wells proposed to be Drilled or Redrilled;~~
- ~~c. Approximate location of all proposed new Well pads, including their size and dimensions;~~
- ~~d. Estimated target depth of all proposed Wells and their estimated bottom hole locations;~~
- ~~e. A discussion of the steps that have been taken to maximize use of existing Well pads, maximize use of Redrilled Wells, and maximize the consolidation of Wells;~~

~~f. Location of all proposed Wells Abandonments, if known in accordance with DOGGR integrity testing program of Idle Wells;~~

~~g. Location of all Well pads proposed to be abandoned and restored;~~

~~h. A proposed schedule and phasing of the Drilling, Redrilling, Well Abandonment, Well pad abandonment and restoration activities;~~

~~i. A discussion of the latest equipment and techniques that are proposed for use as part of the Drilling and Redrilling program to reduce environmental impacts; and~~

~~j. A topographic vertical profile showing proposed location of new Wells that is reflective of local terrain conditions and that addresses the potential visibility of existing and proposed Wells and other production facilities from residential and recreation areas.~~

(3) Drill Rig Engines. All engines used for Drilling and Redrilling operations shall be operated by muffled internal-combustion engines or by electric motors.

(4) Fire Safety Regulations. All Drilling, Redrilling and Reworking shall be in conformance with applicable fire and safety regulations.

(5) New Technology. Proven reasonable and feasible technological improvements which are capable of reducing the environmental impacts of Drilling and Redrilling shall be considered as they become, from time to time, available.

(6) Derricks and Portable Masts. All Derricks and portable masts used for Drilling, Redrilling and Reworking shall meet the standards and specifications of the American Petroleum Institute as they presently exist or as may be amended.

(7) Equipment Removal. All Drilling and Redrilling equipment shall be removed from the site within 90 days following the completion of Drilling or Redrilling activities or as otherwise directed by the ~~City Manager or Designee~~ **Director**.

(8) Drill Site Conditions. All Drilling Sites shall be maintained in a neat and orderly fashion.

(9) Belt Guards. Belt guards shall be required over all drive belts on Drilling, Redrilling and Reworking equipment. Guarding shall be as required by, Title 8 of the California Code of Regulations, Section 6622, or as may be subsequently amended.

65-63 Processing Operations. The Operator shall comply with the following provisions:

(1) Limits on Processing Operations. Unless otherwise expressly required by DOGGR, the only Processing operations permitted at the Well Site shall be: the dehydration and removal of inerts to pipeline quality of Oil and Gas produced from the Well; the storage, handling, recycling and transportation of such materials; and those Processing operations required for water injection purposes.

(2) Refining. No refining shall be conducted within the Oil Field.

~~(3) Well Pumps Motors. All Well pumping units shall be downhole submersible pumps operated by electric motors.~~

~~(4) Well Pumps. Downhole submersible pumps for production Wells must be used wherever feasible.~~

(4) Removal by Pipeline Only. All Oil, Gas and other hydrocarbons, produced from any Well in the Oil Field shall be shipped and transported through pipelines, except in case of an emergency or when access to a pipeline becomes unavailable. Excluded from this requirement are the three test wells, propane and other related natural gas liquids that are in amounts in excess of what can be blended into the pipeline. Should any pipeline through which Oil or Gas is ~~currently~~ transported become unavailable for the safe transportation of said products due to maintenance problems with the pipeline, or lack of sufficient capacity within the pipeline to handle the volume of Oil and Gas needing transportation, or because the owner or Operator of such pipeline elects to discontinue transporting Oil or Gas through such pipeline, then the Operator shall within 180 days of the date the existing pipeline becomes unavailable, seek to acquire a private right of way or easement, or shall file an application for a right of way, easement, encroachment permit or franchise for the construction of a replacement pipeline and shall diligently prosecute such application until such pipeline is completed. During any emergency situation, or during such time as any existing pipeline becomes unsafe or unavailable, Oil and Gas may be transported by truck until the emergency situation is resolved or until a replacement pipeline shall be permitted and constructed in accord with all applicable laws and regulations.

(5) Pipelines. The Operator shall comply with the following provisions:

- a. New pipelines that remove Oil or Gas from the Oil Field shall be buried below the surface of the ground;
- b. All pipelines which are not enclosed within a fence shall be placed underground or covered with materials approved by the Fire Chief. Said covers shall be maintained in a neat, orderly, secure manner;

- c. Any and all water or brine produced during pipeline construction shall be injected in accordance with DOGGR requirements, or disposed of in accordance with other local, state or federal regulations;
- d. New pipeline corridors shall be consolidated with existing pipelines or electrical transmission corridors where feasible; and
- e. Upon completion of pipeline construction, the site shall be restored to the approximate previous grade and condition.

(6) ~~Gas Metering Station Active Pipeline Plot Plan.~~ The Operator shall submit to the Director of Public Works and Fire Chief a site and building plans of the gas metering station for review and approval. ~~of the plot plan depicting the approximate location of all active pipelines regulated by the United States Department of Transportation or California State Fire Marshall owned and used by the operation that are located outside the Outer Boundary Line, including waste water, and trunk and gathering lines to transport Oil or petroleum products. The plot plan shall be submitted within 30 days of the installation of any new pipelines or the relocation of an existing pipeline.~~

(7) ~~Machinery Enclosures.~~ The Operator shall maintain enclosures around machinery with moving parts consisting of a fence, screening or housing.

(8) ~~Opening Protections.~~ The Operator shall cap, close or protect the openings in all Oil Wells, test holes and similar excavation.

| ~~66.64.~~ Well Reworking Operations. The Operator shall comply with the following provisions:

- (1) DOGGR Regulations. The Operator shall comply with all DOGGR regulations related to Well Reworking operations.
- (2) Number of Reworking Rigs. No more than one (1) ~~eight (8)~~ Reworking rigs shall be present within the Oil Field at any one time, unless an emergency condition requires additional Reworking rigs. ~~This does not include equipment used for Well Maintenance or Well Abandonment.~~
- (3) Hours of Operation. With exception of emergencies, Well Reworking operations shall not be allowed after 7:00 p.m. or before 7:00 a.m., nor on Sundays or legal holidays.
- (4) Specifications. Reworking rigs shall meet the standards and specifications of the American Petroleum Institute.

- (5) Equipment Removal. Reworking rigs shall be removed from the Oil Field within seven (7) days following the completion of Reworking operations unless such rig will be used on another Well at the Oil Field within five (5) days.

67-65. Tanks. The Operator shall comply with the following provisions:

(1) New Tank Specifications. All new Tanks and appurtenances shall be designed, constructed, installed and maintained in accordance with current County Fire Code, American Petroleum Institute, DOGGR, California Division of Industrial Safety, and Environmental Protection Agency Standards, applicable provisions of Title 14 of the California Code of Regulations, Section 1774, and applicable CalARP Program requirements.

~~(2) Setbacks. No new storage Tank, excluding a replacement Tank, shall be constructed closer than 500 feet from any Developed Area, or closer than 200 feet from a public road. No building shall be constructed within 50 feet of any Oil storage Tank.~~

~~(3)(2) Vapor Recovery. During the Operations Phase, Oil, Wash, and Produced Water Tanks shall be vapor tight and during the Operations Phase, shall be equipped with a vapor recovery system.~~

~~(4)(3) Specifications for New Tank Piping, Valves, Fittings and Connections. All new Tank piping, valves, fittings and connections including normal and emergency relief venting, shall be installed and maintained in accordance with current American Petroleum Institute standards to the satisfaction of SCAQMD and DOGGR.~~

~~(5)(4) Detection of Tank Bottom Leaks. The Operator shall design, implement and comply with a program, approved by the Fire Chief, for controlling and detecting Tank bottom leaks on all Tanks at the Oil Field. The Operator may use a combination of methods including but not limited to diversion walls, dikes, Tank foundations of concrete or gravel and, a Tank bottom leak detection system in compliance with, Title 14 of the California Code and Regulations, Section 1773, or any subsequently enacted State regulations regarding tank bottom leaks.~~

68-66. Well and Production Reporting. The Operator shall deliver annual production reports to the ~~Director~~ City Manager or Designee and the Fire Chief by June 30 of each year. The reports shall cover previous year activities and projections for coming year, and shall provide the following information:

- (1) A copy of all DOGGR Forms 110 and 110B submitted during the previous 12 months.
- (2) Number and mapped location of all Wells Drilled or Redrilled, including Well identification numbers and size and dimensions.

- (3) Number and mapped location of water injection Wells, including Well identification numbers.
- (4) Number and mapped location of Idled Wells, including Well identification numbers and the date each Well was idled.
- (5) Number and mapped location of Abandoned Wells, including date each Well was Abandoned and/or re-abandoned.
- (6) The number of Wells Drilled or Redrilled in the previous year, including location, size and dimensions and type, configuration, engine size and total height of drilling rigs used during the previous year.
- (7) A proposed schedule and phasing of the Drilling, Redrilling, Well Abandonment, Well pad abandonment and restoration activities;-
- (8) The maximum number of Wells proposed to be Drilled or Redrilled in the coming year including location, size and dimensions; and type, configuration, engine size and total height of proposed drilling rig to be used during the coming year.
- (9) Estimated target depth of all proposed Wells and their estimated bottom hole locations in the past year (actual) and the coming year (proposed).
- (10) A discussion of the latest equipment and techniques that are proposed for use as part of the Drilling and Redrilling program to reduce environmental impacts;
- (11) Any additional information requested by the Director City Manager or Designee or the Fire Chief.

~~69-67.~~ Idle Well Testing and Maintenance. The Operator shall comply with Title 14, of the California Code of Regulations, Section 1723.9 regarding testing and Maintenance of Idle Wells, or any subsequent enacted State regulations regarding testing and maintenance of Idled Wells. The Operator shall carry out all additional tests, remedial operations and mitigation measures required by DOGGR if any idle wells do not meet the test standards.

~~70.~~ Abandoned Well Testing. The Operator shall conduct annual hydrocarbon vapor testing of areas within the Oil Field that contain Abandoned Wells. The testing shall be done using a soil Gas vapor probe, or another method approved by the Director. The results of the testing shall be submitted to the Director and DOGGR on an annual basis. Abandoned Wells that are found to be leaking hydrocarbons that could affect health and safety shall be reported to the Director and DOGGR within 24 hours of the Abandoned Well Test. If directed by DOGGR, the Operator shall re-abandon the Well in accordance with DOGGR rules and regulations. If the test

results for an Abandoned Well area is at or below the background levels for two (2) consecutive years that area shall thereafter be tested every five (5) years.

79.68. Well and Well Pad Abandonment. If DOGGR orders the Operator to plug and abandon any Wells on the Oil Field, the Operator shall deliver to the Fire Department, on a timely basis, all Notices of Intent to Plug and Abandon a Well that the Operator files with DOGGR and shall commence promptly and proceed diligently with the plugging and abandonment operations in accordance with DOGGR rules and regulations and the terms of the DOGGR permit to plug and abandon the Well. Well Abandonment may commence once all necessary permits and approvals are obtained. If the Well pad associated with the Abandoned Well does not contain other production, injection or Idle Wells, and will not be used for future Drilling, then the Operator shall promptly abandon the Well pad consistent with the following provisions:

~~(1) Closure of Sumps. The Operator shall clean out all sumps, collars and ditches and level and fill all sumps and depressions pursuant to DOGGR requirements. If sumps are lined with concrete, bottoms and walls shall be broken up and removed. Sumps shall be closed in accordance with Regional Water Quality Control Board and California Department of Toxic Substances Control requirements.~~

~~(1)(1).~~

(2) Well Pad Site Cleanup. The Operator shall leave the site entirely free of Oil, rotary mud, Oil soaked earth, asphalt, tar, concrete, litter, debris and other substances to the satisfaction of DOGGR and in accordance with federal requirements.

(3)(2) Contaminated Materials. All contaminated soils and materials within the Well pad boundaries shall be removed and treated or disposed of in accordance with all local, County, State, and Federal regulations.

(4)(3) Well Pad Revegetation. The Well pad shall be revegetated as approved by the City and Habitat Authority.

(5)(4) City Request for Review of Well Status. The ~~Director~~ City Manager or Designee may periodically review the status of the Operator's Wells and submit to DOGGR a list of Wells the ~~Director~~ City Manager or Designee believes should be plugged and abandoned as specified in Public Resources Code Section 3206.5 or any subsequently enacted State Law related to a local jurisdiction's right to request State-agency review of Idle Wells.

(6)(5) ~~Reduced Throughput Triggering Review. When Oil or Gas throughput is less than 2,000 barrels per day, the Director shall conduct a public hearing to determine if shut-down of the Oil Field or other actions are appropriate.~~

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(7)(6) Abandonment Procedures. Within 180 days of permanent facility shut down, the Operator shall submit an Abandonment Plan to DOGGR and submit to the Director of Public Works for review and approval a time line for facility removal, site assessment and remediation as necessary. The Operator shall begin abandonment of the site no later than 20 days after the Director's approval of the timeline, and shall provide to the Director quarterly updates on the abandonment process until such time as the Oil Field is abandoned and restored. The Operator and Landowners shall post a performance bond to insure compliance with all provisions of this subsection, and shall continue to pay property taxes at the rates assessed during Oil Field operation until all site restoration work has been fully completed, as determined by the Director.

74.69. Monitoring and Compliance: The following provisions shall apply throughout the Oil Field project area.

(1) Environmental Quality Assurance Program (EQAP). The Operator shall comply with all provisions of an Environmental Quality Assurance Program (EQAP) that has been approved by the Director of Public Works. The following provisions relate to the EQAP:

a. EQAP Requirements. The EQAP shall provide a detailed description of the steps the Operator shall take to assure compliance with all provisions of this section, including but not limited to all of the monitoring programs called for by this section.

b. Annual EQAP Reports. Within 60 days of the end of each calendar year, the Operator shall submit to the Director of Public Works an annual EQAP report that reviews the Operator's compliance with the provisions of the EQAP over the previous year and addresses such other matters as may be requested by the Director. The Annual EQAP Report shall include the following:

i. A complete list and description of any and all instances where the provisions of the EQAP, or any of the monitoring programs referred to therein or in this section, were not fully and timely complied with, and an analysis to how compliance with such provisions can be improved over the coming year.

ii. Results and analyses of all data collection efforts conducted by the Operator over the previous year pursuant to the provisions of this section.

c. EQAP Updates. The EQAP shall be updated as necessary and submitted to the Director of Public Works for approval along with the annual EQAP report. The Director shall complete the review of EQAP updates as soon as practicable, and shall either approve the updated EQAP or provide the

Operator with a list of specific items that must be included in the EQAP prior to approval. The Operator shall respond to any request for additional information within 30 days of receiving such request from the Director, unless extended by the Director.

