DEVELOPMENT AGREEMENT
BY AND BETWEEN
CITY OF HERMOSA BEACH
AND
E&B NATURAL RESOURCES
MANAGEMENT CORPORATION

THIS DEVELOPMENT AGREEMENT ("Development Agreement" or "Agreement") is entered into as of the ____ day of _____, _____, by and between the CITY OF HERMOSA BEACH, a California municipal corporation ("City"), and E&B NATURAL RESOURCES MANAGEMENT CORPORATION, a California corporation ("E&B").

RECITALS

A. The City is the owner of that certain real property in the City of Hermosa Beach, County of Los Angeles, and State of California described in Section 2.4 of this Agreement (Exhibit A to this Agreement), and also known informally as the City Maintenance Yard ("Property" or "City Maintenance Yard").

B. On or about January 14, 1992, the City entered into Oil and Gas Lease No. 2 ("Lease") with Macpherson Oil Company, a California corporation, for itself and for Windward Associates, a California limited partnership, of which it is the general partner (collectively "Macpherson"). The Lease was approved by the California State Lands Commission ("CSLC"). The Lease authorized Macpherson to perform oil and gas extraction activities in the tidelands granted to the City by the State of California, and also authorized Macpherson to utilize the Property for oil and gas drilling activities ("Macpherson Project").

C. During the 1990s, Macpherson sought and obtained approvals for the Macpherson Project from the City, the CSLC, the California Coastal Commission and the South Coast Air Quality Management District. In 1995, the voters of the City passed Proposition E, an initiative to ban oil drilling in the City. During this time, and subsequently, Macpherson, the City, the CSLC, and opponents to the Macpherson Project were parties to several lawsuits regarding the

Macpherson Project, including an action by Macpherson against the City in which the court concluded that Proposition E constituted a breach of the Lease ("Macpherson Lawsuit"). Macpherson's Lawsuit addressing the issue of causation (i.e. whether the City's termination of the project for health and safety reasons was justified) and seeking damages against the City was scheduled for trial in April 2012.

D. E&B, who had no prior relationship with Macpherson, investigated the Macpherson Project and approached the City and Macpherson with a proposal to settle the Macpherson Lawsuit and to provide E&B with a potential opportunity to proceed with "a state-of-the-art directional well oil drilling project conducted from an urban drill site located on the City's maintenance yard" and "an opportunity to persuade the City's electorate that a state-of-the-art directional well oil drilling project conducted from the City's maintenance yard can be accomplished safely and with financial benefits to all of the parties." (Settlement Agreement, p. 2.) On March 2, 2012, the City, Macpherson and E&B entered into a Settlement Agreement and Release ("Settlement Agreement").

E. The Settlement Agreement, among other consideration, provided for the dismissal of the Macpherson Lawsuit, certain payments to Macpherson, and the assignment to E&B of Macpherson's rights under the Lease and all other permits for the Macpherson Project which would allow E&B to proceed with a redesigned oil development project ("Project") under certain conditions. Under the terms of the Settlement Agreement, the City is required to place on the ballot, in a manner that comports with all applicable law, a measure that asks the voters whether to approve, among other things, "a development agreement that would afford E&B a vested right to proceed with the Project . . . ." (Settlement Agreement, p. 7.)

F. The California Elections Code sets forth the procedures for a local legislative body to submit a measure to the voters of the City. As contemplated in the Settlement Agreement, the City elected to undertake environmental review of the Project referenced in paragraph E above in accordance with the requirements of the California Environmental Quality Act ("CEQA"). On July 8, 2014, the City Council of City certified an Environmental Impact Report in compliance with CEQA by its adoption of Resolution No. 14-6908.

G. The California Legislature enacted Section 65864 *et seq*. of the Government Code, which provides that cities and counties may enter into development agreements with persons having legal or equitable development interests in real property. Section 65867.5 of the Government Code states that a development agreement is a "legislative act" to be approved by ordinance, and the California Constitution establishes the right of voters to approve legislative acts. Elections Code section 9222 authorizes the City Council to submit any ordinance to the voters for their approval. Section 65869 of the Government Code mandates Coastal Commission approval for any development agreement in an area where a local coastal program has not been certified.

H. The City has adopted rules and regulations for consideration of development agreements, pursuant to Government Code Section 65865, in Chapter 17.64 of the City's Municipal Code.

I. In compliance with the Settlement Agreement and all other applicable law, the City submitted the [**insert title of Ballot Measure**] ("Ballot Measure") to the voters of the City on [**insert date**] in compliance with California Elections Code Section 9222. The Ballot Measure includes the following legislative approvals: 1) an amendment to the Land Use Plan of the Local Coastal Program (a component of the City's General Plan) to modify the land use designation for the Property to allow for the implementation the Project and to provide energy policies in compliance with the California Coastal Act; 2) various amendments to the Municipal Code to allow the Project to proceed on the Property and to remove the restriction on the City's use of project royalties; 3) a franchise for oil and gas pipelines; 4) amendments to the Oil Code; and 5) this Development Agreement, and in connection with these legislative approvals, CEQA findings including a statement that the project benefits outweigh its unavoidable environmental impacts (i.e. a statement of overriding considerations). These legislative approvals are referred to in this Agreement as "Ballot Measure Approvals."

J. By approving the Ballot Measure and this Agreement, the voters of the City have determined that the public interest is served by entering into this Agreement because the Project, described in Exhibit B to this Agreement, will provide for the remediation of the City Maintenance Yard, and is expected to provide economic benefits to the City and to the Community in the form of royalties as described in the Lease and as further set forth in Exhibit C to this Agreement. In addition, pursuant to E&B's commitment in the Settlement Agreement to establish a revenue

stream to the Hermosa Beach School District, E&B has assigned to the Hermosa Beach Education Foundation a 1% overriding royalty interest in oil and gas produced from the Project site, with a $1,000,000 advance payment of royalty to the Foundation upon issuance by the City of the drilling permit for the first well. The Education Foundation's mission is "to promote investment in Hermosa Beach Public Schools and provide educational grants."

K. This Agreement will bind future City Councils to the terms and obligations specified in this Agreement and limit, to the degree specified in this Agreement, the future exercise of the City's ability to regulate development on the Property.

L. Upon approval by the voters of the Ballot Measure Approvals, this Agreement and the Project will be consistent with, and will serve to implement the policies, objectives, and standards of the elements of the City of Hermosa Beach General Plan and will be consistent with the standards of the Hermosa Beach Municipal Code (including the Oil Code).

M. This Agreement and the Project is consistent with, and will serve to implement, the provisions of Article 3 of the California Coastal Act.

N. This Agreement will eliminate uncertainty in planning and provide for the orderly development of the Property and generally serve the public interest.

AGREEMENT

NOW THEREFORE, in consideration of the above recitals, the mutual covenants and conditions herein contained, and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties agrees as follows:

1 DEFINITIONS

For purposes of this Agreement, except as otherwise expressly provided or unless the context otherwise requires:

"Agreement" means this Development Agreement by and between the City and E&B.

"Approval Date" means the date on which the Ordinance approving this Development Agreement becomes effective under Elections Code Section 9217, specifically ten days after the date the vote is declared by the City Council [INSERT DATE].

"Ballot Measure" means the measure that was approved by the voters on the Election Date.

"Ballot Measure Ordinance" or "Ordinance" means the ordinance that accomplishes the Ballot Measure Approvals.

"Ballot Measure Approvals" means the: 1) an amendment to the Land Use Plan of the Local Coastal Program (a component of the City's General Plan) to modify the land use designation for the Property to allow for the implementation the Project and to provide energy policies in compliance with the California Coastal Act; 2) various amendments to the Municipal Code to allow the Project to proceed on the Property and to remove the restriction on the City's use of project royalties; 3) a franchise for oil and gas pipelines; 4) amendments to the Oil Code; and 5) this Development Agreement, and in connection with these legislative approvals, CEQA findings including a statement that the project benefits outweigh its unavoidable environmental impacts (i.e. a statement of overriding considerations).

"CEQA" means the California Environmental Quality Act, Section 21000, *et seq.*, of the California Public Resources Code.

"City" means the City of Hermosa Beach, California.

"City Council" means the City Council of the City of Hermosa Beach.

"Code" or "HBMC" means the Municipal Code of the City of Hermosa Beach.

"Commencement Date" means that date when the Commission approves the Development Agreement under Government Code Section 65869; provided, however, if litigation challenging the validity of this Agreement including any Project Approvals and/or environmental review pursuant to CEQA should be brought against the City or the Coastal Commission, the Commencement Date shall be the date such litigation is concluded in a manner

that permits the commencement or continuation of the parties' rights and obligations under this Agreement.

"Commission" means the California Coastal Commission.

"Conditional Use Permit" means the Conditional Use Permit for Oil Development at the City Maintenance Yard, approved by the City in Resolution No. 93-5632, and the validity of which was confirmed by the Settlement Agreement, which is to be abandoned and superseded pursuant to the terms of this Agreement.

"Current Land Use Regulations" means the ordinances, resolutions, rules, regulations, requirements and official policies of the City in force as of the date on which the City Council calls the election on the Ballot Measure, as amended by the Ballot Measure Approvals.

"Development Agreement Act" means Section 65864 *et seq.,* of the California Government Code.

"E&B" means E & B NATURAL RESOURCES MANAGEMENT CORPORATION, a California corporation in the business of exploring for and producing oil and gas and each of its respective successors and assigns to all or any portion of its interests in the Property during such time as such portion is subject to this Agreement.

"Election Date" means March 3, 2015.

"Event of Default" is defined in Section 5.1.1.

"Exactions" means any requirement imposed by the City in connection with or pursuant to any land use regulation or land use approval process for the dedication of land, construction or improvement of public improvements or amenities, payment of development fees, or other mitigation measures required to mitigate the impacts of the development including, without limitation, all development impact fees or linkage fees, utility capacity fees, service or connection fees, major facilities fees, park fees, flood control fees, environmental impact mitigation fees, affordable housing fees, arts fees, transportation fees, child care fees and any similar governmental fees, charges and exactions required for the development of projects or property.

"Force Majeure Delay" is defined in Section 6.23.

"Future Ministerial Permits" is defined in Section 3.2.1.

"General Plan" means the General Plan of the City as of the Effective Date.

"Off-site Project Components" or **"Off-site Components"** means the Project components in the City of Hermosa Beach outside of the Property as described in Exhibit B to this Agreement, including (1) oil and gas pipelines along Valley Drive, Hermosa Beach, California, (2) supply staging/storage at 601 Cypress Avenue, Hermosa Beach, California, (3) a parking lot at 636 Cypress Avenue, Hermosa Beach, California, and (4) various locations outside the jurisdiction of Hermosa Beach. The location of (2) is more particularly described in Exhibit A-2 and the location of (3) is more particularly described in Exhibit A-3.

"Oil Code" means the Hermosa Beach Oil Code, Chapter 21A (Oil Production), approved by the City with Ordinance No. 85-803.

"Processing Fees" means all routine and generally applicable City-wide fees required by the City for processing applications and permits including, but not limited to, fees for land use applications, project permits, building applications, building permits, grading permits, maps and certificates of occupancy in effect at the time paid. Expressly exempted from Processing Fees are all Exactions.

"Project" means the proposed oil and gas drilling and production project as described in the Project Description contained in Exhibit B.

"Project Approvals" means the approvals for the Project as set forth in Section 2.6 of this Agreement.

"Public Benefits" means those improvements to be constructed, services to be provided and/or amounts to be paid by E&B to the City as consideration for this Agreement pursuant to Section 2.1 and Exhibit C.

"Term" means the term of this Agreement, as provided in Section 6.1 of this Agreement.

"Zoning Ordinance" means the comprehensive Zoning Ordinance of the City, found in Chapter 17 of the Code of the City of Hermosa Beach as it exists on the Effective Date.

2 THE DEVELOPMENT AGREEMENT PROCESS

2.1 Statement of Benefits and Consideration. The voters of the City have determined that the Project is a development for which a development agreement is appropriate. Development of the Project in accordance with a development agreement will provide for the orderly development of the Property in accordance with the objectives set forth in the General Plan, including the Land Use Plan of the Local Coastal Program, as amended. Moreover, a development agreement for the Project will achieve the purposes of California Government Code Section 65864, including the elimination of uncertainty in planning for and securing orderly development of the Property. In exchange for these and other benefits to the City, E&B will receive the assurance that E&B may develop the Project during the Term of this Agreement, subject to the terms and conditions herein contained. By approving Ballot Measure ___, the voters of the City have found and determined that this Agreement is consistent with the General Plan, including the Land Use Plan of the Local Coastal Program, as amended, and have approved this Agreement.

This Agreement does not (1) grant density or intensity in excess of that otherwise established in the Project Approvals, (2) supersede, nullify or amend any condition imposed in the Project Approvals, (3) guarantee to E&B any profits from the Project, or (4) prohibit or, if legally required, indicate E&B's consent to, the Property's inclusion in any public financing district or assessment district.

The City is expected to receive benefits as a result of the development of the Property in accordance with this Agreement, as set forth in Exhibit C, in recognition of and in exchange for this Agreement and the benefits provided to E&B pursuant to this Agreement. The voters of the City acknowledge the adequacy of the consideration provided by E&B to the City pursuant to this Agreement.

In consideration of the benefits, commitments and consideration to be provided by E&B pursuant to this Agreement and in order to strengthen the public planning process and reduce the economic costs of development, the voters of the City hereby provide E&B assurance that it can proceed with the development of the Property for the Term of this

Agreement pursuant to the land use, density and intensity specified in the Current Land Use Regulations, the Project Approvals and this Agreement. E&B would not enter into this Agreement or agree to provide the public benefits, commitments and consideration described in this Agreement if it were not for the certainty provided by this Agreement that the Property can be developed during the Term of this Agreement in accordance with the Current Land Use Regulations and the Project Approvals including the land use, density and intensity set forth in the Project Approvals.

2.2 Public Hearings. On June 23, 2014, the Planning Commission of the City, after providing notice as required by law, held public hearings on the legislative elements of the Project, including this Agreement and the amendments to the Hermosa Beach Municipal Code and Coastal Land Use Plan and the EIR. The City Council, after providing public notice as required by law, similarly held public hearings on the Project, including this Agreement on July 8, 2014, October 14, 2014, October 28, 2014 and November 13, 2014**.**

2.3 City Council and Voter Findings. The City Council adopted findings that review of the environmental impacts of this Agreement and the Project Approvals has been conducted in accordance with the provisions of CEQA and the State and local guidelines adopted thereunder, and the City Council has given consideration to such environmental review prior to placing the Ballot Measure on the ballot and has undertaken all actions necessary to comply with CEQA. In approving the Ballot Measure and this Agreement, the voters of the City have determined and found that this Agreement is consistent with the General Plan, including the Land Use Plan of the Local Coastal Program, as amended, and all other applicable City plans, policies and regulations, and is consistent with the standards of the Hermosa Beach Municipal Code (including the Oil Code), all as amended by the Ballot Measure Approvals.

2.4 Property. The Property includes all real property that is subject to this Agreement. The Property as of the Election Date is commonly known as City Maintenance Yard, as more fully described in Exhibit A-1 incorporated herein by reference.

2.5 The Project. The Project consists of the development, construction and operations on the Property permitted under this Agreement and the Project Approvals. The description of the Project and its uses are more fully described in the Project Description set forth in

Exhibit B which is incorporated herein by reference. The Project includes Off-site Components within the City of Hermosa Beach, and other elements located outside of the City.

2.6 Project Approvals. The Project includes, without limitation, all items described in the Project Description contained in Exhibit B and incorporated herein by reference and the following Project Approvals:

(a) Conditional Use Permit for Oil Development at the City Maintenance Yard, approved by the City in Resolution No. 93-5632 (as set forth in Section 2.7 below, to be abandoned per HBMC Section 17.70.030 and superseded pursuant to the terms of this Agreement);

(b) Environmental Impact Report, dated June 2014, prepared pursuant to CEQA and certified by the City Council on July 8, 2014 (with revisions identified in City Council Resolution No. 14-6908);

(c) Amendments to the Land Use Plan and Land Use Plan Map of the Local Coastal Program (a component of the City's General Plan), approved by Ballot Measure __ on _____, and by Commission [insert Commission action] on _____;

(d) Amendment to the Municipal Code, approved by Ballot Measure __ on _____;

(e) Franchise for Oil and Gas Pipelines, approved by Ballot Measure __ on _____;

(f) Amendment to the Oil Code, approved by Ballot Measure __ on _____; and

(e) Development Agreement, approved by Ballot Measure __ on _____, and by Commission [insert Commission action] on _____.

2.7. Abandonment of Conditional Use Permit. With adoption of the Ballot Measure, oil drilling

and production is permitted on the Property subject to a development agreement. The relevant conditions of approval from the 1993 Conditional Use Permit (CUP) for oil development at the Property (Resolution No. 93-5632) are incorporated into this Development Agreement as Exhibit D-1 herein, and E&B shall comply with said conditions as required herein. Thus, upon the Commencement Date, this agreement will supersede the 1993 CUP, which shall no longer serve a regulatory purpose. Hermosa Beach Municipal Code Section 17.70.030 allows for voluntary abandonment of a Conditional Use Permit. This Agreement at the Commencement Date shall serve as both a written request to abandon the CUP and the City's declaration that the 1993 CUP is abandoned.

3 VESTED DEVELOPMENT RIGHTS

3.1 Vested Rights to Develop. Subject to the terms, conditions, and covenants of this Agreement, including the Reservations of Power in Section 3.4, and the conditions of approval and mitigation measures attached hereto and incorporated herein as Exhibit D, E&B shall, as of the Approval Date, have a vested right to develop the Property and Project, including Off-site Components, in accordance with, and to the extent of, the Project Approvals, and the Current Land Use Regulations. The approved use of the Property, the density and intensity of use, the maximum height, footprint, and square footage of proposed buildings and structures, and provisions for reservation and dedication of land or public purposes shall be those set forth in the Project Approvals and the attached Exhibits. Nothing in this Agreement shall be deemed to obligate E&B to initiate development of the Project or any portion thereof within any period of time or at all, subject to the terms of the Lease and the Settlement Agreement, including but not limited to E&B's obligation to proceed with due diligence provided for in Section 12.3 of the Settlement Agreement.

3.1.1 Certain Changes Prohibited Without Consent of E&B. Except as otherwise provided in this Agreement, during the Term, the City shall not, as to the Property and the Project, including Off-site Components, without the prior written consent of E&B, which may be withheld in E&B's sole and unfettered discretion: (a) change the Current Land Use Regulations, or Project Approvals as they apply to the Property or Project so as to prevent or adversely affect development or construction of the Project in accordance with this Agreement, the Current Land Use Regulations or Project Approvals; or (b) apply to the Property or the Project any new or amended ordinance, resolution, rule, regulation,

requirement or official policy that is inconsistent with the Current Land Use Regulations or Project Approvals, so as to prevent or adversely affect development or construction of the Project in accordance with this Agreement, the Current Land Use Regulations or Project Approvals, or prevent or adversely affect the operation of the Project as contemplated hereby in accordance with the Current Land Use Regulations or Project Approvals; or (c) apply to this Agreement, the Property or the Project any new or amended ordinance, resolution, rule, regulation, requirement or official policy that requires additional discretionary review or approval not otherwise required for the Project by the Current Land Use Regulations or Project Approvals; or (d) apply to this Agreement, the Property or the Project any new or amended ordinance, resolution, rule, regulation, requirement or official policy that materially, adversely affects the timing or phasing of construction or development, or which limits the availability of utilities or other infrastructure for the Project. For the purposes of this Section 3.1, "prevent or adversely affect development or construction of the Project" shall include, without limitation, any changes which fundamentally affect the ability of any of the permitted uses to operate within the Project (e.g. prohibit any of the uses in the Project Approvals, change parking standards for any of the uses, etc.).

3.1.2 Rights are Vested. Unless amended or terminated in the manner specified in this Agreement (and subject to the provisions of this Agreement), E&B shall have the rights and benefits afforded by this Agreement and this Agreement shall be enforceable by E&B and the City notwithstanding any growth control measure, initiative, proposition or any development moratorium adopted after the Approval Date, or any change in the General Plan, zoning, or subdivision regulations adopted by the City which alter or amend the Current Land Use Regulations or Project Approvals or the adoption of any new or amended ordinance, resolution, rule, regulation, requirement or official policy that is inconsistent with the Current Land Use Regulations or Project Approvals and so as to prevent or adversely affect development or construction of the Project in accordance with the Current Land Use Regulations or Project Approvals. This Section shall be construed to prohibit the City from applying to the Property or the Project, including any Off-site Components, any development moratorium or growth control measure that is adopted specifically to prohibit the construction or operation of the Project, or as an interim measure pending contemplated General Plan, Specific Plan or

zoning changes, or as a general growth control management measure except as provided for pursuant to Section 3.4.

3.1.3 Future Changes to Current Land Use Regulations. Following the Approval Date, if the City modifies the Current Land Use Regulations in a manner that E&B, in its sole discretion, determines is more beneficial than the Current Land Use Regulations, then E&B may choose in its sole discretion to be governed by the modified land use regulations rather than the Current Land Use Regulations, without E&B being deemed to have waived or limited any rights, remedies or privileges under this Agreement.

3.2 Other Rights.

3.2.1 Future Ministerial Permits. E&B will seek additional ministerial permits as required by the City, including, without limitation, excavation only permits, grading permits, demolition permits, building permits, well permits, drilling permits and public works permits, as needed to implement the Project Approvals and to construct and operate the Project. Collectively, these ministerial permit applications are called the "Future Ministerial Permits". The City agrees that it will not unreasonably withhold or unreasonably condition any of the Future Ministerial Permits which must be issued by the City in order for the Project to proceed, provided that E&B reasonably and satisfactorily complies with all preliminary procedures, actions, payment of Processing Fees and criteria generally required for processing such Future Ministerial Permits, and provided further that such Future Ministerial Permits comply with this Agreement, the Current Land Use Regulations and the Project Approvals and approvals of other governmental agencies with jurisdiction over the Project. The City further agrees that no discretionary permits, other than the Project Approvals, are required from the City to construct and operate the Project.

3.3 Reservations of Power.

3.3.1 Limitations, Reservations and Exceptions. Notwithstanding any other provision of this Agreement, the following subsequent land use regulations shall apply to the development of the Property:

(a) Processing Fees (but not Exactions) imposed by the City to cover the

estimated actual costs to the City of processing applications for Project Approvals, fees for monitoring compliance with any Project Approvals, inspection fees, or fees for monitoring compliance with environmental mitigation measures.

(b) Procedural regulations applied on a City-wide, nondiscriminatory basis relating to City entities required to review petitions or applications, forms of petitions and applications, notice requirements, information requested with petitions or applications, conduct of hearings, form of staff reports, nature and type of recommendations by City entities, appeal procedures and any other similar matters of procedure.

(c) Regulations governing building codes and similar construction standards and specifications including, but not limited to, the California and International Codes, as they may be changed from time to time.

(d) Regulations that are necessary to protect the public health and safety, including without limitation, development moratorium or limitation on the delivery of City-provided utility services, which meet each of the following requirements: (a) are based on genuine health, safety and general welfare concerns (other than general growth management issues); (b) which arise out of a documented emergency situation, as declared by the President of the United States, Governor of California, or the Mayor or City Council of the City of Hermosa Beach; and (c) are based upon its terms or its effect as applied, does not apply exclusively or primarily to the Property or the Project. To the extent possible, any such regulations shall be applied and construed so as to provide E&B with the rights and assurances provided under this Agreement. This subsection governs generally applicable emergencies in the area not specifically related to or caused by the Project.

(e) Regulations that are not in conflict with the Project Approvals, Current Land Use Regulations or this Agreement. Any regulation, whether adopted by initiative or otherwise, limiting the rate, timing, phasing or

sequencing of development of the Property shall be deemed to conflict with the Project and shall therefore not be applicable to the development of the Property. Any regulation limiting the permitted uses of the Property, limiting the density or intensity of use of the Property, or limiting the size, height or location of improvements on the Property shall be deemed to conflict with the Project Approvals and shall therefore not be applicable to the development of the Property.

(f) Regulations that are in conflict with the Project, but as to which the E&B has given its prior written consent for such regulations to be applied to the Property or to the development of the Property.

(g) Regulations applied on a City-wide, non-discriminatory basis that do not prevent or adversely affect development or construction of the Project.

3.3.2 Modification or Suspension by State or Federal Law. In the event that state or federal laws or regulations, or those of any regional authority having jurisdiction over the Project or Property, enacted after the Approval Date of this Agreement, prevent or preclude compliance with one or more of the provisions of this Agreement or the Project conditions, such provisions of this Agreement shall be modified or suspended as may be necessary to comply with such state, federal, or regional authority laws or regulations and to effectuate to the extent possible the terms of this Agreement.

3.3.3 Police Power. The parties acknowledge and agree that City is restricted in its authority to limit its police power by development agreement and that the foregoing limitations, reservations and exceptions are intended to reserve to City all of its police power which cannot be so limited. This Agreement shall be construed to reserve to City all such power and authority which cannot be restricted by development agreement.

3.3.4 Taxes, Assessments and Fees. Anything herein to the contrary notwithstanding, City may impose on the Project any new non-discriminatory, City-wide taxes, assessments and fees, including but not limited to business license taxes or franchise fees, but not including any Exaction or other fee designated to mitigate the impact of development of the Project.

3.4 Regulation by Other Public Agencies. It is acknowledged by the parties that other public agencies not within the control of the City may possess authority to regulate aspects of the development of the Property separately from or jointly with City, and this Agreement does not limit the authority of such other public agencies. Changes to the project mandated by such regulatory agencies shall be automatically included into this Development Agreement as authorized in Section 11.F of the Ballot Measure and shall supersede any inconsistent provisions herein.

3.5 Agreement and Assurances on the Part of E&B. Without in any way limiting E&B's rights under Section 5.2.2 not to proceed with development of the Project and, in such an event, to terminate this Agreement in its sole and subjective business judgment, if E&B proceeds with the Project, E&B agrees that it will use commercially reasonable efforts, in accordance with its own business judgment and taking into account market conditions and economic considerations, to develop the Project, in accordance with the terms and conditions of this Agreement, the Current Land Use Regulations, the Lease and the Project Approvals.

3.6 Public Benefits.

3.6.1 The parties acknowledge and agree that development of the Project will result in public benefits as set forth in Exhibit C. The voters of the City acknowledge the adequacy of the consideration, including the Public Benefits, provided by E&B pursuant to this Agreement.

3.6.2 Exactions and Processing Fees.

3.6.2.1 Exactions. No Exaction may be imposed on this Project except as specifically articulated in this Agreement, and except as required by the conditions of approval and the Mitigation Monitoring and Reporting Program contained in Exhibit D.

3.6.2.2 Processing Fees. E&B shall pay to the City all applicable Processing Fees regularly charged by the City and the amount of such Processing Fees may be increased from time to time on a non-discriminatory City-wide basis.

3.7 Public Improvements and Utilities

3.7.1 Installation Obligations. The parties hereby agree that the obligations to install public improvements and utilities necessary for the development of the Property shall be as provided for in the Project Approvals.

3.7.2 City-Provided Utilities: Reservation of Sufficient Capacity. To the extent that it is within the control of the City, the City shall use its best efforts to ensure that there shall be sufficient capacity, facilities and services with respect to City-provided utilities to complete construction of the Project, provided that E&B bear all costs incurred by the City in doing so. The City agrees that if limitations in the provision of utilities become necessary due to the existence of an emergency situation, they shall be applied only to the extent necessary to respond to such emergency, and shall not be applied against the Property or the Project in a discriminatory manner.

3.7.3 City-Provided Utilities: Nondiscriminatory Rates and Provision of Service. The City agrees that rates and charges for City-provided utilities for the Property and Project shall not be set or imposed in a discriminatory manner, but shall be those rates and charges that are or would be generally applicable to any user of a comparable quantity and quality of the utility use in the City (i.e., any other entity whose use or consumption of the utility is comparable to that of E&B), and that the City shall not discriminate against the Property or the Project in the provision of any City-provided utilities (such as potable and reclaimed water, sewer and drainage).

3.7.4 Dedications, Reservations and Conditions of Development. The portions of Property to be reserved or dedicated for public purposes pursuant to this Agreement, if any, shall be that property described in the Project Approvals. Unless otherwise indicated herein, the property described in the Project Approvals to be reserved or dedicated for public use shall be dedicated by E&B as provided in the Project Approvals. The City shall take such actions as may be necessary to vacate any prior dedications, offers to dedicate and grants of easements that are no longer necessary for the development of the Project in accordance with this Agreement.

3.8 Mitigation Measures and Conditions of Approval. E&B shall at its own expense timely perform all mitigation measures identified in the environmental documentation for the Project and conditions of approval identified in the Project Approvals as set forth in

Exhibit D. E&B shall have no duty to complete the mitigation measures or conditions of approval, except as otherwise set forth in this Agreement, if the contemplated development fails to occur.

4 ASSIGNMENT, AMENDMENT AND REVIEW

4.1 Assignment

4.1.1 Right to Assign. E&B shall have the right to sell, transfer or assign its rights or interests in the Property in whole or in part (provided that no such partial transfer shall be permitted to cause a violation of the Subdivision Map Act, Government Code Section 66410 *et seq.)* to any person, partnership, joint venture, firm or corporation at any time during the Term, other than Macpherson or any of its related entities, subject to the City's consent, as provided in Subsection 4.1.2. The conditions and covenants set forth in this Agreement and incorporated herein shall run with the land and the benefits and burdens shall bind and inure to the benefit of the parties. Any such sale, transfer or assignment shall include the assignment and assumption of the rights, duties and obligations arising under or from this Agreement with respect to the property transferred and shall be made in strict compliance with the following requirements:

(a) Except as provided in Section 6.17 of this Agreement, no sale, transfer or assignment of any right or interest under this Agreement shall be made unless made together with the sale, transfer or assignment of all or a part of the Property and then, only in accordance herewith.

(b) Concurrently with the closing of such sale, transfer or assignment, E&B shall provide the City with an executed agreement by the purchaser, transferee or assignee and providing therein that the purchaser, transferee or assignee expressly and unconditionally assumes the duties and obligations of E&B under this Agreement to the extent of such transfer or assignment, in a form satisfactory to the City Attorney.

(c) The purchaser, transferee or assignee shall provide the City with security equivalent to any security previously provided by E&B to secure performance of its obligations hereunder, if any, or under any of the

Project Approvals.

Any sale, transfer or assignment under Section 4.1 of this Agreement not made in strict compliance with the foregoing conditions shall constitute a default by E&B under this Agreement and any such assignment shall be void and of no effect. Notwithstanding the failure of any purchaser, transferee or assignee to execute the agreement required by subparagraph (b) of this Subsection 4.1.1, the burdens of this Agreement shall be binding upon such purchaser, transferee or assignee, but the benefits of this Agreement shall not inure to such purchaser, transferee or assignee until and unless such agreement is executed.

4.1.2 City's Reasonable Consent Required. E&B may sell, transfer or assign its rights or interests in the Property in whole or in part and this Agreement to any other person, partnership, joint venture, firm, corporation, trust or other lawful entity other than Macpherson or any of its related entities with the City's consent, which consent shall not be unreasonably withheld or conditioned or delayed ("Transfer"). In the event E&B desires to make such Transfer, E&B shall submit to the City a request for approval at least ninety (90) days prior to such Transfer, which approval shall not be unreasonably withheld, conditioned or delayed by the City. The City may withhold, condition or delay its approval upon finding of any of the following:

(a) The proposed purchaser, transferee or assignee lacks the financial ability to perform the obligations of this Agreement;

(b) The proposed purchaser, transferee or assignee lacks the necessary qualifications, competence, experience or capability to implement the development plan contemplated by the Project Approvals with the skill, expertise and quality equivalent to that of E&B; provided, however, if the proposed purchaser, transferee or assignee is a nationally or regionally recognized, or regionally known in Southern California, as an owner or developer of oil and gas facilities, such proposed purchaser, transferee or assignee shall be deemed to have met this requirement; or

(c) The proposed purchaser, transferee or assignee or any related person or entity has a record of material performance failure operating oil drilling and production projects at other locations that resulted in environmental damage, injuries to person or property or other conditions or circumstances detrimental to public health and safety;

(d) An Event of Default by E&B as defined in Section 5.1.1 has occurred and is continuing under this Agreement. E&B's request for approval of a Transfer shall be accompanied by all documentation reasonably calculated to allow the City to evaluate the qualifications of the proposed Transferee; notwithstanding, E&B shall provide to the City such additional information and documentation that the City reasonably requests in order for the City to make any determinations provided for by this Subsection 4.1.2. E&B agrees to provide such information on a timely basis sufficient to permit the City to make its determinations within the ninety (90) day time period. Should the necessary documentation not be provided timely, or should the information and documents provided reasonably require additional review, evaluation and consideration by the City or the City's consultants that cannot be completed within the ninety (90) day time period, the City may in its reasonable discretion extend this period as necessary to complete its review of the proposed transfer for an additional thirty (30) days, or longer if the reason for the delay is E&B's failure to provide the documentation in a timely manner, in which case a reasonable time may be provided to review such documentation once provided by E&B.

4.1.3 Applicability. The provisions of Sections 4.1.1 and 4.1.2 shall not be applicable to a Transfer as a result of which E&B retains at least a fifty (50) percent interest in the Property.

4.2 Changes and Amendments to Project

4.2.1 In the event E&B reasonably finds that a change or amendment in the Project Approvals is reasonably necessary or appropriate, E&B shall apply for any required changes to the

Project Approvals. Any such application that does not require an amendment to the Zoning Ordinance, or General Plan shall be processed in the normal manner for processing such matters in accordance with the Current Land Use Regulations, except as otherwise provided by this Agreement, including the Reservations of Power. Any application that requires an amendment to the Zoning Ordinance, or General Plan shall be processed in the normal manner for processing such matters in accordance with the land use regulations in effect at the time the application is filed.

4.2.2 Minor Changes to Project - No Amendment of Agreement . The parties acknowledge that refinements or modifications of the Project may be required during the Term. The parties agree that refinements and modifications which constitute a "Minor Change" in the Project or Project Approvals shall not require an amendment to this Agreement or public notice and a hearing. For any such Minor Change, the City shall not impose as a condition to approval any Exaction, except as authorized in this Agreement. The City Manager, subject to the City Council's approval, shall be authorized to make the determination on behalf of the City whether a requested refinement or modification may be effectuated pursuant to this Section 4.2.2 or whether the requested refinement or modification is of such a character to require an amendment hereof pursuant to Section 4.2.3. The City Manager, subject to the City Council's approval, shall be authorized to approve any Minor Changes hereunder on behalf of the City. If and when the parties find that Minor Changes are necessary or appropriate, they shall, unless otherwise required by law, effectuate such changes or adjustments through a letter prepared by the City Manager and approved by the City Council, which, after execution, shall be attached hereto as addenda and become a part hereof. The City Manager may consult with technical experts in making the determination that a requested refinement or modification is a "Major" or "Minor Change." The City Manager shall not unreasonably withhold or delay its determination that a requested refinement or modification is a "Minor Change" as that term is used herein. The changes described below shall not be deemed Minor Changes; however, the examples listed below are listed for reference only, and are not intended to provide a complete list of changes that may not be deemed as Minor Changes:

(a) Alters the permitted uses of the Property as a whole;

(b) Requires an amendment to the Zoning Ordinance, or General Plan, or other legislative acts not contemplated in this Agreement;

(c) Increases the density or intensity of use of the Property as a whole;

(d) Constitutes a project requiring a subsequent or supplemental environmental impact report pursuant to Public Resources Code Section 21166;

(e) Creates a situation adverse to public health or safety.

4.2.3 Other Changes. Any change in the Project which does not qualify as a "Minor Change" as defined herein shall require an amendment to this Agreement as provided in Section 6.9, and compliance with CEQA as applicable.

4.3 Annual/Special Review.

4.3.1 Annual Review. The City shall, at least every twelve (12) months during the Term of this Agreement, review the extent of good faith substantial compliance by E&B with the terms of this Agreement. Subject to the notice and cure procedure set forth in Section 5.1.2, such a periodic review may result in amendment or termination of this Agreement, provided a default has been established under the terms of this Agreement. Pursuant to Government Code Section 65865.1, as amended, E&B shall have the duty to file an annual review request with the City, pay any applicable Processing Fees for such annual review and demonstrate its good faith compliance with the terms of this Agreement at such periodic review. Processing fees for such review are to include, but are not limited to, all costs incurred by the City in retaining the necessary professionals and experts to provide the City with the necessary input regarding the annual review, including but not limited to City Attorney, consultant and other third parties the City deems necessary to conduct the annual review. Upon request by the City, E&B shall provide such information as may be necessary or appropriate in order to ascertain compliance with this Agreement.

4.3.1.1 Any party may address any requirement of this Agreement during the review. However, ten (10) days' written notice of any requirement to be addressed shall be

made by the requesting party. If at the time of review an issue not previously identified in writing is required to be addressed, the review at the request of either party shall be continued to afford sufficient time for analysis and preparation.

4.3.2 Special Review. The City Council may order a special review of compliance with this Agreement at any time. The Director of Community Development or City Council, as determined from time to time by the City Council, shall conduct such special reviews. Any special review shall comply with the procedural provisions and Processing Fees of an annual review as provided by Section 4.3.1.

4.3.3 Opportunity to be Heard. Upon written request to the City by E&B, E&B shall be permitted an opportunity to be heard orally and/or in writing at a hearing before the City Council regarding its performance under this Agreement. E&B shall also be heard before the City Council at any required public hearing concerning a review of action on the Agreement. Such hearings requested by E&B shall be subject to the Processing Fees provision of Section 4.3.1.

4.3.4 Information to be Provided E&B. The City shall, to such an extent as is practical, deposit in the mail to E&B a copy of staff reports and related exhibits concerning contract performance a minimum of seven (7) business days prior to any such review or action upon this Agreement by the Planning Commission or the City Council.

5 DEFAULT, REMEDIES AND TERMINATION

5.1 Enforceability.

5.1.1 Default. Subject to Sections 5.1.2 and 5.1.3, failure by any party to perform any term or provision of this Agreement required to be performed by such party shall constitute an event of default ("Event of Default"). In the event that E&B files for reorganization or other relief under any Federal or State bankruptcy or insolvency law, whether voluntarily or by involuntary bankruptcy or insolvency action, all provisions of this Agreement shall remain in full force and effect unless E&B engages in an Event of Default. For purposes of this Agreement, a party claiming another party is in default shall be referred to as the "Complaining Party", and the party alleged to be in default shall be referred to as the "Party in Default".

5.1.2 Procedure Regarding Defaults.

5.1.2.1 Notice of Default. The Complaining Party shall give written notice of default to the Party in Default, specifying the default complained of by the Complaining Party. Delay in giving such notice shall not constitute a waiver of any default nor shall it change the time of default. The Party in Default shall diligently endeavor to cure, correct or remedy the matter complained of, provided the such cure, correction or remedy shall be completed within the applicable time period set forth herein after receipt of written notice (or such additional, time as may be deemed by the Complaining Party to be reasonably necessary to correct the matter). Any failures or delays by a Complaining Party in asserting any of its rights and remedies as to any default shall not operate as a waiver of any default or of any such rights or remedies. Delays by a Complaining Party in asserting any of its rights and remedies shall not deprive the Complaining Party of its right to institute and maintain any actions or proceedings which it may deem necessary to protect, assert, or enforce any such rights or remedies. If an Event of Default occurs, prior to exercising any remedies, the Complaining Party shall give the Party in Default written notice of such default. Without limitation, evidence of default may arise in the course of the regularly scheduled annual review or a special review described in Section 4.3.