(2) Safety Inspection, Maintenance and Quality Assurance Program ("SIMQAP"). The Operator shall comply with all provisions of a Safety Inspection, Maintenance and Quality Assurance Program (SIMQAP) that has been approved by the Director of Public Works and the Fire Chief.

a. SIMQAP Requirements. The SIMQAP shall, at a minimum provide for:

- i. Inspection of construction techniques;
- ii. Regular maintenance and safety inspections;
- iii. Periodic safety audits;
- iv. Corrosion monitoring and leak detection; and
- v. Inspections of all trucks carrying hazardous and/or flammable material prior to loading.

b. SIMQAP Updates. The Operator shall periodically review and revise the SIMQAP to incorporate changes in procedures, and new safety and maintenance technologies and procedures. The Operator shall make such revisions at least every five years, or more frequently, if the Operator determines changes are necessary or if requested by the Director of Public Works or the Fire Chief. The Operator shall submit SIMQAP updates to the Director and the Fire Chief for their review and approval. The Director shall complete the review of SIMQAP updates as soon as practicable, and shall either approve the updated SIMQAP or provide the Operator with a list of specific items that must be included in the SIMQAP prior to approval. The Operator shall respond to any request for additional information within 30 days of receiving such request from the Director, unless extended by the Director.

c. Worker Notification. The Operator shall ensure that all persons working on the Oil Field comply with all provisions of the currently approved SIMQAP.

d. Inspections. The SIMQAP shall provide for involvement of the City staff or the Environmental Compliance Coordinator in all inspections required by this section.

(3) Annual Emergency Response Drills of the County Fire Department. The Operator shall demonstrate the effectiveness of the Emergency Response Action

Plan by responding to one planned emergency response drill per year which shall be conducted in conjunction with the County Fire Department. Emergency response drills required by other agencies that involve County Fire can be used to satisfy this provision. In addition, the Operator shall demonstrate the effectiveness of the Emergency Response Action Plan by responding to not more than two (2) unannounced drills each year which may be called by the County Fire Department at the Oil Field. If critical operations are then underway at the Oil Field, the Operator need not respond to an unannounced drill to the extent such a response would, as a result of such critical operations, create an undue risk of personal injury or property damage, but in such case the Operator must promptly explain the nature of the critical operations, why response is not possible, and when the critical operations will be completed.

- (4) Noise Monitoring. The City shall retain an independent qualified acoustical engineer to monitor ambient noise levels in the areas surrounding the Oil Field as determined necessary by the City Manager or Designee ~~Director~~, the costs of which will be reimbursed by Operator. The monitoring shall be conducted unannounced and within a time frame specified by the Director of Public Works. Should noise from the Oil Operations exceed the noise thresholds specified in the Noise Reduction Plan, required pursuant to Attachment A, no new Drilling, or Redrilling ~~permits~~ shall be ~~issued by the City~~ conducted until the Operator in consultation with the Director identifies the source of the noise and the Operator takes the steps necessary to assure compliance with thresholds specified in the Noise Reduction Plan. The results of all such monitoring shall be promptly posted on the Oil Field Web site.
- (5) Complaints. All complaints related to Oil Operations received by the Operator shall be reported on the same business day to the Environmental Compliance Coordinator and to the Director of Public Works. In addition, the Operator shall maintain a written log of all complaints and provide that log to the Director, on a quarterly basis. Depending upon the nature of the complaint, the Operator shall report the complaint to the SCAQMD, DOGGR, and any other appropriate agencies with oversight authority regarding the complaint at issue. If the complaint is received after normal business hours, it shall be reported to the Environmental Compliance Coordinator and the agencies at the opening of the next business day.

HABITAT PROTECTION / RESTORATION CONDITIONS

72-70 Habitat Mitigation/Restoration

- (1) Temporary Impacts. The project proponent shall restore all temporarily impacted areas. For temporary impacts to native vegetation, temporary impact areas shall be restored to the same type of native vegetation. For non-native vegetation, temporary impacts areas shall be restored to appropriate native vegetation.

When oil operations have ceased at the leased area, facilities will be removed and restored to appropriate native habitats.

- (2) Ongoing Exotic Eradication/Habitat Enhancement. The project proponent shall implement an exotic eradication/habitat enhancement program within designated priority areas within the oil field. This may include, but not be limited to the removal of eucalyptus trees, pepper trees, castor bean, tree tobacco, hemlock, fennel, thistle, and non-native grasses. The eradication program will be reviewed and approved by the Habitat Authority, and will be funded through a Mitigation Fund. The Operator shall establish the Mitigation Fund and ensure annual contributions of \$30,000 (with annual CPI increases). Any unspent funds shall be rolled over to the following year. The Habitat Authority shall have the ability use the fund for related plantings, including distribution of native seeds.
- (3) Impacts to Jurisdictional Waters. For any impacts to jurisdictional waters, the project proponent will obtain all necessary regulatory permits prior to the issuance of a grading permit, including if necessary a Section 404 permit, Section 401 Water Quality Certification, and a Section 1602 Streambed Alteration Agreement. Impacts to jurisdictional waters (and any associated riparian vegetation and/or wetlands) will be mitigated for at a minimum 3:1 ratio, or as required by the regulatory agencies (whichever is higher). If mitigation needs to occur outside the leased area for oil operations then standard access fees applied by the Habitat Authority will apply (see Habitat Authority website for details.)
- (4) Wildlife Movement. For access roads to be re-graded for the project or for existing roads with significant increased activity, the proponent shall install corrugated pipe culverts to facilitate the movement of smaller vertebrates, including rodents, reptiles, and amphibians; as directed and approved by the Habitat Authority Ecologist.

73-71 Fuel Modification

- (1) Impacts to native habitats as a result of fuel modification (including thinning) will be treated as an impact subject to mitigation requirements.
- (2) All plantings within fuel modification zones will consist of non-invasive species, with priority given to native species.
- (3) Access roads will be cleared of vegetation on a regular basis for purposes of fuel modification in accordance with fire department requirements at the expense of the Operator.
- (4) In addition to clearance for annual fuel modification, roads will be maintained for safe and functional use by the Operator at all times.

| 74.72. Noise Attenuation for Wildlife

- (1) During construction, including drilling, activities adjacent to sensitive habitats, including potential nesting gnatcatchers, raptors, etc., will be monitored using permanently installed noise meters. If actual levels (measured from the edge of the leased area) exceed allowable levels ~~(to be determined)~~, construction activities may be temporarily halted at the direction of the City Manager or Designee until additional measures can be implemented to further reduce noise levels. Noise restrictions may also be imposed by regulatory agencies (e.g., Service, CDFG, etc.) as part of any regulatory permits and/or take authorizations.
- (2) Noise levels attributed to operations will be minimized to the maximum extent feasible. Facilities shall be constructed to eliminate noise impacts on surrounding habitats, or at least minimize noise projected into adjacent open space. A standard for noise shall be set to regulate noise projected from the edge of the leased area (e.g., 60 db hourly average or to be determined).
- (3) Vehicle traffic shall be restricted to defined access routes, and using approved equipment for specific areas.
- (4) With the exception of delivering construction and other equipment, access to construction/drilling sites will be using approved vehicles only. Wherever feasible, the Operator shall use hybrid (electric or other low noise) vehicles for all non-construction equipment access.

| 76.73. Unauthorized Access

- (1) Unauthorized access into the Preserve will not be allowed. Personnel must remain inside the leased areas and identified roadways at all times.
- (2) All operations shall occur within the defined lease area. All temporary staging areas, including the placement of construction trailers, shall be reviewed with the Habitat Authority to minimize biological impacts. Temporary use areas outside the leased area require a permit through the Habitat Authority (and approval by the City).
- ~~(3) There will be no access for oil Operators after sunset, unless during temporary new drilling operations, for emergency or safety purposes.~~

76.74. Conservation Easement: Operator acknowledges and agrees that a Conservation Easement shall be placed over the City-owned Preserve Land, which shall except only the surface areas approved for use in the Project, through the Conditional Use Permit. Oil leased area will be defined and separate from Conservation Easement area, which will remain in place over the balance of the City-owned Preserve land.



Puente Hills Landfill
Native Habitat Preservation Authority

October 28, 2011

Jeff Adams
City of Whittier, Community Development
13230 Penn Street
Whittier, CA 90602-1772

Re: Comments on the Final Environmental Impact Report (EIR) and the Conditional Use Permit for the Whittier Main Oil Field Development Project

Dear Mr. Adams:

The Puente Hills Habitat Preservation Authority (Habitat Authority) appreciates the opportunity to comment on the Final EIR and Conditional Use Permit that was approved by the Whittier City Planning Commission on October 25 for the Whittier Main Oil Field Development Project. By an action taken at a meeting of the Habitat Authority's Board of Directors on October 27 the following comments are submitted for your consideration.

1. In the Habitat Authority's Draft EIR comment letter, we suggested installing a wildlife overpass or underpass at upper Colima Road to mitigate for impacts to wildlife movement from the proposed project. In the FEIR responses to comments, the EIR preparers stated that the benefits of such a structure would be outweighed by the negative impacts associated with assumed recreational use of the structure. However, we did not intend for this structure to support recreational access; the recently constructed Harbor Boulevard Wildlife Underpass prohibits recreational use and we would prefer that an underpass or overpass at upper Colima Road be the same. Further, the EIR preparers agreed with our comment that wildlife are likely to alter their existing movement patterns in response to project disturbances, and acknowledged that our roadkill data clearly shows that wildlife movement does occur at the northern end of Colima Road. Therefore, we believe that this mitigation measure warrants further consideration.
2. In our Draft EIR comment letter, we suggested a new and/or expanded Core Habitat area and a new Resource Management Plan to mitigate for the impacts to native wildlife nursery sites and wildlife movement. The EIR preparers responded by saying that they disagreed that the project would degrade the Core Habitat and that it would be beyond the scope of what CEQA requires. However, the EIR preparers accepted and incorporated the information provided in our DEIR comment letter regarding the sensitivity of female bobcats to disturbance and their reliance upon

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natural areas for breeding, and that the project has the potential for some level of adverse effects upon wildlife in the area. The wildlife movement study, which was added as a mitigation measure for cumulative impacts in the FEIR, may show that a new configuration and/or location of Core Habitat is recommended as a result of the project. Therefore, this mitigation measure warrants further consideration. One possible suggestion is the establishment of a multi-million dollar acquisition fund for future open space purchases that would either create new core habitat or provide access to comparable open space areas.

3. Mitigation Measures relating to habitat restoration (BIO-1a, BIO-1b, and BIO-2a) contain new language in the FEIR which states that “Restoration efforts shall be scheduled to start at the same time as construction activities to reduce the temporal loss of habitat”. We have concerns about this, as the cumulative effects from the construction along with the disturbance associated with implementing over 40 acres of habitat restoration could adversely affect wildlife in the area. We believe this language should be removed to allow the habitat mitigation to be implemented as appropriate in consultation with the Habitat Authority, possibly to include implementing some habitat mitigation in phases and/or prior to construction (as feasible and consistent with any required regulatory permitting requirements).
4. Mitigation Measures BIO-1a, BIO-1b and BIO-2a require that a restoration plan be reviewed and approved by the Habitat Authority, the City, USFWS and CDFG. We suggest removing USFWS and CDFG, and using the term “any applicable regulatory agencies”, as it is unclear at this time that permits would be required by these agencies.
5. Mitigation Measure BIO-4j requires that signage be developed and implemented explaining the importance of limiting human disturbances in the vicinity of the Service (Colima) Tunnel between sunset and sunrise. However, since the Preserve, including the tunnel, is already closed from sunset to sunrise, this measure is not necessary.
6. Mitigation Measure BIO-4n requires closing the Arroyo San Miguel Trail west of the Colima Tunnel and requires development of additional alternate recreational access points. Since two of these (either opening the Arroyo San Miguel parking lot or developing pedestrian access across Colima Road) would bring recreational users to the eastern terminus of the tunnel, it would negate any benefit realized by closing the trail west of the tunnel. Therefore, the only other alternative would be to develop parking at La Flore Drive. However, the Habitat Authority does not believe that any additional alternate access is necessary.
7. Appendix O of the FEIR presents a redesign of the proposed project that is assumed to be preferred over the project in the FEIR. Based on this redesign, it appears that soil export will not be necessary, reducing the number of truck trips on the North Access Road by over 9,000, and reducing the amount of grading surrounding the

project site. These redesigned project features result in a reduced amount of habitat mitigation (from 56.18 acres in the FEIR to 43.9 acres in Appendix O. Please include an analysis showing how the redesigned project changes the habitat mitigation for each category (i.e. permanent impacts, temporary impacts, noise impacts, fuel modification zone impacts). It is unclear how the new acreage was derived based on the existing information in Appendix O.

8. The Project Description mentions constructing a gas meter building (20 by 30 feet) near the pipeline before it enters Colima Road. Figure 2-6 shows this building as being located north of the existing dirt access road, which would place it in an area that was restored to native habitat by the Habitat Authority, but Figure A-2 in Appendix A shows the building as being located south of the road in an area currently cleared for fuel modification. Please clarify the location of this building and please avoid impacting the restored native habitat.

Statement of Overriding Considerations:

- Exhibit B of Resolution No. P.C. 11-30, included in the City's Staff Report for the Planning Commission, is the Statement of Overriding Considerations for approval of the FEIR. This document includes findings regarding project benefits that warrant approval of the project despite unavoidable environmental impacts. One of these benefits states that "The proposed Project will provide a stable source of funding for the Habitat Authority for as long as the wells produce oil and gas, thereby ensuring a long-term funding source for restoration within the Preserve." We suggest that this benefit be reworded to remove the reference to restoration, such that the funding is available for the Habitat Authority to use as most appropriate for ongoing management of the Preserve.

Comments on the Draft CUP:

- Condition 22 states that the ranger station shall be temporarily relocated prior to construction. Thank you for addressing the need to relocate the ranger during this project. Please note that this is a residence not a publicly accessible ranger station. Please consider relocating the ranger residence prior to test drilling. If this is not possible, please allow for the relocation during test drilling if the activities are determined to be too disruptive and not conducive for the resident. This condition also states that the residence will be restored to at least its pre-existing usable condition. Please consider replacing the structure or making it more environmentally friendly such as by converting it to the City's sewer system if the oil facility office will be connected to the sewer system as well.
- Condition 23 states that the area around the west end of Colima tunnel shall be revegetated to provide better cover and to attract more animals to use the tunnel and that the area includes the patches where eucalyptus trees were previously removed the weedy areas in-between them (approximately 25 acres). Thank you

for including this condition for consideration. It is unclear if this is the same as Mitigation Measure BIO-4h in the FEIR, which states that “the Applicant shall be required to install appropriate native screening vegetation around the western terminus of the Service Tunnel.” The former seems to imply a larger area, whereas the latter seems to imply a smaller area focused directly at the tunnel terminus. Please also specify that this restoration (installation and associated plant establishment maintenance) is separate from habitat mitigation prescribed in the Final EIR, but that this restoration should be consistent with the FEIR mitigation measures regarding implementation and monitoring requirements. Also, please state in this condition that once the decision to move forward with the construction phase has been made that this condition will be implemented.

- Condition 29(4) dictates insurance requirements identifying the City and its elected and appointed officers and employees as additional insureds. Please also include the Puente Hills Habitat Preservation Authority as an additional insured, as we manage this property for the City.
- Condition 47(1)(b) states that “hourly, A-weighted equivalent noise levels associated with Drilling, Redrilling and Reworking shall not elevate existing baseline levels by more than five (5) dBA at any Developed Area. Please define what is meant by Developed Area – does that refer to the area that is being developed as an oil field under the proposed Project, or existing developed areas such as residential areas?”
- Condition 56 states that “there shall be no storage at the oil field of material, equipment, machinery or vehicles which are not essential to the oil operations. All non-essential equipment shall be removed from the oil field within 30 days of the date they become non-essential, unless a time extension is granted by the Director.” It is our understanding that storage will only be contained inside the oil facility site and not within the greater 1,280 lease area. Please specify this in the condition.
- Condition 57(3) states that “the operator shall keep the lease area free of debris and vegetation overgrowth to the satisfaction of the Director.” Please define what is meant by the “leased area” – does this refer to just the proposed project area (oil facility) or the entire property identified in the lease between the City and Matrix Oil? Also, after the phrase “vegetation overgrowth” please add in new wording “within the fuel modification zones”.
- Condition 58 states that “all unmanned entrances to the oil field shall be equipped with sliding gates which shall be kept closed at all times except when authorized vehicles are entering or leaving the oil field.” Please specify that these sliding gates should be automatic/electronic.

- Condition 63 states that if the oil and gas pipeline becomes unavailable or if the pipeline lacks sufficient capacity to handle the volume of oil and gas needing transport, that the oil and gas would be transported using trucks (using the North Access Road as stated in the Project Description of the Final EIR). Please require that the amount of oil and gas produced cannot exceed the capacity of the pipeline. Also, how many trucks would be required to transport the oil and gas off-site, and would this be feasible given timing restrictions, truck loading facility limitations, and logistics along one-way portions of the North Access Road, especially if all 52 wells are fully operational? This condition also states that in such a situation, that “the operator shall within 180 days of the date the existing pipeline becomes unavailable, seek to acquire a private right of way or easement, or shall file an application for a right of way, easement, encroachment permit or franchise for the construction of a replacement pipeline and shall diligently prosecute such application until such pipeline is completed.” Please consider removing the word “seek”, as this is vague and appears to leave the time period for action open-ended, or please specify a mechanism to facilitate a finite resolution in an acceptable timeframe. To that end, please specify the maximum timeframe allowed for constructing a new pipeline. Please also consider imposing shut-in restrictions (reducing oil production) for any use of the North Access Road by oil and gas tanker trucks during any emergency situations or pipeline disruptions. Enforceable timelines and oil production levels will enable the City to minimize potential biological impacts from using the North Access Road through the Preserve greater than is originally anticipated. Finally, please specify that this condition does not override other conditions restricting traffic use of certain roads, such as only allowing oil tanker trucks on Penn Street between 9 a.m. and 3 p.m., and only allowing vehicles to use the North Access Road between ½ hour after sunrise and ½ hour before sunset.
- Condition 70(1) requires that temporary impacts to habitat be restored. Please consider adding language to the effect that areas be restored to appropriate native habitats “as determined by the City and Habitat Authority”.
- Condition 70(2) requires that the project proponent implement an “Exotic Eradication/Habitat Enhancement” program in an amount of \$30,000 a year (with annual CPI increases) within designated priority areas within the oil field, which may include removal of certain invasive weed species and planting and seeding with native species. The Habitat Authority appreciates the inclusion of this condition and looks forward to working with Matrix on this program. However, it is unclear if this is separate from habitat mitigation required in the FEIR. The Habitat Authority would be available to implement this program if the City prefers. Additionally, please consider allowing that this Mitigation Fund be held by the Habitat Authority.
- Condition 70(3) regarding habitat mitigation for impacts to jurisdictional waters states that “if mitigation needs to occur outside the leased area for oil operations

then standard access fees applied by the Habitat Authority will apply.” Please define what is meant by the “leased area” – does this refer to just the proposed project area (oil facility) or the entire property identified in the lease between the City and Matrix Oil? If the latter, the Habitat Authority believes that any habitat mitigation outside of the project area (oil facility) should be subject to the standard access fees.

- Condition 70(4) requires installation of corrugated pipe culverts along access roads for movement of smaller wildlife. The Habitat Authority wishes to thank the City for including this measure, which we have requested in past discussions.
- Condition 72 requires permanently installed noise meters adjacent to sensitive habitats to measure if noise level exceeds allowable levels (to be determined) as measured from the edge of the leased area. Who determines the sensitive habitats and the allowable noise levels? It was the Habitat Authority’s understanding from reading the FEIR that Mitigation Measure N-2 from the Noise section requires no more than a 5 dBA increase from the baseline of the closest recreational sensitive receptor during drilling, and a no more than 3 dBA increase during operations. Noise monitoring site number 6, located in the Preserve, had a baseline noise level ranging from 46.5 to 47.7 dBA; therefore, it appears that the allowable noise level should be 3 or 5 dBA above these existing levels, which would be no more than 52.7 dBA, which is lower than the 60 dBA mentioned in Condition 73(2). Also, please define what is meant by the “leased area” – does this refer to just the proposed project area (oil facility) or the entire property identified in the lease between the City and Matrix Oil?
- Condition 73 regarding unauthorized access refers to requirements for personnel and operations to remain within the leased areas. Please define what is meant by the “leased area” – does this refer to just the proposed project area (oil facility) or the entire property identified in the lease between the City and Matrix Oil?
- Condition 74 requires a conservation easement to be placed over the balance of the City-owned Preserve land (separate from the oil leased area). Please define what is meant by the “leased area” – does this refer to just the proposed project area (oil facility) or the entire property identified in the lease between the City and Matrix Oil? Also, does this condition also apply to other City-owned parcels, such as Hellman Park? Please provide a map showing the areas that will not be placed under the conservation easement. In addition, please consider specifying that the conservation easement will be held in perpetuity, and please state who will hold the easement (we suggest that the Habitat Authority hold the easement).
- Condition 76 restricts the times that oil tanker trucks can use Catalina Avenue (9 a.m. through 1 p.m. only) and Penn Street (9 a.m. through 3 p.m. only). Please require traffic monitoring and reporting for Penn Street similar to that required on Catalina Avenue in the Final EIR (Mitigation Measure T-1d(4)). Also, please

October 28, 2011

Habitat Authority – Adams

require vehicle traffic limits on Penn Street and the North Access Road similar to the limits required on Catalina Avenue in Mitigation Measure T-1c, enforceable through monitoring and reporting.

Thank you for your consideration. Please do not hesitate to contact me or Ecologist Shannon Lucas at (562) 945-9003 for discussion.

Sincerely,



Andrea Gullo
Executive Director

C: City Council
Steve Helvey, City Manager
Habitat Authority Board of Directors
Habitat Authority Advisory Committee

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RECEIVED

OCT 28 2011

PLANNING DEPT.

**Whittier Main Oil Field Development Project
Conditional Use Permit CUP#09-004****CONDITIONS OF APPROVAL**

GENERAL CONDITIONS

1. **Mitigation Measures.** All mitigation measures set forth in the project CEQA documents, and included as Attachment A, shall be satisfied by the Operator (Matrix Oil Corporation), at the Operator's expense; and the development must operate within the development assumptions utilized for the CEQA review.
2. **Indemnification, Protection and Defense.** The Operator and its successors in interest shall indemnify, protect, defend (with legal counsel reasonably acceptable to the City), and hold harmless, the City, and any agency or instrumentality thereof, and its elected and appointed officials, officers, employees, and agents from and against any and all liabilities, claims, actions, causes of action, proceedings, suits, damages, judgments, liens, levies, costs, and expenses of whatever nature, including reasonable attorney's fees and disbursements (collectively "Claims") arising out of or in any way relating to this project, any discretionary approvals granted by the City related to the development of the project, or the environmental review conducted under California Environmental Quality Act, Public Resources Code Section 21000 et seq., for the project. If the City Attorney is required to enforce any conditions of approval, all costs, including attorney's fees, shall be paid for by the Operator.
3. **Injunctive Relief.** In addition to any administrative remedies or enforcement provided hereunder, the City may seek and obtain temporary, preliminary, and permanent injunctive relief to prohibit violation of the conditions set forth herein or to mandate compliance with the conditions herein. All remedies and enforcement procedures set forth herein shall be in addition to any other legal or equitable remedies provided by law.
4. **Governmental Compliance.** The Operator shall comply with requirements of all Federal, State, County, and local agencies as are applicable to this project.
5. **All oilfield development and operations shall substantially adhere to the approved project plans and description as reviewed and accepted by the Planning Commission on October 25, 2011.**
6. **Project Description.** The procedures, operating techniques, design, equipment and other descriptions provided by the Operator in: 1) its CUP application to the City and in subsequent clarifications and additions to that application; and 2) as described in the project EIR and any subsequent environmental review, are incorporated herein

as permit conditions and shall be required elements of the project. Since these procedures were part of the project description which received environmental analysis, a failure to include such procedures in the actual project could result in significant unanticipated environmental impacts. Deviations from the project description, environmental review or conditions of approval may require further environmental review and a modification to the CUP. Therefore, modifications of these procedures shall not be permitted without a determination of substantial conformity or a new or modified permit. The use of the lease area and the size, shape, arrangement and location of buildings, structures and landscaped areas shall be in substantial conformity with the approved Conditional Use Permit CUP09-004.

7. Grounds for Permit Modification or Revocation. Failure to abide by and substantially comply in good faith ~~fully comply~~ with any conditions for the granting of this permit shall constitute grounds for the modification or revocation of this permit by the approving authority.
8. Conditions Separately Remain in Force. In the event that any condition contained herein is determined to be invalid, then all remaining conditions shall remain in force.
9. Conflicts between Conditions. In the event that any condition contained herein is determined to be in conflict with any other condition contained herein, then where principles of law do not provide to the contrary, the condition most protective of natural environmental resources and public health and safety shall prevail to the extent feasible.
10. Changes to Conditions. The Whittier City Council shall have the authority, in a noticed public hearing, to specify or change the Whittier City Department responsible for monitoring or enforcement of any conditions contained herein.
11. Challenges to Mitigation or Condition. In the event that any condition imposing a fee, exaction, dedication or other mitigation measure is challenged by the Operator in an action filed in a court of law or threatened to be filed therein which action is brought in the time period provided for by Code of Civil Procedures Section 1094.6 or other applicable law, this approval shall be suspended pending dismissal of such action, the expiration of the limitation period applicable to such action, or final resolution of such action. If any condition is invalidated by a court of law, the entire project shall be reviewed by the Planning Commission and no approval shall be issued unless substitute feasible mitigation conditions/measures are imposed. Following initial approval of this permit and commencement of operations under it, if any condition imposing a fee, exaction, dedication or other mitigation measure is added or expanded in subsequent proceedings, and that new or expanded condition, exaction, dedication or other mitigation measure is challenged by the Operator in an action filed in a court of law or threatened to be filed therein which action is brought in the time period provided for by Code of Civil Procedures Section 1094.6 or other applicable law, the new or expanded condition, exaction or other mitigation measure shall be suspended pending dismissal of such action, the expiration of the limitation

period applicable to such action, or final resolution of such action, provided that such suspension does not create or lead to new unassessed environmental impacts. If any condition is invalidated by a court of law, the entire project shall be reviewed by the Planning Commission and re-evaluated in its entirety to ensure that substitute feasible mitigation conditions/measures are imposed

12. Applicability of Conditions to Construction and Operations. These permit conditions are intended to apply to the project during all phases. The term "operations" shall be understood to encompass construction, drilling and redrilling and operation phases unless such an interpretation would be inappropriate.
13. Maximum Number of Wells. The Operator shall drill no more than 60 wells in the Oil Field project area.
14. Infrastructure. The Operator shall have suitable infrastructure in place, as reasonably determined by the City, to support oil operations.
15. Traffic Management Plan. Prior to any project excavation or construction activities related to the project site, the Operator shall prepare for review and approval of the City a Traffic Management Plan to reduce project traffic impacts on substantially affected residential streets, including at a minimum affected portions of Penn Street and Catalina Avenue.
16. The Operator and its successors in interest shall submit a fair share contribution/cost offset to the Whittier Utility Authority associated with the loss of revenue of landfill fees should waste hauler truck trips on Penn Street be reduced to account for an equivalent quantity of truck trips generated from and for the Whittier Main Oil Field Development Project in order to maintain existing, equivalent overall truck trip traffic along Penn Street. The frequency and amount of the fair share contribution shall be determined by the Director of Public Works and Executive Director, and updated as appropriate, to ensure a consistent revenue stream to the Whittier Utility Authority's Solid Waste Collection Account.
17. Retaining Walls. Prior to ~~any project excavation or~~ construction of any retaining walls on related activities related to the project site, the Operator shall provide plans of retaining walls for review and approval of the City and Habitat Authority.
18. Environmental Compliance Coordinator. The City shall hire the Environmental Compliance Coordinators, the costs of which shall be reimbursed by Operator-. The number of Environmental Compliance Coordinators shall be determined by the City and shall take into account the level of Oil Operations at the Oil Field. The Environmental Compliance Coordinator(s) shall be approved by, and shall report to, the City Manager or Designee. The responsibilities of the Environmental Compliance Coordinator(s) shall be determined by the City for the Oil Field and shall generally include:

- (1) On-site, day-to-day monitoring of construction, drilling and redrilling, and operational activities as determined by the City Manager or Designee.
- (2) Taking steps to ensure that the Operator, and all employees, contractors and other persons working in the Oil Field, have knowledge of, and are in compliance with all applicable provisions of this conditional use permit.
- (3) Evaluating the adequacy of Drilling, Redrilling, and construction impact mitigations, and proposing improvements to the Operator or contractors, and the City.
- (4) Reporting responsibilities to the various City departments with oversight responsibility at the Oil Field, as well as other agencies such as DOGGR, and SCAQMD.