5.1.2.2 Cure Periods. If the default is reasonably capable of being cured within thirty (30) days, the Party in Default shall have such period to effect a cure prior to exercise of remedies by the Complaining Party. If the nature of the alleged default is such that it cannot practicably be cured within such thirty (30) day period, the cure shall be deemed to have occurred within such thirty (30) day period if (i) the cure is commenced at the earliest practicable date following receipt of the notice; (ii) the cure is diligently prosecuted to completion at all times thereafter; (iii) at the earliest practicable date (in no event later than thirty (30) days after the curing party's receipt of the notice), the curing party provides written notice to the other party that the cure cannot practicably be completed within such thirty (30) day period; and (iv) the cure is completed at the earliest practicable date. In no event shall the Complaining Party be precluded from exercising remedies, subject to the preceding sentence if a default is not cured within sixty (60) days after the first notice of default is given. Subject to the foregoing, if a

party fails to cure a default in accordance with the foregoing, the Complaining Party, at its option, may terminate this Agreement pursuant to this Agreement and California Government Code Section 65868, and/or institute legal proceedings pursuant to this Agreement.

5.1.2.3 Procedures Regarding City Termination. Notice of intent to terminate shall be by certified mail, return receipt requested. Upon delivery by the City of notice of intent to terminate, the matter shall be scheduled for consideration and review by the City Council within thirty (30) days in accordance with Government Code Sections 65867 and 65868. Upon consideration of the evidence presented in said review and a determination by the City Council based thereon, the City may give written notice of termination of this Agreement to E&B. Any determination of default (or any determination of failure to demonstrate good faith compliance as a part of annual review) made by the City against E&B, or any person who succeeds to E&B with respect to any portion of the Property, shall be based upon written findings supported by substantial evidence in the record. Any purported termination of this Agreement for alleged default shall be subject to review in the Superior Court of the County of Los Angeles pursuant to Code of Civil Procedure § 1094.5(c).

5.1.3 Institution of Legal Action. Subject to notice of default and opportunity to cure under Section 5.1.2, and subject further to the limitation on remedies set forth in Section 5.1.4, in addition to any other rights or remedies, any party to this Agreement may institute legal action to cure, correct or remedy any default, to enforce any covenants or agreements herein, to enjoin any threatened or attempted violation hereof, or to obtain any other remedies consistent with this Agreement. If a legal action or proceeding is brought by any party to this Agreement because of an Event of Default under this Agreement, or to enforce a provision hereof, the prevailing party shall be entitled to reimbursement of all costs and expenses, including reasonable attorneys' fees, incurred in prosecuting such legal action or proceeding. This provision is separate and several and shall survive the merger of this Agreement into any judgment on this Agreement. Additionally, in the event of a court finding in an action brought by the City (1) a violation of this development agreement or the conditions of approval in Exhibit D to this Agreement resulting in a condition detrimental to the public health or safety and

following notice and an opportunity to cure pursuant to Section 5.1.2, or (2) a violation of an order issued under Hermosa Beach Oil Code Section 21-A-10.1 (following disposition of an appeal if any filed under Section 21-A-10.2), a court may impose civil penalties up to $10,000/per day for each day in which E&B is determined to be non-compliant.

5.1.4 Remedies.

5.1.4.1 E&B's Remedies. It is acknowledged by the parties that the City would not have entered into this Agreement if it were liable in damages under or with respect to this Agreement or the application thereof. In addition, the parties agree that monetary damages are not an adequate remedy for E&B if the City should be determined to be in default under this Agreement. The parties further agree that specific performance shall be E&B's only remedy under this Agreement and E&B may not seek monetary damages in the event of a default by City under this Agreement. E&B covenants not to sue for or obtain monetary damages for the breach by City of any provision of this Agreement.

5.1.4.2 City's Remedies. The parties agree that the City shall have limited remedies for monetary damages and specific performance as specifically provided for in this Section 5.1.4.2. The City shall not have any right to compel specific performance with respect to the construction of the Project, or any obligation to construct the Project, including without limitation Section 3.7. Further, the City shall have no right to monetary damages as a result of E&B's failure to construct the Project or its failure to comply with Section 3.7. The City shall have the right to sue for monetary damages for failure by the E&B to pay any amounts owing under this Agreement including without limitation any amounts owing pursuant to Section 6.5.1. In no event shall the City be entitled to punitive damages for any breach of this Agreement. City also shall have the right to seek monetary damages for reimbursement of the actual cost to the City incurred by the City to construct, complete, demolish, remove or restore any physical infrastructure improvement in the public right of way which E&B commences construction of but fails to complete. If E&B's failure or refusal to perform any provision of this Agreement causes an immediate and serious threat to life, health, property or natural resources, the City may pursue all remedies including but not limited to remedies available under the Hermosa Beach Oil Code Chapter 21-A (including the

provisions of Article X, which allow for immediate cessation of operations) and Section 21 of the Lease.

5.1.4.3 Other Actions. Nothing in this Agreement shall be deemed to waive or limit any rights and remedies that the parties would otherwise have against the other relating to matters not covered by this Agreement.

5.2 Termination of Agreement.

5.2.1 As to the Property and all of the rights of E&B hereunder, and except as otherwise provided in this Agreement, this Agreement shall be deemed terminated and of no further effect upon the expiration of the Term of this Agreement unless earlier terminated pursuant to this Agreement. Subject to the notice and cure provisions set forth in Section 5.1.2, the City shall have the right to terminate this Agreement as to the Property and the rights of E&B hereunder, in the event E&B defaults and fails to cure such default within the respective cure period. Subject to the notice and cure provisions set forth in Section 5.1.2, E&B shall have the right to terminate this Agreement and the rights of the City hereunder in the event the City defaults and fails to cure such default within the respective cure period. Upon the termination of this Agreement, neither party shall have any further right or obligation with respect to the Property hereunder except with respect to any obligation to have been performed prior to such termination or with respect to any default in the performance of the provisions of this Agreement which has occurred prior to such termination (other than commencement of construction of either phase) or with respect to any obligations which are specifically set forth as surviving this Agreement. Termination of this Agreement pursuant to this Section 5.2 shall cause the rights and benefits afforded by this Agreement to no longer be vested (subject to planning and zoning law) and as a result, the City shall no longer be limited from taking any action which may adversely affect the Property or the Project.

5.2.2 Termination by E&B Prior to Development. E&B is free, in its sole and subjective business judgment, not to proceed with development of the Project and, in such an event, to terminate this Agreement. The City acknowledges that such a right is consistent with the intent, purpose and understanding of the parties to this Agreement. In the event E&B decides not to proceed with development of the Project and to terminate this Agreement,

E&B shall provide written notice to the City of that decision and of the final, irrevocable termination of this Agreement. Immediately upon the giving of such written notice to the City, the parties' rights and obligations under this Agreement shall cease, except with respect to any obligations which are specifically set forth as surviving this Agreement. In the event of such written notice to the City terminating this Agreement, all Project Approvals (but not the Lease, Settlement Agreement and those included in the City's General Plan and/or the Municipal Code), shall terminate and be extinguished. Termination by E&B shall not affect any of E&B's obligations to pay assessments, liens or taxes incurred prior to the effective date of termination.

6 GENERAL PROVISIONS

6.1 Term.

6.1.1 Term. The Term of this Agreement shall commence upon the Commencement Date and shall be coterminous with the term of the Lease, unless terminated, modified or extended pursuant to the provisions of this Agreement or by the voters of the City. The Term of this Agreement shall be tolled during any period of time in which a Force Majeure Delay exists.

6.1.2 Additional Rights. Expiration or termination of this Agreement shall not affect any right vested under law independent of this Agreement.

6.2 Approval, Execution and Recordation Procedure. The following procedure shall govern approval of this Agreement:

(a) The voters shall have approved Ballot Measure __ approving this Agreement;

(b) Following voter approval, the Hermosa Beach City Council shall declare the vote in accordance with Elections Code Section 9217 and execute the Development Agreement;

(c) As provided in Section 65868.5 of the Development Agreement Act, following execution by the City, the City shall cause a copy of this

Agreement to be recorded with the County Recorder within ten (10) days. Any recording costs shall be paid by E&B; and

(d) Following execution and recordation, the Coastal Commission shall have approved this Agreement (which shall include any revisions to this Agreement authorized by Section 10.F of the Ballot Measure Ordinance);

6.3 Cooperation and Implementation. City represents that it will cooperate with E&B to the extent reasonable and feasible to implement this Agreement. Upon satisfactory completion by E&B of all of its preliminary actions and payments of appropriate fees, City shall commence and proceed with reasonable diligence to complete all steps necessary for the implementation of this Agreement and the development of the Property in accordance with the terms of this Agreement, including, but not limited to, the processing and checking of any and all Project Approvals, agreements, covenants and related matters required under the conditions of this Agreement, building plans and specifications, and any other plans necessary for the development of the Property, requests for inspections and certificates of occupancy, filed by or on behalf of E&B. E&B shall, in a timely manner, provide City with all documents, plans and other information necessary for the City to carry out its obligations hereunder, and pay for all necessary fees, costs, and expenses incurred by the City to facilitate implementation of this agreement that are not identified as the City's responsibility.

6.4 Legal Challenges.

6.4.1 Defense. If any legal action or other proceeding is instituted by a third party or parties, other governmental entity or official challenging the validity of any provision of the Project Approvals, of the EIR or of this Development Agreement, E&B and the City shall cooperate in defending any such action. The City shall notify E&B of any such legal action against City within ten (10) days after the City receives service of process, except for any petition for a Temporary Restraining Order, in which case the City shall notify E&B immediately upon receipt of notice thereof.

6.4.2 Continued Processing. The filing of any lawsuit(s) by a third party (not a party to this Agreement) after the Approval Date against the City and/or E&B relating to this Agreement or to other development issues affecting the Project shall not delay or stop the

processing or issuance of any permit or authorization necessary for development of the Project, unless required by court order.

6.5 Indemnity.

6.5.1 E&B Indemnity. To the fullest extent permitted by law, and notwithstanding the indemnification provisions set forth in the Lease and notwithstanding the limits of the insurance policies required herein, E&B hereby agrees, at its sole cost and expense, to defend, protect, indemnify, and hold harmless the City and its elected officials, officers, attorneys, agents, employees, consultants, volunteers, successors, and assigns (collectively "Indemnitees") from and against any and all third party damages, costs, expenses, liabilities, claims, demands, causes of action, proceedings, expenses, judgments, penalties, liens, and losses of any nature whatsoever, including reasonable fees of accountants, attorneys, engineers, consultants or other professionals and all costs associated therewith, arising or claimed to arise, directly or indirectly, out of, in connection with, resulting from, or related to any act, failure to act, error, or omission of E&B or any of its officers, agents, servants, lessees, employees, contractors, subcontractors, materialmen, suppliers or their officers, agents, servants, lessees, or employees, or arising or claimed to arise, directly or indirectly, out of, in connection with, resulting from, or related to this Agreement or Project Approvals, or any approval subsequently granted by the City for the development of the Property, any construction permitted pursuant to this Agreement or Project Approvals, or any subsequent use of the Property, or any portion thereof, permitted by this Agreement or Project Approvals except for any actions resulting from the gross negligence or intentional acts of an Indemnitee. The City may elect to participate in the litigation, in which case E&B agrees to reimburse the City for its litigation costs and fees, including the retention of outside counsel to be selected by the City at the City's sole discretion. Neither party shall settle any such lawsuit without the consent of the other party.

6.5.2 Survival of Indemnity. The indemnity provisions contained in Sections 6.4 and 6.5 shall survive the termination of the Agreement and are in addition to any other rights or remedies which Indemnitees may have under the law. Payment is not required as a condition precedent to an Indemnitee's right to recover under these indemnity provisions, and an entry of judgment against an Indemnitee shall be conclusive in favor of the

Indemnitee's right to recover under these indemnity provisions. E&B shall pay Indemnitees for any reasonable attorneys' fees and costs incurred in enforcing these indemnification provisions.

6.6 Notices. All notices or other communications required hereunder shall be in writing and shall be personally delivered (including by means of professional messenger service), or sent by registered or certified mail, postage prepaid, return receipt required, or by electronic mail (provided the email transmission is followed by delivery of a "hard" copy), and shall be deemed received on the date of receipt personally, by registered or certified mail or by facsimile.

Unless otherwise indicated in writing, such notice shall be sent addressed as follows:

If to the City:

City Manager
City of Hermosa Beach
1315 Valley Drive
Hermosa Beach, CA 90254

With a copy to:

Michael Jenkins, Esq.
Jenkins & Hogin
1230 Rosecrans Avenue, Suite 110
Manhattan Beach, CA 90266
Telephone: (310) 643-8448
Fax: (310) 643-8441

If to E&B:

E & B Natural Resources Management Corporation
1600 Norris Road
Bakersfield, CA 93308

Telephone: (661) 679-1797
Fax:

With a copy to:

[name]

Telephone:
Fax:

6.7 No Third Party Beneficiaries. This Agreement is made and entered into for the sole protection and benefit of the parties to this Agreement and their successors and assigns. No other person shall have any right of action based upon any provision of this Agreement.

6.8 Time of Essence. Time is of the essence for each provision of this Agreement of which time is an element.

6.9 Modification, Amendment or Extension. Subject to any notice and hearing requirements imposed by law, this Agreement may be modified, amended and/or extended from time to time by mutual written consent of the City Council and E&B as set forth in Government Code Sections 65867, 65867.5 and 65868 and as authorized by Section 11.G of the Ballot Measure Ordinance and Chapter 19.66 of the Municipal Code.

6.10 Conflicts of Law. In the event that state, regional or federal laws or regulations enacted after the Approval Date or the action or inaction of any other affected governmental jurisdiction prevent or preclude compliance with one or more provisions of this Agreement

or require changes in plans, maps or permits approved by the City, the parties shall (a) provide the other party with written notice of such state, regional or federal restriction, provide a copy of such regulation or policy and a statement of conflict with the provisions of this Agreement, and (b) E&B and the City staff shall, within thirty (30) days, meet and confer in good faith in a reasonable attempt to modify this Agreement, but only to the minimum extent necessary to comply with such federal, regional or state law or regulation. Thereafter, regardless of whether the parties reach an agreement on the effect of such federal, regional or state law or regulation upon this Agreement, the matter shall be scheduled for hearings before the Council. Ten (10) days' written notice of such hearing shall be given, pursuant to Government Code Sections 65090 and 65867. The Council, at such hearing, shall determine the exact modification or suspension which shall be necessitated by such federal, regional or state law or regulation. E&B, at the hearing, shall have the right to offer oral and written testimony. Any modification or suspension shall be taken by the affirmative vote of not less than a majority of the authorized voting members of the Council. Any suspension or modification may be subject to judicial review. The City shall cooperate with E&B in the securing of any permits which may be required as a result of such modifications or suspensions, subject to the payment of costs by E&B as set forth in Condition A-3 of Exhibit D-2 (and any other reimbursement authorized under this agreement), and the indemnity provisions in Section 6.5 of this agreement. If E&B and the City do not agree on the modification or suspension, either party may elect to terminate this Agreement pursuant to the provisions of Section 5.2 of this Agreement.

6.11 Waiver. No waiver of any provision of this Agreement shall be effective unless in writing and signed by a duly authorized representative of the party against whom enforcement of a waiver is sought and referring expressly to this Section. No waiver of any right or remedy in respect of any occurrence or event shall be deemed a waiver of any right or remedy in respect of any other occurrence or event

6.12 Successors and Assigns. Except as expressly provided to the contrary in this Agreement, the burdens and obligations of this Agreement shall be binding upon, and the benefits of this Agreement shall inure to, all successors in interest to the parties to this Agreement and all successors in interest to the Property or any portion thereof or any interest therein, and shall be covenants running with the land.

6.13 Governing State Law. This Agreement shall be construed in accordance with the laws of the State of California.

6.14 Constructive Notice and Acceptance. Every person who now or hereafter owns or acquires any right, title or interest in or to any portion of the Property is and shall be conclusively deemed to have consented and agreed to every provision contained herein, whether or not any reference to this Agreement is contained in the instrument by which such person acquired an interest in the Property.

6.15 Statement of Compliance. Within thirty (30) days following any written request, in accordance with the notice provisions of this Agreement, which either party may make from time to time, and upon payment of a fee to the City to reimburse the City for its reasonable expenses associated herewith, the other party shall execute and deliver to the requesting party a statement certifying that: (a) this Agreement is unmodified and in full force and effect or, if there have been modifications hereto, that this Agreement is in full force and effect, as modified, and stating the date and nature of such modifications; (b) that this Agreement is in full force and there are no current uncured defaults under this Agreement or specifying the dates and nature of any such defaults, and manner of cure; (c) any other information reasonably requested. The failure to deliver such statement within such time shall be conclusive upon the party which fails to deliver such statement that this Agreement is in full force and effect without modification except as may be represented by the requesting party and that there are no uncured defaults in the performance of the requesting party. Said statement(s) shall be in the form reasonably satisfactory to the City, E&B and to any purchaser, lender, title company, governmental agency, or other person reasonably requesting such statement(s) in connection with sale, use, development, construction, financing or marketing of the Property. The City and E&B, for their own respective uses, shall also be entitled to obtain a statement of compliance at any reasonable time.

6.16 Insurance.

6.16.1 E&B shall obtain and continuously maintain throughout the term of this Agreement, insurance required by this Section 6.16, which shall also serve to satisfy the insurance requirements of section 18(b) and Exhibit C to the Lease. All insurance required to be

carried by E&B shall be with companies rated A:X or better, in the then most recent edition of Best's Insurance Guide, and licensed to provide the relevant insurance in the State of California. E&B's indemnification and defense obligations under this Agreement are not limited to the type or amount of insurance coverage that E&B is required to provide hereunder.

Certificates of Insurance required to be delivered by this Section 6.16 shall contain liability limits not less than those set forth in this Section 6.16. Commercial general liability and control of well insurance policies shall include the City and the California State Lands Commission and their elected and appointed officials, employees, agents, consultants and representatives as additional insureds. All endorsements or policy provisions adding insureds to required insurance policies shall contain no added limitations, conditions, restrictions or exceptions to coverage in addition to those that apply under the insurance policy generally. E&B shall deliver the required Certificates of Insurance and binders evidencing the insurance required by this Section 6.16 prior to issuance of the City drilling permit for the first well and the insurance policies within thirty (30) days thereafter. Evidence for renewals of required policies shall be submitted to City for city approval not later than ten (10) business days prior to the expiration date of each insurance policy, or at such later date as E&B may request, but in no event later than one business day prior to the expiration date of such existing policies.

The general liability policy shall be endorsed to state that coverage cannot be canceled, voided, suspended, adversely modified, or reduced in coverage or in limits (including for non-payment of premium) except after thirty (30) days' prior notice (or ten (10) days in the case of cancellation for non-payment of premium) has been given to City; provided that E&B may obtain as comparable an endorsement as possible, so long as such endorsement does not include any limitation of liability of the insurer for failure to provide such notice. E&B shall give the City an unqualified thirty (30) day notice of cancellation, non-renewal or material amendment thereof.

In the event that an insurer providing any of the insurance policies becomes the subject of

bankruptcy proceedings, becomes insolvent, or is the subject of an order or directive limiting its business activities given by any regulatory authority, including the State Department of Insurance, E&B shall exercise best efforts to promptly, and at its sole cost and expense, secure alternative coverage in compliance with the insurance requirements contained in this Section 6.16 so as to avoid any lapse in insurance coverage.

Each insurance policy required herein shall provide that the coverage is primary and noncontributory coverage with respect to all insureds, except for coverage that by its nature cannot be written as primary. Any insurance or self-insurance beyond that specified in this Agreement or Lease that is maintained by the City or the California State Lands Commission shall be excess of such insurance and shall not contribute with it.

Each insurance policy shall be written or endorsed so that (i) no acts or omissions of an insured shall impair or otherwise affect coverage of the other insureds and (ii) insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.

E&B is permitted to have self-insured retentions up to the following maximum amounts for each of the insurance policies listed in Section 6.16.2.1 through 6.16.2.5: a) Section 6.16.2.1, self-insured retention of One Hundred Thousand Dollars ($100,000); b) Section 6.16.2.2, self-insured retention of One Million Five Hundred Thousand Dollars ($1,500,000); c) Section 6.16.2.3, self-insured retention of Ten Thousand Dollars ($10,000); d) Section 6.16.2.4, self-insured retention of Ten Thousand Dollars ($10,000); and e) Section 6.16.2.5, self-insured retention of Fifty Thousand Dollars ($50,000). If E&B seeks to have a self-insured retention for any of these policies in an amount higher than listed above, E&B shall obtain the City's approval, which shall not be unreasonably withheld.

All insurance coverage maintained or procured pursuant to this Agreement shall be endorsed to delete the subrogation condition as to City, or shall specifically allow E&B or others providing insurance evidence in compliance with these requirements to waive

their right of recovery prior to a loss. To implement the endorsement to delete the subrogation condition described above, E&B waives all rights of recovery against City, California State Lands Commission, and their elected and appointed officials, employees, agents, consultants and representatives to the extent that any occurrence is covered by insurance required by Section 6.16.

E&B acknowledges and agrees that any actual or alleged failure on the part of City to inform E&B of non-compliance with any requirement in this Section 6.16 imposes no additional obligations on City nor does it waive any rights hereunder.

In the event any insurance (including the limits that are required to be obtained and maintained by E&B pursuant to this Section 6.16), other than insurance required to be obtained and maintained by applicable law, shall not be available and commercially feasible to obtain and maintain in the commercial insurance market, E&B shall provide written notice of that occurrence to the City. Said written notice shall be accompanied by a written report prepared by an independent insurance advisor of recognized national standing and reasonably acceptable to City, certifying that such insurance is not reasonably available and commercially feasible to obtain and maintain in the commercial insurance market, or in the case where any required insurance amount is not so available, certifying as to the maximum amount that is so available, and in each case explaining in detail the basis for such conclusions.

Should commercial unavailability or commercial infeasibility occur, E&B shall have the right to self-insure a portion of the risk in order to obtain additional policy limits and/or coverage (i.e., "excess" insurance), as long as the financial capability of E&B to retain a portion of the risk is sufficient to obtain limits of coverage that would be equivalent to that required by this Section 6.16. Should E&B be unable to satisfy this requirement for financial capability in order to self-insure a portion of the risk, E&B and the City shall negotiate in good faith and attempt to agree upon alternative adequate means of financial assurance to substitute for the insurance or the portion of the insurance that is not reasonably available and commercially feasible to obtain and maintain in the commercial

insurance market, taking into consideration the type and amount of insurance which has become unavailable and the potential magnitude of any loss not covered by insurance.

E&B may self-insure a portion of the risk and/or provide other alternative adequate means of financial assurance to the City only for so long as and to the extent that any insurance required by this Section 6.16 is not then reasonably available and commercially feasible to obtain and maintain in the commercial insurance market. Said differently, E&B will again be required to obtain and maintain all of the insurance required by this Section 6.16 once the same is reasonably available and commercially feasible to obtain and maintain in the commercial insurance market. E&B agrees to test the commercial insurance market through its insurance broker to confirm unavailability or commercial infeasibility of a required coverage no less often than semi-annually during any period of commercial unavailability or commercial unfeasibility for any particular coverage.

6.16.2 Required Insurance. Subject to the provisions of Section 6.16.1, E&B shall procure, pay for and keep in full force and effect during the term of this Agreement each and all of the following insurance policies.

6.16.2.1 Commercial General Liability Insurance. Commercial General Liability, including: Bodily Injury; Property Damage; Personal Injury; Blanket Contractual Liability, or equivalent; Broad Form Property Damage; Premises and Operations; Fire Legal Liability; Sudden and Accidental Pollution Liability; Products and Completed Operations; Explosion, Collapse and Underground Hazard; and Advertising/Personal Injury Coverage, and pollution occurring from the same in an amount not less than One Million Dollars ($1,000,000.00) per occurrence and Two Million Dollars ($2,000,000.00) in the aggregate.

6.16.2.2 (Loss Of) Control Of Well And Pollution Liability Coverage. (Loss Of) Control of Well insurance and Operators Extra Expense Coverage with total of Forty Million Dollars ($40,000,000.00) limited liability for Sections 1A (Well Out Of Control Insurance), IB (Redrill/Extra Expense), and 1C (Seepage, Pollution, Cleanup and Contamination) and

a total of Five Million Dollars ($5,000,000.00) limited liability for Section 2 (Care, Custody and Control) and coverage for bodily injury, property damage, including cleanup costs and defense costs resulting from a Well Out Of Control incident. Notwithstanding the foregoing, E&B shall be obligated to maintain the specified Control of Well coverages only during actual drilling of a well, which includes drilling, completing and/or testing of the well. E&B shall provide the City with a copy of E&B's Control of Well policy prior to commencing any actual drilling, along with the Certificate of Insurance, and such policy shall be maintained throughout the entire course of each actual drilling operation.

6.16.2.3 Worker's Compensation Insurance. Worker's Compensation insurance as required by law, together with Employer's Liability coverage with limits of not less than One Million Dollars ($1,000,000.00). Such coverage shall include a Waiver of Subrogation in favor of the City and an "alternate employer" endorsement.

6.16.2.4 Auto Insurance. Auto liability insurance (Symbol 1 – Any Auto) with limits of not less than One Million Dollars ($1,000,000.00) combined single limit.

6.16.2.5 Following Form Excess Or Umbrella Liability Insurance. Following Form Excess or Umbrella Liability insurance in an amount of not less than Twenty- Five Million Dollars ($25,000,000.00) per occurrence and aggregate per policy period to apply as excess coverage over coverage required by Subsections 6.16.2.1, 6.16.2.3 and 6.16.2.4.

6.16.2.6 Additional Insurance Required To Comply With Law. If the amounts of minimum insurance coverage as specified above in this Section 6.16.2 are insufficient or become insufficient to meet in any respect the minimum insurance coverage requirements set forth in or required by any applicable legal requirements of any governmental entity or regulatory body or agency by statute, case law, rules and/or regulations, then in such event E&B shall procure and maintain sufficient amounts of insurance coverage to satisfy any such minimum insurance coverage requirements in addition to the insurance required by Subsections 6.16.2.1, 6.16.2.2, 6.16.2.3, 6.16.2.4 and 6.16.2.5.

6.16.2.7 Review of Insurance Amounts During Term of Development Agreement. During the term of the Agreement, the City and E&B shall review the limits and types of insurance provided by Section 6.16.2 every five (5) years, starting on the fifth anniversary of the issuance of the City drill permit for the first well and such review shall be based on a written report utilizing industry standards, prepared by an independent insurance advisor of recognized national standing and reasonably acceptable to the City and E&B, and paid for by E&B. If the independent insurance advisor determines based on industry standards that the insurance amounts in Section 6.16.2 or types should be adjusted, then E&B agrees to provide such insurance as recommended by the independent insurance advisor, subject to other provisions of this Section 6.16.

6.16.3 Drilling or Other Contractors. Exhibit C to the Lease states: "Each drilling or other contractor performing work for the joint account shall be required to maintain in force, with respect to the work performed by such contractor, to the extent applicable and possible, the same insurance as specified above." E&B also agrees to require each contractor to include the City as an additional insured to any such insurance maintained by the contractor.

6.16.4 Requirements Not Limiting. All insurance coverage and limits provided by E&B, or by third parties pursuant to obligations of E&B hereunder, and, in each case, available or applicable to this Agreement are intended to apply to the full extent of the insurance policies, and nothing contained in or omitted from this Agreement limits, or shall be deemed to limit, the application of such insurance coverage.

6.16.5 Remedies. Failure on the part of E&B to maintain the insurance as required hereunder shall constitute a material breach of this Agreement, upon which the City may, after providing notice and an opportunity to cure as provided in Section 5.1.2 of this Agreement, if not timely cured by E&B, suspend this Agreement or terminate as set forth in the remedies in Section 5 of this Agreement until E&B remedies the failure to maintain insurance.

6.17 Mortgagee Protection. The parties hereto agree that this Agreement shall not prevent or limit the right of E&B at its sole discretion, to encumber its leasehold interest in the Property or any portion thereof or any improvement thereon by any mortgage or other security device (collectively "Mortgage") securing financing of the purchase, development or operation of the Property or any portion thereof (including, without limitation, any combination of purchase financing, construction financing, bridge loans, take-out and permanent financing), as provided in this Agreement; provided, however, that any such Mortgage shall be subordinate to the rights and obligations under this Agreement.

The City acknowledges that prospective lenders providing such financing may request certain acknowledgements, estoppels, interpretations and/or modifications of this Agreement, and agrees upon request, from time to time, and upon payment of a fee to the City to reimburse the City for its reasonable expenses associated herewith, to meet with E&B and representatives of such lenders to discuss in good faith any such request for acknowledgements, estoppels, interpretations and/or modifications. The City shall not unreasonably withhold its consent to and/or execution of any such requested acknowledgements, estoppels, interpretations and/or modifications which the City determines is consistent with the intent and purposes of this Agreement and reasonably protects the interests of the City under this Agreement.

If the City timely receives a request from a Mortgagee requesting a copy of any notice of default given to E&B under the terms of this Agreement, the City shall provide a copy of that notice to the Mortgagee within ten (10) days of sending the notice of default to E&B, as the case may be. The Mortgagee shall have the right, but not the obligation, to cure the default during the remaining cure period allowed such party under this Agreement.

Any Mortgagee who comes into possession of E&B's interests in the Property, or any part thereof, pursuant to foreclosure of the mortgage, shall take the Property, or part thereof, subject to the terms of this Agreement; in no event shall any such Mortgagee or its successors or assigns be entitled to a building permit or occupancy certificate until all fees and other obligations due by E&B under this Agreement have been performed and/or paid to the City, all defaults have been cured, and all otherwise applicable conditions to such permit or certificate have been satisfied.

6.18 Covenant of Good Faith and Fair Dealing. No party shall do anything which shall have the effect of harming or injuring the right of the other parties to receive the benefits of this Agreement.

6.19 Covenant of Cooperation. E&B and the City shall cooperate with and assist each other in the performance of the provisions of this Agreement, including assistance in obtaining permits for the development of the Property or the Project which may be required from public agencies other than the City, subject to the payment of costs by E&B as set forth in Condition A-3 of Exhibit D-2 (and any other reimbursement authorized under this Agreement), and the indemnity provisions in Section 6.5 of this Agreement. E&B reserves the right to challenge any ordinance, measure, moratorium or other limitation in a court of law if it becomes necessary to protect the development rights vested in the Property pursuant to this Agreement.

6.20 Justifiable Reliance. The City acknowledges that, in investing money and planning effort in and to the Project and all public improvements and dedication offers required hereunder, and in undertaking commencement of the Project, E&B will be doing so in reliance upon the City's covenants contained in this Agreement and upon the enforceability of this Agreement, and the City agrees that it will be reasonable and justifiable for E&B to so rely.

6.21 Project Is Private Undertaking. It is specifically understood and agreed to by and between the parties hereto that: (1) the subject development is a private development; (2) except for the obligations of the City described herein, if any, the City has no responsibilities for or duty to third parties concerning any public improvement until such time and only until such time that the City accepts the same pursuant to the provisions of this Agreement; (3) E&B shall have full power over and exclusive control of the development of the Project herein described subject only to the limitations and obligations of E&B under this Agreement and the Project Approvals; and (4) the contractual relationship between the City and E&B is such that E&B is not an agent of the City nor is City an agent of E&B.

Notwithstanding the foregoing, nothing contained in this Agreement shall be deemed to waive or modify any otherwise applicable obligations the City, acting in its governmental capacity and not as a party to this Agreement, may have to E&B or any other party, under

and in accordance with all applicable laws.

6.22 Further Actions and Instruments. The parties to this Agreement shall cooperate with and provide reasonable assistance to the other parties to the extent contemplated in the performance of all obligations under this Agreement and the satisfaction of the conditions of this Agreement. Upon the request of any party, the other parties shall promptly execute, with acknowledgment or affidavit if reasonably required, and file or record such required instruments and writings and take any actions as may be reasonably necessary under the terms of this Agreement to carry out the intent and to fulfill the provisions of this Agreement or to evidence or consummate the transactions contemplated by this Agreement.

6.23 Section Headings. All Article and Section headings and subheadings are inserted for convenience only and shall not affect any construction or interpretation of this Agreement.

6.24 Enforced Delay (Force Majeure).

(a) In addition to specific provisions of this Agreement, performance by any party hereunder, including making payments, shall not be deemed to be in default where delays or defaults are due to war, insurrection, strikes, walkouts, riots, floods, earthquakes, fires, casualties, acts of God, litigation not commenced by a Party to this Agreement claiming the enforced delay (including without limitation, third party legal challenges to the Project, the Project Approvals or the environmental clearance for the Project Approvals and the Project), unavailability of materials, unforeseeable events beyond the control of E&B, governmental restrictions including moratoria imposed or mandated by governmental entities (but only as to delays or defaults on the part of E&B), enactment of conflicting state or federal laws or regulations (but only if the party claiming delay complies at all times with the provisions of this Agreement pertaining to such conflicting laws), delays caused by the delay or failure by any entity other than the party claiming such delay to provide financing for or construction of needed public facilities or infrastructure as

contemplated or required by this Agreement, delays due to the enforcement of environmental regulations, litigation brought by third parties, or similar bases for excused performance. Any period of enforced delay provided for in this Section shall run concurrently with any period of enforced delay under the Lease. E&B shall only be required to provide one notice claiming such extension for enforced delay under both this Agreement and the Lease.

(b) An extension of time for any such cause including an extension of the Term (a "Force Majeure Delay") shall be for the period of the enforced delay and shall commence to run from the time of the commencement of the cause, if notice by the party claiming such extension is sent to the other parties within thirty (30) days of knowledge of the commencement of the cause. Notwithstanding the foregoing, none of the foregoing events shall constitute a Force Majeure Delay unless and until the party claiming such delay and interference delivers to the other party written notice describing the event, its cause, when and how such party obtained knowledge, the date the event commenced, and the estimated delay resulting therefrom. Any party claiming a Force Majeure Delay shall deliver such written notice within thirty (30) days after it obtains actual knowledge of the event. The time for performance due to a Force Majeure Delay will be extended for such period of time as the cause of such delay exists (whether or not it extends beyond the Term or the Extended Term) but in no event for longer than for such period of time.

(c) Notwithstanding the first sentence of paragraph (b), above, the following shall apply: (i) E&B shall be entitled to a Force Majeure Delay for a period longer than the period of enforced delay if the City Council determines that such longer period is reasonably required; and (ii) E&B shall be entitled to a Force Majeure Delay notwithstanding the fact that E&B may not have given timely notice to the City, if the City Council determines that such Force Majeure Delay is reasonably required.

(d) A Force Majeure Delay shall not include the existence of any adverse or

difficult market or economic conditions.

6.25 Emergency Circumstances.

(a) If, as the result of specific facts, events or circumstances, the City believes that a severe and immediate emergency threat to the health or safety of the City or its residents, meeting the requirements of subparagraph (b), below, requires the modification, suspension or termination of this Agreement, the City will, after reasonable notice to E&B (in light of all the circumstances), hold a hearing on such facts, events or circumstances, at which E&B shall have the right to address the City Council. The City shall have the right to modify, suspend or terminate this Agreement, in whole or in part, if, following such hearing, the City Council determines that such modification, suspension or termination is required in order to protect the health and safety of the City and its residents.

(b) This Section 6.25 governs generally applicable emergencies in the area not specifically related to or caused by the Project. For purposes of this Section 6.25, an emergency must meet each of the following criteria: (i) it must be based on genuine health, safety and general welfare concerns (other than general growth management issues); (ii) it must arise out of a documented emergency situation, as declared by the President of the United States, Governor of California, or the Mayor or City Council of the City of Hermosa Beach; and (iii) based upon its terms or its effect as applied, it does not apply exclusively or primarily to the Property or the Project. To the extent possible, any such action by the City shall be taken in a manner so as to provide E&B with the rights and assurances provided under this Agreement.

6.26 Reporting Adverse Information. Within 15 days of receipt, E&B shall notify the City Manager and City Attorney of any lawsuits, notices of violation or notifications of administrative or governmental agency investigations concerning alleged violations of any law or permit condition which raise material issues arising from or relating to E&B's oil and gas drilling or production operations. Together with the notification required by

this Paragraph 6.26, E&B shall provide City with two (2) copies (one to City Manager, one to City Attorney) of the document initiating such lawsuit, notice of violation or notification of administrative or governmental agency investigation, if such documents are in E&B's possession, custody or control; otherwise, copies of such documents shall be submitted to City within three (3) days of receipt by E&B. Any additional documents pertaining to the matter, including documents filed by E&B in response to any such lawsuit, notice of violation or notification of administrative or governmental agency investigation, as well as the final decision, determination, agency or administrative action of findings, shall be submitted to City upon request. E&B's routine correspondence to said agencies need not be routinely submitted to City, but shall be made available to City promptly upon City's written request.

6.27 Severability. Invalidation of any of the provisions contained in this Agreement, or of the application thereof to any person, by judgment or court order, shall in no way affect any of the other provisions hereof or the application thereof to any other person or circumstance, and the same shall remain in full force and effect, unless enforcement of this Agreement, as so invalidated, would be unreasonable or inequitable under all the circumstances or would frustrate the purposes of this Agreement and/or the rights and obligations of the parties hereto.

6.28 Interpretation. The language in all parts of this Agreement shall in all cases be construed simply, as a whole and in accordance with its fair meaning and not strictly for or against any party. The parties hereto acknowledge and agree that this Agreement has been prepared jointly by the parties and has been the subject of arm's length and careful negotiation over a considerable period of time, that each party has independently reviewed this Agreement with legal counsel, and that each party has the requisite experience and sophistication to understand, interpret and agree to the particular language of the provisions hereof. Accordingly, in the event of an ambiguity in or dispute regarding the interpretation of this Agreement, this Agreement shall not be interpreted or construed against the party preparing it, and instead other rules of interpretation and construction shall be utilized.

6.29 Counterparts. This Agreement may be executed in duplicate counterpart originals, each of which is deemed to be an original and all of which when taken together shall constitute one

and the same instrument.

6.30 Entire Agreement. This Agreement consists of __ pages and _____ exhibits (designated __ through __), which constitute the entire understanding and agreement of the parties, and, with the exception of (1) the Lease; (2) the Settlement Agreement; (3) the Agreement to Implement the Settlement Agreement dated July 23, 2014; and (4) the Reimbursement Agreement dated May 17, 2012 shall supersede any prior agreements, discussions, commitments, representations or agreements, written or oral, between the parties hereto with respect to this Agreement.

IN WITNESS WHEREOF, the parties have each executed this Agreement on the date first written above.

CITY OF HERMOSA BEACH

By:_____
Mayor

ATTEST:

By: _____

City Clerk

APPROVED AS TO FORM:

E&B NATURAL RESOURCES MANAGEMENT CORPORATION

By:_____
President

By: _____

City Attorney

By: _____

Attorneys for E&B Natural Resources Management Corporation

EXHIBIT “A-1”

LEGAL DESCRIPTION

555 6TH STREET, HERMOSA BEACH, CALIFORNIA 90254

That portion of APN 4187-031-900 described as:

That portion of Lot A lying south of a line commencing at the northeasterly corner of Lot 11, Block U, Tract 2002, as per Map recorded in Map Book 22, Pages 154 and 155, in the Office of the Recorder of the County of Los Angeles, and continuing along the easterly prolongation of the northerly line of said Lot 11, to the easterly line of Lot A; Lots 11 through 18, Block R, Tract 2002; Lots 11 through 18, Block U, Tract 2002; and the vacated portion of Bard Street adjoining said lots.

EXHIBIT "A-2"

LEGAL DESCRIPTION

601 CYPRESS AVENUE , HERMOSA BEACH, CALIFORNIA 90254

APN 4187-030-037

Lots 11 Through 14, Block H, Tract 1686, M.B. 20- 188, City Of Hermosa Beach

EXHIBIT "A-3"

LEGAL DESCRIPTION

636 CYPRESS AVENUE, HERMOSA BEACH, CALIFORNIA 90254

APN 4187-031-022

Lots 5 And Lot 6, Block I, Tract # 1686, M.B. 20- 188, City Of Hermosa Beach

EXHIBIT "B"

PROJECT DESCRIPTION
(From Section 2.0 of FEIR)

Revised with removal of City maintenance yard discussion

The Proposed City Maintenance Yard Project described herein is a separate project that the City will undertake if the voters approve the Proposed Oil Project. This Development Agreement only applies to the Proposed Oil Project described below, and except for any obligations explicitly assigned to E&B herein and payments from E&B for the City Maintenance Yard Project, the Proposed City Maintenance Yard Project is not governed by this Agreement. To the extent feasible, references to the Proposed City Maintenance Yard have been removed from the Project Description.

Project Description

E&B Natural Resources Management Corporation (E&B), the Applicant, is proposing the E&B Oil Drilling & Development Project (Proposed Oil Project) on a 1.3-acre site located in the City of Hermosa Beach (City). The site for the Proposed Oil Project (Project Site), as shown in Figure 2.1, would be located at 555 6th Street, bounded on the east by Valley Drive and on the south by 6th Street, approximately seven blocks east of the beach and the Pacific Ocean. Oil and gas pipelines constructed and used by the Project would extend from the Project Site to one of four potential valve box locations for the oil line and to a Southern California Gas (SGE) metering station for the gas line. The Project Site is owned by the City and is currently used as the City (Public Works) Maintenance Yard. The Applicant has leased the Project Site from the City for the implementation of the Proposed Oil Project.

The Proposed Project is composed of two parts: 1) the relocation of the City Maintenance Yard (called the Proposed City Maintenance Yard Project); and 2) the development of an oil and gas facility on the current City Maintenance Yard site (called the Proposed Oil Project). In order to clear the current City Maintenance Yard site (called the Project Site) for the construction of the

proposed oil and gas facility, the City Maintenance Yard would be temporarily relocated during Phase 1 of the Proposed Project. If it is determined that the production of oil and gas on the Project Site would be economically viable (Phase 2 of the Proposed Project), construction of the permanent City Maintenance Yard would be completed once Phase 3 of the Proposed Project begins. The permanent Proposed City Maintenance Yard Project has two options: a Parking Option, which would add a net 97 parking spaces with a below grade parking garage, and a No Added Parking Option, which would have the same amount of parking as is currently available.

This Project Description reflects information contained in the Project Application submitted to the City of Hermosa Beach by the Applicant, along with supporting information provided in conjunction with the Project Application (E&B Natural Resources, Planning Application and Appendices, Volumes 1 – 3, November 14, 2012; Response to Planning Application Completeness Review, April 11, 2013; Response to Requested Clarifications, June 24, 2013; Quantitative Risk Analysis, July 3, 2013; Errata, July 22, 2013).[1] Information related to the relocation of the City Maintenance Yard and construction and operation of the Proposed City Maintenance Yard is derived from information provided by the City of Hermosa Beach Public Works Department. The description of the Proposed Project incorporates the essential elements of the Project as it is proposed, including all phases and major components as well as the locations of all proposed offsite activities (in addition to those occurring on the Project Site). More detailed information related to some aspects of the Proposed Project (including proposed operational parameters and design features) may be found within individual sections of the Final Environmental Impact Report (EIR), where considered relevant to the discussion of specific environmental issues and/or effects. In addition, a description of the environmental setting and current conditions related to the environmental issues is presented in the Environmental Setting subsection of the individual sections of the Final EIR.

Directional Drilling
Drilling wells at multiple angles to better reach and produce oil and gas reserves. Directional drilling allows for multiple wells from the same drilling location.

[1] Information submitted by the Project Applicant is available for public review at the City of Hermosa Beach Community Development Department.

This section discusses the Project objectives, historical operations on the Proposed Project Sites, the four phases of the Proposed Oil Project, scheduling, vehicle trip and employee requirements, and necessary permitting associated with the Proposed Project. A number of technical drawings related to the Proposed Project design and layout are included in Appendix A to the Final EIR.

2.1 Project Overview

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

The City Maintenance Yard is proposed to be relocated to a temporary facility to be established on the rear (westerly) portion of the City Hall site (1315 Valley Drive) prior to and during the initial phase of the Proposed Oil Project so that the maintenance operations could be moved when the existing City Maintenance Yard is demolished as part of Proposed Oil Project activities. The construction of the permanent City Maintenance Yard would be undertaken on the site now occupied by the Hermosa Self-Storage (552 11th Place) after the Applicant completes the testing phase of the Proposed Oil Project in Phase 2. As indicated below, the permanent City Maintenance Yard and the oil and gas facility on the Project Site would be constructed at the same time during Phase 3 of the Proposed Project.

The timeframe from commencement of the Proposed Project until the permanent oil and gas facility would be operational is estimated to be approximately 3.25 years. The existing lease (Oil and Gas Lease No. 2) allowing drilling into the tidelands provides for a 35-year period.

Table 2.1 summarizes events in the Proposed Project timeline. Specifics of each of the Proposed

Project components are described in the following sections.

Figure 2.1 Proposed Project Location

Source: Project Application, Amendments and Appendices

Table 2.1 Proposed Project Schedule Summary

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

Note: * If the test phase is determined to be successful, Phase 3 and 4 would occur. For construction only. Does not include permitting timeframe. ** These are the maximum proposed by the Applicant. The 150 days per year would occur once every 5 years. Most likely re-drill activity would be lower.

2.2 Proposed Project Objectives

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

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

1. Develop the Proposed Oil Project consistent with the 1993 Conditional Use Permit and the March 2, 2012 Settlement Agreement, with the utilization of directional drilling

techniques from the Project Site, which is the current City Maintenance Yard;

2. Maximize oil and gas production from the Torrance Oil Field within the City's jurisdiction, thereby maximizing the economic benefits to the City;
3. Provide an oil and gas development project on the Project Site that utilizes the latest technology and operational advancements related to safety and production efficiency in order to provide a project that would be safe and would meet the applicable environmental requirements;
4. Conduct construction and drilling activities on the Project Site incorporating technological advancements, operational practices, and design features related to air quality, odors, noise, hazards, and water quality to minimize the potential impacts on the adjacent community and the environment;
5. Provide landscaping, hardscape, signage, lighting, and other design features to minimize the visual effects of the Proposed Oil Project on the adjacent community; and
6. Implement operational practices and incorporate design features to provide safe vehicular ingress and egress during temporary construction activities and the ongoing operation of the Proposed Oil Project.

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

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

1. Provide City Yard Maintenance facilities that support provision of high-quality City services in an integrated and cost-efficient manner;
2. Consolidate City facilities and functions for maximum efficiency and flexibility;
3. Minimize disruption of City functions during relocation of the City Maintenance Yard;
4. Ensure the relocated City Maintenance Yard is compatible with surrounding uses; and
5. Ensure there is no net loss of public and employee parking spaces as a result of both the

Proposed Oil Project and the relocation of the City Maintenance Yard consistent with the Preferential Parking Program approved by the Coastal Commission.

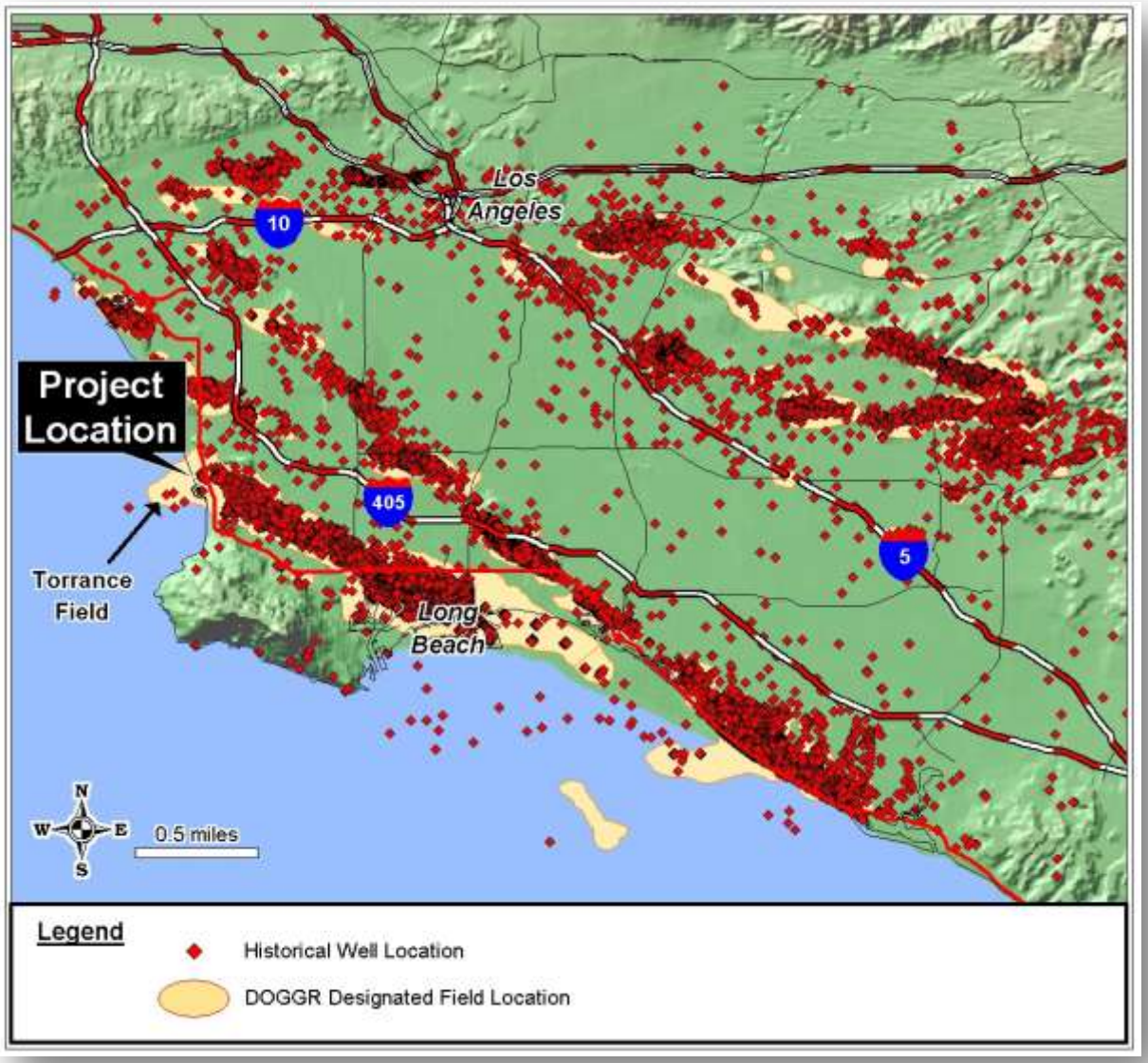
2.3 Historical and Current Operations

Oil drilling and production in the Los Angeles Basin has a long history. According to the California Division of Oil, Gas, and Geothermal Resources (DOGGR) database, almost 30,000 oil wells have been drilled in the Los Angeles Basin in the last 100 to 150 years. Figure 2.2 shows the location of these wells.

The Proposed Oil Project would drill into the western edge of the Torrance Oil Field (see Figure 2.2). Most of the production from the Torrance Oil Field has been generated from wells drilled in the City of Torrance, with some drilling in the Cities of Redondo Beach and Hermosa Beach. There have been approximately 1,500 wells drilled in the Torrance Oil Field historically.

Although the Project Site is relatively flat, it is underlain by windblown sand dunes that previously covered the region, resulting in uneven ground due to natural conditions. In the 1920s and 1930s, the northeastern portion of the Project Site had a large depression that was mined for sand. Around 1927, the City's dump and refuse burner were located on the Project Site, and, by 1947, the depression was filled. The resulting former landfill is approximately 45 feet deep and is filled with glass, porcelain, and ceramic towards the bottom and soils containing miscellaneous metals, wires, glass, and other materials toward the top (i.e., closer to the ground surface). Between the depths of 3 feet and 25 feet below ground surface (bgs), the former landfill contains some soil with lead at concentrations above the Environmental Protection Agency (EPA) Region 9 Industrial Regional Screening levels. In addition, soils impacted with total petroleum hydrocarbons (TPH) were found at depths of 25 to 44 feet bgs within the central portion of the landfill. For a detailed discussion of the soil conditions on the Project Site, refer to Section 4.7, Geological Resources/Soils, of the Final EIR.

Figure 2.2 Historical Wells Drilled in the Los Angeles Basin



Source: DOGGR

In 1930, an oil well (Stinnett Oil Well No. 1) was drilled in the western portion of the Project Site. The oil well was abandoned in 2005, consistent with the then-current standards of the DOGGR. During the mid-1940s, the first building was constructed on the Project Site for City maintenance uses, with the last building constructed in the 1980s. Since the 1990s, with the exception of the addition of trailers, storage containers, and sheds, the Project Site has generally remained unchanged.

The Project Site is currently developed as the City Maintenance Yard, and the Proposed Oil Project would require the relocation of the City Maintenance Yard. As indicated in Figure 2.3, existing development on the Project Site consists of three buildings, two trailers, storage containers, sheds, trash bins, a propane tank, concrete paving and asphalt, fencing, and masonry walls. In addition, within the boundaries of the Project Site, there is an asphalt parking area in the southern portion of the City Maintenance Yard that provides 15 parking spaces for employees (Monday through Thursday between the hours of 6:00 a.m. and 6:00 p.m.) and for the public after hours (6:00 p.m. to 6:00 a.m.) and on weekends and holidays.

Existing site contamination from historical site uses is also shown in Figure 2.3. According to an Environmental Site Assessment prepared in 2012 (Brycon 2012), 10 of the 73 soil samples taken exceeded Regional Water Quality Control Board guidelines for total petroleum hydrocarbons, all within the mid range hydrocarbons (C13-C22). Volatile organic carbons were not present in any of the samples at concentrations above the EPA Region 9 Industrial Regional Screening Levels. Six of the samples exceeded the EPA Region 9 Industrial Regional Screening Levels for lead. In addition, a series of groundwater borings conducted in 2013 (Brycon 2013) found the presence of total petroleum hydrocarbons, lead, barium, and arsenic in the groundwater below the City Maintenance Yard that exceeded the Maximum Contaminant Levels (MCLs) established for drinking water by the Regional Water Quality Control Board.

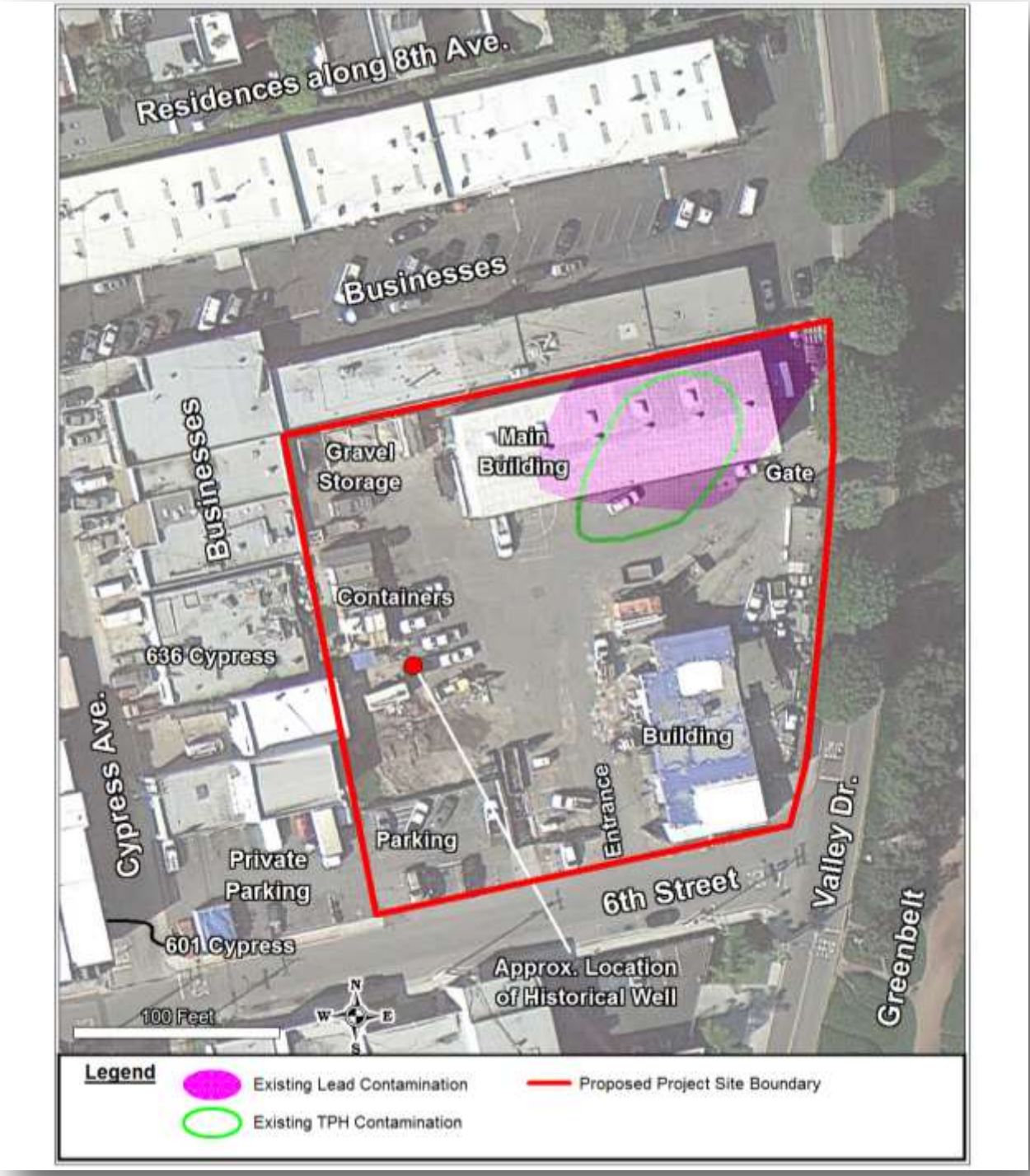
The immediately adjoining properties were sparsely developed into the 1940s, with a few residential units located to the northwest of the Project Site. Post 1940s, significant development occurred with industrial buildings being constructed to the south and west of the Project Site by 1953 and to the north of the Project Site by the 1960s. By 1960, the buildings to the west of the Project Site were identified as containing a building material warehouse, a boat repair shop, and a contractor's storage yard.

By 1960, the building to the south was being utilized as a planter mix manufacturing site. Since the 1960s, the various adjoining buildings have been utilized for multiple small businesses as industrial/commercial uses. To the east, from the late 1800s, there was a railroad right-of-way (ROW) that was utilized by the Santa Fe Railway. During the 1960s, the railroad ROW was converted to a greenbelt/park (Veterans Parkway - Hermosa Valley Greenbelt (Greenbelt)), followed by a Council initiative in 1987 directing the City of Hermosa Beach to acquire the Railroad ROW for public use as parkland and open space in perpetuity; the property is zoned

O-S-1 Restricted Open Space.

Currently, other land uses adjacent to the Project Site (on the same block between 8th and 6thStreet and Cypress Avenue and Valley Drive) are commercial/industrial (Cypress Auto Body, A&B Heating, JB Plumbing, McGivern Surfboard Manufacturing, Buddhist Meditation Center, NUWORK, a recording studio and other various small commercial/industrial businesses), with some residential uses along 8th Street to the north. Adjacent blocks include residential uses located 150 feet to the north of the Project Site, 250 feet to the west and 180 feet to the east (east of the Greenbelt), with small commercial/industrial uses and the Beach Cities Self Storage facility located to the immediate south across 6th Street with its required parking lot abutting the southwest corner of the Project Site. Figure 2.4 shows the southern area of the City of Hermosa Beach along with land uses.

Figure 2.3 Existing Site Conditions



Source: Applicant Project Application, DOGGR well database, Phase 2 Environmental Site Assessments

Exhibit B

Exhibit B

Figure 2.4 Project Site and Area Land Uses (Zoning Map)


OTHER DESIGNATIONS
COASTAL ZONE BOUNDARY
COASTAL ZONE APPEALABLE AREA (WEST OF LINE)
DOWNTOWN DISTRICT
ZONING DESIGNATIONS
R-1 ONE FAMILY RESIDENTIAL
R-1A LIMITED ONE-FAMILY RESIDENTIAL
R-2 TWO-FAMILY RESIDENTIAL
R-2B LIMITED MULTIPLE FAMILY RESIDENTIAL
R-3 MULTIPLE FAMILY RESIDENTIAL
R-P RESIDENTIAL-PROFESSIONAL
RPD RESIDENTIAL PLANNED DEVELOPMENT
R-3PD MULTIPLE FAMILY PLANNED DEVELOPMENT
C-1 NEIGHBORHOOD COMMERCIAL
C-2 RESTRICTED COMMERCIAL
C-3 GENERAL COMMERCIAL
C-3AH-O GENERAL COMMERCIAL AFFORDABLE HOUSING OVERLAY
M-1 LIGHT MANUFACTURING
OS OPEN SPACE
OS-1 RESTRICTED OPEN SPACE
OS-2 RESTRICTED OPEN SPACE
OS-O OPEN SPACE OVERLAY
MHP MOBILE HOME PARK
SPA SPECIFIC PLAN AREA (RESIDENTIAL USES)
SPA SPECIFIC PLAN AREA (COMMERCIAL USES)
WALK STREETS
FRONT YARD SETBACKS
1 VALLEY PARK
2 CLARK STADIUM
3 COMMUNITY/CIVIC CENTER
4 EDITH ROSAWAY FRIENDSHIP PARK
5 SEA VIEW PARK
6 FORT LOTS-OF-FUN/PROSPECT SCHOOL
7 MOONDUST PARK
8 GREENWOOD PARK
9 BI-CENTENNIAL PARK
10 KAH-ETOW PARK
11 SHAFFER PARK
12 4TH & PROSPECT PARK
13 8TH & VALLEY PARK
14 SCOUT PARK
15 ARDMORE PARK
16 GREENBELT
17 BEACH/STRAND/BIKE PATH
18 NOBLE PARK
19 SOUTH PARK
20 RECREATIONAL VEHICLE PARK
21 CITY YARD
Valley School
Community Center
Civic Center
Pier Plaza
Clark Stadium
South Park
Beach
Proposed City Maintenance Yard Site
Project Site
Last updated January, 2014

Exhibit B

Source: City of Hermosa Beach Zoning Map, November 2013

Exhibit B

2.4 Proposed Oil Project Phases

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

- Phase 1: Site Preparation;
- Phase 2: Drilling and Testing;
- Phase 3: Final Design and Construction; and
- Phase 4: Development and Operations.

Each phase is discussed in the following sections.

The Applicant proposes a facility designed for a maximum capacity of 8,000 barrels per day (bpd) of crude oil and 2.5 million standard cubic feet per day (scfd) of produced gas at completion of the drilling stage of the Proposed Oil Project in Phase 4. The operational parameters of the Proposed Oil Project are summarized in Table 2.2. Prior to the initiation of the Proposed Oil Project, it would be required that plans be submitted by the Applicant to the City and other permitting authorities for review and approval. These would include coastal development permits, oil and gas well permits, demolition plans, grading plans, utility and electrical plans, cement/foundation plans, landscaping plans, street and ROW improvement/modification plans, and construction plans, amongst others. Figure 2.5 shows the Project Site along with the electrical and pipeline connections and the Cypress Avenue parking lot.

2.4.1 Phase 1 Site Preparation

The purpose of Phase 1 would be to prepare the Project Site for drilling and testing as well as for the subsequent phases of the Proposed Oil Project. It is anticipated that Phase 1 would occur for approximately six months. Prior to Phase 1 activities, the temporary City Maintenance Yard would be installed.

PHASE 1

Site Preparation
6-7 Months

2.4.1.1 Phase 1 Construction Activities

Phase 1 would consist of the following construction activities:

- Underground existing overhead utilities;
- Construction of modifications to intersection of 6th Street and Valley Drive;
- Relocation of City Maintenance Yard to the temporary site;
- Clearance of Project Site;
- Construction of retaining walls and rough grading;
- Installation of perimeter fencing;
- Construction of well cellar;
- Installation of offsite electrical conduit and onsite electrical equipment;
- Completion of onsite surface and entrance/exit;
- Installation of temporary landscaping; and
- Installation of 35-foot sound attenuation wall.(per Mitigation Measure NV-3a)

Table 2.2 Proposed Oil Project Design Parameters

Parameter	Value
Crude oil production	Phase 2: Up to 800 bpd Phase 4: Up to 8,000 bpd
Crude oil properties	18 API
Natural gas production	Phase 2: Up to 250,000 scfd Phase 4: Up to 2.5 million scfd
Produced water disposal/injection	Phase 2: Up to 1,600 bpd Phase 4: Up to 16,000 bpd
Maximum number of wells	Phase 2: 4 wells (3 production, 1 water disposal/injection) Phase 4: 34 total (30 production, 4 water disposal/injection)
NGL production	Up to 1 bpd mixed with crude oil
Pipeline length and tie-in, gas	Approx. 0.43 miles + 1.4 miles
Pipeline length and tie-in, crude	Approx. 3.55 miles

Water use, during construction	Approx. 2,000 gallons per day during grading and earthwork (potable) Approx. 10,000 gallons per day during pipeline installation (potable) Approx. 20,000 gallons per month during facility construction (potable)
Water use, during drilling	130,000 gallons per well (reclaimed water) (Approx. 4,500 gallons per day)
Water use, during operations and maintenance (Landscaping- Reclaimed Water) (Domestic-Potable Water)	1,300 gallons per day (1,000 gallons per day for landscaping) (300 gallons per day for domestic use)
Electrical use, Phase 2	4.5 megawatts (including drill rig)
Electrical use, Phase 3	0.3 megawatts
Electrical use, Phase 4	7.0 megawatts (including drill rig) 3.0 megawatts during normal ongoing operations Onsite electrical generation of 1 MW
Well workovers, annually	90 days/year
Well re-drills (full sized drilling rig, peak annually	Up to 5 per year, up to 30 re-drills for the life of the Project

Notes:bpd = barrels per day; kW = kilowatts; scfd = standard cubic feet per day; NGL = natural gas liquids; API = American Petroleum Institute; estimated peak values and maximums shown

Source: Project Application, Amendments and Appendices.

Figure 2.5 Project Site and Pipeline/Electrical Connections

Exhibit B

Source: E&B Supplemental Application materials, January 2014

Each of these activities is discussed in the following subsections. Figure 2.6 shows the proposed arrangement of the Project Site under Phase 1. Appendix A of the Final EIR provides the conceptual grading plan, site plan, elevations, and landscape concept plan for the Proposed Oil Project at the completion of Phase 1.

The laydown area (equipment and supply storage/staging) for the Proposed Oil Project would be in the basement of the building located at 601 Cypress Street on the northwest corner of Cypress Street/6th Street (See Figure 2.3).

Underground Existing Overhead Utilities

There are currently overhead power lines and communication lines on poles that run overhead through the existing trees along Valley Drive. These existing lines would be removed along the Project frontage and relocated underground adjacent to the Project Site in a location determined by the utility companies and the City. Appendix A of the Final EIR provides drawings showing the general location where the utility lines would be placed underground.

Construction of Modifications to Intersection of 6th Street and Valley Drive

The Proposed Oil Project would include the construction of modifications to the intersection of 6th Street/Valley Drive to provide the necessary turning radius for Project-related trucks. Appendix A of the Final EIR provides drawings showing the conceptual design of the proposed intersection modifications. These modifications would result in:

- Removal of a portion of the landscaped area and entry driveway to the Beach Cities Self Storage facility;
- Redesign of the sidewalk on the southwest corner of the intersection;
- Relocation of the stop sign and striping for the northbound lanes on Valley Drive to address the redesign of the southwest corner;
- Removal of a utility pole and underground utilities on the southwest corner of the intersection;
- Removal of a utility pole and underground the utilities on 6th Street; and
- The removal of two on-street parking spaces on 6th Street.

As a part of the intersection modifications, the stop sign and striping for the southbound lanes on Valley Drive would be relocated to improve the line of sight to and from the intersection with 6th

Street. This modification would be made concurrently with the addition of the perimeter fencing on the Project Site (See Figure 2.6). In addition, the curb on the northwest corner along 6th Street adjacent to the Project Site would be temporarily provided as a rolled asphalt curb for Phases 1 and 2.

The two on-street parking spaces removed from 6th Street would be provided as part of the Project's overall parking replacement program discussed further below.

Relocation of the City Maintenance Yard

Prior to Phase 1, a temporary City Maintenance Yard would be built at the New City Maintenance Yard location to the rear of City Hall at 1315 Valley Drive. At this point, the maintenance operations would be moved into the temporary City Maintenance Yard.

Clearance of the Project Site

Prior to the initiation of the site clearance activities, temporary 24-foot sound attenuation walls (per Mitigation Measure NV-1a) would be erected at the Project Site to reduce noise impacts related to construction. These sound walls would be designed to be movable and would be relocated within the Project Site as needed to attenuate noise associated with Phase 1 demolition and construction activities. The temporary sound walls would be removed from the Project Site after the onsite construction activities in Phase 1 are completed.

Following the relocation of the City Maintenance Yard , the Project Site would be cleared. The site clearance activities would include the removal of three existing buildings (one of which would be moved to the temporary site), two trailers, storage containers, sheds, trash bins, a propane tank, concrete paving and asphalt, fencing and masonry walls. In addition, the asphalt parking area to the west of the City Maintenance Yard would be removed, resulting in the removal of 15 parking spaces. The building located at 636 Cypress Avenue would also be demolished at this time to clear the parcel for the off-site temporary parking area. Prior to the demolition of both buildings, building materials would be assessed for asbestos content and presence of lead based paint, consistent with the requirements of the South Coast Air Quality Management District (SCAQMD). If asbestos containing materials or lead based paint are detected, the appropriate abatement process would be implemented. The building materials removed from the Project Site would be transported by truck to the recycling facility at Southern

California Disposal in Santa Monica, the recycling facilities at Hanson Aggregates in Long Beach, or another certified facility for recycling or disposal.

The Proposed Oil Project would include an overall parking replacement program that meets the intent of the City's Preferential Parking Program and Coastal Development Permit requirements. Section 2.4.5 discusses the parking plan for the Proposed Oil Project.

Water Injection
Pumping produced water back down the well hole into the oil reservoir from which it was originally extracted.

Three of the four existing mature trees along the frontage of the Project Site on Valley Drive would be retained to help screen construction activities. The Applicant has concluded that the fourth tree should be removed because it is in poor health, and it would limit access to the Project Site (See Figure 2.6). The three remaining trees would be trimmed to keep branches from hanging over onsite equipment and to help prevent trespassing.

Construction of Retaining Walls and Rough Grading

Once the Project Site is cleared, retaining walls would be constructed along the western boundary of the Project Site and set back 10 feet along the western portion of the southern property boundary (See Figure 2.6).

Figure 2.6 Proposed Oil Project Phase 1 Conceptual Site Plan

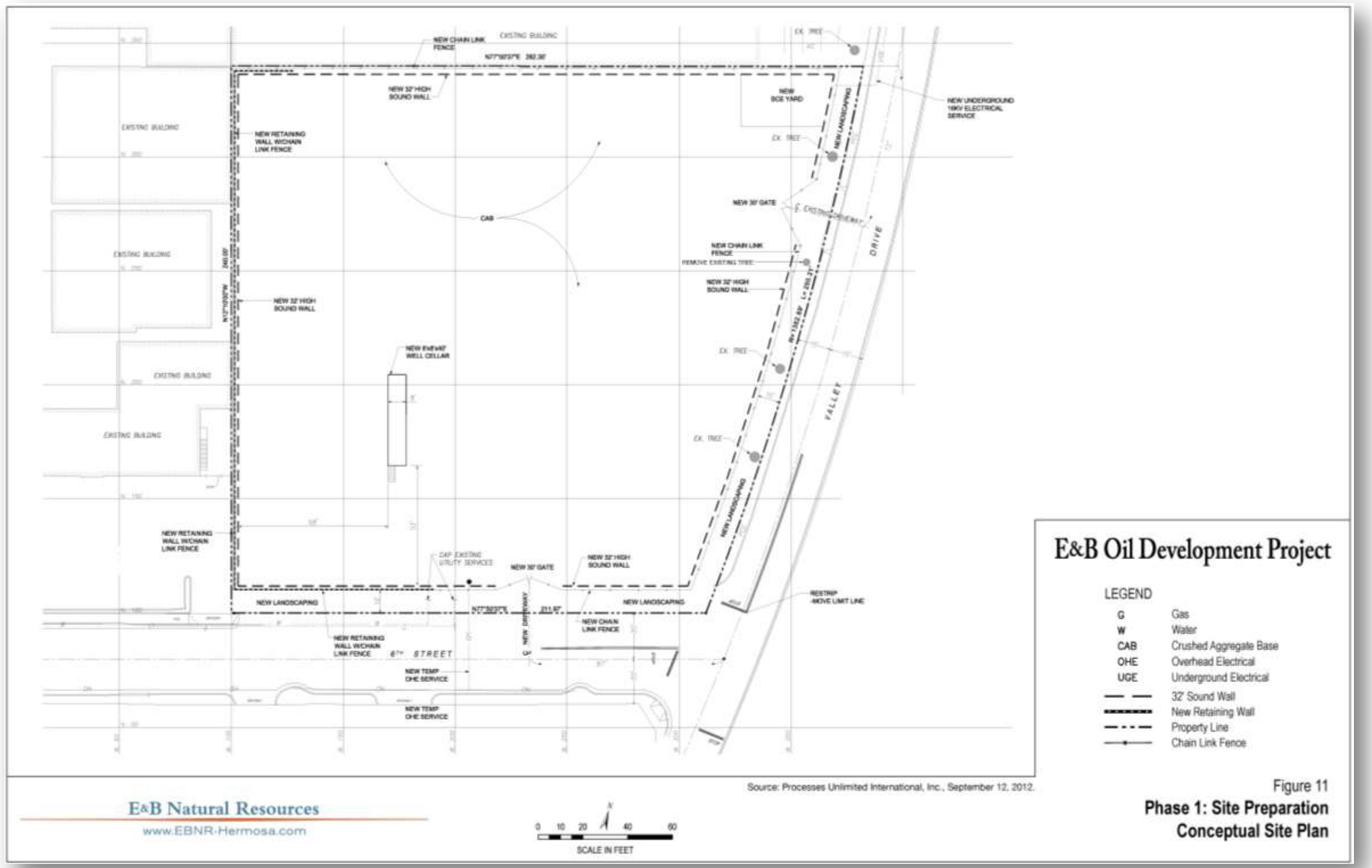


Exhibit B

[need to fix this image]

Source: Applicant application

Exhibit B

Development Agreement between City of Hermosa Beach and E&B Natural Resources

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Rough grading would occur to allow for:

- The construction of a well cellar for three test oil wells and a water disposal/injection well;
- Surface drainage towards a temporary retention basin, which would contain a 100-year flood event;
- A level area for the set up and movement of the drill rig; and
- The installation of temporary production equipment.

It is anticipated that the rough grading would not require the import or export of fill material. Appendix A of the Final EIR provides the conceptual grading plan that indicates the retaining wall locations and rough grading at the completion of Phase 1.

Installation of Perimeter Fencing

Following the rough grading, the Project Site would be enclosed by a six-foot temporary perimeter chain link fence covered with green fabric. The fence would include secured gates for the entrance off Valley Drive and the exit to 6th Street. The Applicant proposes to include the appropriate signage consistent with the requirements of the City. Figure 2.6 shows the location of the fencing and gates at the completion of Phase 1, and Appendix A of the Final EIR shows an elevation of the fencing.

Construction of Well Cellar

A cement well cellar approximately 8 feet wide by 40 feet long by 12 feet deep would be constructed for three test wells and one water disposal/injection well to allow for the drilling of the wells in Phase 2. The well cellar would provide containment of any potential oil spillage during Phase 2. Figure 2.6 shows the location of the well cellar.

Installation of Offsite Electrical Conduit and Onsite Electrical Equipment

Electrical service for the Proposed Oil Project would be provided by Southern California Edison (SCE). The electrical conduit and onsite electrical equipment for all phases of the Proposed Oil Project would be installed in Phase 1. The electrical load during Phase 2 and Phase 3 would be 4.5 Megawatts (MW) and 0.3 MW, respectively. During Phase 4, the electrical load during

drilling would be 7.0 MW and during ongoing operations would be 3.0 MW. According to the Applicant, SCE has determined that the existing 16 kilovolt (kV) circuit running along 8th Street to the north of the Project Site has the necessary capacity to serve the Proposed Oil Project. To receive electrical service from SCE, the Proposed Oil Project would provide for the installation of an underground conduit for a linear distance of 280 feet under Valley Drive from 8th Street to the northeast corner of the Project Site (see Figure 2.6)

Electrical equipment consisting of step down transformer(s), switchgear, and variable frequency drive units would be installed in the northeast corner of the Project Site designated as the New SCE Yard in Figure 2.6. The electricity would be used to provide power for well pumps, the temporary production equipment, the temporary construction trailer, safety system controls, onsite lighting, and the drill rig used in Phase 2 and Phase 4 (both drilling and re-drills). An uninterruptable power supply would be installed for critical systems such as the temporary production equipment safety systems and security lights. An emergency generator would be installed to provide power for the safe shutdown of the drilling operation in the event of a loss of power from SCE.

Appendix A of the Final EIR provides the general location of the offsite underground conduit.

Completion of Onsite Surface and Entrance/Exit

The surface of the Project Site would be covered with crushed aggregate base material to serve as a dust inhibitor and driving surface. Temporary berms would be constructed around the areas where the drill rig and associated equipment would be set up and the temporary production equipment installed to provide secondary containment. In addition, a temporary berm would be provided around the well cellar to avoid surface flows from entering the well cellar. The existing driveway access from Valley Drive and 6th Street would be used. On both sides of the driveway on 6th Street, a rolled asphalt curb would be provided.

Installation of Temporary Landscaping

Landscaping would be provided along the eastern and southern perimeter of the Project Site to provide a visual buffer. The plant materials and irrigation would be consistent with the requirements of the City. The trees and other plant materials would be planted in a manner that

allows for their replanting as a part of the permanent landscaping provided in Phase 3. Reclaimed water supplied by West Basin Municipal Water District would be used for irrigation. The reclaimed water line serving the Greenbelt east of Valley Drive would be tapped and extended to the Project Site. Appendix A of the Final EIR includes a conceptual landscape plan and plant materials for the temporary landscaping provided at the completion of Phase 1.

Installation of 32-Foot Sound Attenuation Wall

Upon completion of the Phase I improvements, a 35-foot sound attenuation wall (per Mitigation Measure NV-3a) would be erected inside the chain link construction fence in order to attenuate noise generated during Phase 2 drilling and testing. The 35-foot sound wall would stay installed through the duration of Phase 2.

2.4.1.2 Phase 1 Site Preparation Detailed Schedule

It is anticipated that Phase 1 would occur for a period of approximately six months as indicated in the schedule provided in Table 2.3.

As required by the previous Conditional Use Permit and as proposed by the Applicant, the construction activities on the Project Site, including the operation of earthmoving equipment, would be conducted between the hours of 8:00 a.m. and 6:00 p.m. Monday through Friday (except holidays) and 9:00 a.m. and 5:00 p.m. on Saturdays. Offsite construction activities within the public ROW would occur between the hours of 8:00 a.m. and 3:00 p.m. Monday through Friday in the City of Hermosa Beach.

Truck deliveries to the Project Site would be limited to the hours between 9:00 a.m. and 3:00 p.m. Monday through Friday, except in the case of an emergency and with the prior approval of the Director of Public Works. The Project-related truck trips would be limited to 18 round trips per day and limited to the designated truck routes.

2.4.1.3 Phase 1 Site Preparation Personnel and Equipment Requirements

The vehicles, equipment, and employees estimated for Phase 1 are provided in the detailed

listing in Appendix A of the Final EIR. Vehicle trips are summarized in Table 2.4. The Project-related personnel would utilize parking spaces in an offsite parking area provided consistent with the proposed parking plan described in detail in Appendix A.