19. Special Training for Vendors and Employees.

- (1) Prior to any project excavation or construction related activities, Operator shall provide all contractors, subcontractors, oil tankers and workers with an operational manual that will include instructions about Preserve rules; permitted parking areas; smoking prohibition; appropriate location and placement of temporary living trailers, offices as well as guard station posts; guidelines for environmentally friendly operations (i.e. do not push dirt in drainages, do not trim riparian vegetation, etc.). The operational manual shall be reviewed and approved by the City Manager or Designee and Habitat Authority.
- (2) The Operator shall arrange for an on-going special training program to ensure that all employees and vendors are trained to comply with the operational manual, including all environmental and biological compliance and monitoring requirements.

20. The Operator shall improve, at its cost, the internal landfill access road (SIA2) to the satisfaction of the Director of Public Works and enter into a Reciprocal Access Agreement subsequent to the Design but prior to the Construction Phase of the Project. The Agreement shall be subject to review and approval by the City Council and shall include, but not be limited to, the specific design and construction of the required road improvements and their related on-going maintenance, and construction coordination with on-going Savage Canyon Landfill operations.

21. Landfill Road Restrictions. No use of the Landfill Road shall be permitted during the hours from one half (1/2) hour before sunset to 1/2 hour after sunrise, to protect animals with nocturnal foraging/hunting habits, except for emergencies.

22. Ranger Station. A suitable offsite facility shall be obtained by Operator, at Operator's expense, to provide temporary accommodations in place of the ranger station during construction. The location shall be subject to approval of the City Manager or Designee and Habitat Authority prior to Project construction. This temporary location shall remain operational as determined by the City Manager or Designee and Habitat Authority. Following completion of construction, Operator shall restore the existing ranger station to at least its pre-existing usable **condition** to the satisfaction of the City Manager or Designee.

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23. Colima Tunnel. The area around the west end of Colima tunnel where Eucalyptus trees have been previously removed shall be revegetated to provide better cover and to attract more animals to use the tunnel. The revegetation area shall include weedy patches connecting the tree removal area, encompassing approximately **25** acres. Phasing of the revegetation shall be as directed by the City and Habitat Authority.

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24. Spill Clean-up Fund. The Operator shall establish a fund, letter of credit or similar mechanism in an amount acceptable to the City to guarantee that funds will be immediately available to undertake clean-up activities in case of a spill. The minimum amount of such fund shall be the deductible amount of any policy of liability, pollution or well control drilling insurance required in this permit.

25. Fire Fighting Apparatus. The Operator shall provide adequate firefighting apparatus to fight oil related fires within all areas of the Preserve on which oil related operations will occur, including pipelines and roads. The type, amount and location of firefighting apparatus shall be determined by the County Fire Department and City.

26. During all construction, drilling and redrilling and operational phases, the Operator shall ensure that protective fencing is in place as required by the City and Habitat Authority.

27. 24-Hour Emergency Contact. Prior to issuance of the first required Permit for Phase 1, the Operator shall provide to City, Habitat Authority and County Fire Department the current name and position, title, address, and 24-hour telephone numbers of the person in charge of the facility, person in charge of construction, and other representatives who shall receive all orders and notices, as well as all communications regarding matters of condition and permit compliance at the site and who shall have authority to implement an emergency facility shutdown.

28. Oilfield Public Relations Contact. The Oilfield shall provide for an ~~on-site~~ public relations officer to be available at all phases of project construction and operation. The officer's name and phone number shall be posted for easy access to the public, including on the City's website.

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29. Administrative Items: The following provisions shall apply throughout the Oil Field project area.

- (1) **Costs of Implementing and Enforcing Conditions.** The Operator shall be fully responsible for all reasonable costs and expenses incurred by the City or any City contractors, consultants, or employees, in implementing, monitoring, or enforcing this permit, including but not limited to, costs for permitting, permit conditions implementation, mitigation monitoring, reviewing and verifying information contained in reports, undertaking studies, research and inspections, administrative support, and including the fully burdened cost of time spent by City employees on such matters.
- (2) **Draw-Down Account.** The Operator shall maintain a draw-down account with the City, from which actual costs will be billed and deducted for the purpose of defraying the expenses involved in the City's review and verification of the information contained in any required reports and any other activities of the City, including but not limited to: enforcement, permitting, inspection, coordination of compliance monitoring, administrative support, technical studies, and the hiring of independent consultants. The initial amount to be deposited by the Operator shall be \$500,000. In the first year, if withdrawals from the account have reduced its balance to less than 50 percent of the amount of the initial deposit (\$250,000), the Operator shall deposit \$50,000 in supplemental funds within 30 business days of notification. After the first year, if the balance in the draw-down account is reduced at any time to \$50,000 or less, the Operator shall deposit \$50,000 in supplemental funds on each occasion that the account is reduced to \$50,000 or less within 30 business days of notification. There is no limit to the number of supplemental deposits that may be required. At the discretion of the Operator, the amount of an initial or supplemental deposit may exceed the minimum amounts specified in this subsection. The City Manager or Designee may, from time to time, increase the minimum \$50,000 figure to account for inflation or the City's experience in obtaining funds from the account. Operator shall be entitled to reasonably review the expenditures from the deposit to ensure the expenditures are related to the Project.
- (3) **Indemnification.** The Operator shall enter into an agreement with the City to indemnify and hold harmless the City, its elected and appointed officials, agents, officers and employees from any claim, action or proceeding for damages arising from its Oil Operations, including water, air or soil contamination, health impacts, or loss of property value during the Oil Operations, Abandonment and post-Abandonment of the Oil Operations with terms approved by, and in a form acceptable to, the City Manager.
- (4) **Insurance Requirements.**

Operator shall demonstrate to the City that it carries on the Matrix Project General Liability Insurance, in an aggregate amount of not less than \$15,000,000, combined limits, \$15,000,000 in Well Control Drilling Insurance, and a policy of Comprehensive Pollution Legal Liability Coverage Insurance in an aggregate amount of not less than \$30,000,000 combined limits. This insurance shall provide coverage for claims for bodily injury, environmental or property damage that result from pollution conditions at, on or emanating from the Matrix facilities. The Comprehensive Pollution Legal Liability Coverage Insurance policy may not contain an exclusion of onsite remediation costs if such an exclusion would exclude, remove or impair coverage for onsite remediation performed in response to a governmental order, demand, warning or other legally enforceable requirement. Should an exclusion exist in the policy, Operator shall post a bond to cover costs associated with remediation.

The insurance policies must be secured through an insurance company having a Best's rating of "A – VII" or better. Operator shall submit one or more certificates of insurance to P&D to be approved by the City Risk Manager. The General Liability and Pollution Legal Liability Insurance policies shall be in place prior to issuance of the Permit and shall remain in full force and effect until revocation of the permit. Operator shall submit certificates of insurance 30 days in advance of the renewal anniversary of each policy. Such certificate(s) shall evidence the coverages described above, shall name the City of Whittier as an additional insured as to each policy provided, and shall afford the City 60 days advance notice of cancellation or non-renewal. The City Risk Manager may adjust the aggregate coverage amount specified above over time depending on factors such as inflation, modifications to State and Federal oil spill financial responsibility guidelines, and project modifications. In making such adjustments, the City Risk Manager shall give due regard to the cost and availability of such coverage, and shall allow Operator a reasonable period of time in which to place such coverage.

The Well Control Drilling Insurance policy shall only be required to be in effect while drilling operations are being conducted. Operator may satisfy the Well Control Drilling Insurance requirement by having its drilling contractor or subcontractors supply the required insurance, so long as the aggregate insurance maintains the total required.

- (5) Performance Security. The Operator shall be subject to the following provisions:
- a. Performance Bond. Prior to issuance of the first drilling permit pursuant to this section, the Operator shall provide to the City Manager or Designee, a faithful performance bond or financial instrument in the sum to be determined by the City Manager, payable to the City and executed by a corporate surety

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acceptable to the City and licensed to transact business as a surety in the State of California. Such bond shall be conditioned upon the faithful performance by Operator of duties related to well abandonment, site restoration and environmental cleanup and shall be in a format and include terms approved by the City Manager.

b. Change of Operator. The performance bond shall continue in force for one (1) year following any sale, transfer, assignment, or other change of Operator of the Oil Field, or of the current Operator's termination of activities at the oil field. The City may release said bond prior to the end of the one (1) year period upon satisfaction by said Operator of all its obligations. Notwithstanding the foregoing, the performance bond shall not be terminated or released upon the sale, transfer, assignment, or other change of Operator until the new Operator has delivered a replacement bond complying with the provisions of this section.

c. Funding Options. At its sole option, the City may accept Certificates of Deposit, Cash Deposits, or U.S. Government Securities in lieu of commercial bonds to meet the above bonding requirements on terms approved by the City Manager.

30. Record Keeping. As to any condition which requires for its effective enforcement the inspection of records or facilities by City or its agents, the Operator shall make such records available or provide access to such facilities upon reasonable notice from City. The City agrees to keep such information confidential where permitted by law and requested by the Operator in writing.

31. Periodic Review. The City shall conduct a comprehensive review of the conditions of approval at least every five (5) years from CUP issuance to determine if the conditions of approval are adequately protecting the health, safety and general welfare. Such reviews shall, among other things, consider whether additional conditions should be added, appended or removed. One of the main goals of the periodic review shall be to evaluate if proven technological advances that would further reduce impacts of Oil Operations on neighboring land uses should be incorporated into the conditions of approval.

(1) Review Requirements. Each review shall include a report from a Consultant designated by the City Manager or Designee, which shall be prepared after public notice and an opportunity for public comment. The report shall include a comprehensive analysis of the effectiveness of the conditions of approval, and shall review and consider enforcement activity, operational records, and any other issues relating to Oil Operations. A draft of the report shall be provided to the Operator for review and comment. All comments on the draft report from the Operator shall be submitted to the City Manager or Designee in writing, and will be considered, if timely received, before the report is finalized. The final report by the Consultant shall include a recommendation as to whether the Community

Development Director should prepare a proposed amendment to the conditions of approval for submission to the Planning Commission, with review or appeal rights to the City Council.

- (2) **Early Reviews.** An earlier review may be requested by the City Manager or Designee at any time, if more than three (3) material violations occur within any twelve (12) month period and the City Manager or Designee and responsible agencies determine that resolution of the violations requires an amendment to the conditions of approval.

32. Operational Procedures

- (1) All oilfield vehicles on the Oil Field project area shall carry two-way radios or approved equivalent, fire extinguishers, and other emergency equipment.
- (2) If damages due to natural events such as earthquakes or floods occur on the Oil Field project area, the affected area shall be repaired to previous or comparable conditions.
- (3) The Oil Field project area shall remain in safe condition at all times. Operator shall also be responsible for maintaining any affected adjacent areas in safe condition subject to the review and approval of the City and Habitat Authority (i.e. Operator shall pay for all costs associated with stabilizing an affected adjacent slope outside the leased area to guarantee safe site conditions or to reduce potential property damages.)
- (4) Operator shall provide quarterly written, emailed reports to the City, Habitat Authority and on-site or supervising ranger describing project activities. The reports shall contain a list of contractor company names.
- (5) Operator will ensure that the oil operations site manager and on-site or supervising ranger exchange phone numbers.
- (6) Operator shall be responsible for cleanup of trash produced by oil field activities along the roadways and surrounding areas
- (7) Operator shall provide all contractors, subcontractors and oil tankers with adequate directions and maps for accessing the site. Proper sign posting of the Oil Field shall be provided so that oil contractors are aware of the proper entrance.
- (8) The Operator shall clearly identify on site the boundaries of the oil field project area with fencing and in a manner acceptable to the Habitat Authority to avoid confusion over use area for staging, storing, stockpiling, etc.

- (9) The Operator shall ensure that roadside/ trailside signs are used as necessary to warn vehicles and hikers, such as "Watch for truck traffic"; "Watch for pedestrians/wildlife". Speed limit signs shall be posted along roads used by oilfield vehicles. Posted speeds shall be a maximum of 10 miles per hour.
 - (10) The Operator shall be responsible for graffiti cleanup along roads used by oilfield vehicles and on any signs/gates/fencing related to the operation.
 - (11) The Operator shall report any illegal activity or vandalism to the Habitat Authority and City in a timely manner.
33. City Manager's Review Required. The Operator shall not conduct any new Drilling or Redrilling unless the subject wells have been approved as part of the annual drilling plan, and until copies of all related permits have been submitted to the City Manager or Designee; including, but not limited to the permits required by DOGGR, the County Fire Department, the City Department of Public Works, the County Sanitation District, RWQCB, SCAQMD and other pertinent agencies identified by the City Manager or Designee.
34. Enforcement: In addition to the provisions of Chapter 1.08 of the City of Whittier Municipal Code, the Operator shall be subject to the following enforcement provisions:
- (1) Civil Penalties and Performance Security. The Operator shall be subject to a penalty for violation of any requirement of this conditional use permit as determined by, and at the discretion of, the City Manager or Designee in an amount not less than \$1,000 or more than \$10,000 per day per violation, but in no event, in an amount beyond that authorized by state law. For this purpose, the Operator shall deposit the sum of \$100,000 in an interest-bearing trust fund with the City within thirty days of the effective date of this section, to establish a draw down account. A written notice of violation and the associated penalty will be sent to the Operator. If the noted violation is not corrected within thirty days to the satisfaction of the City Manager, or if steps satisfactory to the City Manager have not been initiated during that period to effect a cure or to seek modification of the condition, the penalty amount cited in the written notice will be deducted from the account. If the violation is corrected within 30 days but recurs any time within a six-month period, the penalty will be deducted from the account upon each recurrence and the Operator will be notified of such deduction. Once the deposit has been depleted by 50 percent of the initial amount (\$50,000), the Operator shall deposit additional funds sufficient to bring the balance up to the amount of the initial deposit (\$100,000) within 10 business days of notification. There is no limit to the number of supplemental deposits that may be required while the Operator conducts Oil Operations within the City. If the Operator is dissatisfied with the action of the City Manager or Designee, the Operator may file an appeal in accordance with the City's Municipal Code within 15 days after

notice is mailed. Upon receiving a notice of appeal, the decision maker shall take one of the following actions.

- a. Affirm the action of the City Manager or Designee;
- b. Refer the matter back to the City Manager or Designee for further review with or without instructions; or
- c. Set the matter for public hearing and, after hearing, affirm, modify or reverse the action of the City Manager or Designee.

The decision on appeal shall be final as provided in the Whittier Municipal Code.

(2) Right of Entry. Any officer or employee of the City, or his or her duly appointed representative, whose duties require the inspection of the Oil Field premises shall have the right and privilege at all reasonable times, to enter upon any premises upon or from which any Oil Operations are being conducted for which any permit is required under this conditional use permit, for the purpose of making any of the inspections pursuant to this section, the permit, or in any other ordinance of the City, or for any other lawful purpose, but for safety reasons, shall be accompanied by the Operator or a designee of the Operator and shall wear all appropriate personal protection equipment in accordance with the Operator's established health and safety policies.