Table 2.3 Phase 1 Project Schedule

Activity	Schedule (Weeks)																										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Construction of Temporary City Yard	■	■	■	■	■																						
Underground overhead utilities	■	■	■	■	■																						
6th Street & Valley intersection					■	■	■	■																			
Relocation of Yard					■	■																					
Remove buildings					■	■	■	■																			
Remove other site structures									■	■	■																
Construct retaining walls												■	■	■	■	■											
Grade, well cellar, aggregate																	■	■	■	■	■						
Construct chain link fence																						■					
Construct well cellar																						■	■				
Install electrical service									■	■	■	■										■	■	■	■	■	■
Install landscaping																										■	■
Install 32-foot sound wall																								■	■	■	

Note: relocation of Yard would only include moving of shop materials and equipment. The Temporary City Maintenance Yard would be construction prior to the start of Phase 1 and would take approximately 9 months. See section 2.5.

2.4.1.4 Phase 1 Truck Routes

Truck trips would be required in order to deliver and remove construction-related materials and equipment to and from, respectively, the Project Site. Trucks would utilize roads designated as truck routes by the cities of Hermosa Beach, Redondo Beach, Manhattan Beach and Torrance.

Truck routes are shown in Figures 2.13 and 2.14.

The routes identified by the Applicant as those utilized for all phases of the Project are as follows:

Inbound Trucks

1. Inbound trucks from westbound Artesia Boulevard
2. Left on to southbound Pacific Coast Highway
3. Right on to westbound Pier Avenue
4. Left on southbound Valley Drive
5. Right into the Project driveway on Valley Drive

Or

6. Inbound trucks from westbound 190th Street (which becomes Anita Street)
7. Right on northbound Pacific Coast Highway
8. Left on to westbound Pier Avenue
9. Left on to southbound Valley Drive
10. Right into the Project driveway on Valley Drive

Outbound Trucks

11. Outbound trucks on to eastbound 6th Street
12. Right on to southbound Valley Drive
13. Left on to eastbound Herondo Street
14. Continue onto Anita Street, then 190th Street to the Interstate 405 (I-405)/ Crenshaw interchange

Or

15. Outbound trucks on to eastbound 6th Street
16. Right on to southbound Valley Drive
17. Left on to eastbound Herondo Street

18. Left on to northbound Pacific Coast Highway
19. Right on to Artesia Boulevard.

2.4.2 Phase 2 Drilling and Testing

PHASE 2

Drilling and Testing:
Drilling for 3-4 Months
Testing for 7-9 Months
More

The purpose of Phase 2 would be to conduct the drilling and testing of wells in order to determine the potential productivity and economic viability of the Proposed Oil Project. During this phase, up to three test wells and one water disposal/injection well (a total of four wells) would be drilled. These wells would be drilled utilizing directional drilling technology, which enables the wells to be drilled laterally for long distances, so that the bottom-hole locations may be located several thousand feet from the surface location of each wellhead on the Project Site (see Figure 2.7 and 2.8).

2.4.2.1 Phase 2 Site Geology and Drilling Objectives

The Proposed Oil Project would utilize directional drilling techniques to access the crude oil and gas reserves in the tidelands (offshore) and uplands (onshore) in the portions of the Torrance Oil Field within the City's jurisdiction. The Project Application states that "no hydraulic fracturing (or "fracking") of wells will occur because the geologic zones for the Proposed Project are permeable and capable of yielding oil and gas without hydraulic fracture stimulation."

Table 2.4 Phase 1 Vehicle Trip Summary

Activity	Trucks, Maximum RT/day*	Autos/PU, Maximum RT/day	Total, Maximum RT/day
Underground overhead utilities	4	10	14
Construct 6th & Valley intersection	3	8	11
Remove buildings	10	8	18
Remove other existing site structures	15	6	21
Construct retaining walls	5	14	19
Grade, well cellar and aggregate	15	10	25
Construct chain link fence	1	4	5
Construct well cellar	4	8	12
Install electrical service	6	15	22
Install landscaping	1	2	3
Install 32-foot sound attenuation wall	3	12	14
Greatest number of trips in one day	18 (during week 9)	31 (during week 12)	43 (during week 10)

Notes: * According to the 1993 CUP, which is valid pursuant to the Settlement Agreement, the number of truck trips shall be limited to a maximum of 18 rounds trips per day, except in an emergency.

Trucks are 3+ axle or greater or trucks with trailers. Autos are automobiles or pickups/trucks with 2 axles.

Trips are round trips.

Maximum truck activity occurs during week 9 with the installation of electrical service and the removal of existing structures.

Maximum auto activity occurs during week 12 with the installation of electrical service and construction of the retaining wall.

Maximum activity trucks and autos combined occur during week 10.

Truck maximum and auto/PU maximum do not necessarily occur on the same day, so the total maximum is not necessarily a simply addition of the two. See appendix.

See Appendix A for a detailed breakdown of vehicles, employees, trucks and construction equipment for each week.

Source: Project Application, Amendments and Appendices

The approximate extent of the City's jurisdiction within the Torrance Oil Field is provided in Figure 2.7. Figure 2.8 provides a typical well cross section illustrating how wells can reach the oil reserves, within the tidelands, from the Project Site. The Project Application states the primary target zones are the Upper Main, Lower Main, and Del Amo Zones with some production potential within the Schist Conglomerate.

As shown in Figure 2.8, the Upper Main Zone is the uppermost part of the Puente Formation. The Project Application states that it is expected to be the shallowest oil productive zone in the City. Of the three known producing horizons in the Torrance Oil Field, the Upper Main Zone is the most prolific. The Upper Main Zone beneath the Hermosa Beach tidelands and uplands is expected to be 300 feet thick and composed of inter-bedded thin sands and shales. The shales are currently fractured and provide both fractured porosity and permeability. The fractures are

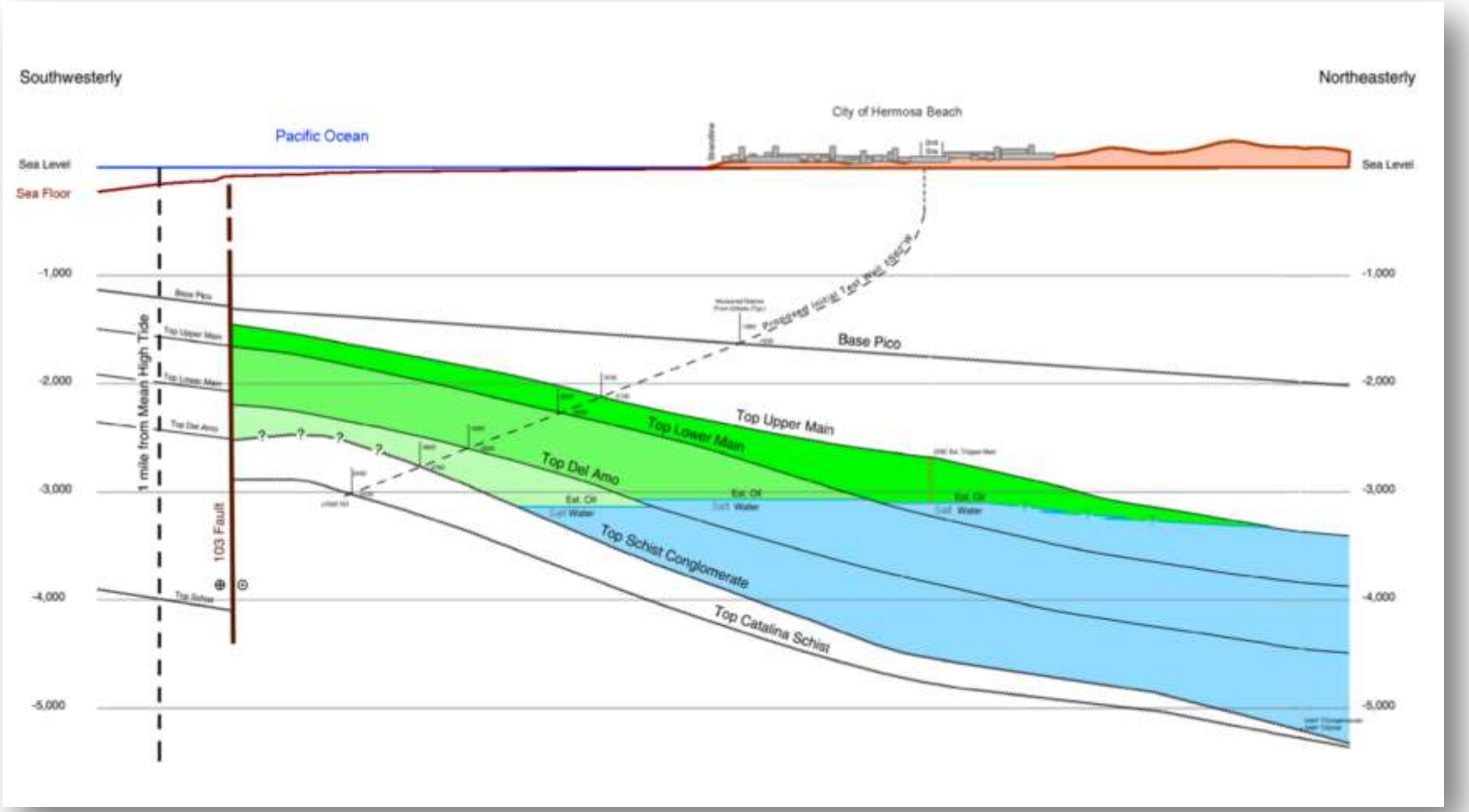
critical to the performance of the reservoir in the area due to the fine-grained and thin-bedded nature of the sands. The Lower Main Zone lies below the Upper Main Zone in the Puente Formation. The Project Application states that similar to the Upper Main Zone, the shales of the Lower Main Zone are currently fractured and important for oil production. However, the Lower Main Zone has fewer interbedded fine-grained sands and is over 500 feet thick.

Figure 2.7 Proposed Oil Project Lease Areas (below)

Source: Project Application

Exhibit B

Figure 2.8 Applicant Proposed Oil Project Lease Areas Cross Section



Source: Project Application. Representative figure not to scale or reflective of the exact geology of the region.

The Del Amo Zone lies beneath the Lower Main Zone. It contains the least amount of thin-bedded sandstone in the Puente Formation. The Project Application states that similar to the other two zones, the shales of the Del Amo Zone are currently fractured and important for oil production. The Del Amo Zone varies the most in thickness and could be from 200 feet up to 700 feet thick.

The Schist Conglomerate underlies the Del Amo Zone and is resting on metamorphic basement rock (Catalina Schist). The Schist Conglomerate could be as much as 400 feet thick and is composed of reworked fragments derived from erosion of the underlying Catalina Schist. The Project Application states that although it is unknown if the Schist Conglomerate is productive beneath the City, it is still a viable exploration target.

The production test wells would target areas to the south-west, the north-west and the north areas of the lease (see Figure 2.7). The wells for the Proposed Oil Project would be at a true vertical depth of approximately 3,000 feet and a measured depth of approximately 9,000 feet. The actual well depth would vary depending on the area targeted.

The Applicant indicates that the wellhead pressures anticipated during and immediately after drilling would be 0.0 pounds per square inch (psi) and that the wells are not anticipated to be free-flowing.

DOGGR must review and approve an engineering study conforming to CCR Section 1724.6 and 1724.7 for operations. No Class II injection wells will be permitted prior to review and approval of the study. A Notice of Intent will need to be submitted for each proposed well. The Notice of Intent will be reviewed for accuracy and completeness and, if appropriate, a drilling permit issued.

2.4.2.2 Phase 2 Construction and Drilling Activities

Phase 2 construction and drilling would consist of the following activities and improvements:

- Installation of Temporary Construction Trailer
- Delivery and Set Up of Drill Rig
- Installation of Temporary Production Equipment

- Drilling of Wells
- Testing and Operational Systems

These activities are discussed in the following subsections.

Phase 2 Installation of Temporary Construction Trailer

A temporary construction trailer would be installed in the northeast portion of the Project Site (see Figure 2.9). In addition, the associated utilities, including potable water and sewer, would be extended from the existing lines currently located along 6th Street that serve the City Maintenance Yard. Water and sewer service would be provided by the California Water Service Company and the City, respectively. Electricity would be provided by Southern California Edison (SCE) as discussed above under Phase 1 construction activities.

Figure 2.9 Proposed Conceptual Site Plan - Project Phase 2

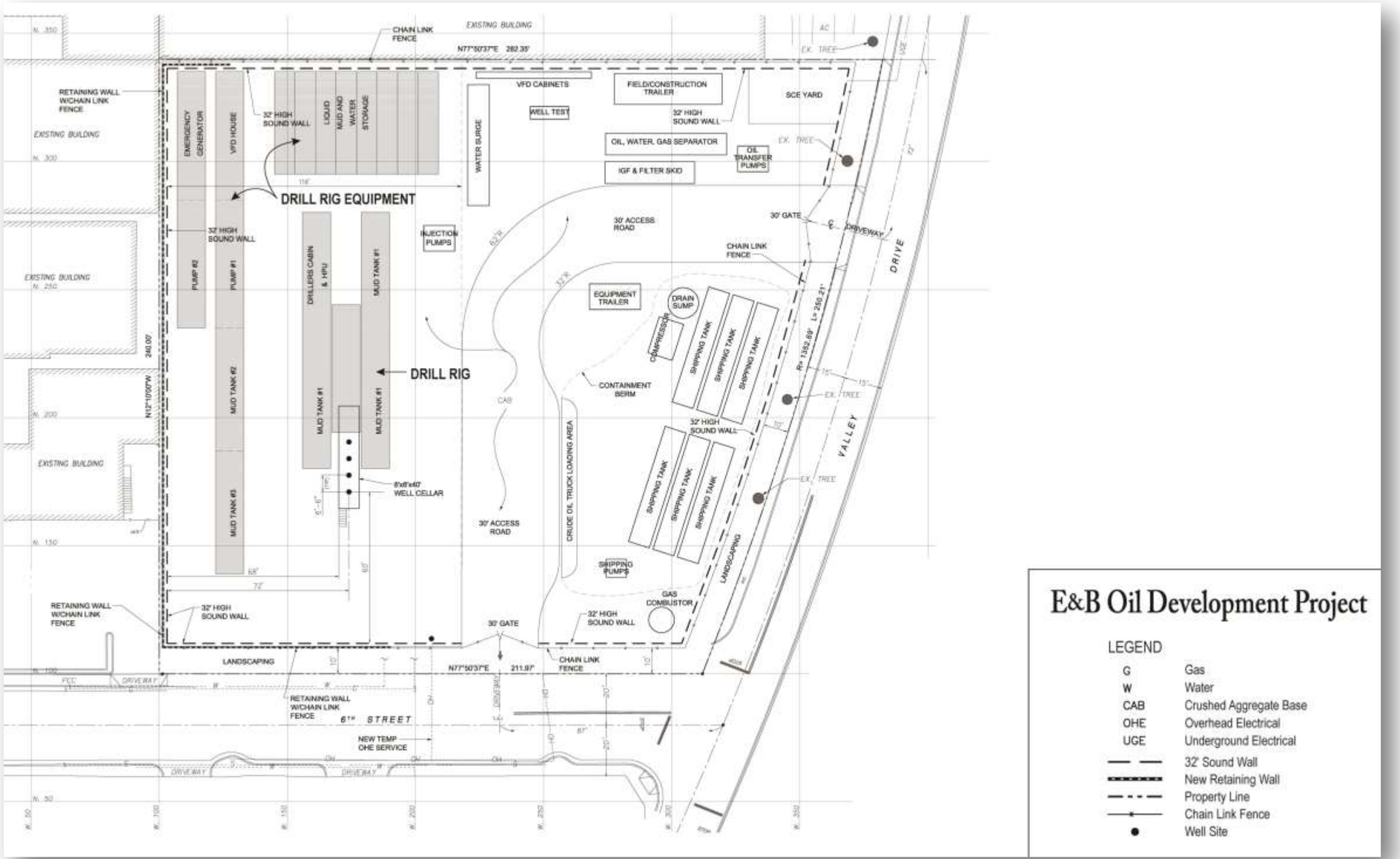

CHAIN LINK FENCE
EXISTING BUILDING
N77°50'37"E 282.35'
RETAINING WALL W/CHAIN LINK FENCE
EXISTING BUILDING
EXISTING BUILDING
EMERGENCY GENERATOR
VFD HOUSE
32' HIGH SOUND WALL
LIQUID MUD AND WATER STORAGE
DRILL RIG EQUIPMENT
32' HIGH SOUND WALL
PUMP #2
PUMP #1
MUD TANK #2
MUD TANK #3
DRILLERS CABIN & HPU
MUD TANK #1
MUD TANK #1
DRILL RIG
8'x8'x40' WELL CELLAR
INJECTION PUMPS
WATER SURGE
VFD CABINETS
WELL TEST
FIELD/CONSTRUCTION TRAILER
32' HIGH SOUND WALL
SCE YARD
OIL, WATER, GAS SEPARATOR
OIL TRANSFER PUMPS
IGF & FILTER SKID
30' ACCESS ROAD
30' GATE
CHAIN LINK FENCE
EQUIPMENT TRAILER
DRAIN SUMP
COMPRESSOR
SHIPPING TANK
SHIPPING TANK
SHIPPING TANK
CONTAINMENT BERM
32' HIGH SOUND WALL
SHIPPING TANK
SHIPPING TANK
SHIPPING TANK
CRUDE OIL TRUCK LOADING AREA
30' ACCESS ROAD
SHIPPING PUMPS
GAS COMBUSTOR
LANDSCAPING
EX. TREE
EX. TREE
EX. TREE
DRIVE
VALLEY
RETAINING WALL W/CHAIN LINK FENCE
32' HIGH SOUND WALL
30' GATE
32' HIGH SOUND WALL
LANDSCAPING
N77°50'37"E 211.97'
CHAIN LINK FENCE
RETAINING WALL W/CHAIN LINK FENCE
6TH STREET
NEW TEMP OHE SERVICE
DRIVEWAY
DRIVEWAY
DRIVEWAY
E&B Oil Development Project
LEGEND
G Gas
W Water
CAB Crushed Aggregate Base
OHE Overhead Electrical
UGE Underground Electrical
32' Sound Wall
New Retaining Wall
Property Line
Chain Link Fence
Well Site

Exhibit B

Source: Applicant application

Exhibit B

Development Agreement between City of Hermosa Beach and E&B Natural Resources

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Exhibit B

Development Agreement between City of Hermosa Beach and E&B Natural Resources

Phase 2 Delivery and Set Up of Drill Rig

Automated Drilling Rig

An electric drilling rig and its associated equipment would be brought to the Project Site on large trucks with trailers to be permitted by the City and the California Highway Patrol (CHP). The drilling rig would be an "automated drill rig" (ADR), which means that many of the drill rig procedures (loading pipe, etc,) would be done by mechanical means automatically. The approximately 87-foot high drill rig would be powered by electricity. A large crane with a 150-foot boom would be used to erect the drill rig. Support equipment for the drill rig would include pipe racks, mud and cutting system, pumps, hydraulic equipment, and an accumulator. In the event of a loss of power from SCE, a generator, which would be a non-road portable diesel-fuel generator certified by the California Air Resources Board (CARB), would provide power for the safe shutdown of the drilling operation.

Ground Flare

Phase 2 Installation of Temporary Production Equipment

Temporary oil, water, and gas production equipment would be installed on the Project Site. This temporary equipment would include a well test station, an induced gas flotation/filter skid, a gas combustor (enclosed ground flare), fluid handling tanks, piping, vapor recovery unit, pumps, and vessels. The production equipment would be delivered by trucks to the Project Site. The temporary production equipment would be installed in the eastern portion of the Project Site within an area enclosed by a containment berm as shown in Figure 2.9.

Phase 2 of the Proposed Oil Project would be designed as a closed-loop system, with pressure relief valves venting to a flare and tanks venting to a vapor recovery system. The control system would be computerized and would monitor the closed-loop system, providing warnings, corrective actions, and shutdowns, if necessary. Corrective actions could be closing valves, sounding alarms, shutting down wells or other process related functions. In addition, according to the Applicant, redundancy would be built into the system to provide an extra level of protection, ensuring there would be a backup for each safety device. All safety devices would be tested on a regular basis as per applicable codes and standards.

Operators would be onsite 24 hours per day, seven days per week, to monitor all aspects of the Proposed Oil Project's production process.

Phase 2 Drilling of Wells

Once the drill rig and associated equipment set up is complete, up to three test wells would be drilled utilizing directional drilling technology. This would enable the wells to be drilled laterally for long distances so that the bottom-hole locations may be located horizontally several thousand feet from the surface location of the well head on the Project Site. All wells would be permitted, drilled and cemented in accordance with the State Division of Oil, Gas, and Geothermal Resources (DOGGR) regulations. Drilling would proceed in the following manner:

- Installation of conductor casing;
- Drilling of wells;
- Placement of casing and cementing of wells (in stages at various depths); and
- Completion of the well, including installation of down-hole pumps and tubing.

Installation of Conductor Casing

The conductor casing is the initial hole drilled into the ground with a large diameter pipe installed to maintain integrity. The subsequent drilling of the well would take place through the conductor casing. Conductor casing would be installed with a small drilling rig, referred to as a dry-hole digger, which would be used to set the conductor casing for all of the intended wells in the Project Site. A large diameter hole, about 18 inches in diameter, would be drilled to an approximately 80-foot depth. This type of drilling is similar to boring a hole with an auger. Usually, no drilling fluid is needed to drill the hole, hence the name dry-hole digger. A large

diameter casing, commonly referred to as "conductor pipe", typically 13-3/8 inches in diameter, is lowered to the bottom of the hole and is cemented in place with construction concrete. This forms the first seal of the near-surface formations and also serves as a steel conduit to allow the drilling fluid used in the next stage of the well drilling to be circulated to the surface without washing away the shallow near-surface dirt. All conductors necessary to develop the Proposed Oil Project test phase would be set at this time and the dry-hole digger moved off before the drilling rig would be mobilized and brought to the Project Site.

Drilling, Casing and Completion of Wells

The components of the drill rig and all necessary equipment would then be moved onto the Project Site with large specially equipped trucks. The drill rig height would be 87 feet. The drilling setup would include three main parts; the drilling structure (i.e., mast, substructure,

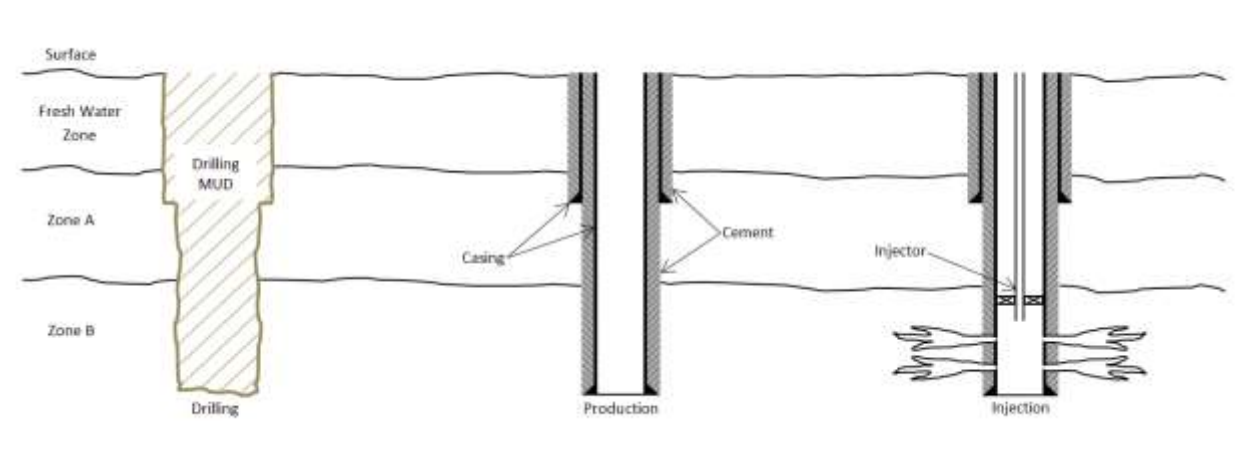
catwalk, silicon-controlled rectifier (SCR) house, top drive, back-up generator, crown block, traveling block, iron rough neck, drill pipe, control cabin), the blow out preventer (BOP) system (i.e., BOP Stack, Shear Ram, BOP Controller, and Accumulator), and the mud system (i.e., mud tanks, mud shakers, mud pumps, mud return line). The drilling rig would also require other equipment such as a spare parts house, other tanks, and storage areas as needed to support the drilling operation. The substructure of the drill rig would be located over the first well conductor casing, the mast would be raised, and the other equipment would be aligned and connected. The drill pipe would be laid out on racks convenient to the rig floor so they may be used when needed. Water tanks would be filled, and drilling fluid additives would be stored on site. The drill rig for the Proposed Oil Project would be run on electric utility power, so an electrical hookup would be made at this time. Drilling operations would then begin. The initial mobilization and rigging up operation is expected to last about seven to ten working days.

"Spudding in" is the term used to begin drilling operations. A large (12 ¼-inch diameter) drill bit is attached to the first joint of drill pipe (usually 30 feet long) and lowered into the conductor casing. As the first length of pipe is completely lowered in, another length of pipe is attached to the end, thereby increasing the length of the drill "string". When the drill string reaches the bottom of the conductor casing at a depth of 80 feet, the drilling begins. In order to drill downwards through soil and rock, the drill bit requires rotation and downward force, which is provided by the weight of thick-walled pipe on top of the drill bit. A single, 30-foot long drill pipe for a larger diameter drill bit weighs approximately three tons. As the drill bit drills deeper, more drill pipe is placed on top, thereby increasing the downward force; this is collectively known as the drill string. The drill bit turns clockwise as the weight of the drill pipe column forces it downward. Drilling fluid, called mud, is pumped down the inside of the hollow drill pipe, through a hole in the drill bit, and flushes the drilled rock cuttings away from the bit and up the space between the wall of the borehole and the outside of the drill pipe, which is referred to as the "annulus." When the mud reaches the surface, it circulates to a mud tank where the rock cuttings are separated out of the fluid by using a shaker, and the clean mud is pumped back down the hole in a continuous circuit, constantly circulating the drilled rock cuttings up and away from the drill bit as it penetrates deeper into the earth. The cuttings are analyzed, stored in 20 cubic yard bins, and then hauled offsite.

Initially, a large diameter bit is used to drill to a predetermined depth. When the specified depth

is reached, drilling is stopped, the drilling string is removed and a large diameter pipe (a casing string) is assembled in 40-foot lengths and lowered to the bottom of the well bore. Cement is then pumped down the inside of the casing, around the bottom of the hole, and up the annulus between the casing and the well bore. When the cement hardens, it ensures that the entire casing and well bore are encased in cement, protecting the fresh water aquifers and surrounding subsurface areas from the production fluids inside of the casing. See Figure 2.10 for a schematic of the well bore and casing.

Figure 2.10 Typical Well Bore and Casing



Source:Project Application

Next, a piece of equipment known as a blowout preventer (BOP) is attached to the well head. The BOP is a safety system used during drilling operations in oil and gas fields to prevent the uncontrolled release of reservoir fluids and to immediately shut off the flow in the event that abnormal pressure is encountered in the well bore that cannot be controlled by the hydrostatic head of the drilling fluid when drilling resumes beneath the surface casing. Blow out prevention equipment shall conform to DOGGR's publication M07 "Blowout Prevention in California, Equipment Selection and Testing 2006 edition. If the subsurface pressure begins to cause the well to flow, the BOP is activated, closing in the well and trapping the pressure until it can be bled off safely and drilling can continue. A BOP would be placed on each wellhead during the drilling and removed after the well is completed. A BOP utilizing Blind Shear Rams would be utilized. Blind Shear Rams are a type of BOP common in the offshore environment that allow for the shutting off of flow through the well even if drill pipe is in the wellbore. Pursuant to the requirements of the Code of Federal Regulation on Oil and Gas and Sulphur Operations in the Outer Continental Shelf(30 CFR part 250), the Applicant indicates that the BOP would be certified that the shear rams can actually shear the drill pipe prior to drilling.

The surface casing serves three primary functions:

- It isolates fresh water formations from contact with any fluids coming from deeper in the earth;
- It serves as a mounting place for the blowout preventer; and
- It serves as the support for the production casing that would be placed in the well if oil is found.

Once the surface casing is cemented in, drilling operations resume with a smaller drill bit. This smaller hole is drilled to the total depth decided upon by the Applicant's geologic and engineering staff. Usually, the only interruptions to drilling operations would be to remove the drill pipe (also known as tripping pipe) from the well to replace a dull drill bit, and then lowering the pipe back to the bottom of the well.

In order to achieve the directional aspect of the drill hole, the well bore is bent. The act of "bending" a well out of the vertical axis typically begins after vertical drilling has progressed several hundred feet beneath the surface. Although the specifics of each well proposed for this Project have not been established, it is not uncommon to begin to deviate from vertical at a depth of about 600 feet and still reach a target formation located at a depth of 4,000 feet, but also almost 4,000 to 6,000 feet sideways from the surface spot location. This system would be used on virtually all of the wells drilled for the Proposed Oil Project.

When the well reaches total depth (TD), drilling operations are halted and the drill pipe is removed from the well leaving mud in the hole to contain any potential production fluids located at the reservoir depth. A logging tool is then lowered into the hole to record petrophysical data of the formations through which the rig has drilled. If the well looks like it would produce oil, production casing is installed in a similar fashion to the installation of the surface casing. Production casing for the Proposed Oil Project is planned to be 7inches in diameter. Production casing would be cemented similarly to how the surface casing is cemented, as previously described. Once the cement has been allowed to fully harden, another electric logging tool, called a cement bond log, is lowered to the bottom of the well to evaluate the completeness and effectiveness of the cement on the outside of the production casing. If the cement is found to have defects, the casing can be perforated and cement forced into the well at a specific location or the casing can be removed and the well re-drilled. Devices are inserted to ensure any perforations are sealed.

The well is then "completed", which is a series of activities that allow for the production fluids to flow into the well bore inside the casing and to the surface.

Table 2.5 shows a list of chemicals that would be used during drilling operations. The amounts listed are the estimated quantities consumed per well drilled. These materials are packaged by the manufacturer for shipping and would be delivered to the job site by conventional delivery or flatbed trucks.

Drilling each well would require approximately 130,000 gallons (or 0.4 acre-feet) of water. The water would be reclaimed water provided by the West Basin Municipal Water District from an existing reclaimed water line serving the Greenbelt east of Valley Drive. The West Basin Municipal Water District has provided the Applicant with a "will serve" letter.

The drilling process requires the use of drilling mud to circulate drilled rock cuttings out of the well hole, retain the integrity of the well hole, and control reservoir pressure. The drilling mud would be collected onsite in Baker tanks (enclosed tanks that are approximately 12 feet tall by 40 feet long and hold up to 500 barrels each). Although most of the mud would be reused on subsequent wells, some mud would be removed from the Project Site and disposed of each day by truck at an approved disposal site at Anterra's Oxnard Licensed Class 2 Disposal Facility or a similar facility. In addition, all other waste generated by the test drilling would be transported by truck to the appropriate disposal site at Clean Harbors Buttonwillow Landfill, or a similar facility if closer to the Project Site.

Table 2.5 Phase 2 Drilling Chemicals

Common/Trade Name	Use	Container	Amount per Well
Gel Wyoming Bentonite	Used to enhance mud viscosity	100-pound sack	525 sacks
DMA Sodium Polyacrylate	Water absorbent mud additive	50-pound sack	82 sacks
Benex Anionic Acrylamide	Mud additive	2-pound sack	75 sacks
GEOZan Xanthan Gum	Mud viscosifier	25-pound sack	40 sacks
Omniopol Sodium Polyacrylate Liquid	Water absorbent mud additive	-	380 gallons
CFR Fatty Acid Liquid	Mud additive to enhance lubricity	-	600 gallons
Bicarb Sodium Bicarbonate	Mud additive for pH control	50-pound sack	40 sacks
Citric Acid	Mud additive for pH control	50-pound sack	11 sacks
Walnut Hulls	Filter medium, used to reduce torque and drag of drill pipe and for plugging of fractures and high porosity formations	50-pound sack	48 sacks
Cement Bulk-Truck	Used for well sealing	-	3 bulk trucks
Biotreat 8415	Treatment of water before injection into the oil reservoir		
Hydrochloric Acid	15%, used for acid washing during completion	Bin	varies

Hydrofluoric Acid	3%, used for acidizing muds	Bin	varies

Source: Project Application, Amendments and Appendices

The Proposed Oil Project would comply with the 1993 CUP conditions of approval, proposed operational practices, and proposed design features. The noise reduction methods would include the following:

- An electric drill rig would be utilized, reducing the need for diesel engines;
- The drill rig would have no draw works or cables resulting in less noise;
- A 35-foot-high acoustical barrier wall (per Mitigation Measure NV-3a) would be erected around the perimeter of the Project Site during all drilling activities. The wall would have a sound transmission class (STC) rating of at least 32;
- The air inlets and vents of the hydraulic power unit would be fitted with silencers;
- An acoustical shroud would enclose three sides of the rig mast to reduce the top drive noise (if applicable);
- The mud pumps would be enclosed with acoustical barriers having a sound transmission class (STC) rating of at least 25;
- An 8-foot high acoustical barrier with an STC rating of at least 25 would be installed around the shaker tables;
- Drilling Quiet Mode Plan would be implemented at the drill site between 7:00 p.m. and 8:00 a.m., a plan which would provide for the following: disablement of all audible mobile equipment and truck backup alarms; minimization of pipe handling; cessation of cementing operations, maintenance, and tripping pipe; and limits within the delivery schedule; and
- An automated and remotely managed system to connect/disconnect pipe (Iron Roughneck) would be used, which would reduce pipe handling;

No processing of gas would occur during Phase 2. The gas separated from the oil and water would be directed to a gas combustor (enclosed ground flare), where disposal of it would occur through burning.

The Applicant indicates that low levels of potential "native" hydrogen sulfide (H_2S), in the order of 0.0 to 6.0 parts per million (ppm), may be encountered in the gas produced from the

underlying oil reservoir.

Because the produced fluids may contain some H_2S, fixed H_2S detection systems would be installed around the drilling site and continuous monitoring would be present during all drilling, workover, and well servicing operations. Sensors would be located in areas that are frequently used by personnel, selected drilling area locations, areas where H_2S may accumulate, and any other areas determined by hazard analysis to pose a potential risk. Personnel would also carry personal H_2S monitors attached to their clothing for immediate H_2S detection during drilling.

Figures 2.12 and 2.13 provide an outline of the City's designated truck route for construction trucks through the cities of Hermosa Beach, Redondo Beach and Torrance.

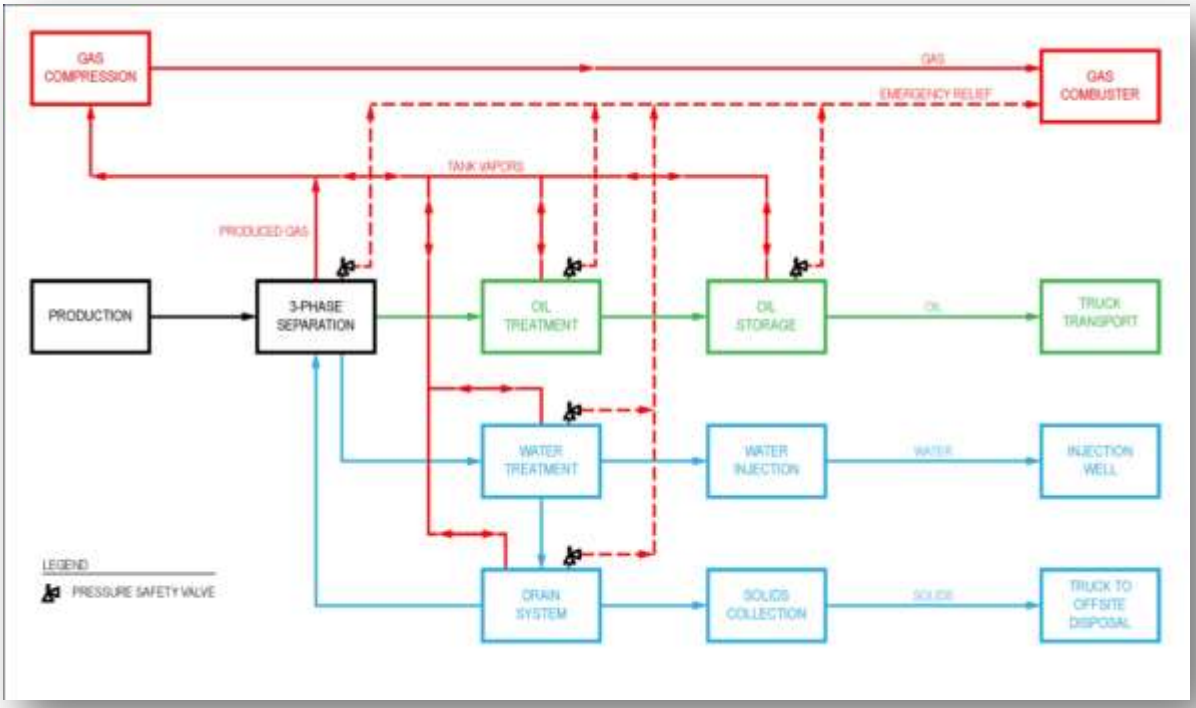
Phase 2 Testing and Operational Systems

After the completion of the first test well and the water disposal/injection well, the extracted oil would go through production and testing. The temporary production equipment on the Project Site would be used to process the production fluid. The oil would be processed to a standard that would be suitable for sale. The produced water would be processed and re-injected back into the oil-producing reservoir below the oil water contact. Disposal of the gas produced during Phase 2 would occur through burning in the enclosed ground gas flare. Figure 2.11 shows the steps involved in processing the oil, water, and gas produced from the test wells in Phase 2.

Processing of Production Fluids

During Phase 2, the Proposed Oil Project is designed to handle up to 800 barrels of oil per day and up to 250,000 standard cubic feet of gas per day. After the oil is processed, it would be trucked from the Project Site to an offsite oil receiving facility at 2650 Lomita Boulevard in Torrance. The route used for crude haul trucks is detailed in Appendix A of the Final EIR.

Figure 2.11 Phase 2 Process Flow Diagram



Source: Applicant application

The produced fluids would be sent from the wells to a three-phase separator, which would separate the fluid into gas, oil and water streams. The gas exits the top of the separator, the oil exits the middle, and the water exits the bottom of the separator. Each one of these fluids enters a specific system of treatment as follows.

Oil Treatment System

The produced oil would enter a series of stock tanks after leaving the three-phase separator. The stock tanks would be used if the oil needs to be further processed to remove excess water. The water removed from the oil and water mixture would be sent back to the three-phase separator through a drain system. Once the oil is processed to a standard suitable for sale, the oil from the stock tank would be loaded into a tanker truck and transported to the purchaser.

Gas Treatment System

The produced gas would be sent directly to a compressor and then to the gas flare for combustion after leaving the three-phase separator. A vapor recovery system attached to the temporary Baker tanks would be utilized to capture vapors and to direct them to a vapor recovery compressor and to the gas system and flare. The vapor recovery, tank and flare system would be subject to Southern California Air Quality Management District (SCAQMD) permit requirements.

Figure 2.12 Truck Routes from Highway 405 to Project Site

Source:Project Application, Amendments and Appendices

Figure 2.13 Truck Routes to Highway 405from theProject Site

Source:Project Application, Amendments and Appendices

The Proposed Project provides for the disposal of treated stormwater runoff and produced water from the drilling and production process back into the oil reservoir using water disposal/injection

wells. The injection of untreated water can result in the creation of H_2S concentrations in the oil reservoir above preexisting levels (referred to as the "native" condition). Prior to the injection of produced water from the oil extraction process, or the injection of surface runoff from precipitation that collects on the Project Site, the water would be treated by a biocide to eliminate sulfate-reducing bacteria (SRB). Once wells begin production, the extracted water would be tested for SRBs to determine if treatment is needed. In addition, the surface runoff water and any other injected water, would be tested. SRBs are an assemblage of specialized bacteria that thrive in the absence of oxygen and obtain energy for growth by oxidation of organic nutrients, with sulfate being reduced to hydrogen sulfide (H_2S). SRBs are treated by the use of a biocide and this treatment could be a batch or continuous treatment. There are numerous antibacterial agents available on the market that could be used for this specific treatment if it is determined to be needed.

Facility Storm Drain System

The Proposed Oil Project Site is designed to retain, process, and inject storm water within the perimeter fence or wall for a 100-year storm event. All rainwater falling on the site would be collected and pumped into the water processing system for disposal/injection into the oil reservoir. In addition, any spills on the site would also be contained, both within process system walls/berms around equipment and site walls/berms around the site. Process walls/berms would be designed to contain at least 110 percent of the largest vessel plus the precipitation generated by a 100-year storm event.

Safety Systems

Operators would be onsite 24 hours per day, seven days per week, to monitor the Proposed Oil Project's production process during Phase 2.

A fire protection system as required by Federal, State, and local codes, ordinances and regulations would be installed by the Applicant prior to the drilling and testing activities on the Project Site. The Fire Protection Plan for Phase 2 of the Proposed Oil Project would be provided to the City of Hermosa Beach Fire Department for review and approval prior to the initiation of Phase 2.

The design and operation of the Proposed Oil Project would be required to meet provisions

within the California Fire Code (CFC) and standards of the National Fire Protection Association (NFPA), including the requirements for the storage of hazardous materials, the installation and use of fire protection systems and devices, and the implementation of safety measures for employees and emergency responders.

Onsite personnel and a site security program, including a closed circuit television system, a gate access system, and an intrusion and motion detection system, would control all access to and from the Project Site during Phase 2. In addition, temporary lighting would be provided. The lighting would be shielded/hooded and directed downward, as is consistent with City requirements.

All tanks would have containment equal or greater in capacity than at least 110 percent of the largest vessel plus the precipitation generated by a 100-year storm event.

Water Treatment System

The produced water would be pumped into a treatment system, including a gas flotation unit and a filter unit, to remove excess oil after leaving the three-phase separator. The primary objective of both units would be to clean the water of oil and solids such as sand. The water would then enter a water surge tank after leaving the filter unit and would be sent to the water disposal/injection pumps for disposal/injection into the oil-producing reservoir through the disposal/injection well. If determined to be needed, before it enters the water surge tank, the water would be injected with a biocide to eliminate any bacteria that may be in the produced water.

Electrical Requirements

Approximately 75 kilo-watt hours of electricity would be required to drill each well.

Chemicals

Project operations would require the use of chemicals. These chemicals would be documented in a required Hazardous Materials Business Plan. Typical chemicals utilized in the temporary production facility are shown in Table 2.6.

Table 2.6 Phase 2 Testing Chemicals

Common/Trade Name	Use	Maximum Quantity (Gallons)
Emulsion Breaker/Phasetreat 6378	Help separate oil and water	60
Water Clarifier/Floctreat 7991	Water additive	40
Emulsion Breaker/Waxtreat 3610	Help separate oil and wax	50
Corrosion Inhibiter/Cor 7182	Additive to reduce corrosion	400
Surface Cleaner/4U	General purpose cleaner	165
Scale Dissolver/Techni Solve 1780	General purpose scale remover	55
Scale Inhibitor/Techni Hib 7621	Additive to reduce scaling	120

Source: Project Application, Amendments and Appendices

Noise Abatement

The Proposed Project would be implemented in compliance with the 1993 Conditional Use Permit conditions of approval. In addition, the applicant proposes to incorporate several operational practices and design features intended to abate noise. The conditions of approval, operational practices and design features that would be incorporated into the production operations include the following:

- Heavy/large reciprocating equipment would be mounted on vibration isolators;
- Pipe tripping would be restricted to daylight hours only;
- Loudspeaker paging systems would be prohibited;
- Well workover rigs or any other workover-type rig (not the main drilling rig) that is used would be operated only between 8:00 am and 6:00 pm during daytime weekday hours only, excluding holidays, except in an emergency as defined in the Conditional Use Permit (CUP) and reported to the City in accordance with the notification requirement. The exhaust and intake of the diesel engine (if used on the workover rig) would be muffled to reduce noise to an acceptable limit. The operator would use whatever means necessary, including, but not limited to, enclosing the diesel engine and rig in acoustic blankets or housing;

- All oil maintenance equipment, vehicles and non-electrical motors would be equipped with manufacturer approved mufflers or housed in a sound-proofing device;
- Noise monitoring would be conducted under the supervision of an independent certified acoustical engineer;
- Each well pump would produce a sound power level no greater than 83 dBA. This may be achieved by fitting sound attenuating enclosures that provide an insertion loss of at least 15 dB;
- The produced oil pumps, produced water pumps, water booster pumps and variable frequency drive electrical (VFD) cabinets would produce a sound power level no greater than 77 dBA;
- The water injection pumps would produce a sound power level no greater than 83 dBA.
- The vapor recovery compressors would produce a sound power level no greater than 83 dBA; and
- The cooler for the compressors would produce a sound power level no greater than 85 dBA.

Decision not to Proceed -Abandonment

If it is determined that the production of oil and gas on the Project Site would not be economically viable, the Applicant would remove the sound attenuation walls, the temporary production equipment, and the temporary construction trailer and abandon the three test wells and the water disposal/injection well in accordance with the requirements of DOGGR. The Project Site would be left as a graded site with site improvements including the retaining walls, the perimeter chain link fence, and the perimeter landscaping.

As the temporary City Maintenance Yard would already be constructed under the Proposed Project, the current City Maintenance Yard Site would be empty and would be available for development within the M-1 Light Manufacturing zoned area of Hermosa Beach. The Project Site would then be available for City or other development proposals, or for the temporary City Maintenance Yard to be relocated back to this site. However, any future use would need to be consistent with the lease agreement with the Applicant. Current site contamination would remain as part of the abandonment process and would be removed in accordance with the requirements of any future site use.

2.4.2.3 Phase 2 Drilling and Testing Schedule

It is anticipated that Phase 2 would occur for approximately 12 months as indicated in the schedule provided in Table 2.7. The drill rig would operate continuously for 24 hours per day, seven days per week, until the appropriate depth and bottom-hole location for each well has been reached. It is estimated it would take 120 days for drilling activities, 24 hours a day, which is approximately 30 days per well for four wells. After the drilling of the three oil wells and one water disposal/injection well is complete, the drill rig would be removed from the Project Site. As each well is drilled, the produced fluids from that well would go thorough production and testing, as described above.

2.4.2.4 Phase 2 Drilling and Testing Personnel and Equipment Requirements

The vehicles, equipment, and employees estimated for Phase 2 are provided in detail in Appendix A of the Final EIR. A summary of the vehicle trips is shown in Table 2.8. Parking for the employees would be provided in an adjacent parking area as previously discussed for Phase 1. Since Phase 1 prepares the Project Site for Phase 2, the conceptual landscape plan and elevations provided above for Phase 1 would also be applicable to Phase 2.

Table 2.7 Phase 2 Project Schedule

Activity	Schedule (Weeks)																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	thru 54
Install trailer and associated utilities	■																								
Deliver and set up drill rig/equipment		■	■																						
Install oil, water, and gas equipment							■	■	■	■	■	■													
Drill 3 test wells and water well				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
Testing of wells														■	■	■	■	■	■	■	■	■	■	■	■
Remove drill rig and equipment																							■	■	

Source: Project Application, Amendments and Appendices

Table 2.8 Phase 2 Vehicle Trip Summary

Activity	3-axle Trucks, Maximum RT/day*	2-axle trucks, Autos, Maximum RT/day	Total, Maximum RT/day
Install trailer and associated utilities	2	5	7
Deliver and set up drill rig/equipment	7	20	27
Install oil, water, and gas equipment	6	15	21
Drill 3 test wells and water well	9	10	19
Testing of wells	13	5	18
Remove drill rig and equipment	5	20	25
Greatest number of trips in one day	18 (during weeks 15, 17, 19, 21-24)	25 (during weeks 7-12)	37 (during week 7)

Notes: * According to the 1993 CUP, which is valid pursuant to the Settlement Agreement, the number of truck trips shall be limited to a maximum of 18 rounds trips per day, except in an emergency.

Trucks are 3+ axle or greater or trucks with trailers. Autos are automobiles or pickups/trucks with 2 axles.

Trips are round trips.

Maximum truck activity occurs during drilling and testing of wells.

Maximum auto activity occurs during weeks 7-12 with the installation of oil, water and gas equipment and the drilling of wells. Maximum activity trucks and autos combined occurs during week 7.

Testing of wells would involve crude transportation by truck, by way of an average of 7 trucks per day/5 days per week or up to 12 trucks in one day (round trip).

Truck maximum and auto/PU maximum do not necessarily occur on the same day, so the total maximum is not necessarily a simply addition of the two. See appendix A.

See Appendix A for a detailed breakdown of vehicles, employees, trucks and construction equipment for

each week.

Source: Project Application, Amendments and Appendices

2.4.3 Phase 3 Final Design and Construction

PHASE 3

Final Design and Construction:
16 Months

If it is determined that the production of oil and gas on the Project Site would be economically viable, the Applicant would begin Phase 3 of the Proposed Oil Project. The purpose of Phase 3 would be to utilize the production information from Phase 2 to prepare the final design of the facility, prepare the onsite area for facility installation, install the permanent oil and gas production facilities, and construct offsite Pipelines.

2.4.3.1 Phase 3 Onsite Construction

Phase 3 onsite activities would involve the following construction activities:

- Preparation of final engineering design;
- Removal of temporary production equipment;
- Removal of three remaining trees;
- Removal of 35-foot sound attenuation wall and perimeter fencing (per Mitigation Measure NV-3a);
- Installation of 24-foot sound attenuation wall (per Mitigation Measure NV-4a);
- Implementation of remedial action plan;
- Construction of remaining retaining walls and final grading;
- Completion of construction of well cellars;
- Construction of 35-foot block wall (per Mitigation Measure NV-6a);
- Removal of 24-foot sound attenuation wall (per Mitigation Measure NV-4a);
- Construction of small office building;
- Installation of permanent production equipment;
- Construction of final site improvements;
- Construction of final street improvements along Project frontage;
- Installation of final landscaping;
- Installation of 32-foot sound attenuation wall;
- Setting of conductor pipe; and
- Installation of lighting systems.

Each of these activities is detailed in the discussion that follows. A site plan for Phase 3 is shown in Figure 2.14. The conceptual grading plan, site plan, elevations (with the 32-foot sound attenuation wall), and conceptual landscape plan for the Proposed Oil Project at the completion of Phase 3 are shown in Appendix A of the Final EIR.

Prepare Final Engineering Design

The final design of the permanent oil and gas production facilities, to be implemented during the first few months of Phase 3, would be based on the oil and gas analysis and production results from Phase 2 activities. Final design would include the sizing and development of the exact specifications for the oil, gas, and water separation production equipment and the detailed engineering to prepare the required final construction drawings.

Remove Temporary Production Equipment

The temporary oil, water, and gas production equipment installed on the Project Site during Phase 2 would be removed. The wells drilled during Phase 2 would be shut in, and steel plating would be placed on top of the well cellar.

Remove Remaining Trees

The three remaining mature trees along the frontage of the Project Site along Valley Drive would be removed to allow for the construction of final site improvements including a perimeter wall and the installation of permanent landscaping.

Remove 32-Foot Sound Attenuation Wall and Perimeter Fencing

The 35-foot sound attenuation wall (per Mitigation Measure NV-6a) and the 6-foot perimeter chain link fencing would be removed from the Project Site.

Install 16-Foot Sound Attenuation Wall

Prior to the initiation of earthmoving activities, a temporary 24-foot sound attenuation wall (per Mitigation Measure NV-4a) would be brought to the Project Site. The sound walls would be designed to be movable and would be relocated within the Project Site as needed to attenuate noise and dust associated with the earthmoving activities needed for the implementation of the Remedial Action Plan and the final grading of the Project Site. The temporary sound walls

would be removed from the Project Site after the onsite earthmoving and grading activities are completed.

Implementation of Remedial Action Plan

The Remedial Action Plan would be implemented to address lead, barium, arsenic and total petroleum hydrocarbon (TPH) contaminated soil and groundwater within and beneath the former landfill area in the northeastern portion of the Project Site. It is anticipated that approximately 9,000 cubic yards of lead contaminated soil would be removed from the Project Site in accordance with the Remedial Action Plan and hauled to a Class 1 landfill at the Kettleman Hills Facility, approximately 190 miles from the Project Site. The TPH contaminated soil (approximately 4,500 cubic yards located deeper than 25 feet) would be treated onsite via vapor extraction. For a detailed discussion of the soil remediation that would occur prior to final grading of the Project Site, refer to the Remedial Action Plan provided in Appendix A of the Final EIR. Groundwater contamination attributed to historic use of the site has been documented (Brycon 2013). The RWQCB have indicated that the Regional Water Quality Control Board Site Cleanup Program reviewed the Report on Groundwater Assessment and indicated the matter would go on its large backlog of low priority cases.

Construction of Remaining Retaining Walls and Final Grading

Retaining walls (up to 6 feet high) would be constructed 10 feet back from the Valley Drive and 6th Street property lines, along the eastern boundary of the Project Site and along the eastern portion of the southern boundary of the Project Site (see Figure 2.14). In addition, retaining walls would be constructed within the Project Site for the containment area associated with the production equipment. After the completion of the retaining walls, the Project Site would be graded to allow for the installation of Project equipment and to allow for proper site drainage. The final grading of the Project Site would not require the import or export of fill material. Appendix A of the Final EIR provides the conceptual grading plan that indicates the location of the retaining wall locations and the final grading of the Project Site.

Complete Construction of Well Cellars

The cement well cellar constructed in Phase 2 would be extended, and a second well cellar would be constructed to allow for the drilling of the remaining wells in Phase 4. At completion,

the well cellars would be approximately 8 feet wide by 120 feet long by 12 feet deep, with stairs at each end and covered with expanded metal grating. The well cellars would be equipped with storm water collection sumps and pumps to direct the storm water to the drain sump. From the drain sump, water would be directed into the processing system and injected, by the water disposal/injection wells drilled in Phase 4, into the oil-producing reservoir below the oil water contact. Figure 2.14 shows the location of the well cellars.

Construction of 16-Foot Split-Face Block Wall

A 16-foot split-face block wall would be constructed around the perimeter of the Project Site. The wall would be set back 10 feet from the Valley Drive and 6th Street property lines to allow for a landscape area. The wall would have a gated entrance off Valley Drive (set back 70 feet from the sidewalk) and a gated exit to 6th Street. The gates would be metal and motor operated. The appropriate signage would be provided, as is consistent with City requirements.

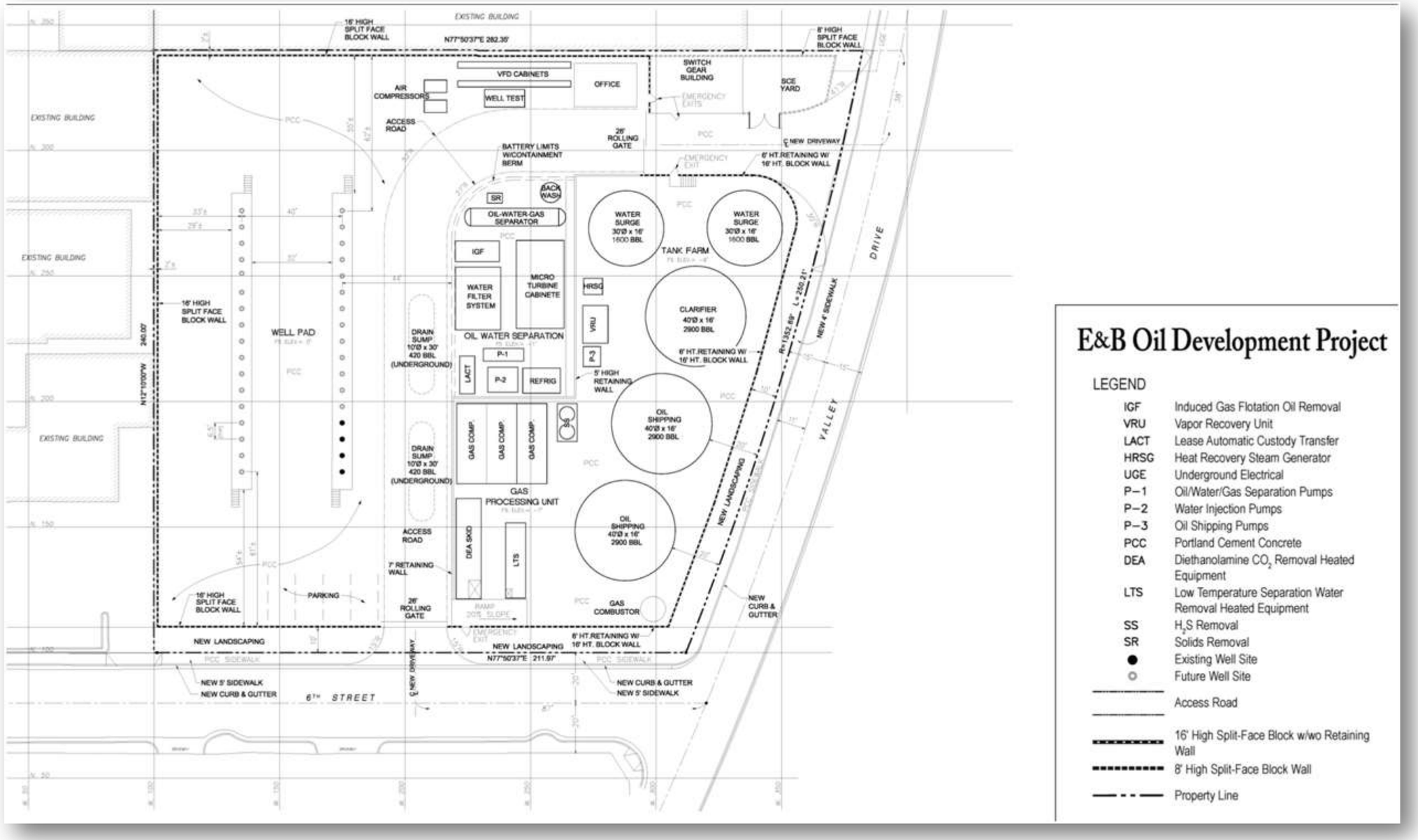
Remove 16-Foot Sound Attenuation Wall

After the completion of the Remedial Action Plan, final site grading, and construction of the well cellars and perimeter wall, the 16-foot temporary sound attenuation wall would be removed from the Project Site.

Construction of Small Office Building

A small office building approximately 650 square feet in size would be constructed in the northeast portion of the Project Site to house employee offices and control and monitoring equipment. The building would have a restroom and break room. The improvements extended to the Project Site in Phase 1 would provide for associated utilities, including water, sewer, natural gas, and telephone. The California Water Service Company and the City would provide water and sewer service, respectively. Southern California Gas Company (SCGC) would provide natural gas, and electricity would be provided by Southern California Edison (SCE). Verizon would provide telephone service. Office related solid waste services would be provided by Athens Services or a future city franchisee.

Figure 2.14 Phase 3 Proposed Conceptual Site Plan



E&B Oil Development Project

LEGEND

IGF	Induced Gas Flotation Oil Removal
VRU	Vapor Recovery Unit
LACT	Lease Automatic Custody Transfer
HRSG	Heat Recovery Steam Generator
UGE	Underground Electrical
P–1	Oil/Water/Gas Separation Pumps
P–2	Water Injection Pumps
P–3	Oil Shipping Pumps
PCC	Portland Cement Concrete
DEA	Diethanolamine CO_2 Removal Heated Equipment
LTS	Low Temperature Separation Water Removal Heated Equipment
SS	H_2S Removal
SR	Solids Removal
●	Existing Well Site
○	Future Well Site
	Access Road
	16' High Split-Face Block w/wo Retaining Wall
	8' High Split-Face Block Wall
	Property Line

Exhibit B

Source: Applicant application

Exhibit B

Development Agreement between City of Hermosa Beach and E&B Natural Resources

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Installation of Permanent Production Equipment

Permanent oil, water, and gas production equipment would be installed on the Project Site. The permanent oil production facilities would include tanks, vessels, piping, pumps, filters, and supporting metering equipment. These are listed in Table 2.9. A retaining wall around all of the vessels, tanks and other equipment containing oil would provide secondary containment. The design capacity of the secondary containment would exceed the fluid capacity of the largest tank by 110 percent plus the precipitation from a 100-year storm event.

In Phase 4, the oil production facility would be used to separate gas, water, and solids from the oil, after which the oil would be stored in tanks prior to transport via pipeline from the Project Site. The separated water would be accumulated in tanks, filtered, and then injected into the oil-bearing reservoir by the four water disposal/injection wells. Gas from each well would be treated on the Project Site and then sold to the SCGC. The permanent gas production facilities would have compressors, vessels, a H_2S and carbon dioxide (CO_2) removal system, a moisture removal system, and an odorizing system. The use of this equipment is discussed in Section 2.4.4, Phase 4 Development and Operations.

Table 2.9 Phase 3 and 4 Processing Equipment Listing

Equipment	Size and Number
Oil Shipping Tanks	40 foot diameter by 16 feet high, 2900 BBLS, 2 tanks
Water Clarifier	40 foot diameter by 16 feet high, 2900 BBLS, 1 tank
Water Surge	30 foot diameter by 16 feet high, 1120 BBLS, 2 tanks
Gas compressors	30 foot by 40 foot - 3 compressors
DEA Skid (acid gas removal)	12 foot by 40 foot, 1 skid
Low Temperature Separation (LTS) skid (propane refrigerant)	12 foot by 40 foot, 1 skid
Flare/Gas Combustor	10 foot diameter by 22 feet high
Vapor Recovery Compressor	17 foot by 28 foot
IGF Skid	18 foot by 8 foot, 1 skid

Filter Skid	25 foot by 18 foot, 1 skid
Micro Turbines (five turbines)	200 kw each, 30 foot by 40 foot
3-Phase Separator	7 foot diameter by 35 feet long
Lease Automatic Custody Transfer (LACT) Skid	5 foot by 12 foot

Source: Project Application, Amendments and Appendices. BBLS=barrels (42 gallons), skid=a pre-fabricated unit.

Construction of Final Site Improvements

In addition to the areas where the concrete well cellar, the containment area, and the oil and gas production equipment have been constructed, the ground surface of the Project Site would be paved with concrete or asphaltic concrete and designed so that no fluids, including rain water up to a 100-year storm event, would leave the Project Site. Liquids, including rainwater, would be captured in the containment areas or in the well cellars, processed through the production facility, and injected into the oil-bearing reservoir via four water disposal/injection wells.

Construction of Final Street Improvements Along Project Frontage

The Proposed Oil Project would include the construction of street improvements along the frontage of the Project Site on 6th Street and Valley Drive. The improvements would include the installation of new curbs, gutters, and sidewalks.

Installation of Final Landscaping

Permanent landscaping would be provided along the perimeter of the Project. To the extent feasible, plant materials used in the temporary landscape plan installed in Phase 1 would be reused in the permanent landscaping. Reclaimed water supplied by the West Basin Municipal Water District would be used for irrigation. Appendix A provides the conceptual landscape plan and plant materials for the permanent landscaping that would be provided at the completion of Phase 3.

Installation of 32-Foot Sound Attenuation Wall

At the completion of the improvements in Phase 3, a 32-foot sound attenuation wall would be

erected inside the 16-foot block wall to provide for noise attenuation during Phase 4 drilling. Appendix A of the Final EIR provides the elevations of the Project Site, including the sound attenuation walls with the block walls, from Valley Drive and 6th Street at the completion of Phase 3.

Set Conductor Pipe

Prior to drilling in Phase 4, a dry-hole digger/auger would be used to set the conductor casing in the well cellars for all of the intended wells on the Project Site in a manner similar to the setting of the conductor pipe in Phase 2. A hole approximately 18 inches in diameter would be drilled to a depth of approximately 80 feet. A conductor pipe would be lowered to the bottom of the hole and cemented in place. This would form the seal of the near-surface formation and serve as a steel conduit to allow the drilling fluid used in the next stage of the well to be circulated to the surface without washing away the shallow near-surface dirt. All conductors necessary to develop the Proposed Oil Project would be set, and the dry hole digger/auger would be moved off the Project Site.

Lighting Systems

The permanent lighting for the Proposed Oil Project would be installed as a part of Phase 3. The lighting,as proposed in the Applicant's Lighting Plan, would be designed to be directed downward and shielded in order to avoid obtrusive light spillage beyond the Project Site, reflective glare, and illumination of the nighttime sky.

2.4.3.2 Phase 3 Offsite Pipeline Construction

During Phase 3, offsite pipelines for oil and gas would be constructed to transport the oil and gas to markets. Each route is discussed in the following subsections.

Gas Pipeline Route

As it leaves the Project Site, the offsite underground pipeline for the transport of gas would be constructed for a distance of 0.43 miles in the ROW of southbound Valley Drive (which is a one way street south of 2nd Street) in the City of Hermosa Beach to a tie-in to a SCG gas line in the Southern California Edison(SCE) Utility Corridor east of N. Francisca Avenue in the City of Redondo Beach. See Figure 2.15 for the proposed pipeline routes. Appendix A contains

detailed drawings of the route and valve box options.

This portion of the gas pipeline would consist of two parallel pipelines, 4 inches in diameter, and located at a depth of approximately 3.5 to 4 feet below ground surface (bgs) within the road ROW until it ties into the SCG line at a proposed metering station immediately to the east of N. Francisca Avenue. The pipeline would be a loop system that allows for the gas to be returned to the Project Site for further treatment in the event that the produced gas does not meet SCG standards. The metering station site, which would be provided as a part of the Proposed Oil Project and is owned by SCG, would be approximately 40 by 60 feet in size and surrounded by an 8-foot high block wall.

As shown in Figure 2.15, this first portion of the gas pipeline is bounded to the east by the Greenbelt and Ardmore Park and, further to the east, by Ardmore Avenue and residential development in the City of Hermosa Beach; to the west by the Beach Cities Self Storage facility, light manufacturing land uses, South Park, and residential development in the City of Hermosa Beach; and to the west in the City of Redondo Beach by facilities associated with the AES Power Plant. The gas line is designed for a maximum operating pressure of 465 pounds per square inch gauge (psig), but would typically operate at approximately 225 psig of pressure.

Once the proposed gas pipeline from the Project Site ties into the SCG point of receipt at the proposed metering station, SCG would construct a six-inch gas pipeline that extends northeast for approximately 1.4 miles to connect to an existing SCG pipeline transmission facility (Line 1170) located on the south side of 190th Street near its intersection with Green Lane, between Flagler Lane and Beryl Street, in the City of Redondo Beach. After the first portion of the new six-inch gas pipeline leaves the proposed metering station and continues northeast, it would be located in an existing SCG easement within the SCE Utility Corridor between N. Francisca Avenue and Pacific Coast Highway. The new pipeline would exit the SCE Utility Corridor on the south side of the intersection of Herondo Street/Anita Street with Pacific Coast Highway, extend across Pacific Coast Highway, and continue northeast within the ROW of Anita Street/190th Street to its point of connection with the existing SCG pipeline transmission facility (Line 1170). If for some reason the first portion of the new pipeline could not be located within the existing SCG easement within the SCE Utility Corridor between N. Francisca Avenue and Pacific Coast Highway, it would leave the proposed metering station and continue for a short distance north within the ROW of N. Francisca Avenue and turn northeast at Herondo Street

within the ROW until it reaches the intersection of Herondo Street/Anita Street with Pacific Coast Highway. At that point it would continue to the northeast as described previously. Although SCG would obtain the necessary permits and construct the new gas pipeline, the Applicant would pay for the associated costs of construction.

The proposed gas line from the proposed metering station to the existing SCG pipeline transmission facility is bounded to the north by commercial land uses and residential development in the City of Redondo Beach and to the south by commercial land uses, residential development, and public facilities including Dominguez Park and Redondo Beach Dog Park in the City of Redondo Beach.

Oil Pipeline Route

The offsite underground pipeline for the transport of oil to an area refinery via a connection to a valve location in the City of Torrance would be constructed for a distance of approximately 3.55 miles in one of three potential pipeline scenarios that would follow a route through the Cities of Hermosa Beach and Redondo Beach and terminate in Torrance. The selection of the pipeline route would occur after Project approval. Appendix A of the Final EIR shows the pipeline route scenarios in detail.

Pigging
Passing a device through a pipeline that cleans or inspects the pipeline. A pig is usually a small rubber device slightly smaller in diameter than the pipeline. The pig is forced through it by product flow. Usually cylindrical or spherical, pigs sweep the line by scraping the sides of the pipeline

The pipeline would be 8 inches or less in diameter, located at a depth of approximately 3.5 to 4 feet bgs depending on the grade. At one of four potential valve box locations, the pipeline would tie-in to an existing pipeline that transports oil to a refinery. Appendix A of the Final EIR provides the proposed alignments of the three oil pipeline scenarios, the respective jurisdictional boundaries, and the adjacent land uses. Appendix A of the Final EIR provides the four valve box location options that the pipeline could tie into. More details are included in Appendix A.

The oil line would be designed for a maximum operating pressure of approximately 500 psig, but would typically operate at approximately 100 to 200 psig of pressure. The pipeline would

include pigging stations to send and receive maintenance pigs into and from the pipelines to clean or inspect the pipelines during ongoing operations. This would occur for the lifetime of the Proposed Oil Project. Pigging refers to the practice of using pipeline inspection gauges or 'pigs' to perform various maintenance operations on a pipeline without stopping the flow of the product in the pipeline (refer to sidebar for more information).

Figure 2.15 Proposed Pipeline Routes


Manhattan Beach
Lawndale
405
Artesia Blvd
Valley Dr.
1
Redondo Beach
Valvebox Options
Pier Av.
Hermosa Beach
Project Site
190th Street
Herondo St.
Torrance Refinery
Crude Pipeline Routes
Gas Pipeline
Torrance
Redondo Beach
Kings Harbor
Hawthorne Blvd.
N
W
E
S
0
0.5
miles

Exhibit B

Source:Project Application, Amendments and Appendices

As shown in Figure 2.15, the oil pipeline would be constructed for a distance of 0.39 miles in the ROW of southbound Valley Drive (which is one-way starting at 2nd Street) in the City of Hermosa Beach to the corner of Valley Drive/N. Francisca Avenue and Herondo Street in the City of Redondo Beach. At this point, the oil pipeline would turn to the east along one of the following three pipeline scenarios (see Appendix A of the Final EIR):

- Scenario 1 consists of the construction of the oil pipeline towards the east within the ROW of Herondo Street, Anita Street, and 190th Street in the City of Redondo Beach to the intersection of 190th Street/Hawthorne Boulevard in the City of Torrance. At this point, Scenario 1 would continue to one of the four valve box options presented later in this discussion;
- Scenario 2 consists of the construction of the oil pipeline towards the east within the ROW of Herondo Street and Anita Street in the City of Redondo Beach and the ROW of 190th Street in the City of Torrance to the intersection of 190th Street/Hawthorne Boulevard. At this point, Scenario 2 would continue to one of the four valve box options presented later in this discussion; and
- Scenario 3 consists of the construction of the oil pipeline towards the east within the SCE Utility Corridor in the Cities of Redondo Beach and Torrance. When the oil pipeline meets Hawthorne Boulevard in the City of Torrance, Scenario 3 would continue to one of the four valve box options presented later in this discussion.

The function of the valve box is to house the valve on the new oil pipeline to isolate it from the main oil transmission line and allow for inspection, operation, and maintenance of the valve and line to be performed as required by Federal and State regulations.

The site requirement for a valve box for the Proposed Oil Project would be approximately six feet wide by eight feet long by six feet high. The valve box would be a precast concrete box with walls that are typically eight to ten inches thick. The valve box would be located below grade and designed to State of California Highway "traffic-rated" standards to allow for vehicle travel over it. A standard 36-inch or 42-inch manhole cover would provide access down into the valve box from grade. The manhole cover, the weight of which takes two people to remove and replace, would be bolted into place with special tools, providing security for the valve box. The oil pipeline would end at one of the following valve box locations:

- Valve Option 1 – For Pipeline Scenarios 1 and 2, the pipeline would continue from the Hawthorne Boulevard/190th Street intersection down 190th Street to the Exxon Mobil Refinery, where it would connect with a valve box location within the refinery site. For Pipeline Scenario 3, the pipeline would turn north in Hawthorne Boulevard and east in 190th Street to the refinery site;
- Valve Option 2 - For Pipeline Scenarios 1 and 2, the pipeline would turn south in Hawthorne Boulevard to the SCE Utility Corridor where it would turn east to the valve box location. For Pipeline Scenario 3, the pipeline would continue east in the SCE Utility Corridor across Hawthorne Boulevard to the valve box location;
- Valve Option 3 – For Pipeline Scenarios 1, 2, and 3, the pipeline would turn north in Hawthorne Boulevard to the valve box location adjacent to the Santa Fe Rail Road line; and
- Valve Option 4 - For Pipeline Scenarios 1, 2, and 3, the pipeline would turn north in Hawthorne Boulevard to the valve box location northeast of the intersection of 190th Street/Hawthorne Boulevard.

The oil pipeline would be equipped with a supervisory control and data acquisition system (SCADA), which would monitor pipeline pressure and flow and, if a leak is suspected, would notify the operators. The percentage that is set in the SCADA system would notify the operator of potential oil leak. The detection timeframes set by the Applicant would vary depending on the crude oil flow rate in the pipeline. When the flow rate is at the maximum anticipated production rate of 8,000 barrels per day, flowing on a continuous basis, the flow rate would be 5.5 barrels per minute, and the following would apply:

- 15 minute time interval 5 % or 4.1 barrels
- 1 hour time interval 2 % or 6.7 barrels
- 24 hour time interval 1 % or 80 barrels

If oil production is considerably less than the 8,000 barrels per day, the percentages would be adjusted upward to maintain essentially the same volume of oil previously noted based on the reduced flow rate in the pipe.

Pipeline Construction Methods

The gas and oil pipelines would be installed utilizing conventional trenching methods within

either one trench or two separate trenches within the roadway ROW. The construction and installation process would occur in stages consisting of approximately 237 feet in length each. Two stages would be constructed per day (a segment of 237 feet would be new construction, and another 237 feet would be the completion of the construction from the previous day). With the addition of approximately 126 feet for lane transitions and safety cones, a total of approximately 600 linear feet of roadway would be affected per day. A construction spread would be used to accomplish most aspects of the gas and oil pipeline construction along the alignments previously discussed. A construction spread is a clustering of construction equipment that moves along the pipeline route, sequentially removing asphalt roadway, trenching, laying pipe, filling, re-paving, and cleaning up. A pipeline construction spread consisting of several units would be organized to proceed in the following order:

- Pre-construction activities
- Asphalt removal and ditching or ROW grubbing and ditching
- Pipe handling/welding
- Pipe coating
- Pipe lowering, backfilling, and street repair
- Pipe testing and inspection
- Metering, pigging, odorant station installation

If the oil pipeline can be laid within the SCE Utility Corridor (Scenario 3 pipeline route), a construction spread similar in arrangement, but smaller, would be used since the alignment would not have asphalt. In addition, if it is determined that existing sleeves under streets crossing the SCE Utility Easement exist, trenching across some streets may not need to occur. The following describes the activities that would occur for the construction of the pipelines and Figure 2.16 depicts a typical pipeline construction spread.

Pre-Construction Activity

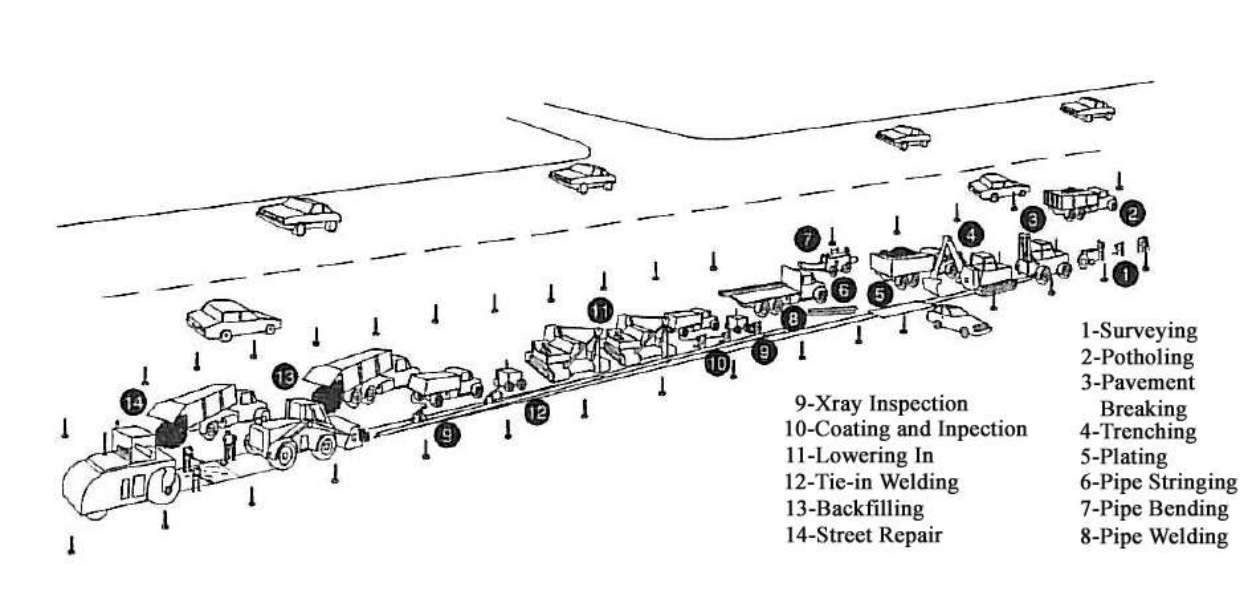
The pipeline alignment ROW would include roadways and/or land in existing paved streets and other property, potentially including private property. Approval to construct and operate a pipeline would be obtained from or authorized by franchise agreements or permits from the agency with jurisdiction over the roadways and, if needed, from affected property owners.

The construction requirements in the municipal codes and ordinances of the Cities of Hermosa

Beach, Redondo Beach, and Torrance allow for the construction on major roadways during the following weekday hours:

- Hermosa Beach: 8:00 a.m. to 6:00 p.m. on weekdays and 9:00 a.m. to 5:00 p.m. on Saturday. No construction on Sundays and holidays;
- Redondo Beach: 9:00 a.m. to 3:00 p.m. on weekdays. No construction on weekends and holidays; and
- Torrance: 8:30 a.m. to 3:30 p.m. on weekdays. No construction on weekends and holidays.

Figure 2.16 Typical Pipeline Construction Spread



Note: All activities may not occur simultaneously.

The pipeline construction activities would occur on weekdays between the hours of 9:00 a.m. and 3:00 p.m. (as per the CUP requirements), a time frame which is after morning peak commute hours (i.e., 7:00 a.m. to 9:00 a.m.) and before evening peak commute hours (i.e.: 4:00 p.m. to 6:00 p.m.) on the affected roadways. The Applicant proposes no construction activities during weekends and holidays. The Applicant would prepare a Construction Traffic Management Plan

(CTMP) that would include the following:

- Require the pipeline contractor(s) to obtain and follow Street Construction Permits in the affected Cities of Hermosa Beach, Redondo Beach, and Torrance, and Caltrans facilities (Pacific Coast Highway and Hawthorne Boulevard);
- Develop detour and traffic management plans consistent with the affected City's Standard Roadway Plans (e.g., Torrance Street Standard T603), the California Manual of Uniform Traffic Control Devices (MUTCD), or the Work Area Traffic Control Handbook (WATCH);
- Revise pipeline construction segments to minimize access conflicts to adjacent residents and businesses;
- Develop truck route plans to reduce traffic on the street network during peak traffic commute hours;
- Avoid construction-related traffic to occur during peak travel periods; and
- Implementation of staggered construction worker shifts to minimize Project traffic during the peak hours.