OPERATIONAL CONDITIONS

35. Odors, Liquids or Visible Emissions. The Operator shall ensure that all normal Project facility operations will be conducted in such a manner so as not to generate offensive odors, fumes, noxious liquids or visible emissions of smoke.

36. Sour Gas Contingency Plan. The Operator shall prepare a sour gas contingency plan which addresses the actions that will be taken in the event that hydrogen sulfide is encountered during the drilling and production operations. This plan shall require that the well or wells involved facility be shut down if hydrogen sulfide above 20 ppm is encountered during production and outline what additional measures will be taken if hydrogen sulfide is encountered during production to prevent a hazardous release. No operation with sour gas shall be allowed as part of this permit. The Operator shall distribute copies of the plan to applicable City Departments and the County Fire Department. All plan recipients are to be notified of contingency plan changes via formal contingency plan updates.

37. Pipeline Construction Confined to Right-of-Way. All pipeline construction activities, including work areas and staging and storage areas of pipe, shall be confined to the approved right-of-way both within the Preserve and outside the site on oil and gas pipelines.

38. **Submittal of As Built Drawings.** Within one year after initial start-up of the project (Phase 1), and again within one year of commencement of Phase 2 operations, The Operator shall submit as-built drawings of the entire facility(s) to City. Any facility modifications required for Phase 3 operations shall also be documented on facility as-built drawings within one year of their construction. The Operator shall submit as many sets of drawings (up to ten sets) as may be requested by the City, as well as electronic copies.

39. **Solid Waste Disposal.** Solid waste generated on the site shall be transported to a City-approved landfill or hazardous waste facility as may be appropriate.

40. **Water Conservation Measures.** The design of all new and/or modified onsite facilities shall incorporate the use of cost-effective water-conserving fixtures.

41. **Energy Conservation Measures.** Throughout the project life, as equipment is added or replaced, cost-effective energy conservation techniques shall be incorporated into project design.

42. **Meteorological Station.** The Operator shall maintain and operate a meteorological station at the Oil Field in good operating condition and in compliance with all applicable EPA and SCAQMD rules, regulations and guidelines, and to the satisfaction of the Director of Public Works. The Operator shall conduct an audit of the meteorological station on an annual basis and submit the results of the audit to the SCAQMD and the Director of Public Works. The Operator shall maintain the data files for the meteorological station for a period of not less than ten years. All such data shall be available upon request to the SCAQMD and the Director of Public Works.

43. **Updated Health Risk Assessment.** After every five (5) years of operation of the meteorological station, the Operator shall provide the previous five (5) years of metrological data to the SCAQMD and the Director of Public Works. If the SCAQMD or the Director of Public Works determines that the previous five (5) years of metrological data from the Oil Field could result in significant changes to the Health Risk Assessment that was conducted as part of the Environmental Impact Report, then the City may elect to re-run the health risk assessment using the previous five (5) years of metrological data from the metrological station.

44. **Safety and Risk of Upset.** The Operator shall at all times conduct oil operations in a manner that minimizes risk of accidents and the release of hazardous materials, and shall comply with the following provisions:

- (1) **Natural Gas Liquid Blending.** Natural gas liquids at the gas plant shall be blended with the oil to the maximum allowable pipeline system vapor pressure. Natural gas liquids storage shall be limited to the volume allowed in the Risk Management Plan approved by the County Fire Department.

- (2) **Process Hazards Analysis (PHA).** The Operator shall provide for a PHA to be conducted on all processes at the field and pipeline routes, to address potential releases of flammable gasses, spills of crude oil, oily water or releases that could cause odors.
- (3) **Secondary Containment for Oil.** The Operator shall comply with the following provisions:
 - a. The Operator shall ensure that all oil processing areas, unless determined by the Director of Public Works to be infeasible, shall have secondary containment (berms and walls) that can contain at least 110 percent of the largest oil tank volume in order to reduce the likelihood of oil spills entering the retention basins. In the event the Director of Public Works determines that it would be infeasible to provide 110 percent containment for a particular existing oil tank, the Operator shall provide such containment as the Director of Public Works determines is feasible.
 - b. All above ground piping in the Preserve that contains or could contain Oil shall be protected by basins or secondary containment (berms and/or walls).

45. **Geotechnical.** The Operator shall comply with the following provisions:

(1) **Grading.** The Operator shall comply with all of the following provisions:

- a. All proposed grading shall be subject to prior review and approval by the Director of Public Works.
- b. Grading involving up to 5,000 cubic yards may be undertaken pursuant to a City Master Grading Plan stamped by a registered professional engineer and a California-certified engineering geologist and approved by the Director of Public Works.
- c. Cuts and fills shall be minimized to avoid erosion and visual impacts.

(2) **Geotechnical Investigations.** The Operator shall comply with the following provisions:

- a. A site-specific geotechnical investigation shall be completed for grading in excess of 5,000 cubic yards, unless approved pursuant to a Master Grading Plan approved by the Director of Public Works, and for any grading that supports or impacts a critical facility as determined by the Director. The investigation shall be completed by a California licensed geotechnical

engineer and/or California-certified engineering geologist and submitted to the Director of Public Works for review and approval, in conjunction with an application for a revised grading permit.

- b. A site-specific geotechnical investigation shall be completed for all proposed Permanent Structures. The investigation shall include analysis and recommendations associated with potential seismically induced ground failure, such as differential settlement and lateral spreading. The geotechnical investigation shall be completed by a California licensed geotechnical engineer and/or California-certified engineering geologist and submitted to the Director of Public Works, for review and approval.

(3) Erosion Control. The Operator shall comply with the following provisions:

- a. The Operator shall comply with all provisions of an Erosion Control Plan that has been approved by the Director of Public Works. The Erosion Control Plan shall be reviewed by the Operator every two (2) years to determine if modifications to the Plan are required. Any modifications to the Erosion Control Plan shall be submitted to the Director for review and approval. The Erosion Control Plan shall include any measures requested by the Director.
- b. Erosion shall be controlled on all slopes, creeks and banks so that no mud or other substances are washed onto public streets or surrounding property. Such control measures may consist of planting and irrigation, dams, cribbing, riprap, sand bagging, netting, berms, or other devices.

(4) Restoration of Slopes. Slopes shall be restored to their original grade once the use that required the grading of the slope has been discontinued. However, if restoration of a slope would negatively affect existing drainage patterns or slope stability, the slope shall be restored to a grade that avoids these negative effects.

(5) Oil Field Accelerometer. The Operator shall operate and maintain an accelerometer at the oil field to determine site-specific ground accelerations as a result of any seismic event in the region (Los Angeles/Orange County and offshore waters of the Santa Monica Bay and San Pedro Channel). Readings from the accelerometer shall be recorded at the oil field, and transmitted in real-time to the Caltech Seismological Laboratory. The Operator shall cease **operations** and inspect all oil field pipelines, storage tanks, and other infrastructure following any seismic event that exceeds a ground acceleration at the oil field of 15 percent of gravity (0.15 g) and promptly notify the Director of Public Works. The Operator shall not reinstitute operations at the oil field and associated pipelines until it can reasonably be determined that all oil field infrastructure is structurally sound.

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46. Pipeline Management Plan. The Operator shall maintain and implement a Pipeline Management Plan that meets the requirements of DOGGR regulations.

47. Noise Attenuation. All oil operations on the oil field shall be conducted in a manner that minimizes noise, and shall comply with the following provisions:

(1) Noise Limits. The Operator shall comply with the following provisions:

a. All oil operations on the oil field shall comply with the noise provisions of Chapter 8.32 of Title 8 of the City of Whittier Municipal Code, with the exception of drilling, redrilling, and reworking, which are exempt from the provisions of said Chapter.

b. Hourly, A-weighted equivalent noise levels associated with Drilling, Redrilling and Reworking shall not elevate existing baseline levels by more than three (3) dBA at any Developed Area, or five (5) dBA at any recreational area, trail or other public area. For daytime activities (7:00 a.m. to 7:00 p.m.) existing baseline noise levels shall be defined as the maximum daytime equivalent noise level (eq) at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. For nighttime activities (7:00 p.m. to 7:00 a.m.), existing baseline noise levels shall be defined as the minimum nighttime equivalent noise level ~~(43.1)~~ at the closest monitoring site as shown in Table 4.5-5 of the Environmental Impact Report. Updated baseline noise levels may be set, and additional monitoring sites may be established, from time to time by the Director of Public Works. In no case shall baseline noise levels include any Drilling, Redrilling or Reworking, or construction or operational operations.

c. Noise produced by Oil Operations shall include no Pure Tones when measured at a Developed Area. (Pure Tones are defined in the EIR.)

(2) Backup Alarms. Backup alarms on all vehicles operating within the Oil Field shall be disabled between the hours of 8:00 p.m. and 8:00 a.m. During periods when the backup alarms are disabled, the Operator shall employ alternate, low-noise methods for ensuring worker safety during vehicle backup, such as the use of spotters.

(3) Equipment Servicing. All noise producing Oil Field Equipment shall be regularly serviced and repaired to minimize increases in Pure Tones and other noise output over time. The Operator shall maintain an equipment service log for all noise producing equipment.

(4) Deliveries to the Oil Field. Deliveries to the Oil Field shall not be permitted after 7:00 p.m. and before 7:00 a.m., Monday through Friday; between 5:00 p.m. and 8:00 a.m. ~~and 5:00 p.m.~~ on Saturdays and no activities on Sundays or federal holidays, except in cases of emergency.

- (5) **Construction Equipment.** All construction equipment shall be selected for low-noise output. All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
 - (6) **Construction Equipment Idling.** Unnecessary idling of internal combustion engines near noise-sensitive areas is prohibited.
 - (7) **Worker Notification.** The Operator shall instruct employees and subcontractors about the noise condition provisions prior to commencement of each and every Drilling, Redrilling, Reworking, and construction operation, and shall annually certify to the City Manager or Designee that such employees and subcontractors have been properly trained to comply with such noise provisions. The Operator shall prominently post quiet mode policies at every Drilling and Redrilling site.
48. **Vibration Reduction.** All oil operations on the oil field shall be conducted in a manner that minimizes vibration. Additionally, vibration levels from Oil Operations at the Oil Field shall not exceed a velocity of 0.25 mm/s over the frequency range 1 to 100 Hz at any Developed Area.
49. **Signs.** All signage shall comply with the following provisions:
- (1) **Perimeter Identification Signs.** Identification signs, at intervals acceptable to the Director of Community Development, shall be posted and maintained in good condition along the Outer Boundary Line fence and along the fences adjoining the public roads that pass through the Oil Field. Each sign shall prominently display current and reliable emergency contact information that will enable a person to promptly reach at all times, a representative of the Operator who will have the expertise to assess any potential problem and recommend a corrective course of action. Each sign shall also have the number of the Operator's 24-hour emergency contact, City Code Enforcement contact and the number of SCAQMD that can be called if odors are detected.
 - (2) **Main Entrance Sign.** A sign shall be posted and maintained in good condition at the main entrance of the Oil Field prominently displaying a telephone number by which persons may contact a representative of the Operator at all times to register complaints regarding Oil Field operations.
 - (3) **Other Required Signs.** All identification signs, warning signs, no trespassing signs, and other signs required by County, State and Federal regulations shall be properly posted and maintained in all required locations and in good condition.
 - (4) **No Littering Signs.** "No littering" signs shall be prominently posted and maintained in good condition on all Oil Field entrance gates.

50. Painting. All Oil Operation related structures visible from public roadways and surrounding properties within the Oil Field shall be painted or otherwise surfaced or textured with a color that is compatible with the surrounding areas, and has been approved by the City Manager or Designee. The painting or other surfacing of all structures covered by this provision shall thereafter be maintained in good condition.

51. Well Cellars. All cellars shall be constructed in accordance with the most current American Petroleum Institute standards. In addition, the Operator shall comply with the following provisions:

(1) Cellar Fluids. Well cellars shall be kept free of ~~all~~ Oil, water, or debris at all times to the greatest extent possible. During Drilling, Redrilling and Reworking, the cellar shall be kept free of excess Fluids by a pump which discharges into a waste Tank, mud pit, vacuum truck, or other approved disposal system.

(2) Access to Multi-Well Cellars. All multi-well cellars exceeding three (3) feet in depth and 25 feet in length shall have two (2) means of entrance and exit and an additional exit for every 50 feet in length thereafter. At least one (1) means of entrance or exit for all multi-Well cellars of 25 feet in length shall be a stairway constructed to California Division of Industrial Safety standards.

(3) Single Cellar Covers. All single cellars shall be covered with open grating and have no openings larger than three (3) inches at any point. Covers shall be capable of supporting vehicle weight or guardrails shall be erected to prevent vehicle access.

(4) Cellar Ladder Openings. All openings for ladders through grating shall be designed to allow exit from underside without obstruction, and shall be kept free of storage of any type. Said opening shall not be less than 24 inches on either side.

52. Sumps. The Operator shall comply with all of the following provisions:

(1) Sump Clean Out. All sumps that are used, or installed, or maintained for use in connection with any Well, and which have not been used for 90 days for the operation of or the Drilling, Redrilling or Reworking of such Well or any other Well in the vicinity, shall be cleaned out, and all Oil, rotary mud and rubbish removed.

53. Water Management Plan. The Operator shall comply with all provisions of a Water Management Plan that has been approved by the City Manager or Designee and the Director of Public Works. The Plan shall include best management practices, water conservation measures and the use of a drip irrigation system. The Plan shall also address the availability of reclaimed water for use at the Oil Field. The Water Management Plan shall be reviewed by the Operator every three years to determine if modifications to the Plan are required. The Operator shall make changes to the

Plan if requested by the City Manager or Designee or the Director of Public Works. Any modifications to the Water Management Plan shall be submitted to the City Manager or Designee and the Director of Public Works for review and approval. The water management plan shall include any elements requested by the City Manager or Designee or the Director of Public Works.

54. Groundwater Monitoring. The Operator shall develop, implement, and carry out a groundwater quality monitoring program for the Oil Field that is acceptable to the Director of Public Works and consistent with all requirements of the Regional Water Quality Control Board. Pursuant to and if required by the approved program, the Operator shall install and maintain groundwater monitoring Wells. Such monitoring Wells shall be located and completed as determined by a California Certified Professional Geologist. The Regional Water Quality Control Board and the Director of Public Works shall be regularly advised of the results of such monitoring, and shall be immediately advised if such monitoring indicates a potential problem.