Underground Service Alert would notify service providers of construction to avoid conflicts with existing utilities and disruptions of service to utility customers. Because construction would occur in either paved streets or an existing utility corridor, extensive grading is not proposed.

Asphalt Removal and Ditching

Once traffic control measures are in place, trenching operations would begin. Typically, a five-foot deep and 18- to 24-inch wide ditch (single pipe) or 36-inch wide ditch (double pipes) would be excavated (varying depths, depending on the conditions encountered). Backhoes and track hoes would excavate the ditch. However, hand digging would be necessary to locate buried utilities, such as other pipelines, cables, water mains, and sewers. Fugitive dust emissions at the construction site during earthmoving operations would be controlled by water trucks equipped with fine-spray nozzles. Spoils from cuts, including cuts in the streets, would be saved for backfill or would be removed, and the ditch would be backfilled with slurry material as approved by the local jurisdictional agency. Effort would be made to minimize the amount of excess material. Material unsuitable for backfill and not economically useful for other purposes at the pipeline location would be disposed of at a landfill according to local jurisdictional guidelines.

When used for backfill, the spoils from the trenches would be hauled to previously disturbed sites, as determined by the construction contractor.

Pipe Handling

Special trucks would transport the pipe in 40- to 80-foot lengths from the shipment point or storage yard to the pipeline installation point. Where sufficient room exists, trucks would carry the pipe along the roadway, and sideboom tractors would unload the joints of pipe from the stringing trucks and lay them end to end beside the ditch-line for future line-up and welding. A portable bending machine would bend the pipe to fit the ditch contour both vertically and horizontally. Construction ROW conditions could occasionally require pipe bends that are not able to be accomplished in the field. In these cases, manufactured or shop-made bends would be used, and pipe would be bent prior to the application of coating. While the line-up crew lays the pipe, line-up clamps would hold the pipe sections in position until approximately 50 percent of the first welding pass is completed. The welding crew would then apply the remaining weld passes to comply with API 1104, ASME B31.4, or ASME 31.8.[2] All pipeline welds would be radiographically inspected.

Pipe Coating

Protecting the pipe from moisture and air helps prevent corrosion, thereby preventing cracks, breaks, and leaks in the pipe. The steel pipeline would be coated externally with fusion-bond epoxy or a corrosion resistant tape wrap system. Pipeline coating would be applied at the mill before delivery to the construction site. However, field coating would be necessary on all field weld joints to provide a continuous coating along the pipeline. After the pipe has been welded and radiographically inspected, one of the following would be applied: two-part epoxy, heat-shrink polyethylene sleeves or polyethylene tape and tape primer.

Pipe Lowering, Backfilling, and Street Repair

The pipe would be lifted and lowered into the ditch by one or two sideboom tractors spaced so that the weight of unsupported pipe would not cause mechanical damage. Cradles with rubber rollers or padded slings would allow the tractors to lower the pipe without damage as they travel

[2] ASME - American Society of Mechanical Engineers; API – American Petroleum Institute

along the ditch line. Additional welds could be required in instances where the ditch line is obstructed by other utilities crossing the pipe ditch. These welds would typically be made in the ditch at the final elevation. In addition to normal welding and weld inspection, each weld would require pipe handling for line-up, cutting to exact length, coating, and backfilling.

Backfill material in roadways would most likely be slurry material or could be ditch spoils, according to local agency requirements. Slurry material would be delivered by concrete trucks and consist of sand and cement. Concrete trucks would be trucks from local commercial sources. The area would be repaved if it was previously an existing paved street. In areas where the pipeline would be in previously unpaved areas, the backfill would include topsoil preserved from the excavation for re-vegetation where needed.

At the time of backfilling, a colored warning tape would be buried approximately 12 to 18 inches above the pipeline to indicate the presence of a buried pipeline to third-party excavators. The backfilled earth would be compacted using a roller or hydraulic tamper. The trench would be filled with slurry where approved or required by local regulations. Steel plates would cover any open trench at the end of each workday.

Pipe Testing and Inspection

All field welding would be performed by qualified welders that meet the Applicant's specifications and in accordance with all applicable laws, ordinances, regulations, and standards, including API 1104, the Standard for Welding Pipe Lines and Related Facilities, and the rules and regulations of the U.S. Department of Transportation found in the Code of Federal Regulations.

All welds would be visually and radiographically inspected. All rejected welds would be repaired or replaced as necessary and radiographically inspected again. The radiographic reports and a record of the location of welds would be maintained for the life of the pipeline. In addition to standard testing of all pipe and fittings at the mill, hydrostatic testing would be performed after construction and prior to startup. Federal regulations mandate hydrostatic testing of new, cathodically protected pipelines prior to placing the line into operation. This test involves filling a test section of the pipeline with fresh water and increasing pressure to a predetermined level. Such tests are designed to prove that the pipe, fittings, and weld sections would maintain mechanical integrity under pressure without failure or leakage.

Cathodic protection controls the corrosion of a metal surface by making it work as a cathode of an electrochemical cell. This is achieved by placing the cell in contact with the metal surface and another more easily corroded metal to act as the anode of the electrochemical cell. The cathodic protection system consists of power sources called rectifiers, buried anodes (either sacrificial or impressed current), and test stations along the pipelines.

Metering and Pigging Station Installation

A gas-metering station would be required at the custody transfer location where the Applicant's proposed gas pipeline interconnects with the existing SCG pipeline. The metering station would measure and record gas volumes, gas quality, and gas characteristics and provide custody transfer of the gas to SCG. The metering station would be located adjacent to N. Francisca Avenue, southeast of the intersection of Herondo Street and N. Francisca Avenue. SCG would then construct a new six-inch pipeline to a tie-in location with the existing SCG pipeline transmission facility (Line 1170) as previously discussed in Section 2.4.3.2, Phase 3 Offsite Pipeline Construction.

In addition to the metering station, a pigging station would be installed at the metering station and Project Site for the gas pipeline, as required by SCG, and at the tie-in point for the oil pipeline.

An odorant station would be installed at the Project Site consisting of a 500 gallon odorant tank that would be filled approximately annually. The gas would be odorized before it leaves the site.

2.4.3.3 Phase 3 Hazardous Materials

Hazardous materials used as part of Phase 3 would be associated with construction activities, including diesel fuels, lubricating oils, pipe coatings, solvents, etc. No storage of hazardous materials beyond standard consumer quantities (a few gallons) is anticipated in this phase.

2.4.3.4 Phase 3 Schedule

It is anticipated that Phase 3 would occur for a period of approximately 14 months as indicated in the schedule provided in Table 2.10.

Table 2.10 Phase 3 Project Schedule

Activity	Schedule (Weeks)
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28-38 39-53 54 55 56 57 58 59 60 61 62 63 64
Remove temporary equipment	
Remove trees along Valley	
Remove32-foot sound wall	
Implement RAP	
Construct retaining walls	
Final grading	
Construct well cellars	
Construct 16-foot block wall	
Remove 16-foot sound wall	
Construct/install facilities	
Construct street improvements	
Install landscaping	
Construct offsitepipelines	
Start-up of equipment	
Install 32-foot sound wall	

Set conductor

Note: Days are weekdaysSource: Project Application, Amendments and Appendices

Table 2.11 Phase 3 Vehicle Trip Summary

Activity	3-axle Trucks, Maximum RT/day	2-axle Trucks, Autos, Maximum RT/day	Total, Maximum RT/day
Remove production equipment	6	15	21
Remove trees along Valley Drive	2	4	6
Install 16-foot noise wall	6	8	14
Implement Remedial Action Plan	18	8	28
Construct retaining walls	3	20	24
Final grading (balanced)	4	6	10
Construct well cellars	9	15	25
Construct 16-foot perimeter wall	5	20	25
Remove 16-foot noise wall	5	5	10
Construct/install onsite facilities	18	40	47
Construct street improvements	11	9	20
Install landscaping	1	7	7
Construct pipeline	18	22	54
Start-up production equipment	0	7	7
Install 32-foot sound wall	6	9	16
Set conductor	2	5	7
Greatest number of trips in one day	18 (during weeks 6-13, 23, 54)	62 (during weeks 39-53)	78 (during week 39-53)

Notes: * According to the 1993 CUP, which is valid pursuant to the Settlement Agreement, the number of truck trips shall be limited to a maximum of 18 rounds trips per day, except in an emergency.

Trucks are 3+ axle or greater or trucks with trailers. Autos are automobiles or pickups/trucks with 2 axles.

Trips are round trips (RT).

Maximum truck activity occurs during week 6-13 with RAP activities, week23 with construct well cellars,

perimeter wall and onsite facilities and week 54 with construction of onsite facilities, pipeline construction and conductor setting. However, the majority of the pipeline construction traffic would occur away from the Project Site except during the installation of the sections of the pipeline located very close to the Project facility.

Maximum auto activity occurs during weeks 39-53 with the facilities construction.

Maximum activity trucks and autos combined occurs during weeks 39-53, however, the majority of the vehicles for the pipeline construction would be parked at the contractor's facilities or near the pipeline alignment.

Truck maximum and auto/PU maximum do not necessarily occur on the same day, so the total maximum is not necessarily a simply addition of the two. See appendix.

See Appendix A for a detailed breakdown of vehicles, employees, trucks and construction equipment for each week.

Source: Project Application, Amendments and Appendices

2.4.3.5 Phase 3 Personnel and Equipment Requirements

The vehicles, equipment, and employees estimated for Phase 3 are provided in Table 2.11. The vehicle trips required to transport employees and equipment for Phase 2 are also provided in Table 2.11.

2.4.4 Phase 4 Development and Operations

PHASE 4

Development and Operations:
2.5 years drilling program. Operations - ongoing

The purpose of Phase 4 would be to maximize oil and gas recovery from the reservoirs by drilling additional wells and operating the permanent facility. To accomplish this, Phase 4 would involve the drilling of wells; the operation of the permanent oil production equipment; the transport of the oil and gas by pipeline to their respective destinations; and the ongoing

maintenance of the Proposed Oil Project. The Proposed Oil Project would be designed for a maximum capacity of 8,000 barrels of oil per day and 2.5 million cubic feet of gas per day.

Figure 2.17 provides the conceptual site plan for Phase 4. Elevations and the conceptual landscape plan for the Proposed Oil Project during Phase 4 are included in Appendix A of the Final EIR.

2.4.4.1 Phase 4 Drilling

Phase 4 drilling would involve delivery and setup of the drilling rig and the drilling of the remaining wells.

Delivery and Set Up of Drill Rig

The drilling rig and its associated equipment would be brought to the Project Site by trucks with trailers permitted by the City and the California Highway Patrol. The approximately 87-foot high drill rig would be powered by electricity. A large crane with a 150-foot boom would be used to erect the drill rig. The crane would be removed from the Project Site after the drill rig and supporting equipment have been set in place. Support equipment for the drill rig would include pipe racks, mud and cutting system, pumps, hydraulic equipment, and an accumulator. In the event of a loss of power from SCE, the generator, which would be a non-road portable diesel-fuel generators certified by the California Air Resources Board (CARB), would provide power for the safe shutdown of the drilling operation. The drill rig and its associated equipment would require the same setup as described under Section 2.4.2, Phase 2 Drilling and Testing.

2.4.5 Drill Remaining Wells

The drilling of the remaining oil wells and water disposal/injection wells, up to a total of 30 oil wells and four water disposal/injection wells, would involve the same activities as described for Phase 2. As previously discussed regarding Phase 2, once the drilling of a well is complete, the cemented casing would be run from the surface to the bottom of the wellbore where the well penetrates the oil-producing reservoir. The well would be plumbed into the temporary production equipment and pump system that had been installed. The pump system, installed below ground, would bring the oil, gas, and water to the surface for processing. In addition, up to three additional water disposal/injection wells (in addition to the single water disposal/injection well drilled during Phase 2) would be drilled to allow for the injection of processed produced water back into the oil-producing reservoir and at below formation fracture pressure. The drill rig would operate continuously for 24 hours per day, seven days per week, until the appropriate depth and bottom-hole location for each well has been reached. It is estimated it would take approximately 30 days to drill each well, including the time for placing the drilling rig in position and installing rigging. After the drilling of the wells is complete, the drill rig would be removed from the Project Site. Including set up for each well and removal from the Project Site, the total drilling time for Phase 4 would be about 30 months (2 ½ years).

Drilling each well would require approximately 130,000 gallons (or 0.4 acre-feet) of water. The water would be reclaimed water provided by the West Basin Municipal Water District conveyed via extension of an existing waterline serving the Greenbelt east of Valley Drive. The West Basin Municipal Water District has provided the Applicant with a "will serve" letter.

The drilling process requires the use of drilling mud to circulate drilled rock cuttings out of the well hole, retain the integrity of the well hole, and control reservoir pressure. The drilling mud would be collected onsite in tanks. Although most of the mud would be reused on subsequent wells, some mud would be removed from the Project Site and disposed at Anterra's Oxnard Licensed Class 2 Disposal Facility or a similar facility. All other waste generated by the test drilling would be transported by truck to Clean Harbors Buttonwillow Landfill or a similar facility closer to the Project Site.

Noise abatement would be incorporated into the drilling process in the same manner as described for Phase 2, including a 32-foot high sound attenuation wall. After the drilling of the wells is

completed, the 32-foot sound attenuation wall would be removed from the Project Site.

Re-Drilling of Wells

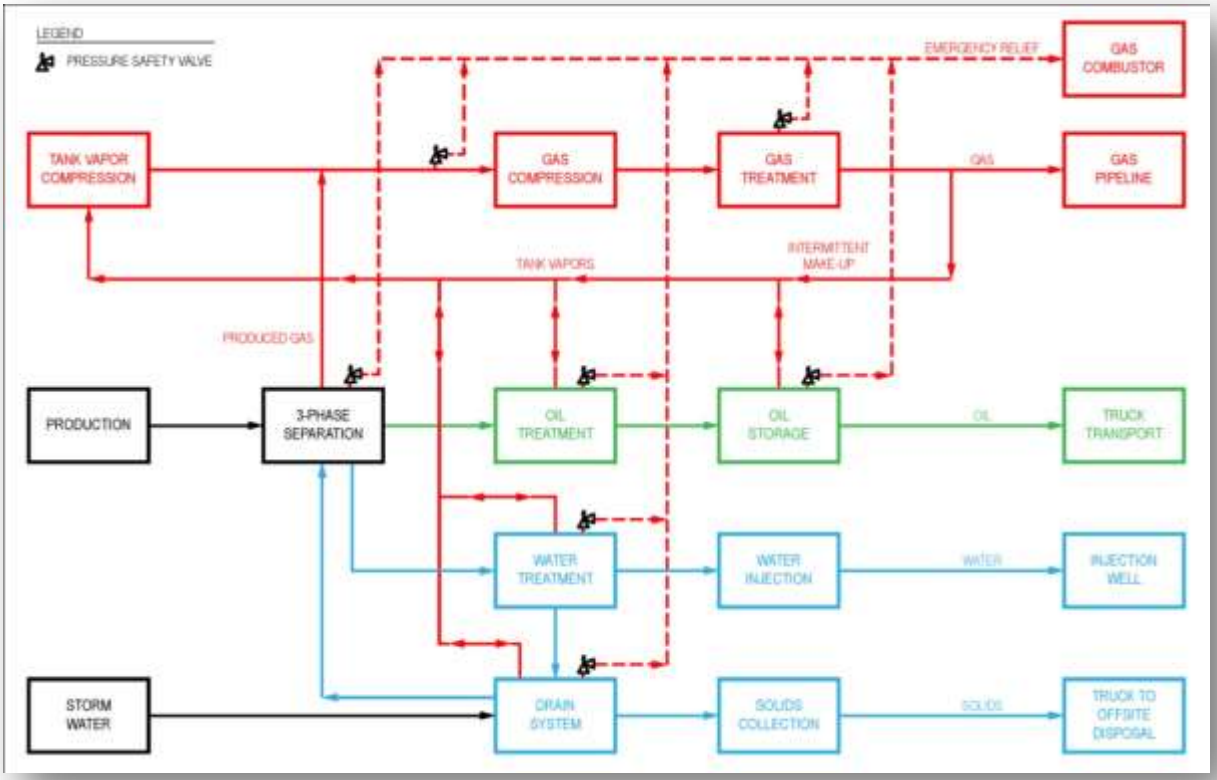
Re-drilling of a well occurs if production from a well declines substantially or if problems exist with the well, affecting the well's efficiency or viability. The same activities would be required for re-drills as for initial drilling, except that conductor piping would not have to be installed again, as the same conductor piping would be used for the re-drill.

Although the Applicant does not expect the need for the re-drilling of wells, the activity may be required under extraordinary circumstances. Depending on the circumstances, a workover rig might be able to be used to complete a re-drill. However, for the purpose of providing a worst-case analysis, the Applicant estimates that up to 30 re-drills could occur over the life of the Proposed Oil Project, with up to five re-drills occurring during any given year. In the event that a re-drill would occur, noise attenuation design features, including the use of a 32-foot sound attenuation wall and acoustical covers, would be implemented on the Project Site. Re-drills would involve the same activities and equipment as the drilling proposed for Phase 2 and 4.

2.4.5.1 Phase 4 Processing and Operations

During the drilling of the remaining oil wells and water disposal/injection wells, the production of the extracted oil would occur. Figure 2.18 shows the steps involved in processing the oil, water, and gas produced from the wells during Phase 4. The permanent production equipment on the Project Site would be used to process the oil and gas to a standard that would be suitable for sale. The produced water would be processed and injected into the oil-producing reservoir. The gas produced would be processed and sold to the gas company. The oil and gas produced would be transported offsite via pipelines constructed during Phase 3.

Figure 2.18 Phase 4 Process Flow Diagram



Source: Applicant application

Noise abatement would be incorporated into operational practices and permanent production equipment. The anticipated personnel on the Project Site would be four personnel for a 12-hour daytime shift, two personnel for an 8-hourgraveyard shift, and two personnel for an 8-hour swing shift. Therefore, personnel would be present 24 hours per day on the Project Site.

During the ongoing operation of the Proposed Oil Project, active wells would require periodic routine service. These activities could include the replacement of down-hole pumps, piping, and cleaning. These maintenance activities would typically be accomplished by utilizing a service rig, or "workover" rig, approximately 110 feet high. The workover rig would be operated on the Project Site a maximum of 90 days per year. The workover rig would be operated between the hours of 8:00 a.m. and 6:00 p.m. on weekdays only (excluding holidays). Only a single workover rig would be onsite at one time.

In addition, there would be an occasional need for other services such as facilities repair and

solid and liquid waste pick-up. Preventative maintenance would be performed on a routine basis to ensure the integrity of the operating equipment. The pipelines would be periodically inspected to ensure their continued integrity.

The permanent production facility would be utilized to separate and treat produced oil, gas and water. The separation and treatment of these fluids allows for the oil and gas to be sold and subsequently transported via pipeline and for the water to be injected into the oil-producing reservoir below the oil water contact line. Figure 2.18 provides a simplified flow diagram of the flow of fluids through the permanent production facility. The following describes the steps of production and operational characteristics in Phase 4.

Fluids Piped from the Wellhead to the Production Facility

After a well has been drilled and completed (final down-hole equipment installed), the extracted fluids would be piped to the permanent production facility on site. The combination of fluids (i.e., oil, gas, and water mixture) is referred to as an emulsion. This emulsion would be sent via pipes to a production header, where it is commingled with the emulsion from all the wells in a gross line before entering a three-phase separator. There is also a test header that allows the diversion of emulsions from a single well through a well test station before the three-phase separator. The well test station allows for the testing of each well quality and flow characteristics. After the emulsion passes through the well test station, it would be directed back to the gross line where it would be commingled back with the emulsion from the production header and then enter the three-phase separator. The three-phase separator separates the oil, gas, and water. The gas exits the top, the oil exits the middle, and the water exits the bottom of the separator. Each of these fluids enters a specific system of treatment, as is discussed in the following subsections.

Oil Treatment System

After the produced oil leaves the three-phase separator, it would enter a stock tank, where it may need to be heated depending on the quality of the crude oil. This heating would allow excess water to drop from the oil. Heating, if necessary, would be provided by the microturbine exhaust waste heat recovery system. From the stock tank, the oil would be measured using a Lease Automated Custody Transfer Unit (LACT) and transported via pipeline to the purchaser. Any water that drops out of the oil would be routed to the water treatment system. Vapors would be

directed to the gas processing systems through the vapor recovery unit.

Gas Treatment System

During this phase, gas would be treated, sold, and subsequently transported via pipeline to the SCGC. Treatment of the gas would be required to meet gas pipeline specifications. After the gas leaves the three-phase separator, it would be sent to the first stage compressor. The first stage compressor would increase the pressure of the gas for treatment. The first stage of gas treatment is removal of H_2S from the gas utilizing triazine using the SulfaScrub system. SulfaScrub is a non-regenerative batch process that requires replacement of the SulfaScrub materials periodically. The SulfaScrub process is a "scavenging" process, meaning it is used to remove H_2S in process gas at low concentrations (up to concentrations of approximately 200 ppm).

After leaving the SulfaScrub system, the gas would be sent through the amine system. This amine system removes CO_2 from the gas. After leaving the amine system, the gas would pass through the second stage compressor, where pressure is increased prior to the gas' entry into the low temperature separation system. The low temperature separation system removes any remaining moisture (mostly water) and gas liquids from the gas prior to sale. Propane would be utilized as a refrigerant in the low temperature separation system. Before the gas leaves the Project Site, it would be odorized using an odorizing substance (mercaptan or equivalent) as required by law. The gas would then be sent via pipeline through a metering station to a SCG pipeline constructed in Phase 3 located near the corner of Herondo Avenue and N. Francisca Drive to the south of the Project Site.

Water Treatment System

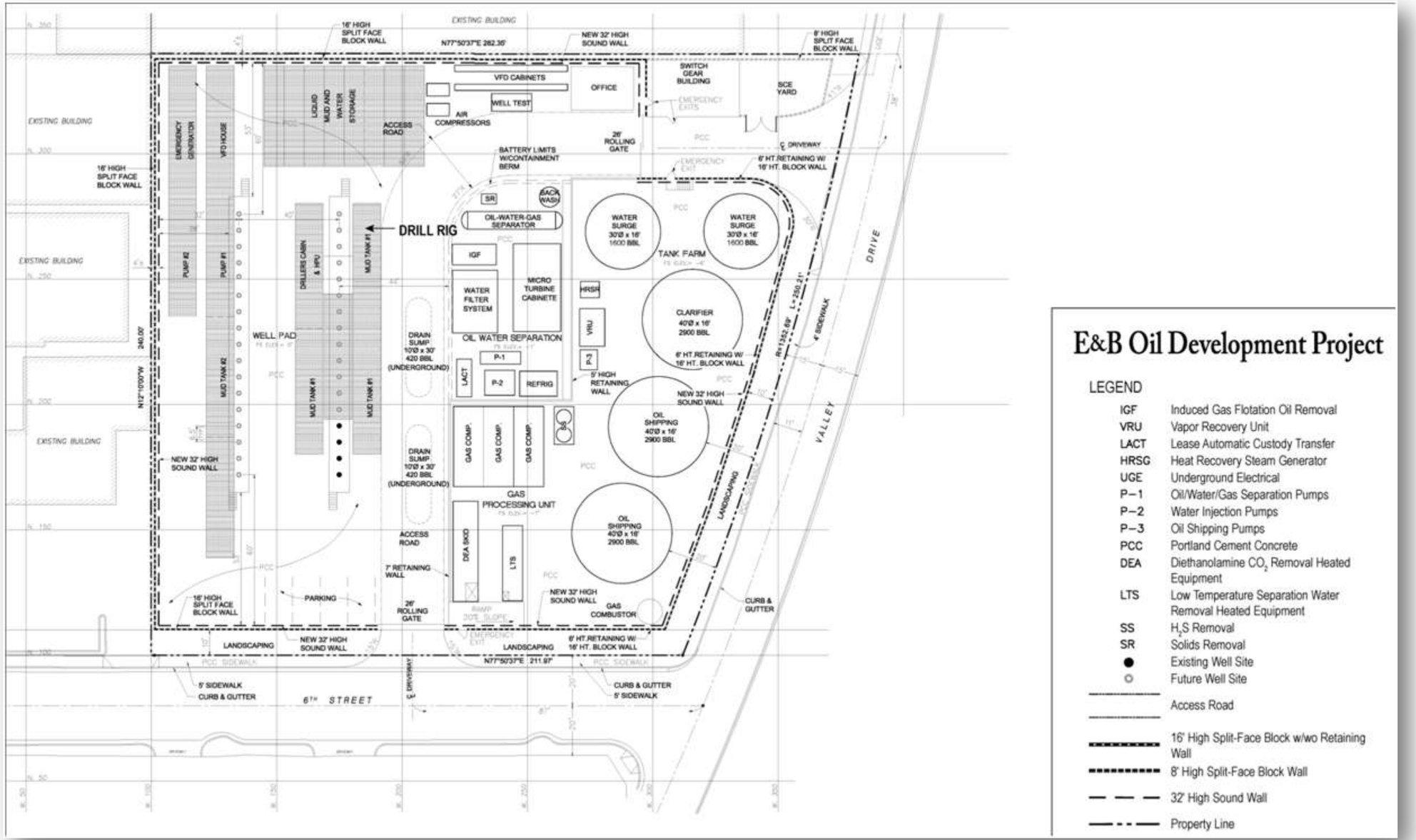
After the water leaves the three-phase separator, it would be sent to the clarifier tank. This tank would allow solids in the water to drop out. From the clarifier tank, the water would then enter the induced gas flotation unit for the removal of suspended matter, such as oil or solids. The induced gas flotation unit removes oil by injecting gas bubbles into the water. The bubbles adhere to the suspended matter, causing the suspended matter to float to the surface and form a froth layer, which is then removed by a skimmer.

From the induced gas flotation unit, the water would then pass through a filter unit. The filter

unit would be used to clean the water of any remaining oil and solids, such as sand. After the water has left the filter unit, it would enter the water surge tanks for storage before disposal/injection.

From the water surge tank, the water would then flow through pumps and be sent to the disposal/injection wells for injection into the oil producing reservoir.

Figure 2.17 Phase 4 Site Plan with Drilling Rig



E&B Oil Development Project

LEGEND

IGF	Induced Gas Flotation Oil Removal
VRU	Vapor Recovery Unit
LACT	Lease Automatic Custody Transfer
HRSG	Heat Recovery Steam Generator
UGE	Underground Electrical
P–1	Oil/Water/Gas Separation Pumps
P–2	Water Injection Pumps
P–3	Oil Shipping Pumps
PCC	Portland Cement Concrete
DEA	Diethanolamine CO_2 Removal Heated Equipment
LTS	Low Temperature Separation Water Removal Heated Equipment
SS	H_2S Removal
SR	Solids Removal
●	Existing Well Site
○	Future Well Site
	Access Road
	16' High Split-Face Block w/wo Retaining Wall
	8' High Split-Face Block Wall
— — —	32' High Sound Wall
— - —	Property Line

Exhibit B

Source: Project Application

Exhibit B

Development Agreement between City of Hermosa Beach and E&B Natural Resources

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Vapor Recovery System

Gas from all tanks and vessels not part of the gas processing system (the oil and water processing tanks and vessels), as well as pressure relief valves, would be gathered through pipes into a closed-system and directed to a vapor recovery compressor unit. The vapor recovery compressor would compress the gas and then add it to the gas in the gas processing system (from the three-phase separator, etc), where it would be processed and sent via pipeline to the metering station and the SCG system.

Process Drain System

All equipment would be connected to a drain system that would be directed to a drain tank. Liquids from the drain tank would be sent back to the three-phase separator for reprocessing. Solids from the drain system may periodically be removed to an offsite approved disposal facility.

Electrical Generation System

The facility would utilize a Microturbine system, which would consist of five 200 kw Capstone turbines configured as a single 1,000 kw package. Anticipated NOx emissions would be 4 ppm. Gas produced on the Project Site would be utilized as fuel for the turbines.

Facility Storm Drainage System

The Proposed Oil Project Site is designed to retain, process, and inject storm water within the perimeter fence or wall for a 100-year storm event. All rainwater falling on the site would be collected and pumped into the water processing system for injection into the oil reservoir. In addition, any spills on the site would also be contained, both within process system walls/berms around equipment and site walls/berms around the Project Site. Process walls/berms would be designed to contain at least 110 percent of the largest vessel plus the precipitation from a 100-year storm event.

Waste

Waste would be generated as part of the facility operations and the production process. Regular waste would include typical municipal trash such as paper, trash bags, food, and cups. Process waste would include generic oil field waste such as sandy oil (from the tank bottoms), spent H_2S scavenger, spent filters, oily cloths (i.e., rags), gloves and Tyvek® suits. Intermittently the facility could generate hazardous waste. These wastes could include empty drums, rinse water, painting supplies, spilled chemicals, spent media, and hydraulic fluids. The Applicant indicates

that the Project Site would have an Environmental Protection Agency (EPA) and Department of Toxic Substances Control(DTSC) Identification Number.

Phase 4 Safety and Security Systems

The Fire Protection Plan for Phase 4 would be provided by the Applicant for review and approval by the City of Hermosa Beach Fire Department (Fire Department) and incorporated into the Phase 4 Site Safety Plan. Emergency access would be incorporated into the design of the Proposed Oil Project. An additional fire hydrant would be provided adjacent to the Project Site as a component of the Proposed Oil Project. The location of the hydrant would be determined by the Fire Department, and installation would occur as a part of the construction completed in Phase 3.

A fire suppression system for the ongoing operation of the Proposed Oil Project in Phase 4 would be installed during Phase 3. The fire suppression systems would include a foam injection system and automated detection and annunciation systems. Automated alarm systems would be installed for the detection of chemicals and fire hazards to notify onsite personnel that an emergency situation is potentially occurring. If it is determined that a chemical fire or fire emergency exists, the onsite operator would activate the emergency shutdown system and notify the Fire Department. The Fire Department and their allied agencies would respond as indicated in their mutual and automatic aid agreement contracts. The onsite personnel for the Proposed Oil Projectwould be trained for initial spill response and activation of emergency systems at the site as per HAZWOPER requirements, but would not be trained for fire fighting and would rely on the Fire Department for response activities.

The fire detection system would consist of thermal fire detection and optical surveillance systems that would monitor potential fire zones and activate warning indicators.

The Applicant proposes Subsidence and Induced Seismicity Monitoring Programs to detect subsidence as a result of drilling activities. This would ensure that subsidence would not be tolerated to the degree that it could endanger the facility, offsite structures, and the shoreline. Also, an Induced Seismicity Monitoring Program would be designed to detect seismic activity that might result from drilling activities.

The security system for the ongoing operation of the Proposed Oil Project in Phase 4 would be installed and initiated during Phase 3. Security on the Project Site would be provided by onsite personnel and a site security program that would include a Closed Circuit Television System, a gate access system, and an intrusion and motion detection system. The security system would

control all access to and from the Project Site.

During the final design of the Proposed Project and submission of plans to the appropriate agencies for permits, the following plans and programs would be developed by the Applicant as part of the facility drilling and operations phases (Phase 2 and Phase 4 activities):

- Odor Minimization Plan;
- Air Monitoring Plan;
- Fire Protection Plan;
- Safety and Environmental Management Program;
- Mechanical Integrity Program;
- Hazardous Materials Business Plan;
- Subsidence and Induced Seismicity Monitoring Programs;
- Noise Monitoring Plan;
- Quiet Mode Drilling Plan; and
- Various plans related to grading, equipment design, electrical design, landscaping, etc.

Safety devices would be installed within the piping, vessels, and tanks in the processing system. Safety devices would provide early warning, corrective action, or shut down of a specific segment of the system or the entire facility, if necessary. A number of safety devices are required or recommended by codes, standards and regulations, including:

- High level warning systems;
- High pressure warning systems;
- Automatic shutdown valves;
- Vessel and pipe design requirements;
- Vapor recovery and component leakage limits; and
- Fuel contaminant limits.

Detailed piping and instrument diagrams would be provided by the Applicant during the detailed permitting stages, and reviews of the final design would be undertaken at that time. Specific measures to reduce the risk of hazardous material releases are addressed in Section 4.8, Safety, Risk of Upset, and Hazards.

Phase 4 Hazardous Materials

The operation would require the use of hazardous chemicals. The chemicals would be stored

onsite with secondary containment. The chemicals would be documented in a required Hazardous Materials Business Plan and submitted to the Los Angeles County Fire Department as the Certified Unified Program Agency (CUPA) and the Hermosa beach Fire Department. Typical chemicals utilized in the permanent production facility and the maximum quantities that would be onsite at any time are listed in Table 2.12.

Hydrogen Sulfide

The Applicant indicates that low levels of potential "native" H_2S, in the order of 0.0 to 6.0 parts per million (ppm), may be encountered in the gas produced from the underlying oil reservoir. In order to have the capability to treat higher levels, the Proposed Oil Project has been planned to treat H_2S levels of 15 ppm and has a maximum design capacity to treat H_2S levels of up to 100 ppm. After treatment with the SulfaScrub system, the H_2S levels of the gas would be reduced to less than 4.0 ppm. SCG's specifications limit the H_2S concentrations in gas delivered to the meter from a producer to less than 4.0 ppm.

The Proposed Project provides for the disposal/injection of treated produced water from the drilling and production process back into the oil reservoir using water disposal/injection wells. Untreated produced water can result in the creation of H_2S concentrations in the reservoir above the existing levels in the oil reservoir (referred to as the "native" condition). Prior to the disposal/injection of produced water from the oil extraction process, surface runoff from precipitation that collects on the Project Site, or any additional injected water, the water would be treated by a biocide to eliminate sulfate-reducing bacteria (SRB). Once wells begin production, the extracted water would be tested for SRBs to determine if treatment is needed. In addition, the surface runoff and additional water would be tested. SRBs are an assemblage of specialized bacteria that thrive in the absence of oxygen and obtain energy for growth by oxidation of organic nutrients, with sulfate being reduced to hydrogen sulfide (H2S). SRBs are treated by the use of a biocide and this treatment could be a batch or continuous treatment. There are numerous antibacterial agents available on the market that could be used for this specific treatment if it is determined to be needed.

Table 2.12 Phase 4 Drilling Chemicals

Common/Trade Name	Use	Maximum Quantity Onsite (Gallons)
Odorant/Mercaptan	Odorize the sales gas	500
H_2S Scavenger/Pertrosweet	Gas treatment for H_2S	9,000

Table 2.12 Phase 4 Drilling Chemicals

Common/Trade Name	Use	Maximum Quantity Onsite (Gallons)
HSE700		
Emulsion Breaker/Phasetreat 6378	Help separate oil and water	60
Water Clarifier/Floctreat 7991	Water additive	40
Emulsion Breaker/Waxtreat 3610	Help separate oil and wax	50
Corrosion Inhibiter Cor7182	Additive to reduce corrosion	400
Surface Cleaner/4U	General purpose cleaner	165
Scale Dissolver/Techni Solve 1780	General purpose scale remover	55
Scale Inhibitor/Techni Hib 7621	Additive to reduce scaling	120
Glycol/TEG	Gas treatment for water removal	55
Amine/DEA	Gas Treatment for H_2S removal	110
Methanol	For oil treatment	55
Biotreat 8415	Water treatment prior tore-injection	55
Hydrochloric Acid	15%, used for acid washing during completion	Varies
Hydrofluoric Acid	3%, used for acidizing muds	Varies

Note: Project Application, Amendments and Appendices

2.4.5.2 Phase 4 Schedule

It is anticipated that Phase 4 would occur for a period of approximately 30 to 35 years, as indicated in the schedule provided in Table 2.13. The drilling of the remaining wells would occur during the first 30 months of Phase 4, with periodic re-drills thereafter for the life of the project (averaging 30 days per year with a maximum of 150 days in one single year).

The permanent production equipment would operate 24 hours a day, seven days per week. The

Project Site would be staffed 24 hours a day, seven days per week.

Table 2.13 Phase 4 Project Schedule

Activity	Schedule (Weeks)													
	1	2	3	4	5 through 131					132	133	134	135	Life of Project
Deliver and Set up drill rig	■	■												
Drill remaining 30 wells			■	■	■	■	■	■	■					
Remove drill rig										■	■			
Remove 32-foot noise wall												■	■	
Facility operations and maintenance	■	■	■	■	■	■	■	■	■	■	■	■	■	Continuous
Re-drills														Avg. 30 days/yr Max 150 days/yr*
Well workovers														Max 90 days per year

Source: Project Application, Amendments and Appendices. To re-drill a well, a drilling rig similar to the one initiallyused to drill the wells would be used with the same setup, drilling and removal procedures. Workovers would use an 110-foot tall truck mounted drilling rig and would be conducted a maximum of 90 days per year. * This is the maximum number of days per year proposed by the Applicant. The 150 days per year is predicted to occur once every 5 years. Most likely re-drill activity would be lower.

2.4.5.3 Phase 4 Vehicle Requirements

The number of vehicles estimated by the Applicant to be necessary for Phase 4 operations are provided in Table 2.14. During drilling, parking for Project employees would be provided as previously described under Section 2.4.1.1, Phase 1 Construction Activities, under the subsection Clearance of the Project Site. Parking for Project employees would be provided on the Project Site after the drilling of all the wells is completed and the drill rig has been removed from the Project Site.

2.4.6 Parking Requirements

The Proposed Project construction and operation activities would result in increased parking demand. The elimination of existing parking would also make necessary the replacement of spaces lost. Parking requirements addressed in this FEIR include the following:

- Temporary parking for a maximum of 40 Project employee vehicles, varying between

approximately 20 and 40 employee vehicles during construction and/or drilling activities in Phases 1-4, excluding ongoing production in Phase 4;

- Long-term parking for four Project employees during the ongoing operation of the Proposed Project and four additional spaces for maintenance workers in Phase 4;

Replacement of 15 parking spaces currently located at the City Maintenance Yard that supply free remote public parking on weekends under the City's Preferential Parking Program approved by the Coastal Commission. These spaces are used by:

- Maintenance Yard employees during working hours (i.e., Monday through Thursday from 7:00 a.m. to 6:00 p.m. excluding holidays) and by the public at other times; and
- Replacement of two on-street public parking spaces that would be eliminated by improvements to the southwest corner of 6th Street and Valley Drive. These spaces are not part of the City's Preferential Parking Program.

Table 2.14 Phase 4 Vehicle Trip Summary

Activity	3-axle Trucks, Maximum RT/day	2-axle Trucks, Autos, Maximum RT/day	Total, Maximum RT/day
Deliver and Set up drill rig	6	20	26
Drill remaining 30 wells	12	11	23
Remove drill rig	5	20	25
Remove 32-foot sound wall	4	8	12
Facility operations and maintenance	5	13	18
Well workovers/Major Maintenance	4	14	18
Greatest number of trips in one day	17 (during drilling)	34 (during drilling)	44 (during drilling)

Notes: * According to the 1993 CUP, which is valid pursuant to the Settlement Agreement, the number of truck trips shall be limited to a maximum of 18 rounds trips per day, except in an emergency.

Trucks are 3+ axle or greater or trucks with trailers. Autos are automobiles or pickups/trucks with 2 axles.

Trips are round trips.

Maximum activity occurs during drilling of wells with facility operations and maintenance.

Truck maximum and auto/PU maximum do not necessarily occur on the same day, so the total maximum is not necessarily a simple addition of the two. See Appendix A.

Re-drilling would produce the same level of traffic as traffic produced during drilling activities.

See Appendix A for details regarding vehicles, employees, trucks and construction equipment necessary for Project operations each week.