55. Fencing. All portions of the Oil Field on which Oil Operations are conducted shall be enclosed with a fence that at a minimum is compliant with DOGGR regulations codified at California Code of Regulations Title 14, Article 3, Sections 1778 and 1779, or as may be subsequently amended by the State.

56. Storage of Equipment. There shall be no storage at the Oil Field of material, equipment, machinery or vehicles which are not essential to the Oil Operations. All non-essential equipment shall be removed from the Oil Field within 30 days of the date they become non-essential, unless a time extension is granted by the Director of Public Works.

57. Oil Field Cleanup and Maintenance. The Operator shall maintain the site in a clean and orderly condition and shall comply with the following provisions:

(1) Equipment Removal. All facilities that have reached the end of their useful economic life shall be properly decommissioned and removed from the Oil Field within one year. Areas not slated for future use shall be restored and revegetated within 90 days of termination of use, unless such restoration and revegetation would interfere with fire safety or access to Oil Operations.

(2) Equipment Maintenance. All equipment, improvements, facilities and other personal property or fixtures located on the Oil Field, shall be maintained in good condition to the satisfaction of the City Manager or Designee and the Director of Public Works.

(3) Site Debris and Vegetation. The Operator shall keep the lease area free of debris and vegetation overgrowth to the satisfaction of the Director of Public Works.

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58. Security. All unmanned entrances to the Oil Field shall be equipped with sliding gates which shall be kept closed and secured at all times except when authorized vehicles are entering or leaving the Oil Field. The Operator shall maintain 24 hours per day surveillance. In addition, Oil Processing Facilities shall be manned 24 hours per day commencing with the Operations Phase.

59. Oil Field Waste Removal. The Operator shall comply with the following provisions:

(1) Waste Collection. All Drilling, Redrilling and Reworking waste shall be collected in portable steel bins compliant with United States Department of Transportation standards. Any Drilling, Redrilling, and Reworking wastes that are not intended to be injected into a Class II Well, as permitted by DOGGR, shall be removed from the Oil Field no later than 30 days following completion of the Drilling, Redrilling and Reworking. This provision does not apply to active sumps and mud pits.

(2) Waste Discharge. No Oil Field waste shall be discharged into any sewer unless permitted by the Sanitation District, or into any storm drain, irrigation system, stream, or creek, street, highway, or drainage canal. Nor shall any such wastes be discharged on the ground provided that the foregoing shall not prohibit the proper use of active Drilling sumps and mud pits.

(3) Recycling Plan. The Operator shall comply with all provisions of a Recycling Plan that has been approved by the Director of Public Works. The recycling plan shall include any elements requested by the Director.

60. Sanitation. The Operator shall comply with the following provisions:

(1) Garbage and Refuse. The Oil Field shall be maintained in a clean, sanitary condition, free from accumulations of garbage, refuse and other wastes.

(2) Toilets and Wash Facilities. Sanitary toilet and washing facilities shall be installed at any site where personnel are permanently stationed. Portable facilities shall be provided wherever crews are temporarily employed. Such facilities shall be maintained in a clean and sanitary condition at all times.

61. Storage of Hazardous Materials. The Operator shall comply with all provisions of a Hazardous Materials Business Plan that has been submitted to the Fire Chief. The Operator shall deliver to the Fire Chief for review and approval an updated Hazardous Material Business Plan on an annual basis. This Plan shall provide the location of where hazardous materials are stored at the Oil Field. Hazardous materials shall be stored in an organized and orderly manner, and identified as may be necessary to aid in preventing accidents, and shall be reasonably protected from sources of external corrosion or damage to the satisfaction of the Fire Chief.

62. Drilling, Redrilling and Reworking Operations. The Operator shall comply with all of the following provisions:

(1) DOGGR Regulations. All DOGGR regulations related to Drilling, Redrilling and Reworking operations.

(2) Number of Drilling and Redrilling Rigs. No more than ~~three (3)~~ one (1) Drilling or Redrilling rigs shall be present within the Oil Field at any one time. The maximum number of drilling rigs and redrilling rigs within the Oil Field at any one time shall be two (2).

Forma

(3) Drill Rig Engines. All engines used for Drilling and Redrilling operations shall be operated by muffled internal-combustion engines or by electric motors.

(4) Fire Safety Regulations. All Drilling, Redrilling and Reworking shall be in conformance with applicable fire and safety regulations.

(5) New Technology. Proven reasonable and feasible technological improvements which are capable of reducing the environmental impacts of Drilling and Redrilling shall be considered as they become, from time to time, available.

(6) Derricks and Portable Masts. All Derricks and portable masts used for Drilling, Redrilling and Reworking shall meet the standards and specifications of the American Petroleum Institute as they presently exist or as may be amended.

(7) Equipment Removal. All Drilling and Redrilling equipment shall be removed from the site within 90 days following the completion of Drilling or Redrilling activities or as otherwise directed by the City Manager or Designee.

(8) Drill Site Conditions. All Drilling Sites shall be maintained in a neat and orderly fashion.

(9) Belt Guards. Belt guards shall be required over all drive belts on Drilling, Redrilling and Reworking equipment. Guarding shall be as required by, Title 8 of the California Code of Regulations, Section 6622, or as may be subsequently amended.

63. Processing Operations. The Operator shall comply with the following provisions:

(1) Limits on Processing Operations. Unless otherwise expressly required by DOGGR, the only Processing operations permitted at the Well Site shall be: the dehydration and removal of inerts to pipeline quality of Oil and Gas produced from the Well; the storage, handling, recycling and transportation of such materials; and those Processing operations required for water injection purposes.

(2) Refining. No refining shall be conducted within the Oil Field.

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(3) Well Pumps. All Well pumping units shall be downhole submersible pumps.

(4) Removal by Pipeline Only. All Oil, Gas and other hydrocarbons, produced from any Well in the Oil Field shall be shipped and transported through pipelines, except in case of an emergency or when access to a pipeline becomes unavailable. Excluded from this requirement are the three test wells, propane and other related natural gas liquids that are in amounts in excess of what can be blended into the pipeline. Should any pipeline through which Oil or Gas is transported become unavailable for the safe transportation of said products due to maintenance problems with the pipeline, or lack of sufficient capacity within the pipeline to handle the volume of Oil and Gas needing transportation, or because the owner or Operator of such pipeline elects to discontinue transporting Oil or Gas through such pipeline, then the Operator shall within 180 days of the date the existing pipeline becomes unavailable, seek to acquire a private right of way or easement, or shall file an application for a right of way, easement, encroachment permit or franchise for the construction of a replacement pipeline and shall diligently prosecute such application until such pipeline is completed. During any emergency situation, or during such time as any existing pipeline becomes unsafe or unavailable, Oil and Gas may be transported by truck until the emergency situation is resolved or until a replacement pipeline shall be permitted and constructed in accord with all applicable laws and regulations.

(5) Pipelines. The Operator shall comply with the following provisions:

- a. New pipelines that remove Oil or Gas from the Oil Field shall be buried below the surface of the ground;
- b. All pipelines which are not enclosed within a fence shall be placed underground or covered with materials approved by the Fire Chief. Said covers shall be maintained in a neat, orderly, secure manner;
- c. Any and all water or brine produced during pipeline construction shall be injected in accordance with DOGGR requirements, or disposed of in accordance with other local, state or federal regulations;
- d. New pipeline corridors shall be consolidated with existing pipelines or electrical transmission corridors where feasible; and
- e. Upon completion of pipeline construction, the site shall be restored to the approximate previous grade and condition.

(6) Gas Metering Station. The Operator shall submit to the Director of Public Works and Fire Chief a site and building plans of the gas metering station for review and approval.

64. Well Reworking Operations. The Operator shall comply with the following provisions:

- (1) DOGGR Regulations. The Operator shall comply with all DOGGR regulations related to Well Reworking operations.
- (2) Number of Reworking Rigs. No more than one (1) Reworking rigs shall be present within the Oil Field at any one time that a Drilling rig is present, unless an emergency condition requires additional Reworking rigs. The maximum number of rigs on site at any one time is two (2).
- (3) Hours of Operation. With exception of emergencies, Well Reworking operations shall not be allowed after 7:00 p.m. or before 7:00 a.m., nor on Sundays or federal legal holidays.
- (4) Specifications. Reworking rigs shall meet the standards and specifications of the American Petroleum Institute.
- (5) Equipment Removal. Reworking rigs shall be removed from the Oil Field within seven (7) days following the completion of Reworking operations unless such rig will begin to be used on another Well at the Oil Field within ~~five (5) days~~ that seven (7) day period.

65. Tanks. The Operator shall comply with the following provisions:

- (1) New Tank Specifications. All new Tanks and appurtenances shall be designed, constructed, installed and maintained in accordance with current County Fire Code, American Petroleum Institute, DOGGR, California Division of Industrial Safety, and Environmental Protection Agency Standards, applicable provisions of Title 14 of the California Code of Regulations, Section 1774, and applicable CalARP Program requirements.
- (2) Vapor Recovery. Oil, Wash, and Produced Water Tanks shall be vapor tight and during the Operations Phase, shall be equipped with a vapor recovery system.
- (3) Specifications for New Tank Piping, Valves, Fittings and Connections. All new Tank piping, valves, fittings and connections including normal and emergency relief venting, shall be installed and maintained in accordance with current American Petroleum Institute standards to the satisfaction of SCAQMD and DOGGR.
- (4) Detection of Tank Bottom Leaks. The Operator shall design, implement and comply with a program, approved by the Fire Chief, for controlling and detecting Tank bottom leaks on all Tanks at the Oil Field. The Operator may use a combination of methods including but not limited to diversion walls, dikes, Tank foundations of concrete or gravel and, a Tank bottom leak detection system in

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compliance with, Title 14 of the California Code and Regulations, Section 1773, or any subsequently enacted State regulations regarding tank bottom leaks.

66. Well and Production Reporting. The Operator shall deliver annual production reports to the City Manager or Designee and the Fire Chief by June 30 of each year. The reports shall cover the previous year's activities and projections for the coming year, and shall provide the following information:

- (1) A copy of all DOGGR Forms 110 and 110B submitted during the previous 12 months.
- (2) Number and mapped location of all Wells Drilled or Redrilled, including Well identification numbers and size and dimensions.
- (3) Number and mapped location of water injection Wells, including Well identification numbers.
- (4) Number and mapped location of Idled Wells, including Well identification numbers and the date each Well was idled.
- (5) Number and mapped location of Abandoned Wells, including date each Well was Abandoned and/or re-abandoned.
- (6) The number of Wells Drilled or Redrilled in the previous year, including location, size and dimensions and type, configuration, engine size and total height of drilling rigs used during the previous year.
- (7) A proposed schedule and phasing of the Drilling, Redrilling, Well Abandonment, Well pad abandonment and restoration activities.
- (8) The maximum number of Wells proposed to be Drilled or Redrilled in the coming year including location, size and dimensions; and type, configuration, engine size and total height of proposed drilling rig to be used during the coming year.
- (9) Estimated target depth of all proposed Wells and their estimated bottom hole locations in the past year (actual) and the coming year (proposed).
- (10) A discussion of the latest equipment and techniques that are proposed for use as part of the Drilling and Redrilling program to reduce environmental impacts;
- (11) Any additional information requested by the City Manager or Designee or the Fire Chief.

67. Idle Well Testing and Maintenance. The Operator shall comply with Title 14, of the California Code of Regulations, Section 1723.9 regarding testing and Maintenance

of Idle Wells, or any subsequent enacted State regulations regarding testing and maintenance of Idled Wells. The Operator shall carry out all additional tests, remedial operations and mitigation measures required by DOGGR if any idle wells do not meet the test standards.

68. Well and Well Pad Abandonment. If DOGGR orders the Operator to plug and abandon any Wells on the Oil Field, the Operator shall deliver to the Fire Department, on a timely basis, all Notices of Intent to Plug and Abandon a Well that the Operator files with DOGGR and shall commence promptly and proceed diligently with the plugging and abandonment operations in accordance with DOGGR rules and regulations and the terms of the DOGGR permit to plug and abandon the Well. Well Abandonment may commence once all necessary permits and approvals are obtained. If the Well pad associated with the Abandoned Well does not contain other production, injection or Idle Wells, and will not be used for future Drilling, then the Operator shall promptly abandon the Well pad consistent with the following provisions:

- (1) Well Pad Site Cleanup. The Operator shall leave the site entirely free of Oil, rotary mud, Oil soaked earth, asphalt, tar, concrete, litter, debris and other substances to the satisfaction of DOGGR and in accordance with federal requirements.
- (1) Contaminated Materials. All contaminated soils and materials within the Well pad boundaries shall be removed and treated or disposed of in accordance with all local, County, State, and Federal regulations.
- (2) Well Pad Revegetation. The Well pad shall be revegetated as approved by the City and Habitat Authority.
- (3) City Request for Review of Well Status. The City Manager or Designee may periodically review the status of the Operator's Wells and submit to DOGGR a list of Wells the City Manager or Designee believes should to be plugged and abandoned as specified in Public Resources Code Section 3206.5 or any subsequently enacted State Law related to a local jurisdiction's right to request State-agency review of Idle Wells.
- (4) Abandonment Procedures. Within 180 days of permanent facility shut down, the Operator shall submit an Abandonment Plan to DOGGR and submit to the Director of Public Works for review and approval a time line for facility removal, site assessment and remediation as necessary. The Operator shall begin abandonment of the site no later than 20 days after the Director's approval of the timeline or as soon thereafter as practicable, and shall provide to the Director quarterly updates on the abandonment process until such time as the Oil Field is abandoned and restored. The Operator and Landowners shall post a performance bond to insure compliance with all provisions of this subsection, and shall continue to pay property taxes at the rates assessed during Oil Field

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operation until all site restoration work has been fully completed, as determined by the Director.

69. Monitoring and Compliance: The following provisions shall apply throughout the Oil Field project area.

(1) Environmental Quality Assurance Program (EQAP). The Operator shall comply with all provisions of an Environmental Quality Assurance Program (EQAP) that has been approved by the Director of Public Works. The following provisions relate to the EQAP:

a. EQAP Requirements. The EQAP shall provide a detailed description of the steps the Operator shall take to assure compliance with all provisions of this section, including but not limited to all of the monitoring programs called for by this section.

b. Annual EQAP Reports. Within 60 days of the end of each calendar year, the Operator shall submit to the Director of Public Works an annual EQAP report that reviews the Operator's compliance with the provisions of the EQAP over the previous year and addresses such other matters as may be requested by the Director. The Annual EQAP Report shall include the following:

i. A complete list and description of any and all instances where the provisions of the EQAP, or any of the monitoring programs referred to therein or in this section, were not fully and timely complied with, and an analysis to how compliance with such provisions can be improved over the coming year.

ii. Results and analyses of all data collection efforts conducted by the Operator over the previous year pursuant to the provisions of this section.

c. EQAP Updates. The EQAP shall be updated as necessary and submitted to the Director of Public Works for approval along with the annual EQAP report. The Director shall complete the review of EQAP updates as soon as practicable, and shall either approve the updated EQAP or provide the Operator with a list of specific items that must be included in the EQAP prior to approval. The Operator shall respond to any request for additional information within 30 days of receiving such request from the Director, unless extended by the Director.

(2) Safety Inspection, Maintenance and Quality Assurance Program ("SIMQAP"). The Operator shall comply with all provisions of a Safety Inspection, Maintenance and Quality Assurance Program (SIMQAP) that has been approved by the Director of Public Works and the Fire Chief.

a. **SIMQAP Requirements.** The SIMQAP shall, at a minimum provide for:

- i. Inspection of construction techniques;
- ii. Regular maintenance and safety inspections;
- iii. Periodic safety audits;
- iv. Corrosion monitoring and leak detection; and
- v. Inspections of all trucks carrying hazardous and/or flammable material prior to loading.

b. **SIMQAP Updates.** The Operator shall periodically review and revise the SIMQAP to incorporate changes in procedures, and new safety and maintenance technologies and procedures. The Operator shall make such revisions at least every five years, or more frequently, if the Operator determines changes are necessary or if requested by the Director of Public Works or the Fire Chief. The Operator shall submit SIMQAP updates to the Director and the Fire Chief for their review and approval. The Director shall complete the review of SIMQAP updates as soon as practicable, and shall either approve the updated SIMQAP or provide the Operator with a list of specific items that must be included in the SIMQAP prior to approval. The Operator shall respond to any request for additional information within 30 days of receiving such request from the Director, unless extended by the Director.

c. **Worker Notification.** The Operator shall ensure that all persons working on the Oil Field comply with all provisions of the currently approved SIMQAP.

d. **Inspections.** The SIMQAP shall provide for involvement of the City staff or the Environmental Compliance Coordinator in all inspections required by this section.

(3) **Annual Emergency Response Drills of the County Fire Department.** The Operator shall demonstrate the effectiveness of the Emergency Response Action Plan by responding to one planned emergency response drill per year which shall be conducted in conjunction with the County Fire Department. Emergency response drills required by other agencies that involve County Fire can be used to satisfy this provision. In addition, the Operator shall demonstrate the effectiveness of the Emergency Response Action Plan by responding to not more than two (2) unannounced drills each year which may be called by the County Fire Department at the Oil Field. If critical operations are then underway at the Oil Field, the Operator need not respond to an unannounced drill to the extent such a response would, as a result of such critical operations, create an undue

risk of personal injury or property damage, but in such case the Operator must promptly explain the nature of the critical operations, why response is not possible, and when the critical operations will be completed.

- (4) **Noise Monitoring.** The City shall retain an independent qualified acoustical engineer to monitor ambient noise levels in the areas surrounding the Oil Field as determined necessary by the City Manager or Designee, the costs of which will be reimbursed by Operator. The monitoring shall be conducted unannounced and within a time frame specified by the Director of Public Works. Should noise from the Oil Operations exceed the noise thresholds specified in the Noise Reduction Plan, required pursuant to Attachment A, no new Drilling, or Redrilling shall be conducted until the Operator in consultation with the Director identifies the source of the noise and the Operator takes the steps necessary to assure compliance with thresholds specified in the Noise Reduction Plan. The results of all such monitoring shall be promptly posted on the Oil Field Web site.
- (5) **Complaints.** All complaints related to Oil Operations received by the Operator shall be reported on the same business day to the Environmental Compliance Coordinator and to the Director of Public Works. In addition, the Operator shall maintain a written log of all complaints and provide that log to the Director, on a quarterly basis. Depending upon the nature of the complaint, the Operator shall report the complaint to the SCAQMD, DOGGR, and any other appropriate agencies with oversight authority regarding the complaint at issue. If the complaint is received after normal business hours, it shall be reported to the Environmental Compliance Coordinator and the agencies at the opening of the next business day.

HABITAT PROTECTION / RESTORATION CONDITIONS

70. Habitat Mitigation/Restoration

- (1) **Temporary Impacts.** The project proponent shall restore all temporarily impacted areas. For temporary impacts to native vegetation, temporary impact areas shall be restored to the same type of native vegetation. For non-native vegetation, temporary impacts areas shall be restored to appropriate native vegetation. When oil operations have ceased at the leased area, facilities will be removed and restored to appropriate native habitats.
- (2) **Ongoing Exotic Eradication/Habitat Enhancement.** The project proponent shall implement an exotic eradication/habitat enhancement program within designated priority areas within the oil field. This may include, but not be limited to the removal of eucalyptus trees, pepper trees, castor bean, tree tobacco, hemlock, fennel, thistle, and non-native grasses. The eradication program will be reviewed and approved by the Habitat Authority, and will be funded through a Mitigation Fund. The Operator shall establish the Mitigation Fund and ensure annual contributions of \$30,000 (with annual CPI increases). Any unspent funds shall be

rolled over to the following year. The Habitat Authority shall have the ability use the fund for related plantings, including distribution of native seeds.



- (3) Impacts to Jurisdictional Waters. For any impacts to jurisdictional waters, the project proponent will obtain all necessary regulatory permits prior to the issuance of a grading permit, including if necessary a Section 404 permit, Section 401 Water Quality Certification, and a Section 1602 Streambed Alteration Agreement. Impacts to jurisdictional waters (and any associated riparian vegetation and/or wetlands) will be mitigated for at a minimum 3:1 ratio, or as required by the regulatory agencies (whichever is higher). If mitigation needs to occur outside the leased area for oil operations then standard access fees applied by the Habitat Authority will apply (see Habitat Authority website for details.)
- (4) Wildlife Movement. For access roads to be re-graded for the project or for existing roads with significant increased activity, the proponent shall install corrugated pipe culverts to facilitate the movement of smaller vertebrates, including rodents, reptiles, and amphibians; as directed and approved by the Habitat Authority Ecologist.



71. Fuel Modification

- (1) Impacts to native habitats as a result of fuel modification (including thinning) will be treated as an impact subject to mitigation requirements.
- (2) All plantings within fuel modification zones will consist of non-invasive species, with priority given to native species.
- (3) Access roads will be cleared of vegetation on a regular basis for purposes of fuel modification in accordance with fire department requirements at the expense of the Operator.
- (4) In addition to clearance for annual fuel modification, roads will be maintained for safe and functional use by the Operator at all times.

72. Noise Attenuation for Wildlife

- (1) During construction, including drilling, activities adjacent to sensitive habitats, including potential nesting gnatcatchers, raptors, etc., will be monitored using permanently installed noise meters. If actual levels (measured from the edge of the leased area) exceed allowable levels, construction activities may be temporarily halted at the direction of the City Manager or Designee until additional measures can be implemented to further reduce noise levels. Noise restrictions may also be imposed by regulatory agencies (e.g., Service, CDFG, etc.) as part of any regulatory permits and/or take authorizations.

- (2) Noise levels attributed to operations will be minimized to the maximum extent feasible. Facilities shall be constructed to eliminate noise impacts on surrounding habitats, or at least minimize noise projected into adjacent open space. A standard for noise shall be set to regulate noise projected from the edge of the leased area (e.g., 60 db hourly average or to be determined).
- (3) Vehicle traffic shall be restricted to defined access routes, and using approved equipment for specific areas.
- (4) With the exception of delivering construction and other equipment, access to construction/drilling sites will be using approved vehicles only. Wherever feasible, the Operator shall use hybrid (electric or other low noise) vehicles for all non-construction equipment access.

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73. Unauthorized Access

- (1) Unauthorized access into the Preserve will not be allowed. Personnel must remain inside the leased areas and identified roadways at all times.
- (2) All operations shall occur within the defined lease area. All temporary staging areas, including the placement of construction trailers, shall be reviewed with the Habitat Authority to minimize biological impacts. Temporary use areas outside the leased area require a permit through the Habitat Authority (and approval by the City).

74. Conservation Easement: Operator acknowledges and agrees that a Conservation Easement shall be placed over the City-owned Preserve Land, which shall except only the surface areas approved for use in the Project, through the Conditional Use Permit.

75. Prior to initiating the Project, a pavement management program shall be developed by an appropriate pavement design consultant at the cost of the Operator and/or its successors in interest for Catalina Avenue and Penn Street. An appropriate fair share cost of acceptable pavement rehabilitation or reconstruction shall be recommended for the roadways. During the project life, an appropriate frequently-performed pavement condition analysis shall be performed to measure the roadway condition and a fair share contribution shall be made by Operator. Alternatively, the Operator may construct the improvements at its cost.

76. Oil tanker trucks shall be permitted on Catalina Avenue only between the hours of 9 a.m. and 1 p.m. and on Penn Street only between the hours of 9 a.m. to 3 p.m. Only single trailer oil tanker trucks (no doubles) shall be permitted.

77. High volume, high pressure hydraulic fracturing shall not be employed in the Project.

78. Operator shall work with City staff to adopt a program to encourage hiring of local workers for the Project.



101 W. Anapamu Street, Suite
Santa Barbara, CA 93101

ATTACHMENT I

November 2, 2011

Ms. Kim Barlow
City of Whittier
13230 Penn St
Whittier, CA 90602

Re: Proposed Modifications to Conditions of Approval
CUP09-004

Dear Ms. Barlow:

Following is proposed language for selected conditions and rationale, per your request in our meeting yesterday.

CONDITION 29-5

CURRENT TEXT: Administrative Items: The following provisions shall apply throughout the Oil Field project area...(5) Performance Security. The Operator shall be subject to the following provisions:

a. **Performance Bond.** Prior to the issuance of the first drilling permit pursuant to this section, the Operator shall provide to the City Manager or Designee, a faithful performance bond or financial instrument in the sum to be determined by the City Manager, payable to the City and executed by a corporate surety in the State of California. Such bond shall be conditioned upon the faithful performance by Operator of duties related to well abandonment, site restoration and environmental cleanup and shall be in a format and include terms approved by the City Manager.

b. **Change of Operator.** The performance bond shall continue in force for one (1) year following any sale, transfer, assignment, or other change of Operator of the Oil Filed, or of the current Operator's termination of activities at the oil field. The City may release said bond prior to the end of one (1) year period upon satisfaction by said Operator of all its obligations. Notwithstanding the foregoing, the performance bond shall not be terminated or released upon the sale, transfer, assignment, or other change of Operator until the new Operator has delivered a replacement bond complying with the provisions of this section.

c. **Funding Options.** At its sole option, the City may accept Certificates of Deposit, Cash Deposits, or U.S. Government Securities in lieu of commercial bonds to meet the above bonding requirements on terms approved by the City Manager.

SUGGESTED TEXT: Administrative Items: The following provisions shall apply throughout the Oil Field project area...(5) Performance Security. The Operator shall be subject to the following provisions:

a. **Performance Bond.** Prior to the issuance of the first drilling permit pursuant to this section, the Operator shall provide to the City Manager or Designee, a faithful performance bond or financial instrument in the sum of \$10,000 per well identified in the drilling permit, payable to the City and executed by a corporate surety in the State of California. The amount of the performance bond or financial instrument shall increase by \$10,000 per well, as identified with each subsequent drilling permit up to sixty (60) wells. Additionally, the Operator shall provide proof of its Operator Bond

with the State of California. Such performance bond shall be conditioned upon the faithful performance by Operator of duties related to well abandonment, site restoration and environmental cleanup and shall be in a format and include terms approved by the City Manager.

b. Change of Operator. The performance bond shall continue in force for one (1) year following any sale, transfer, assignment, or other change of Operator of the Oil Filed, or of the current Operator's termination of activities at the oil field. The City may release said bond prior to the end of one (1) year period upon satisfaction by said Operator of all its obligations. Notwithstanding the foregoing, the performance bond shall not be terminated or released upon the sale, transfer, assignment, or other change of Operator until the new Operator has delivered a replacement bond complying with the provisions of this section.

c. Funding Options. The City will accept Certificates of Deposit, Cash Deposits, or U.S. Government Securities in lieu of commercial bonds, in an account controlled by the City, to meet the above bonding requirements on terms approved by the City Manager.

RATIONALE: Matrix maintains an Operator Bond with the State of California for the purpose of well abandonment, in the event of an operator bankruptcy, or when walks away from an oil field, without completing well abandonment. The amount of that Operator Bond is determined on a per well basis. The Operator Bond is funded through a Certificate of Deposit. The Performance Bond must be contemplated in the context of the already existing Operator Bond, which will cover all wells drilled as part of this Project. Matrix will provide the City with proof of its Operator Bond. Matrix proposes the same approach here: \$10,000 bond or financial instrument per well, up to the maximum of sixty wells. That money can be funded by Certificates of Deposit, or Cash Deposits, in accounts controlled by the City.

CONDITION 31

CURRENT TEXT: Periodic Review: The City shall conduct a comprehensive review of the conditions of approval at least every five (5) years from CUP issuance to determine if the conditions of approval are adequately protecting the health, safety and general welfare. Such reviews shall, among other things, consider whether additional conditions should be added, appended or removed. One of the main goals of the periodic review shall be to evaluate if proven technological advances that would further reduce Impacts of Oil Operations on neighboring land uses should be incorporated into the conditions of approval.

SUGGESTED TEXT: Periodic Review: The City shall conduct a comprehensive review of the conditions of approval at least every five (5) years from CUP issuance to determine if the conditions of approval are adequately protecting the health, safety and general welfare. Such reviews shall, among other things, consider whether additional conditions should be added, appended or removed. One of the main goals of the periodic review shall be to evaluate if proven technological advances that would further reduce impacts of Oil Operations on neighboring land uses should be incorporated into the conditions of approval. Should future proven technological advances be incorporated into the amended conditions of approval, those requirements shall apply only to new equipment, and such conditions of approval shall not require replacement of existing equipment.

RATIONALE: Stationary equipment at an oil filed is very expensive. Under the current EIR, six categories remain significant impacts with mitigation. Three of those categories that remain significant with mitigation are associated with the height of the drill rig. One category is associated with the possibility of an oil spill. And the other categories concern emissions in excess of the AQMD standards. Matrix has proposed Condition 79 concerning the drill rig height and environmental impacts related to new technology. [see below] The significant impact with respect to oil spills cannot be mitigated, even with proven technological advances, and the emissions impacts, largely associated with construction, is not expected be above the AQMD thresholds during the operations phase. The drilling rigs are contracted from third parties to drill the wells, and will come and go from the site as new wells are developed. Matrix is committed to exploring new technology with respect to drilling, re-drilling, work over wells, and anticipates that

the suggested change, with respect to new equipment, addresses those technologies as they become available

CONDITION 32-9

CURRENT TEXT: The Operator shall ensure that roadside/trailside signs are used as necessary to warn vehicles and hikers, such as "Watch for truck traffic"; "Watch for pedestrians/wildlife". Speed limit signs shall be posted along roads used by oilfield vehicles. Posted speeds shall be a maximum of 10 miles per hour.