Source: Project Application, Amendments and Appendices

In order to comply with the City's Preferential Parking Program and Coastal Development Permit requirements and be consistent with the City's Coastal Land Use Plan (titled Local Coastal Plan) policies,, 17 public parking spaces would have to be generated under the Proposed Oil Project to replace the 15 parking spaces removed at the current City Maintenance Yard and the 2 on-street public parking spaces removed from 6th Street, Table 2.15 provides the Applicant's assessment of parking demand for each phase of the Proposed Oil Project and the Applicant's proposal for the development of the required parking as a component of the Proposed Oil Project. As indicated in Table 2.15, Phases 1, 2, and 3 and the drilling portion of Phase 4 would require temporary offsite parking.

Table 2.15 Proposed Oil Project Parking Requirements

Phase and Peak Activities	Peak Number of Employees	Number of Offsite Parking Spaces Needed	Comments
Phase 1: construct fence, wells cellar and install electrical service	27	20	Some employees would park onsite and others would use temporary parking lot.
Phase 2: Install equipment and drill test wells.	22	12	Two 5 person shifts for drilling, some carpooling assumed.
Phase 3: Construct wall, remove soundwall, construct onsite facilities	30-60	40	Peak employees occurs for constructing onsite facilities. Assumes some carpooling.
Phase 4: Drilling and Operations	10	4	5 persons per shift with 2 shifts per day. Carpooling is assumed.
Phase 4: Operations Only	2-4	0	No offsite parking needed.

Source: Applicant submittals January 2014

The following information summarizes E&B's proposal in the Project Application to meet parking demands.

Cypress Parking Lot: Parking for 20 employees during temporary construction and drilling activities during Phases 1, 2, 3, and the drilling portion of Phase 4 would be provided in an offsite temporary parking lot to be developed at 636 Cypress Avenue adjacent to the western Project boundary (referred to as the temporary parking lot).

The Applicant states it has entered into an agreement with the current owner of the subject property at 636 Cypress Avenue (Assessor Parcel No. 4187-031-22) for this use. Access to the parcel is provided from Cypress Avenue. While adjoining the Project Site at 555 6th Street, the temporary parking lot will not be accessible from the Project Site due to an elevation difference between the properties and the need for secured points of entry onto the Project Site.

The 6,000-square foot parcel at 636 Cypress Avenue is a relatively level property. Itis currently developed with a single-story building that occupies approximately 75 percent of the parcel and a parking lot with approximately 6 parking spaces. The development of the parcel would comply with all City requirements. Development would require demolition of the existing building, removal of the current asphalt parking area, and minimal grading. The Cypress Parking Lot would be completed before the commencement of construction activities to occur under Phase 1 Site Preparation of the Proposed Project.

Improvements that would be made to the new 60-foot by 100-foot parking lot with 20 parking spaces would include drainage, landscaping with irrigation, lighting, a trash container, and other elements to comply with the City of Hermosa Beach Municipal Code. Details of the redeveloped parcel are shown in Figure 2-18.

The Applicant has requested that the City supply the required 17 replacement spaces as part of the City Maintenance Yard relocation. If the No Added Parking option is constructed, then the 17 spaces would be provided on a temporary basis at the proposed temporary parking lot at 636 Cypress Avenue and on a permanent basis as indicated below.. The City has not agreed to supply any replacement spaces regardless whether the Parking option or No Added Parking option were to be constructed

*Additional 20 Temporary Parking Spaces (Phase 3):*During peak construction activities in Phase 3, parking for a maximum of 20 temporary parking spaces, in addition to the 20 temporary parking spaces provided at the off-site temporary parking area at 636 Cypress Avenue , would be provided at one or more sites, not yet identified, that would be leased or rented by the Applicant. Employees would walk to or be shuttled to the Project Site.

The Applicant proposes to ensure to the City, through the submittal of any required documentation, that the parking spaces would be available during the temporary construction and drilling activities for the Proposed Project. If spaces are "remote," located farther than 5 to 8 blocks from the Project Site as defined by the Applicant, a van pool shuttle service from the remote parking spaces would be provided to the Project Site by the Applicant. The Applicant proposes to obtain all required approvals and entitlements from the City and to make any required modifications to conform with City codes, identified as mitigation measures in the certified EIR, and any other requirements that may be imposed as a result of the Development Agreement or ballot measure.

Construction Vehicle Parking (Phases 1-4 excluding permanent operations): The Applicant

indicates that it has an agreement to utilize the below-ground parking area at 601Cypress Street for non-hazardous equipment storage and construction vehicle parking. Parking for construction vehicles and staging would be provided both at the Project Site at 555 6th Street and within the building at 601 Cypress Street during Phases 1-4.

Parking for Ongoing Operations in (Phase 4): The long-term parking for a maximum of four Project employee vehicles during ongoing operations and maintenance will be supplied by four marked parking spaces on the Project Site at 555 6th Street. Additional parking required for maintenance activities for ongoing operations would also be accommodated onsite along the perimeter wall as indicated in Figure 2-18. No additional offsite parking would be required for long-term Project operations.

Replacement of Spaces Eliminated by the Project: Fifteen parking spaces at the Project Site at 555 6th Street are used by City Maintenance Yard employees during working hours of Monday through Thursday from 7:00 a.m. to 6:00 p.m. excluding holidays. These spaces also supply free remote public parking on weekends under the City's Preferential Parking Program, approved by the Coastal Commission, and are otherwise used by the public when available. The Application proposes to replace 15 spaces for free remote public parking in the offsite temporary parking lot at 636 Cypress Avenue on a temporary basis and as indicated below on a permanent basis. The City would be responsible to supply parking for its Maintenance Yard employees as part of its City Maintenance Yard relocation plan.

Two on-street public parking spaces would also be eliminated by Project improvements to the southwest corner of 6th and Valley Drive; these spaces are not part of the City's Preferential Parking Program. The Application proposes to replace these two spaces in the offsite temporary parking lot at 636 Cypress Avenue on a temporary basis and as indicated below on a permanent basis.

The Application indicates potential overlap with onsite employee scheduling during the drilling portion of Phase 4, requiring four parking spaces at 636 Cypress Avenue to be vacant as one shift arrives and another shift is leaving. This results in the availability of 16, rather than 17, parking spaces for a period of approximately one hour.

The Application indicates that relocation of the 17 public parking spaces requires a coordinated approach between the Applicant and the City and proposes that this relocation be governed by the Lease Agreement (Section 13). The Applicant proposes the relocated City Maintenance Yard be developed in a manner which could supply the permanent public parking spaces on weekends

and at night, similar to the way in which the existing parking spaces at the current City Maintenance Yard are utilized. If the relocation of the City Maintenance Yard does not become the location for the permanent public parking spaces, then the Applicant proposes to provide 15 replacement public parking spaces as well as the additional 2 public parking spaces, prior to the commencement of Project operations, at the offsite temporary parking lot at 636 Cypress Avenue or to provide other suitable public parking spaces consistent with requirements of the City's Preferential Parking Program, the California Coastal Act, and a framework proposed by the Applicant.

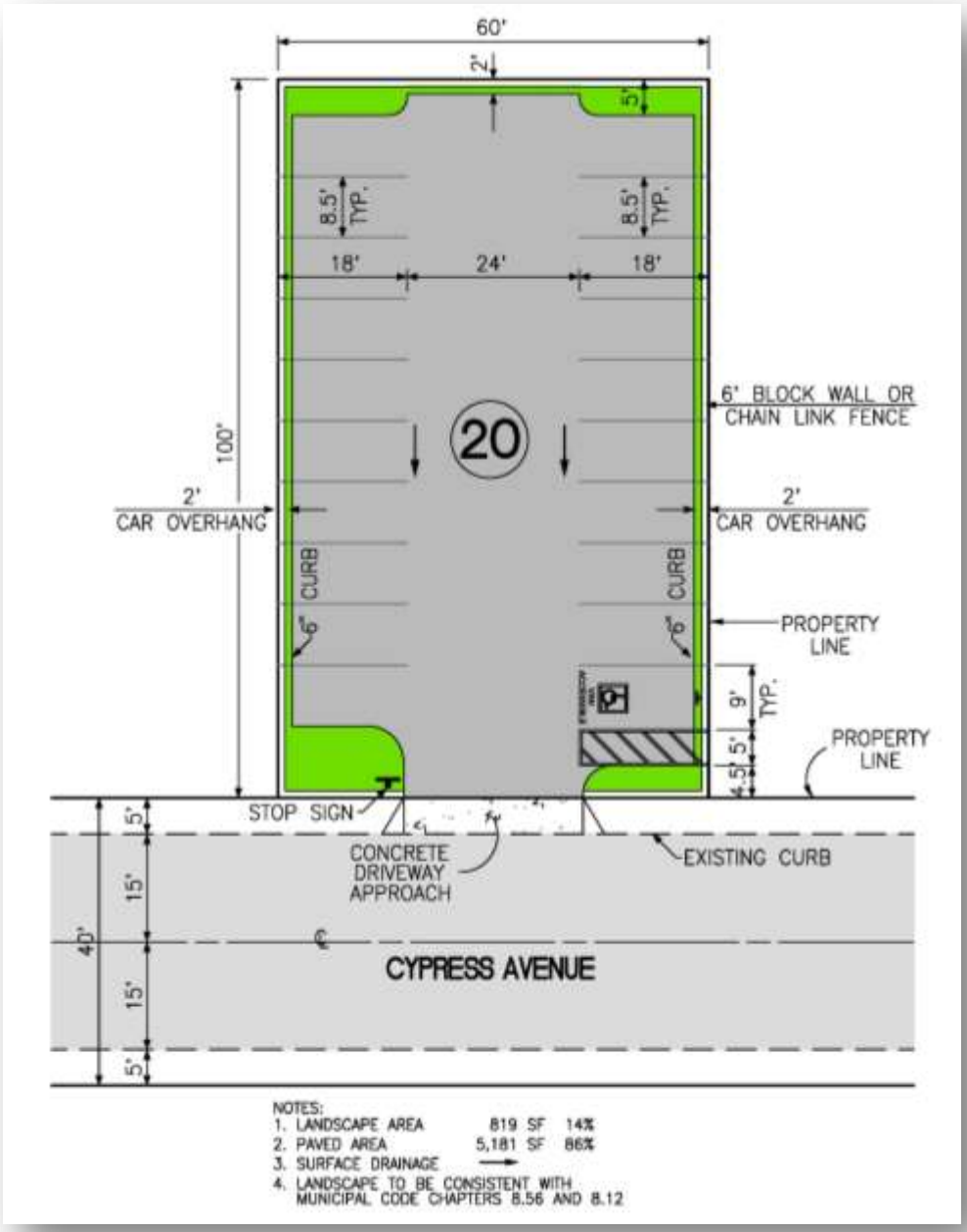
2.4.7 Project Life and Decommissioning

Under the Proposed Oil Project, the oil and gas resources would be developed until they are depleted and developing them is no longer economically viable, for up to 35 years. Currently, the amount of crude oil that could be produced from the field is unknown, and future crude prices are difficult to assess. According to the Lease Agreement, the Proposed Oil Project could operate for up to 35 years. Figure 2.19 shows the estimated crude oil, gas and water production for the life of the Proposed Oil Project.

If during Phase 2 the Applicant does not consider the level of production from the Project Site to be economically feasible, then decommissioning of the installed equipment would commence. Decommissioning would involve the removal of the drilling and temporary testing equipment and would include abandonment of wells according to the Division of Oil, Gas and Geothermal Resources (DOGGR) requirements. The Project Site would be left as a graded site with site improvements including the retaining walls, the perimeter chain link fence, and the perimeter landscaping.

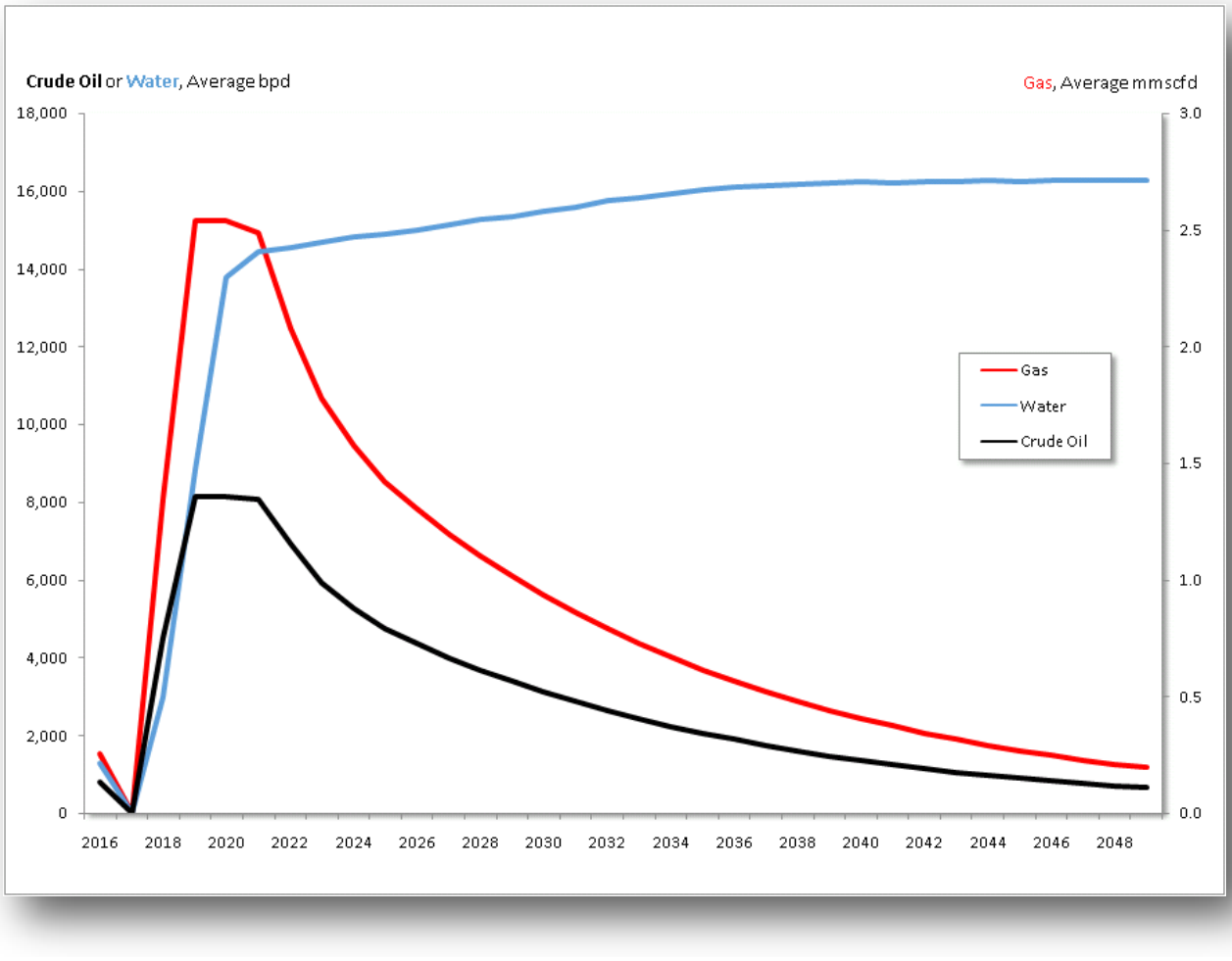
At the end of the Proposed Oil Project, when the owner applies to DOGGR and to the City to abandon the facility, a separate permit process and CEQA environmental review would be required to evaluate decommissioning of the entire Project Site. Since the timing of the decommissioning is unknown, the Applicant has not submitted a detailed decommissioning plan, and therefore any assessment of decommissioning activities would be speculative at this time.

Figure 2-18 Cypress Parking Area



Source: E&B Updated Parking Plan 1/8/2014

Figure 2.19 Estimated Production Levels



Source: Based on Applicant submitted estimates

2.4.8 Project Scheduling Summary

Under the Proposed Oil Project, there are a number of different activities with various allowances for time of day, day of week and annual limits. These are summarized in Table 2.16.

Table 2.16 Proposed Oil Project Scheduling Summary

Activity	Allowed Period Annually	Days and Hours per Day
Workover Rig	Maximum 90 days per year	8 am - 6 pm weekdays only
Drilling Rig	Phase 2 - 120 days	24 hours per day

	Phase 4 - 30 months	
Re-drills	30 days per year average, up to 150 per year max	24 hours per day
Phase 1 and Phase 3 Construction	Any	8 am - 6 pm weekdays and 9 am - 5 pm Saturdays
Offsite ROW Construction	Any	8 am - 3 pm weekdays only in the City of HB
Truck deliveries	Any	9am - 3 pm weekdays or emergencies
Quiet mode drilling	Phase 2 and Phase 4 Drilling, Re-drills	7 pm - 8 am
Pipeline construction activities	Phase 3	9 am - 3 pm weekdays.

Exhibit B

EXHIBIT "C"

PUBLIC BENEFITS OF PROJECT

With the approval of the Project by the voters of the City, the public benefits of the Project provided by the Lease include: a) the royalties as further described in the Lease in amounts estimated both by E&B and the City's independent consultant, Kosmont Company, as described in the Cost Benefit Analysis, and b) the minimum annual royalty of Five Hundred Thousand Dollars ($500,000) starting on the fourth anniversary of the completion of the first well drilled as further described in the Lease ("Minimum Royalty").

In addition, and as consideration for the benefits provided to E&B through the approval of this Agreement by the voters of the City, E&B has agreed to provide the additional public benefits as follows:

1) Accelerated Uplands Royalty Payments Commencing with Issuances of City Drilling Permit for First Well: E&B shall pay to the City five, annual, accelerated royalty payments of no more than One Million Dollars ($1,000,000) each, to be counted toward the City's future, Unrestricted Royalties, as further defined hereinafter. Such payments shall begin on the date of the issuance by the City of the drilling permit for the first well, and continue thereafter annually on the anniversary of that date until the Minimum Royalty payment in the Lease commences ("Accelerated Royalty Payment" or collectively, "Accelerated Royalty Payments"). (For clarity, this period is estimated to continue for approximately five years, for a total of no more than Five Million Dollars ($5,000,000).) Without having to repay E&B interest, or otherwise taking into account the time value of money, the Accelerated Royalty Payments will be counted toward and offset against future, Unrestricted Royalties otherwise due and payable to the City. For purposes of this Paragraph, "Unrestricted Royalties" are those royalty payments to be deposited into the City's General Fund attributable to those shares of production described in Paragraph 1 and Paragraph 2(i) of Exhibit B of the Lease. For clarity, the Accelerated Royalty Payments are not restricted, and are not to be offset against any future royalty payments for oil, gas, and other hydrocarbon substances resulting from the leased lands in the tidelands (i.e., Paragraph 2 of the Lease), except for that share of the tidelands royalty due to the City's general fund as consideration for furnishing the Drill Site (i.e., Paragraph 2(i) of the Lease). Each annual Accelerated Royalty Payment will be adjusted by any Unrestricted Royalties otherwise received by the City in that year to ensure that the City receives a minimum of $1,000,000 each year into the City's general fund. (By way of example, if the City were owed $250,000 in Unrestricted Royalties in the second year after the Issuance of the Drilling Permit for the First Well, E&B would issue an Accelerated Royalty Payment to the City in that year of $750,000.) After the fifth and final annual Accelerated Royalty Payment, then the City's subsequent, Unrestricted Royalty Payments will be reduced accordingly to account for the early payment of all Accelerated Royalty Payments so received under this Paragraph. If such later Unrestricted Royalties payments are not sufficient to cover the Accelerated Royalty

Payments already paid to the City, then the City is not required to repay the Accelerated Royalty Payments. Notwithstanding anything to the contrary in the foregoing paragraph, in satisfying the City's annual repayment obligations for the Advance under Paragraph 13. d. of the Lease, the City's repayment obligations for the Advance shall be satisfied first, pursuant to the terms of Paragraph 13.d.(4) of the Lease, and any Unrestricted Royalties remaining after such repayment is made in any given year will then be used to offset any prior Accelerated Royalty Payments.

2) Bonus Payments During Years 4-13 of the Lease to Ensure $1,000,000 Royalty Amount: The Lease provides for a "Minimum Royalty" of Five Hundred Thousand Dollars ($500,000) starting on the fourth anniversary of the completion of the first well drilled and continuing to the 13th anniversary of the first well's completion date ("Years 4-13"). If all royalties, both Uplands Royalties and Tidelands Royalties, as specified in Exhibit B to the Lease, paid to the City during Years 4-13 do not exceed One Million Dollars ($1,000,000), E&B shall pay to the City an additional bonus amount equal to the difference between the Minimum Royalty and One Million Dollars ($1,000,000) ("Bonus Payment"). For clarity, given that the Minimum Royalty is Five Hundred Thousand Dollars ($500,000), this Bonus Payment would be an additional amount of up to Five Hundred Thousand Dollars ($500,000), for a total of One Million Dollars ($1,000,000) annually. The Bonus Payments are not restricted, and may be used in accordance with applicable City laws. The Bonus Payments are bonuses to the City as Lessor under the Lease, are designed to be an additional benefit to the City pursuant to this Development Agreement, and shall not be considered royalties, Unrestricted Royalties, or otherwise subject to the allocation formula under Exhibit B of the Lease.

3) Remediation of City Maintenance Yard: If E&B determines as a part of Phase 2 of the Project to proceed with Phase 3 of the Project, E&B shall implement the proposed Remedial Action Plan as described in Exhibit B to this Agreement in Phase 3 of the Project; however, if E&B determines as a part of Phase 2 not to proceed with Phase 3 of the Project, then E&B shall conduct any necessary remediation activities at the Project site to allow the site to be used for industrial or commercial purposes (e.g., City maintenance or commercial activities), in a manner consistent with its obligations under the Lease, the Settlement Agreement and this Agreement. E&B shall not be obligated to remediate the property for any other future uses, such as commercial or residential uses. [If voters do not approve ballot measure, this document would not be vehicle for determining clean-up, but in any case, E&B is will not remediate site if project is not approved.]

4) Relocation of City Maintenance Yard: If the voters approve the Project, the City may determine to relocate the City Maintenance Yard to a temporary location and then to a permanent location or alternatively, to relocate the City Maintenance Yard directly to a

permanent location, without a temporary location. With respect to either of these options, E&B agrees as follows:

a. $3.5 Million Forgiven Upon Issuance by City of Drilling Permit for First Well: Upon the issuance by the City of the drilling permit for the first well, the City shall not be required to repay the Three Million Five Hundred Thousand Dollars ($3,500,000), plus interest, to E&B as further described in Section 4.6.b of the Settlement Agreement.

b. $6.5 Million Advance for Permanent Relocation: If E&B determines as a part of Phase 2 of the Project to proceed with Phase 3 of the Project, then E&B shall advance Six Million Five Hundred Thousand Dollars ($6,500,000) to the City for the permanent relocation of the City Maintenance Yard.

5) Payment to City to Fund Community Improvements

E&B shall provide 1% of 100% of gross revenues to City for community improvements, where such improvements shall be determined by the City in its sole discretion. This would be funded by E&B as a percentage of gross project revenues, with an initial amount of One Million Dollars ($1,000,000) to be contributed by E&B to the program upon the issuance by the City of the drilling permit for the first well.

6) Hermosa Beach Residential Property Fund:

Purpose: To provide owners of residential properties within 600 feet of the Hermosa Beach Oil Recovery Project (Project) with assurance that they will incur no loss, as a result of the Project, to their property's fair market value (Market Value), in the event of a sale of their property. Such assurance is offered through voluntary participation in a Hermosa Beach Residential Property Fund (Fund).

Offer: The Fund will pay the difference between an eligible property's actual negotiated sale price and the appraised Market Value of the property, which will be determined as if the Project had not been built. A predetermined independent appraisal process will demonstrate if there is a loss in the Market Value of an owner's residential property.

Participation: Participation in the Fund is entirely voluntary.
Eligibility: Owners of residential properties that are located within the "eligibility area" (within 600 feet of the Project, measured property edge to property edge) are eligible to participate. The claim must be made by the then current owner of the property and only one claim per property will be allowed; however, the owner need not own the property when the Fund commences in order to be eligible for a claim. By way of example only, if the original owner of

the property does not make a claim in connection with its sale to a buyer, then so long as the sale occurs during the Fund term, the buyer would automatically succeed to the rights of the selling property owner with respect to the Fund, including the right to make any claim, subject to the other requirements for participation in this Fund.

Costs: There is no monetary cost to participating residential property owners to receive the benefits of the Fund, now or in the future. All costs, including the costs of obtaining required appraisals, are paid by the Fund.

Cap: There will be a $25,000,000 cap (Funding Cap) on the total amount of benefits that the Fund can pay out.

Term: The Fund will commence upon issuance of the City Drilling Permit for First Well by the City of Hermosa Beach and will continue in effect until the first to occur of (a) six years from commencement of the Fund, or one year after the completion of the final Project well, whichever is later, or (b) the entire Funding Cap has been disbursed to eligible residential property owners. The six-year aspect of the Fund term described in subpart (a), above, will be extended consistent with any extension of the term of the Development Agreement in accordance with Section 6.24 of the Development Agreement.

Administration: E&B Natural Resources (E&B) will establish the Fund and designate a qualified, independent Fund Administrator. The Fund Administrator will not be an officer, employee, or affiliate of E&B.

Application: To receive benefits, a selling owner of a residential property within the eligible area will submit to the Fund Administrator: (1) a signed Program Participation Agreement setting forth the terms of the Fund program (Program) and a signed claim form; (2) a copy of an accepted written offer to purchase the residence on arms-length terms from a buyer who is not related to or affiliated with the selling residential property owner and that complies with the Program requirements; and (3) a current (dated not earlier than six months prior to the property owner's application) appraisal reflecting the Market Value of the property, which will be determined as if the Project had not been built. The appraisal must be prepared by an MAI or RM designated appraiser who is licensed in California and has at least five years of experience appraising similarly-situated residential properties in the South Bay region of Los Angeles County, California.

Benefits: Within 14 calendar days after receiving a selling residential property owner's application materials, the Fund will either agree to pay the amount of the claim, or obtain another appraisal of the residential property using the same criteria as the owner's appraisal.
If the Fund obtains an alternate appraisal and the difference between the two appraisals is within 10% of the higher appraised Market Value, the Market Value

for purposes of the residential property owner's claim on the Fund will be equal to the average of the two appraised Market Values. If not, a third appraiser will be selected by the first two appraisers, and the Market Value determination in the third appraisal will be deemed the Market Value of the property. The owner and the Fund will be conclusively bound by the third appraisal.
The difference between the Market Value of the residence, as so determined, and the property's actual negotiated sale price will be paid by the Fund to the selling homeowner either at closing or within 10 calendar days after the Market Value of the residence has been determined, whichever takes place later.

Market Value: Each appraisal obtained will determine the Market Value of the homeowner's residential property as of the date of the appraisal and as if the Project had never been built.

Claims: By submitting a claim to the Fund, the homeowner agrees to be bound by the terms of Program, and to accept reimbursement from the Fund for a loss in the Market Value of the owner's residential property in exchange for foregoing any legal action to receive compensation for a decrease in the Market Value of the owner's residential property that is caused by or results from the Project. The owner will not be required to execute a general release of claims but will be obligated solely to release claims pertaining to loss of property value. Any offer that a participating owner enters into for sale of its residence must disclose that E&B has a right of first refusal to purchase the property for a price equal to the Market Value determined by the appraisal process without incurring any broker's commission. Any claim against the Fund must be submitted before the sale of the eligible residential property is completed; no claim will be considered or paid by the Fund after the closing of the sale of the residential property.

Funding: E&B will ensure that, at all times during the Fund term, there is a minimum balance of $1,000,000 in the Fund, and E&B will ensure that at least $1,000,000 is in the Fund upon expiration of the six-year Fund term. E&B will regularly replenish the Fund up to the Funding Cap, as and if disbursements are made, to ensure that the Fund has readily-available funds to satisfy potential claims asserted by owners of eligible residential properties under the Program. E&B will also provide additional funding totaling a maximum of $4,000,000 from contributions based on 1.5% of gross project revenues on an annual basis until either a total of $4,000,000 has been contributed to the Fund from gross project revenues or the Funding Cap has been reached.

Distribution: E&B will ensure that upon expiration of the Fund term, the Fund will have a remaining balance of at least $1,000,000 and up to a maximum sum of $5,000,000, depending on the total amount of claims that have been made against and paid by the Fund. The remaining amount in the Fund at the end of the Term shall be distributed to the then current owners of all otherwise-eligible residential properties located within 300 feet of the Project for which there has not previously been made any claim. The owner of each such residential property

will be entitled to an equal, pro rata share of the amount remaining in the Fund at the end of the Fund term (after all appraisal costs and other Fund administrative expenses have been deducted). The pro rata share of the Fund balance to which each owner will be entitled will be based on the total number of properties entitled to share in the distribution. By way of example only, if at the end of the Fund term, there are 60 residential properties within 300 feet of the Project for which no claim has been made against, and no distribution received from, the Fund, then the owner of each such residential property will be entitled to 1/60 of the amount then remaining in the Fund after all appraisal costs and other Fund administrative expenses have been deducted.

EXHIBIT "D"

CONDITIONS OF PROJECT APPROVAL

Exhibit D includes:

1. **Exhibit D-1**
   Conditions of Approval from 1993 Conditional Use Permit for Oil Development at the City Maintenance Yard, approved by the City in Resolution No. 93-5632 (CUP to be abandoned and superseded by this agreement)

2. **Exhibit D-2**
   Additional Project Conditions

3. **Exhibit D-3**
   Mitigation Measures/Mitigation Monitoring Plan- from Section 8.0 of Final Environmental Impact Report (as revised at Hermosa Beach City Council certification hearing on July 8, 2014 per Resolution 14-6908).

Exhibit D

Exhibit D-1

Conditions of Approval from 1993 Conditional Use Permit for Oil Development at the City Maintenance Yard, approved by the City in Resolution No. 93-5632

(CUP to be abandoned and superseded by this Agreement)

(Amendments to conditions necessary for consistency with Project Description, Mitigation Measures and other conditions and terms are reflected herein)

SECTION 1. GENERAL

1. The testing phase for all production shall be a maximum of one year from the date drilling is initiated.

2. A minimum of one annual site audit shall take place to inspect for soil contamination as a result of accidental spills in any area not paved and expose. Auditor shall be hired by City.

3. The maximum number of days the work over rigs or any other rig (other than a drill rig) that is to be used on-site shall be 90 days per year, and shall be operated weekdays 8:00 A.M. to 6:00 P.M. excluding holidays.

4. In the event that a residence with solar panels is affected by shading, a site specific study paid for by the oil contractor shall be conducted to determine economic impact.

5. Pursuant to Assembly Bill 3180 the operation shall be monitored for all condition of the approval of which the City has responsibility which includes (but not limited to) noise monitoring and inspection of the site for proper maintenance.

6. The proposed plans shall be submitted to the State Division of Oil, Gas & Geothermal Resources for their review and recommendation;
    a. Any recommendation by the State Division of Oil, Gas & Geothermal Resources shall be taken into consideration prior to approval, and may be included as condition of approval.

7. Drill cuttings and other wastes, shall be collected in above ground containers and disposed of at an approved disposal site. Receipts for all disposal of waste product shall be provided within ten (10) days of disposal to the Public Works Director.

8. All requirements, standards, conditions stated within the oil Production Code, Chapter 21-A, of the City's Municipal Code shall be met, unless more restrictive requirements are imposed through mitigation measures; where it cannot be clearly determined whether the City's Oil Ordinance, Chapter 21-A or mitigation measure are more stringent, the appropriate City staff shall make a determination; appealable to the City Council.

9. Three (3) copies of final building plans including site, elevation, and floor plans shall be submitted for review and approval by the Planning Director prior to the issuance of any Building Permit.

10. The proposed development shall be in substantial conformance with submitted plans. Any minor modification shall be reviewed and may be approved by the Planning Director.

11. All wells must be drilled and completed within 55 months from the start of drilling of the first exploratory well in accordance with the following schedule:

PHASE 1 SITE PREPARATION	6 MONTHS
PHASE 2 DRILLING AND TESTING PHASE (Exploratory drilling, production testing)	12 MONTHS
PHASE 3 FINAL DESIGN AND CONSTRUCTION PHASE (Permanent facility construction)	14 MONTHS
PHASE 4 DEVELOPMENT AND OPERATIONS (DRILLING) (Development Drilling, 1 month per well)	34 MONTHS

If the Drilling Contractor is delayed at any time in the progress of work by any act or neglect of the City of Hermosa Beach or any other governmental body having authority over this project, or by labor disputes, adverse weather conditions, by law, war, riots, strikes,

unavoidable casualties, unusual delays in receiving material or equipment or by an act of God, or causes beyond the control of the Drilling Contractor, when justified, the time period may be extended to a reasonable time to correspond with the delay incurred by the Drilling Contractor.

SECTION 2. LAND USE

1. The maximum size for any storage tank of any type shall be forty feet in diameter and sixteen feet in height, appurtenances not included.

2. Prior to construction and prior to obtaining building permits for oil production, a complete soil analysis shall be performed and approved by all applicable governing agencies having jurisdiction over the project.

3. Not more than five tanks shall be installed, and shall be submerged in a concrete basin which contains 10% above the volume required by the State Division of Oil, Gas & Geothermal Resources and the Uniform Fire Code which is as follows: the volumetric capacity of the diked area shall not be less than the greatest amount of liquid that can be released from the largest tank within the diked area. The capacity of the diked areas enclosing more than one tank shall be calculated by deducting the volume of the tanks other than the largest tank below the height of the dike.

4. All wells shall be drilled and cemented in accordance with State Division of Oil, Gas and Geothermal Resources regulations to protect underground aquifers.

5. The electrical service systems shall be designed with sufficient capacity to minimize surging impacts.

6. The well cellars shall be concrete lined and shall be designed to hold contaminated run-off from on-site sources; or a sump shall be provided.

7. Solid state control console linked to a control system to perform energy conservation functions such as start/stop time programming of motor equipment, data logging of energy consumption and maintenance and service scheduling shall be provided.

    a. All Electrical machinery where possible shall have a minimum coefficient of

efficiency of 0.75.

SECTION 3. PUBLIC SAFETY

1. The site shall be enclosed by a solid masonry or concrete wall with solid gates during all operations, protecting both against public entry, observation and attraction. A chain link fence to provide security is acceptable only through Phases 1 and 2.

2. Security personnel shall be employed at all times during the drilling stage (24 hours) and emergency phone numbers shall be posted during production Phases 2 and 4.

3. Signs warning of unauthorized entry and safety hazards shall be posted on all sides.

4. Access to facilities shall be limited to authorized personnel only.

5. Trees shall be maintained at a distance from all walls to prohibit children and others from unauthorized entry.

6. All site personnel shall be instructed on required safety procedures if hydrogen sulfide concentrations are encountered. Documentation of training and instruction shall be made available to the City Manager.

7. Both solid and liquid wastes shall be sampled and tested to determine if it needs to be treated as a hazardous waste.

8. An Oil Spill Prevention Control Countermeasures (SPCC) Plan and an Oil Drilling Contingency Plan will be Prepared for the Project and approved by the State Division of Oil, Gas and Geothermal Resources, and the City of Hermosa Beach Fire and Building and Safety Departments.

9. Drillsite and production facilities shall be constructed in accordance with the State seismic standards, and designed in accordance with U. B.C. seismic requirements for hazardous facilities.

10. A soils engineering report and engineering geology report prepared by a licensed

geologist and engineer shall be prepared and reviewed in conjunction with the plans for all physical improvements. Said report shall address potential seismic hazards, such as liquefaction, due to soils or geologic conditions. All recommendations contained in said reports shall be incorporated in the construction documents.

11. An emergency response plan, including a blowout prevention and control plan, shall be prepared for review and approval by the State Division of Oil, Gas & Geothermal Resources and the Hermosa Beach Fire Department.

12. When a leak or spill occurs, it shall be contained, the fluid shall be recovered and the area restored to its original condition.

SECTION 4. FIRE SAFETY

1. Adequate fire detection and fighting equipment and supplies, approved by the Fire Department, shall be maintained on the drillsite and tank production facility at all times.

2. A supplementary analysis by a professional consultant shall be provided detailing any necessary improvements the Fire Department may need to prevent, and to halt oil related fires and shall also include the following: public notification, warning and evacuation plan.

3. Oil sumps, drip pans, etc. shall be cleaned at regular intervals to reduce fire hazards and prevent minor spills.

4. Oily rags, paper and miscellaneous waste shall be disposed of in an appropriate manner to reduce fire hazards

5. Signs warning of flammable fluids and prohibiting smoking shall be installed where appropriate.

6. The drillsite and production facility shall be protected by automatic fire detection sensors and suppression systems. The fire suppression systems shall include a tank-cooling sprinkler system.

7. Drilling operations shall be conducted in accordance with appropriate State Division of Oil, Gas & Geothermal Resources regulations and shall utilize all required blowout prevention equipment and safety devices.

8. Fire flows to service the operation shall meet Fire Department regulations.

9. All equipment necessary to contain an oil fire or blowout shall be provided and/or maintained on site and all fire personnel shall be trained on its use.

SECTION 6. VEHICLE TRAFFIC AND CIRCULATION ON AND OFF SITE

1. All truck deliveries shall be limited to daylight hours (9:00 AM – 3:00 PM), Monday through Friday, except for an emergency situation, as defined by this agreement and reported to the City in accordance with the notification requirement, which have been reported to the Director of Public Works in advance of the delivery.

2. Operation of earthmoving equipment shall be limited to daytime hours between 8 AM and 6 PM.

3. Equipment deliveries shall be made only during daytime hours between 9 AM and 3 PM.

4. Project related truck travel shall be restricted to specific truck routes and access points as approved by the Public Works Department.

5. Signs shall be installed to direct detour traffic as approved by the Public Works Director.

6. The number of truck trips shall be limited to a maximum of 18 round trips per day, except in an emergency, as defined by this agreement and reported to the City in accordance with the notification requirement.

7. Maintenance Yard site access shall be designed to enable trucks to turn into the site without inhibiting traffic movement on Valley Drive or Sixth Street.

8. Minor curb radii reconstruction shall be done by the operator as determined by the

City Public Works depending on the length and necessary turning radii for project related trucks.

9. Area residents shall be notified of pipeline construction prior to commencement. Signs shall be installed to direct detour traffic.

10. All trucks arriving or departing the drill site shall be washed to prevent spillage of earth and all routes shall be swept and washed by the driller as required by the City.

11. An evaluation of the structural condition of the existing pavement shall be performed by a soils engineer on all access streets and the proposed truck routes prior to commencing any site preparation or construction and prior to the issuance of any necessary permits. The evaluation shall include as a minimum:

    a) the number, type, size and weight of trucks for export of materials or product,

    b) the number, type, size and weight of truck deliveries of building supplies, drilling supplies etc.,

    c) the number, type, size and weight of equipment transported to the site,

    d) other associated transportation items,

    e) other anticipated loading.

    The evaluation shall contain recommendations as to the actions required to maintain said streets and routes in their current condition throughout the planned development phase, planned production phase, and in the close out phase.

12. The operator shall perform the actions on the existing pavement as recommended by the soils or highway engineer, the operator will hire a licensed contractor and provide street profiles, drawings, and engineering to the satisfaction of the Public Works Department prior to work commencing.

13. The City Council may restrict the use of certain street, alleys, or roadways in connection with the permittee's operation. In the event any street, alley or roadway is

damaged by the permittee's operations, such damages shall be paid for by the permittee upon demand by the City, and the failure to pay such damages, being the reasonable cost of the repair of any such damaged portions, shall be grounds for the revocation of the permit and the collection of such damages.

SECTION 7. SANITARY SEWER

1. Use of sanitary sewer is prohibited, except for the minimal use associated with the office and restroom facilities. Any water from oil production shall be disposed in the four disposal wells.

SECTION 8. NOISE /VIBRATION

1. Tripping will be restricted to daylight hours only.

2. Loudspeaker paging systems shall be prohibited.

3. Well workover rigs or any other rig that is used shall be operated only between the hours of 8:00 A.M. and 6:00 P.M. during daytime weekday hours only, excluding holidays, except in an emergency, as defined herein and reported to the City in accordance with the notification requirement. The exhaust and intake of the diesel engine (if used on the workover rig) shall be muffled to reduce noise to an acceptable limit. The operator shall use whatever means necessary, including but not limited to, enclosing the diesel engine and rig in acoustic blankets or housing.