SUGGESTED TEXT: The Operator shall ensure that roadside/trailside signs are used as necessary to warn vehicles and hikers, such as "Watch for truck traffic"; "Watch for pedestrians/wildlife". Speed limit signs shall be posted along roads used by oilfield vehicles. Posted speeds shall be a maximum of 15 miles per hour.

RATIONALE: Two speed limits in the preserve are identified in the FEIR: 15 mph as a dust mitigation, and 10 mph as biological mitigation. There are high grades along the north access road, which is the required access for several large trucks. This is a safety hazard. The 10 mph speed limit to protect wildlife is arbitrary and there is no scientific evidence proving that reducing the speed limit from 15 mph to 10 mph will significantly reduce hazards to wildlife. A 10 mph speed limit along the north access road creates a significant safety hazard for these large trucks, such that they will be required to use heavy braking on those grades to reduce speeds from 15 mph to a 10 mph speed limit. This undue braking, in turn, raises the real potential for brake failure along the north access road, in turn increasing the possibility of a truck accident within the preserve, with the associated issues, depending on that truck's load. The speed limit of 15 mph allows for engine braking, rather than the undue use of brakes, and the heightened risk of brake failure.

CONDITION 45-5

CURRENT TEXT: Oil Field Accelerometer. The Operator shall operate and maintain an accelerometer at the oil field to determine site-specific ground accelerations as a result of any seismic event in the region (Los Angeles/Orange County and offshore waters of the Santa Monica Bay and San Pedro Channel). Readings from the accelerometer shall be recorded at the oil field, and transmitted in real-time to the Caltech Seismological Laboratory. The Operator shall cease operations and inspect all oil field pipelines, storage tanks, and other infrastructure following any seismic event that exceeds a ground acceleration at the oil field of 15 percent of gravity (0.15 g) and promptly notify the Director of Public Works. The Operator shall not reinstitute operations at the oil field and associated pipelines until it can reasonably be determined that all oil field infrastructure is structurally sound.

SUGGESTED TEXT: Oil Field Accelerometer. The Operator shall operate and maintain an accelerometer at the oil field to determine site-specific ground accelerations as a result of any seismic event in the region (Los Angeles/Orange County and offshore waters of the Santa Monica Bay and San Pedro Channel). Readings from the accelerometer shall be recorded at the oil field, and transmitted in real-time to the Caltech Seismological Laboratory and automatic notification from Caltech will alarm the operator of a seismic event. The Operator shall inspect all oil field pipelines, storage tanks, and other infrastructure following any seismic event that exceeds a ground acceleration at the oil field of 15 percent of gravity (0.15 g) and promptly notify the Director of Public Works. Should there be any structural damage or equipment failure as a result of any seismic event, the Operator shall isolate and address any damage or equipment failure as appropriate to minimize environmental or safety impacts. The Operator shall not reinstitute operations at those portions of the oil field and associated pipelines until it can reasonably be determined that all oil field infrastructure has been repaired and is structurally sound.

RATIONALE: Emergency shutdown of oil field facilities should only be implemented in the event of a true emergency, i.e. the actual damage to, or failure of equipment. All facilities will be

designed and installed in compliance with all current seismic and engineering standards, and is reasonably expected to withstand all but the most extreme seismic event. Absent massive structural failures as a result of the contemplated seismic event, that may require a complete shut down of the oil field, it will be very difficult, if not impossible, to detect leaks within dynamic parts of the system, or possible equipment failure if the oil field is not in operation. For example, if a seismic event occurs, as contemplated by condition 45-5, and the entire operation is shut down and inspected, the operation could pass inspection, be restarted over a period of several hours, only to then discover that an issue has arisen as a result of the shutdown and/or seismic event. This, in turn, would then require, at a minimum, a partial shut down of the area affected. On the other hand, if the field continues to operate, leaks will be detected much more quickly, and the affected portions can be isolated, shut down, and repaired. Additionally, rapid shutdowns as contemplated by this condition can cause damage to the equipment and the potential for well failure. Specifically, downhole motors have a limited number of starts, and if a drilled well is shutdown, it raises to possibility of sand entering the hole, effectively destroying the equipment. During drilling operations, a total shutdown of a drilling rig will likely cause the Operator to lose the well and/or create safety issues.

CONDITION 71-1

CURRENT TEXT: Impacts to native habitats as a result of fuel modification (including thinning) will be treated as an impact subject to mitigation requirements.

SUGGESTED TEXT: Impacts to native habitats as a result of fuel modification (including thinning) will be treated as an impact subject to mitigation requirements. The impact subject to mitigation requirements shall arise only during the initial fuel modification.

RATIONALE: Subsection (2) of Condition 71 calls for "plantings within fuel modification zones [that] will consist of non-invasive species, with priority given to native species." Fuel modification will have to occur on an annual basis. After the initial thinning for fuel modification purposes, the mitigation associated with that initial thinning, including the plantings contemplated in subsection (2) of this condition, this condition should be satisfied. It makes no sense to require ongoing annual mitigation associated with fuel modification, particularly when that annual fuel modification may include thinning those plantings within the fuel modification zone. Once the impact of the initial fuel modification has been satisfied through mitigation requirements, no additional mitigation should be required.

CONDITION 74

CURRENT TEXT: Conservation Easement: Operator acknowledges and agrees that a Conservation Easement shall be placed over the City-owned Preserve Land, which shall except only the surface areas approved for use in the Project, through the Conditional Use Permit.

SUGGESTED TEXT: Conservation Easement: Operator acknowledges and agrees that a Conservation Easement shall be placed over the City-owned Preserve Land, which shall except the City and Operator's rights pursuant to the Oil and Gas Lease, through this or any other Conditional Use Permit hereafter entered.

RATIONALE: As contemplated, the City is giving up its rights under the Lease pursuant to the proposed Conservation Easement, with the narrowly limited exception of those areas approved for use in the Project, through the Conditional Use Permit. The timeline for a conservation easement is quite lengthy and there is no need to determine the specific language concerning the scope of the Conservation Easement as part of this condition at this time. Matrix is not opposed, in principle, to a Conservation Easement, but is opposed to the City giving up its and the Operator's rights under the Lease pursuant to such a conservation easement for the following reasons: 1) Recently, and under its current leadership, DOGGR has placed new regulatory restrictions on the issuance of well injection permits. The Project calls for up to eight (8) injection wells to address the production water associated with development of the Project. Those permits may not be forthcoming at the time those wells are needed. An alternate approach, such as

installation of a waste water line along the north access road, through a portion of the City owned lands may be required to address disposal of the production water. Under the proposed Conservation Easement, the right to seek those right of ways, through a CUP and EIR process, does not exist, because the City has given up that right; 2) Should the Fire Department require the installation of a water tank within the Preserve for this project, subject to the necessary approvals and analysis, there is no recourse because the City did not reserve its rights under the Lease in the Conservation Easement; 3) Condition 63-4 contemplates Matrix seeking an alternate pipeline right of way should a problem arise with respect to the existing pipeline. Again, pursuant to the Conservation Easement, the City no longer has the right to grant such an easement in City owned property, because its rights pursuant to the Lease were not reserved or excepted from the Conservation Easement. The Oil Industry is subject to heavy regulations, and those regulations are constantly being changed and updated, and absent a reservation of the rights subject to the Lease, the flexibility to adapt and implement changes in the regulatory environment will not be available; 4) the current language of the Conservation Easement would preclude the ability to seek permits for the export of electricity from the Consolidated site, and 5) As the landfill is closing in a few years, the City may want to reserve an easement along the north access road for a gas line and water to replace the loss of gas production from the landfill, as well as a possible water treatment plant, for use in the City.

CONDITION 76

TEXT: Oil tanker trucks shall be permitted on Catalina Avenue only between the hours of 9 a.m. and 1 p.m. and on Penn Street only between the hours of 9 a.m. to 3 p.m. Only single oil tanker trucks (no doubles) shall be permitted.

SUGGESTED TEXT: Oil tanker trucks shall be permitted on Catalina Avenue and Penn Street only between the hours of 9 a.m. to 3 p.m. Only single oil tanker trucks (no doubles) shall be permitted.

RATIONALE: The FEIR finds less than significant impacts on Catalina Avenue or Penn Street as a result of the three oil trucks per day during the Testing Phase. Pursuant to the SCAQMD, Matrix is limited to trucking 450 barrels of day during the Testing Phase because there are no permanent facilities in place. Matrix does not own the oil tanker trucks, and must call those trucks out as needed. The oil industry in Southern California is very busy, and scheduling oil tanker trucks during the proposed time restrictions could be very difficult, and will likely lead to multiple production shut-ins during the Testing Phase as the oil tanker trucks are not able to reach the site, particularly during the afternoon from Catalina. The Operator does not have the ability to store oil and have more trucks come the following day, i.e. no trucks one day and six trucks the following day is not an option. The north access road is in need of major rehabilitation prior to it being used by oil tanker trucks. However, if both Catalina and Penn Street are open to oil tanker trucking between 9 a.m. and 3 p.m., the likelihood of shut-ins during the Testing Phase is significantly reduced. It is not feasible to move three trucks in and out of the Consolidated site in the four hour window on Catalina during testing: three trucks cannot be on site at the same time, cannot be loaded simultaneously, and it takes roughly one hour to load each truck. Once the oil tanker truck shipping shifts to the north access road, which will be a one way road, each truck will take a minimum two (2) hour round trip to drive from Penn Street, to the north access road traveling at restricted speeds, load up, and return to Penn Street. Once the water trucks traveling on the north access road are factored into the consideration, it is not feasible to ship the oil by tanker truck within the six hour window. The Operator will agree to a limit of one, one way oil tanker truck through Penn Street and the north access road between 7am and 9am for ingress, and one, one way tanker truck through Penn Street for egress between 3pm and 5 pm.

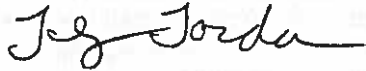
The Operator will work with the City to determine the preferred route through the City.

[PROPOSED] CONDITION 79

PROPOSED TEXT: To reduce aesthetic, recreation and visual impacts of the project on the

Habitat and surrounding area the Operator (after the test period) will be required to evaluate the feasibility of using a drilling rig that is less than 100 feet in height, which may include a "double" conventional rotary table rig or a "top drive" single rig, when those rigs are commercially available in California.

Sincerely,



Johnny Jordan
President
Matrix Oil Corp
jjordan@matrixoil.com

Figure 2-1 Proposed Project Location

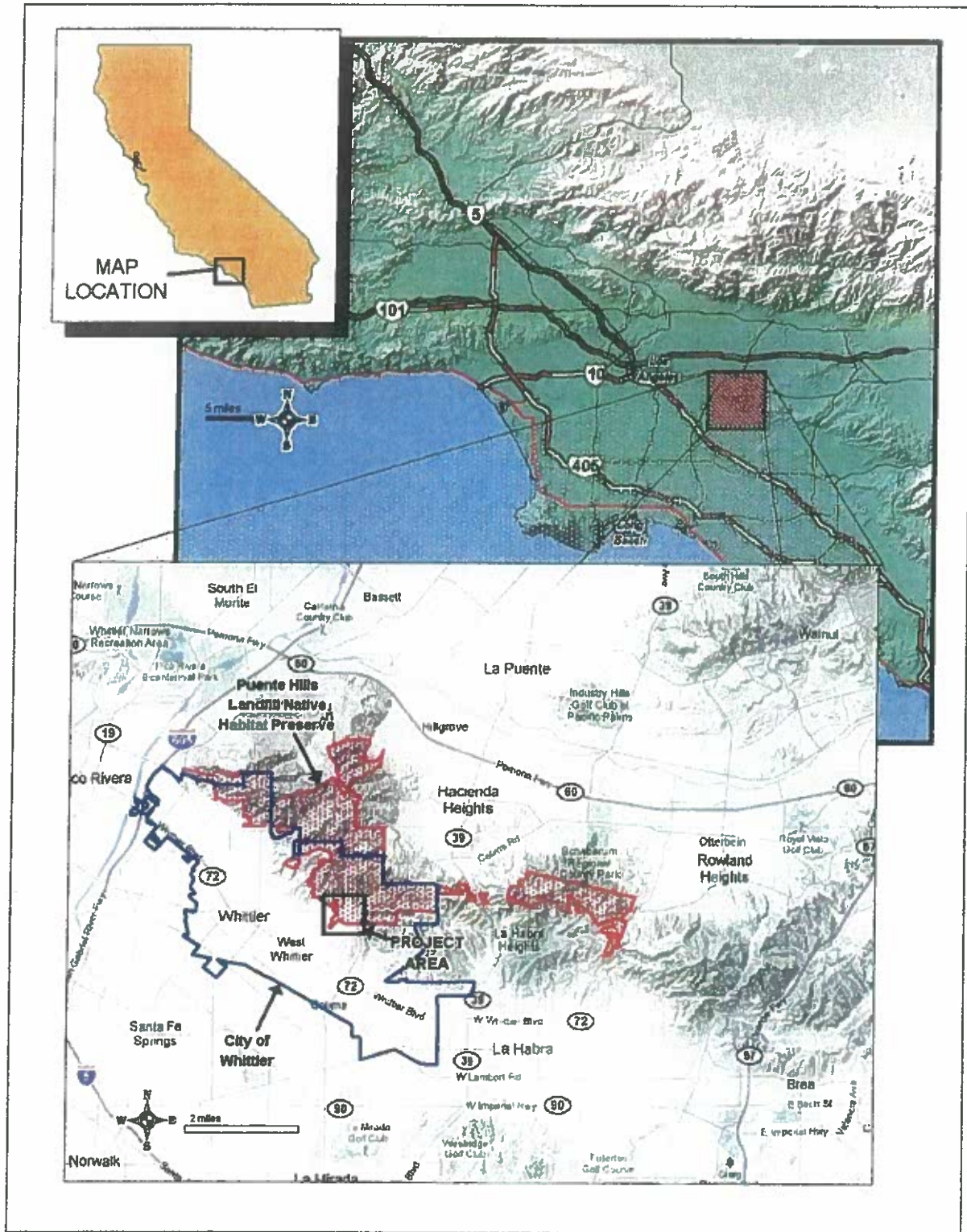


Figure O-1 Design Modifications Layout



Source: Matrix Submittal

October 2011

O-5

Final