4. All oil maintenance equipment, vehicles and non-electrical motors shall be equipped with manufacturer approved mufflers or housed in a sound-proofing device.

5. Noise monitoring shall be conducted under the supervision of an independent certified acoustical engineer paid for by the permittee. Reports shall be submitted to the Planning Director within three working days after the completion of each phase of the monitoring. The monitoring shall include the following:

    a. Pre-drilling phase monitoring. Prior to the start of the drilling phase, noise measurements shall be obtained during the operation of the specific drilling rig which has been selected and the measurements shall be related to those

experienced at the nearest residential boundaries to the drilling site. In addition, the noise control measures which have been (or will be) applied to the rig as needed for compliance with the City of Hermosa Beach noise ordinances shall be identified.

b. Start of Drilling. Noise measurements shall be obtained during the nighttime hours (10:00 P.M. to 7:00 A.M.) for at least six hours on each of the three nights within the five day period from the start of the drilling phase. Monitoring is to occur at the nearest residential boundary to the actual drilling operation.

c. During the drilling phase. Noise monitoring shall occur during a six-hour period between the hours from 10:00 P.M. to 7:00 A.M. at least once each month during the drilling phase of the project. The noise level data obtained shall be compared to the City of Hermosa Beach Noise Ordinance standards by the Planning Department. Where an exceedence of the standards is identified, noise control measures shall be required.

Production phase. Noise measurements shall be obtained during a six-hour period between the hours from 10:00 P.M. to 7:00 A.M. at least once each year during the production and completion phase.**SECTION 9. LANDSCAPING**

1. A Detailed Landscape Plan for Phases 2 (exploratory drilling and testing) and Phase 4, indicating the type, size and quantity of plant materials shall be submitted to the Planning Commission, and shall comply with Section 21A-2.9 of the Oil Code.

2. During Phase 2, test facility, landscaping consisting of 24" box, or larger size trees may be installed without permanent planting.

3. Minimum 24" boxed trees for Phases 2 and 4 shall be adequate in size to create a buffer effect to obscure visibility of oil production activity. Permanent trees planted around the perimeter of the site for Phase 4 shall be a minimum sixteen (16) feet high at planting.

4. Trees along the lot perimeter shall be provided to create a dense landscape buffer to the satisfaction and field review of the Planning Director.

5. The aesthetic impact of the exposed masonry walls on the west and northern sides shall be softened with the planting of climbing vines to the satisfaction and review of the Planning Director.

6. Landscaping shall be maintained in a neat and clean condition.

7. A complete automatic sprinkler system shall be provided prior to commencement of Phases 2 and 4.

SECTION 10. AESTHETICS

1. The tanks, acoustical wrap and wall, and production facility shall be painted a neutral color to blend in with in with the surroundings; color shall be reviewed and approved the Planning Commission.

2. The use of architectural lighting beyond safety and security requirements shall be prohibited.

3. The site for drilling equipment and the storage facilities shall be depressed in combination with walls so that the visual impact is minimized.

4. All outdoor lighting shall be shielded and directed inward of the site.

5. Lighting shall be limited solely to the amount and intensities necessary for safety and security purposes.

6. Certain activities which might involve unshielded lighting (i.e., site preparation and restoration) activities shall be limited to daylight hours and thus not require nighttime lighting.

7. A wall maintained graffiti free of a minimum of 12 feet in height shall be provided; wall materials shall be reviewed and approved by Planning Director. During test drilling minimum 6'high fencing shall be provided. See Mitigation Measures for Noise and Vibration in D-3 below for additional requirements for this wall.

8. Tanks shall be submerged 6 to 8 feet or more below grade and will be adjacent to the 35-foot high privacy wall.

9. If the drill derrick remains idle for more than one year, review and approval by the City Planning Commission or the City Council shall be required, or the derrick shall be dismantled at the expense of the operator.

10. All production equipment and structures shall be painted to blend with the surrounding environment with review and approval by the Planning Director.

11. On-site signs shall be limited to those needed for public health and safety.

12. All derricks masts hereafter erected for drilling, re-drilling or remedial operations or for use in production operations shall be removed within 45 days after completion of the work unless otherwise ordered by the Division of Oil, Gas & Geothermal Resources of the state.

13. The operator shall diligently and continuously pursue drilling operations until the all 30 oil wells and all four (4) water disposal wells are completed or abandoned to the satisfaction of the Division of Oil, Gas & Geothermal Resources of the state and upon completion or abandonment shall remove all drilling equipment from the drill site within 45 days following completion or abandonment of the well unless otherwise ordered by the Division of Oil, Gas & Geothermal Resources.

SECTION 11. ODORS/VAPOR/AIR POLLUTION

1. A vapor recovery system shall be installed to recover 99% of hydrocarbon emission during storage and transfer of crude oil.

2. Raw gas shall not be allowed into the atmosphere.

3. Gas and vapor detection systems shall be installed at appropriate locations.

4. All project site activities shall be conducted such as to eliminate escape of gas in accordance with best available control technology and practices which shall be reviewed and approved by the City.

5. All requirements of AQMD shall be met at all times.

6. A state-of-the-art scrubber shall be employed for the exploratory phase to eliminate odors from waste gases, and any flame shall be enclosed.

7. Tanks shall be designed and located so that no odors or fumes can be detected from the adjacent areas outside the exterior walls of the project.

8. Operators shall not blow lines to the atmosphere, except in an emergency, as defined below in Section 14. and reported to the City in accordance with the notification requirement.

9. Construction equipment and vehicles shall be maintained in proper tune.

10. Odorless drilling muds shall be used.

11. Well tubing and rods shall not remain out of the well during workover operation less than 8-hours. The tubing will be surface washed with a detergent solution to remove odor bearing residual hydrocarbons if exposed longer than 8-hours.

12. Odor control will be further enforced by the SCAQMD under Rules 402, 466.1 of their regulations, and the commercial recovery system shall be employed for the permanent facility.

13. There shall be no open flames allowed.

14. The permittee shall monitor drilling mud during drilling on the site for odorous substances and take such measures to eliminate any odor which would be perceptible outside the drill site.

15. The permittee shall undertake no refining process or any process for the extraction of products from natural gas, except for such minor processe~~d~~s as necessary to make natural gas acceptable to the City gas mains for domestic use. [correction of typo]

16. Well cellars shall be maintained in a clean and efficient manner to prevent waste accumulation and shall be frequently steam cleaned.

SECTION 12. GRADING/STORM WATER/SITE RUNOFF

1. Grading shall not be performed when wind speeds exceed 20 mph. The contractor shall maintain a wind speed monitoring device on site during grading operations. The contractor shall continually keep the soil moist during grading operations. At no time shall any dust be allowed to leave the work site.

2. Normal wetting procedures shall be employed during grading. Review and approval of procedure shall be by Public Works Director.

3. Graded surfaces shall be paved or landscaped per approved plan.

4. Project site shall be graded so that all contaminated runoff is collected and treated on-site and disposed of according to all laws.

5. Site shall be graded in a manner so that all hazards or contaminated fluids and runoff are directed toward a cellar and approved pit and disposed of properly.

6. No water from the site shall be allowed to enter the storm drainage system or any public area.

7. No water from the site shall be allowed to surface flow across the public beach.

SECTION 13. PIPELINE CONSTRUCTION

1. The pipeline operators shall adhere to all applicable federal, state, regional, and local statutes governing design, construction, operation, and maintenance of the pipelines and related equipment.

2. A detailed pipeline survey shall be conducted in order to locate existing pipelines prior to excavation for pipeline construction.

3. A responsible agent paid for by the applicant shall be present during excavations.

4. Areas of construction and maintenance activities shall be delineated by signs,

flagmen, pavement markings, barricades, and lights, as determined by permit requirements of all local agencies.

5. Where pedestrian activities are affected during construction, appropriate warning signs shall be installed and pedestrians will be diverted. Pedestrian access to businesses and residences will be maintained during construction. Special facilities, such as handrails, fences, and walkways shall be provided, if necessary, for the safety of pedestrians.

6. Obstruction of emergency vehicle operations will be partially mitigated by ensuring that providers of emergency services are kept informed of the location, nature, and duration of construction activities so alternate routes can be chosen. It is essential that fire department access is maintained to all buildings adjacent to construction activities. For this reason, a minimum of at least one lane for streets undergoing construction will be kept open at all times, and fire hydrants in construction areas will remain accessible.

7. If public transit stops along pipeline routes need to be temporarily relocated during construction, the applicant shall provide signs directing riders to the temporary stop location.

8. When hauling excavated and waste materials from construction sites, substandard roadways will be avoided and local jurisdiction regulation governing hauling vehicles will be adhered to.

9. Pipeline construction and operation of earth moving equipment shall be limited to daylight hours between 8:00 AM and 3:00 PM and shall not be permitted during weekend periods. Additionally, construction-related trucks should not be operated during peak traffic hours of 7 to 9 AM and 3 to 7 PM. Pipeline construction at major intersections shall be limited to daylight hours between 9:00 AM and 3:00 PM to avoid peak traffic periods.

10. Equipment deliveries shall be made only during daytime hours between 8 AM and 3 PM.

11. In order to reduce visual impacts and possible safety hazards, storage of pipes and

other materials, as well as construction equipment, shall not be permitted on any street during non-construction hours.

12. Area residents within 300’ shall be notified about the pipeline construction operation prior to commencement of construction.

13. Detour signs on pipeline construction routes shall be placed at appropriate locations.

14. Steel plates covering pipeline excavation trenches shall be placed to permit traffic movement during non-construction hours.

15. Pipelines shall be designed with ample safety factors, pressure-tested prior to being placed in operation, and monitored for corrosion once in operation.

16. Safety shut-down devices that respond to drops in pipeline pressure shall be incorporated into the project in order to stop the flow of the pipeline contents in case of a pipeline rupture.

17. Groundwater level and land subsidence shall be monitored to insure that pipeline damage does not occur as a result of geologic and hydrologic phenomena. The annual subsidence survey shall include a report to the City on monitoring efforts to insure pipelining damage has not occurred.

18. Pipeline construction along Valley Drive shall be approved by the Director of Public Works prior to issuance of a permit.

19. Pipeline construction shall not occur in the area known as the Hermosa Valley Greenbelt except that the permittee may connect to West Basin Municipal Water District’s existing reclaimed water line for the purposes and as described in Exhibit B to this Agreement.

20. Storage of materials shall not be allowed on the Hermosa Valley Greenbelt. The storage or dumping upon the greenbelt of any materials, construction equipment, debris, oil drilling equipment, drilling rigs, piping, etc., and any and all equipment and vehicles necessary for the construction and maintenance of the pipeline and oil development site shall be prohibited. The use of the greenbelt as a staging area for

construction of the oil facility or pipeline shall be prohibited. There shall be no parking or standing of any vehicles on the greenbelt for any time period.

21. Trenches shall be covered during non-working hours to minimize traffic circulation problems.

SECTION 14

Definition and notification requirements for emergency situations:

I. For purposes of these conditions, "Emergency" is defined as follows:

A threat to the health and safety of persons in the surrounding area to the drill site and the following conditions which require immediate action:

A. Conditions which could lead to potential spill or well blowout:

1. Entry of oil and gas into the wellbore while drilling, tripping or out of the hole which may be indicated by one or more of the following:

   a. Pit volume gain
   b. Well flowing with pumps off
   c. Flow rate increases with circulation
   d. Improper hole fill-up on trips
   e. Sudden increase in drilling rate
   f. Pump pressure decreases and pump rate increases
   g. Decrease in returning mud rate
   h. Sloughing shale
   i. Changes in mud salinity and/or mud flow properties

2. Lost circulation or loss of ability to circulate

3. Casing or wellhead failure while drilling

4. Stuck pipe and/or equipment during any of the following operations:

a. Drilling
b. Tripping drill pipe and tools
c. Wireline logging
d. Drill stem testing
e. Running casing
f. Perforating and stimulating completion interval

5. Loss of rig power or equipment failure while drilling or tripping.

B. Injuries to personnel at the Drill Site

C. Conditions which could reduce the stability and safety of the rig and production equipment:

1. Natural events:

a. Excessive winds, rain and lightning
b. Floods
c. Subsidence
d. Earthquakes

2. Other events

a. Riots/Demonstrations
b. Fire

II. **Notification Required:** In the case of an emergency, as defined above, the permittee shall give immediate notice to the City of the occurrence of the emergency event. The City will provide the permittee with a list of phone numbers of City personnel to call for notification purposes. A written notice, including a detailed description of the emergency condition, and the actions take and/or proposed to be taken to correct the situation, shall be provided within 24 hours of the occurrence of the emergency event.

SECTION 15

1. Each of the above conditions is separately enforced, and if any of the conditions of approval is found to be invalid by a court of law, all the other conditions shall remain valid and enforceable.

2. The subject property shall be developed, maintained and operated in full compliance with the conditions of this grant and any law, statute, ordinance or other regulation applicable to any development or activity on the subject property. Failure of the permittee to cease any development or activity not in full compliance shall be a violation of these conditions.

Exhibit D-2
ADDITIONAL PROJECT CONDITIONS

A. GENERAL

E&B (herein "Operator") is the owner and Operator of this project, responsible for implementing and complying with all applicable conditions.

A-1 Project Description

This Development Agreement, and associated conditions, is based upon and limited to the project described in Exhibit B to the Development Agreement.

A-2 Acceptance of Conditions

Execution of this agreement shall be deemed as acceptance of all conditions herein and waiver of any objections thereto.

A-3 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 approval, including but not limited to, costs for permitting, permit conditions implementation, mitigation monitoring, compliance 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.

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 or plans 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 during normal business hours the expenditures from the deposit to ensure the expenditures are related to the Project. Should Operator object to an expenditure, Operator shall submit a request in writing to the City Manager for a detailed written explanation of the expenditure. Following receipt of the written explanation from the City and should Operator continue to object to payment of the expenditure, it shall file such objection in writing with the City Council explaining why such expenditure is not appropriate from the draw down account or why the amount of the expenditure is not appropriate for the work. Following City Council consideration of the matter and decision, the Council's determination on the expenditure shall be final and binding on the parties.

A-4 Substantial Conformity

The Project shall be designed, constructed, and operated in substantial conformity with the Project Description in Exhibit B and all conditions of approval set forth in this Exhibit D.

A-5 Conflicts Between Conditions

In the event that any condition or mitigation measure contained in this development agreement 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.

A-6 Facility Throughput and Source Limits

All facilities constructed under this approval shall be limited to the following maximum

production volumes: Phase 2 shall be limited to 800 barrels of oil and up to 250,000 standard cubic feet per day of gas. Phase 4 shall be limited to 8,000 barrels of oil per day and 2.5 million standard cubic feet of gas per day.

A-7 Alternative Mitigation if Condition Invalidated

If any condition of this project is invalidated by a court of law in a final adjudication, this approval shall be suspended pending imposition of a substitute condition or mitigation measure that will achieve equivalent results or reduction of impacts. A substitute condition or mitigation measure shall be incorporated into the Development Agreement in accordance with Section 4.2 of the Agreement- Changes and Amendments to Project before the suspension shall be lifted and the project is allowed to proceed.

A-8 Applicability of Conditions to Construction and Operations

These conditions are intended to apply to the E&B Project during both the construction and the operation of the permitted facilities. The term "operations" shall be understood to encompass both construction and operation phases unless such an interpretation would be inappropriate.

A-9 Compliance Plans to have Same Force and Effect as Conditions

All elements of the plans and programs required under this Exhibit D shall have the force and effect of a project condition. The remedies available to the City upon Operators failure to comply with such plans and programs includes but is not limited to those remedies which are available to the City upon Operator’s failure to comply with a project condition.

A-10 Performance Security

The Operator shall be subject to the following provisions:

a. Performance Bond.
Prior to issuance of the first drilling permit, the Operator shall provide to the City Manager or Designee, a faithful performance bond or financial instrument in a commercially reasonable amount to be determined by the City Manager taking into account existing bonds to the extent they overlap, 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 to cover certain activities in the exploratory phase of the Project as follows: well abandonment, site restoration and environmental cleanup, and financing spill response connected with exploration. Should the Project proceed to the oil production phases of the Project, 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, financing spill response and shall be in a format and include terms approved by the City Manager connected with the production phases of the project. These bonds shall be in addition to any other bond required by law (including without limitation Public Resources Code Sections 3202, 3204, 3205, 3205.2 and 3206 and 14 C.C.R. § 1722.8. These bonds shall satisfy the bond requirement in Section 23 of the Lease, and in the City Manager's discretion, may satisfy the bond requirement in Condition E-1 below.

b. Change of Operator. The performance bond(s) required above shall continue in force for one (1) year following any sale, transfer, assignment, or other change of Operator of the Project Site, or of the current Operator's termination of activities at the Project Site. 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.

B. PROJECT REVIEW

B-1 Review by Community Development Director

Prior to commencement of construction or operation for Phase 1, 2, 3 and 4, and for subsequent modifications, Operator shall submit to Community Development Department relevant construction plans, engineering drawings and supporting text demonstrating

compliance with the relevant conditions of this approval. Construction or operation may not commence until City has reviewed and approved the appropriate submittal, consistent with applicable conditions. The City agrees to make a good faith attempt to review the submittal for completeness as expeditiously as possible, which may involve retaining consultants with the appropriate technical expertise to review the submittal, and to provide a list of deficiencies. When the submittal is deemed complete, the City agrees to provide written notice of approval of construction plans as expeditiously as possible, or indicate in writing the conditions which have not been met, or notify the permittee that the Community Development Director review shall be completed within a period of time specified by the City, based on sound engineering practices. When such conditions have been met and city confirms in writing, construction or operation may be commenced. The City may require post-construction inspections or review of as-built drawings, as necessary to confirm consistency with the approved submittal.

B-2 Condition Scheduling Conflicts

In the event that scheduling requirements among or between conditions in this approval (or with this approval and conditions imposed by other agencies) conflict with respect to timing, Community Development Department (in consultation with other departments, agencies, and Operator as appropriate) shall resolve such conflict.

B-3 Authority to Begin Construction

Operator shall not commence construction without written confirmation from Community Development Director, or designee, that all conditions which require approval prior to construction of Phase 1, Phase 2, and Phase 3, as specified by this approval, have been satisfied.

B-4 Authority to Begin Operations

After construction and prior to start-up, Operator shall not commence operations without written confirmation from Community Development Director, or designee, that all conditions which require approval prior to start-up, as specified by this approval, have been satisfied. Start-up, for purposes of this condition, is defined as the introduction of hydrocarbons into the facility production equipment for both Phase 2/4.

C. MANAGEMENT AND MONITORING

C-1 Environmental Quality Assurance Program (EQAP)

Under EM-1 below in Exhibit D-3, Operator is required to provide funding for implementation and administration of an environmental monitoring program, including an environmental monitor ("Monitor"), to ensure compliance with the environmental conditions of approval. The Monitor shall assist in condition compliance and mitigation monitoring for all applicable construction and operational stages of the project. The monitor shall be under contract with the City and funded by the Operator.

1. In accordance with EM-1, the Monitor will create a monitoring program for the project that includes a post-construction component to monitor measures that extend beyond the construction period and the operational phase of the project.
2. The Monitor will prepare a working monitoring plan that reflects the approved environmental mitigation measures and conditions of approval. The monitor's plan will include:
    a. Goals, responsibilities, authorities, and procedures for verifying compliance with environmental mitigations;
    b. Lines of communication and reporting methods;
    c. Daily and weekly reporting of compliance;
    d. Construction crew training regarding environmental sensitivities;
    e. Authority to stop work; and
    f. Action to be taken in the event of non-compliance.
3. Under EM-1 and other conditions, Operator is also responsible for funding work required by permit conditions requiring use of individuals with special expertise (e.g., geologist, noise engineer, etc.). The Monitor will coordinate the monitoring efforts of the specialists, including communication with the City and responsible Agencies, reporting and availability (at appropriate times: prior to issuance of construction permits, or during construction, as required by applicable permit conditions).

To assist the Monitor in creating and implementing its working monitoring plan, Operator shall prepare and obtain Community Development Department approval of an Environmental Quality Assurance Program (EQAP) prior to commencement of Phase 1 construction activities, and obtain Community Development Department approval of a revised EQAP prior to commencement of Phase 2, Phase 3, construction activities and Phase 4, Operations.

The approved EQAP and all approved revisions to the EQAP shall be submitted to the Monitor prior to commencement of each Project phase. This EQAP shall encompass both construction and operations phases of the E&B Project, and shall describe the steps Operator will take to assure compliance with the conditions contained in the approval for this project. The EQAP is intended to provide a monitoring and reporting framework for compliance with all conditions, programs and plans specified by these conditions and the mitigation measures. As such, it will become a comprehensive reference document for the City, the Monitor, other agencies, and the public regarding the E&B Project.

The EQAP shall include, without limitation:

a. All plans, as required by these conditions and mitigation measures, relevant to construction and operation of the permitted facilities (including the Risk Management Program, SIMQAP, Emergency Response Plan, Hazardous Material and Waste Management Plan, Site Security Plan, and Fire Protection Plan). To the extent there is any overlap or redundancy between plans required under Exhibits D-2 and D-3, upon E&B request the Monitor may in its discretion authorize E&B to combine required plans into one submittal;

b. Provisions for regularly communicating with and reporting to the Monitor;

c. Provisions for ensuring knowledge of and compliance with these conditions;

d. Provisions for the submittal to Community Development Department and the Monitor of monthly compliance reports throughout construction and annual summary reports during operations unless more frequent reporting is deemed necessary by Community Development or the Monitor. Upon receipt of compliance reports, Community Development Department or the Monitor shall advise Operator of what additional compliance items require reporting prior to the next report. These compliance reports shall describe:

1. Project status, including but not necessarily limited to:

i. the extent to which construction has been completed on various project phases
ii. the background and experience of the construction labor force
iii. the rate of production/throughput during operation,

iv. environmental planning and implementation efforts, and

v. any revised time schedules or timetables of construction and/or operation that will occur in the next one-year period.

2. Condition compliance, including but not necessarily limited to the results of the specific mitigation requirements identified in these conditions and any compliance plans.

3. Results and analyses of all data collection efforts being conducted by Operator pursuant to these permit conditions.

d. Copies of all local, state, and federal permits relative to the E&B Project, and any amendments thereto.

The EQAP shall be updated regularly to include all up-to-date compliance plans required under these conditions of approval.

C-2 24-Hour Emergency Contact

Prior to issuance of the Permit for Phase 1, Operator shall provide to the Community Development Department and the City 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 a facility shutdown pursuant to this agreement or other City ordinances.

There shall always be such a contact person(s) designated by the Operator. One contact person shall be available 24 hours a day in order to respond to inquiries received from the City, or from anyone in case of an emergency.

If the address or telephone number of Operator's agent should change, or the responsibility be assigned to another person or position, Operator shall provide to Community Development Department the new information within 24 hours of the effective date of such change.

C-3 Operator to Provide Copies of Permits to Community Development Department

Operator shall furnish to Community Development Department and Monitor copies of all local, state, and federal permits relative to the E&B Project within 30 days of receipt by Operator.

C-4 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 area defined in the encroachment permit.

C-5 Capacity and Throughput Reports

Operator shall report to Community Development Department and Monitor the volumes and rates of: (1) inlet volumes; (2) transferred for sales into the Southern California Gas Company transmission line; and (3) Oil volumes transported to Pipeline. Reports shall be made on at least a monthly and annual basis and supporting documentation will be provided upon request from Community Development Department or Monitor. Upon approval from the Community Development Director and the Monitor, these reports may be combined with and submitted at the same time as Royalty Statements under Section 4 of the Lease.

C-6 Risk Mitigation Program

A Risk Management Program to substantially reduce the risks of project-related accidents which may result in loss of life and/or injury, and damage to property and/or the natural environment shall be submitted for approval to the Hermosa Beach City Community Development, Fire and Public Works Departments. Other City departments, as deemed necessary, may be consulted. All reasonable costs associated with this City review shall be borne by Operator. Operator shall be entitled to participate fully in the review process.

The Program shall include all appropriate construction plans, Process Hazards Analyses (PHA), and Hazard and Operability Studies (HAZOPs) for the proposed facility and ancillary equipment to the City who may employ a third-party technical review in order to evaluate project design and help identify possible design hazards prior to issuance of ministerial permits. The HAZOPs shall be reviewed and approved by the City prior to construction for each Phase of the project. This review shall also evaluate all mitigation identified in the EIR. The City may require as-built inspections and the submittal of as-built drawings for approval

prior to the operation of any plant modifications.

C-7 Safety Inspection, Maintenance And Quality Assurance Program

Operator shall submit a detailed Safety Inspection, Maintenance and Quality Assurance Program (SIMQAP) for all facilities and pipelines which shall be implemented during construction and operations. Separate SIMQAP plans may be submitted for Phase 1 and Phase 2/3/4 activities. The SIMQAP shall be reviewed and approved by the City, including the Hermosa Beach City Community Development Department, Hermosa Beach Fire Department and the Monitor. Other City departments, as deemed necessary, may be consulted. The SIMQAP for construction shall be approved prior to construction, and the SIMQAP for operation shall be approved prior to operation for each Phase of the project. The plan is a dynamic document and, as such, updates including new procedures, safety and maintenance technologies and processes, shall be reviewed jointly by Operator and the City. The SIMQAP shall be revised as appropriate. The SIMQAP shall include, but not be limited to, evaluation of staffing levels for safe operation of the plant in emergency situations, establishing procedures for review of safety inspection records, regular maintenance and safety inspections, periodic safety audits, development of safety system testing protocols, training and experience standards for personnel and use of simulation techniques in training programs, inspections of all trucks carrying hazardous and/or flammable material prior to loading, monitoring of critical safety devices and systems, and review of the routing of all trucks carrying hazardous material. Operator shall implement the approved plan and shall provide for involvement of the Monitor, City staff, or its consultants in all inspections as appropriate. Prior to construction and operations, Operator shall demonstrate that employees (and subcontractors) are trained in the safety, inspection, maintenance and operations requirements of the project. All costs associated with this review process shall be borne by Operator.

C-8 Emergency Response Plan

Operator shall submit to the applicable City Departments and the City Fire Department an Emergency Response Plan (ERP) that addresses response procedures to be implemented by Operator for accidental events that pose significant threats to public health and safety, property, or the environment.

The ERP shall be reviewed and approved by the City Fire, Community Development and

Public Works Departments prior to commencement of drilling operations. Separate ERPs may be required for Phase 1 and Phase 2/3/4 activities. The ERP shall include specific measures to avoid impacts on cultural resources, sensitive habitats, and sensitive biological resources identified in the project EIR whenever possible without affecting emergency response. Operator shall demonstrate the effectiveness of its ERP by responding effectively as determined by Fire to one emergency response drill prior to Phase 1 and prior to approval of the Plan by Fire. The ERP shall be submitted sufficiently prior to Operator's projected start-up date so as to allow reasonable time for review and the planning of a drill required prior to ERP approval.

The ERP shall be a dynamic document and, as such, shall be jointly reviewed by the City and Operator, and revised when warranted to incorporate new planning strategies or procedural changes, new technologies, and the acquisition of more effective, feasible response equipment as it becomes available. Any changes shall be submitted to the City Fire, Community Development and Public Works Departments for their review and approval, prior to implementation. Operator shall demonstrate the ongoing effectiveness of the ERP by responding to no more than two surprise drills each year which may be called by the City. If critical operations are underway, Operator need not respond to the drill at that time but shall explain the nature of the critical operations and why response is not possible. The City may then call for an additional surprise drill in the same year. Operator shall implement all reasonable changes based on review of drill performance, which will further enhance overall emergency response planning and capabilities. Upon E&B's request and written approval from the Monitor, this plan may be combined with the emergency response plan required under FP-1d and FP-1e below.

C-9 Hazardous Material and Waste Management Plan

Prior to start-up, Operator shall submit a Hazardous Material and Waste Management Plan (HMWMP) to the City Fire Department and Community Development Department for all facilities. The HMWMP shall be reviewed and approved by Fire and Community Development prior to start-up.

The Plan shall demonstrate compliance with the provisions of the Uniform Fire Code as adopted in Chapter 15 of the Hermosa Beach Municipal Code and the provisions of the Health and Safety Code §25500 et seq, Chapter 6.95 Business Plan Requirements, with the exception of emergency response procedures which are complied with above.

The Hazardous Material and Waste Management Plan shall include but not be limited to the following:

a. Locations and methods for storing hazardous materials and wastes, both within the facility and along the OIL pipeline right-of-way.

b. Treatment procedures, or justification where none are used, to reduce the hazardous nature of the materials before they are permitted to leave the site.

c. Specific routes for transportation of hazardous waste materials to Class I disposal sites consistent with City policy.

d. Letter of commitment that the materials are transferred by a carrier licensed in hazardous material transport.

e. Letter of commitment ensuring complete accounting of intake, processing, and exit of hazardous material and wastes.

f. Detailed description of a monitoring system to be installed, capable of detecting hazardous material and wastes that may escape from primary storage devices.

g. A revised Hazardous Materials Business Plan which accurately reflects the revised chemical inventory of the project site to Environmental Health Services for review and approval, in accordance with the California Health & Safety Code, Chapter 6.95, Section 25,500 et seq.

The HMWMP shall be a dynamic document and, as such, shall be jointly reviewed by the City and Operator, and revised when parties mutually agree it is warranted to incorporate new planning strategies, changes in procedures, new technologies, or changes in materials, or when required by law. Any changes requested by Operator or City shall be submitted to Fire and Community Development for their review and approval, prior to implementation.

C-10 Site Security Plan

Prior to issuance of a Permit for Phase 1, Operator shall submit to the Community

Development and the Hermosa Beach City Police Department for review and approval a site security plan. The plan shall describe the procedures to be implemented by Operator which will prevent intentional damage to the drilling and production facilities which may result in environmental damage or public safety hazards. The plan shall include placement of security cameras to the satisfaction of the Community Development and Police Departments, and employment of security personnel at all times during drilling stages (24 hours) (see condition 3.2 in D-1) and employment of security personnel from dusk until dawn at all other times. The plan shall be reviewed and revised as warranted to require incorporation of new planning strategies, new technologies or changes in plant operation, and changes in notification procedures.

C-11 Fire Protection Plan

All E&B Project facilities shall have fire protection features installed in accordance with the provisions of an E&B Project Fire Protection Plan (FPP), and as such features may be required under this Exhibit D. All facilities, construction activities, process equipment, and fire protection equipment shall comply with the standards of the National Fire Protection Association (NFPA), American Petroleum Institute, Uniform Fire Code as adopted in Chapter 15, Building and Construction of the Hermosa Beach Municipal Code, and the Hermosa Beach City Fire Department. In the event of a conflict between these standards, the Fire Marshal, in consultation with the Operator, shall make a cost/benefit decision regarding which standards apply.

Prior to construction, Operator shall receive Fire Department approval of an FPP which addresses both construction and operation of the E&B Project. Operator shall distribute copies of the approved contingency plans 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. Separate FPPs may be submitted for Phase 1 and Phase 2/3/4 activities. The FPP shall include, but may not be limited to, discussions of the following:

- Onsite firefighting equipment and systems
- Fire and detection
- Access
- Vegetation management
- Employee training and safe practices
- Process control and monitoring analysis

- Drainage and containment
- Safety, inspection (including City inspectors) and maintenance practices

Upon E&B's request and written approval from the Monitor, this plan may be combined with the emergency response plan required under FP-1d and FP-1e below.

C-12 Prevention of Internal Pipeline Corrosion

Operator shall implement techniques to prevent internal corrosion in accordance with the requirements of the California State Fire Marshal (Title 5 §51010-5-019 of the California Government Code), 49 CFR 192 Parts 150, 475 and 477, and 49 CFR 195.418 as part of the Oil and pipeline maintenance procedures. The internal inspection records shall be submitted to and reviewed by the appropriate governmental agencies. Such activities shall include routinely scheduled pigging of the pipeline to remove pockets of accumulated fluids that contribute to internal corrosion (such as hydrogen sulfide, carbon dioxide, and water), the use of corrosion inhibitors and corrosion coupons, and periodic testing by a state-of-the-art "smart pig" to identify areas where corrosion, pipewall thinning, dents, cracks and other defects have occurred. Specific measures are discussed below:

a) Whenever any section of the pipelines are removed for any reason, they shall be inspected for possible internal corrosion and records retained for inspection by the State Fire Marshal.

b) The pipeline shall be tested with a state-of-the-art "smart pig" to identify areas where corrosion, pipewall thinning, dents cracks and other defects have occurred. State-of-the-art pigging will be capable of defining wall-thickness contours around any area of reduced wall thickness. The smart pigging will be done prior to operation of the Oil and natural gas pipelines and at a subsequent interval to be determined by the California State Fire Marshal. A program of maintenance shall be developed to ensure that permits to perform the work are obtained as soon as possible and that pipeline defects are rectified within one month of securing the necessary permits for severe defects, and within six months for moderate defects. This procedure shall be noted in the SIMQAP and receive approval by the SSRRC prior to operations of either the OIL or natural gas pipelines.

C-13 Prevention of External Pipeline Corrosion

Operator shall undertake the following provisions to avoid external pipeline corrosion:

a) The Oil and natural gas pipelines shall be coated to reduce the potential for external corrosion. Final selection of pipeline coating will be demonstrated, to the satisfaction of the California State Fire Marshal, that the selected coating would provide the maximum level of protection of available coatings for all expected operating conditions; and

b) A baseline pipe-to-soil cathodic profile and reading shall be obtained after the pipeline has been installed, but before any cathodic protection facilities are connected. Other utilities shall disconnect their bonds as well. This measure shall be included on the construction plans which shall be reviewed by the City.

C-14 Pipeline Hydrotesting

The oil and natural gas pipelines shall be hydrotested prior to operation, and every five years thereafter or sooner if warranted by major ground movement that has the potential to undermine the structural integrity of the pipeline. This procedure shall be noted in the SIMQAP which shall be reviewed and approved prior to operations.

C-15 Structural Support for Underground Utilities

Operator shall provide structural support for underground utilities in and near the construction area during work in the trench and backfilling operations to prevent damage to such facilities during construction activities.

C-16 Underground Utility Damage

Operator shall halt work in the immediate vicinity in the event of inadvertent damage to an underground utility, until the owner of the utility has been contacted and repairs have been effected.

C-17 Underground Pipeline Warning Marker

A plastic ribbon or other suitable material shall be buried 12 to 18 inches above the oil and natural gas pipelines and shall cover the length of the pipeline. The material shall be brightly

colored and be labeled with a warning that this area contains a hazardous liquid pipeline trench. This measure shall be noted on the design and construction plans to be reviewed and approved by the City.

C-18 Pipeline Route Warning Signs

The entire pipeline route shall be marked with pipeline warning signs a minimum of every 500 feet. Spacing of markers may be greater in agricultural areas provided markers are clearly within sight of each other. Bright colored markers shall be installed above new pipelines that extend offsite of the proposed facility. This type of measure helps reduce the likelihood of external mechanical interference, of which third party damage associated with excavation near the pipelines is the most common cause of pipeline failures.

C-19 Underground Service Alert Notification

Operator shall notify owners through the office of Underground Service Alert of any underground facilities (including electrical, water, petroleum pipelines, fiber-optics and agricultural water delivery and drainage pipelines) 48 hours in advance of excavation in the vicinity of these facilities. Operator shall have an electrical contractor on-call at all times during construction near the potentially affected facility to repair any circuits if required by the owner in the event they are damaged during construction. The appropriate response to hazards associated with damage to natural gas pipelines will be determined in consultation with Southern California Gas Company. The City Fire Department shall be notified of the schedule for construction activities in the vicinity of natural gas and other oil pipelines.

C-20 Finished Pipeline Route Maps

Upon completion of pipeline construction, Operator shall provide all jurisdictional agencies with at least two copies of maps showing the finished pipeline route and shall include locations accessible by fire department emergency response vehicles. Said maps shall be 7 1/2 minute quadrate scale, (one inch equals 24,000 inches), and shall represent topographical features.

C-21 Supervisory Control and Data Acquisition and Emergency Shutdown Systems

The pipeline supervisory control and data acquisition (SCADA) and Emergency Shutdown

(ESD) systems, including inspection, maintenance and quality assurance procedures for the SCADA and ESD systems, shall be reviewed and approved by the Fire Department and the Building Department and Public Works Department prior to operations of either the oil or natural gas pipelines, and as appropriate thereafter. The SCADA and ESD systems shall comply with the provisions of Fire Department Development Standard No. 7 and the National Electrical Code Article 760.

Operator shall conduct a comprehensive safety and reliability analysis of the SCADA system as well as the processing facility and oil and natural gas pipelines control room prior to commencement of pipeline operations, and as appropriate thereafter. The analysis shall meet or exceed the guidelines developed by the Institute of Electronic and Electrical Engineers. Any improvements identified in the study shall be included in the suggested hardware and software. Results of the study shall be provided to the Community Development Department.

Company shall design the project such that the entire project will integrate the supervisory control and data acquisition (SCADA) or other monitoring system for all the components of this project in a manner so as to provide timely and efficient detection, shutdown, notification and response to an emergency involving any of the project components. Any break, rupture, and/or damage to the facilities shall result in the orderly shutdown of the pumping operations, and will activate the shut off valves in a manner which will minimize environmental damage.

C-22 Update of Operational Risk Assessment

Upon City request, Operator shall fund the updating of the operational risk assessment subject to ministerial permitting, as needed, so that any surrounding land use proposals are aware of existing risk, if any.

D. FACILITY DESIGN

D-1 Submittal of As Built Drawings

Within one year after initial start-up of the E&B Project (Phase 1), and again within one year of commencement of Phase 2 operations, 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. Operator shall submit as many sets of drawings (up to ten sets) as requested by the Community Development Department.

D-2 Solid Waste Disposal

Solid waste generated on the site shall be collected by the City's franchised commercial trash hauler. Construction waste shall be transported by E&B's own efforts to a facility authorized to accept construction waste in accordance with the provisions of the Hermosa Beach Municipal Code. Hazardous waste shall be transported by E&B's own efforts to a facility authorized to accept hazardous waste in accordance with all local, state and federal laws.

D-3 Water Conservation Measures

The design of all new and/or modified onsite facilities shall incorporate the use of cost-effective water-conserving fixtures, including by way of example indoor and outdoor plumbing fixtures and irrigation.

D-4 Energy Conservation Measures

Throughout the project life, as equipment is added or replaced, cost-effective energy conservation techniques shall be incorporated into project design, including by way of example indoor and outdoor lighting, HVAC, drill equipment, vehicles, and microturbines.

E. ABANDONMENT

E-1 Abandonment Procedures

In implementing Section 26 of the Lease and Article VII of the Hermosa Beach Municipal Code - Oil Code Chapter 21A, Operator shall secure all necessary permits and proceed in accordance with a City Council approved abandonment and restoration plan within one year of permanent shut down. The abandonment plan shall be processed with environmental review of the plan. Operator shall post a performance bond, or other security device acceptable to City Council, prior to commencement of Phase 1 construction for estimated

costs of abandoning Phase 1 facilities. Operator shall also post a performance bond, or other security device acceptable to City Council, prior to commencement of Phase 2 for estimated costs of abandoning Phase 2 facilities.

E-2. Abandonment Costs

All costs associated with abandonment or removal shall be borne by Operator.

E-3. Wellsites

Prior to permanent shutdown or termination of this agreement or the lease, any well drilled by Operator shall be plugged and abandoned within three months from the date it is determined that such well is no longer capable of production, subject to weather and rig availability, and capped, in accordance with the rules and regulations of the State Division of Oil, Gas & Geothermal Resources. Thereafter, the wellsite shall be restored as near as practicable to its original condition.

F. Miscellaneous Conditions

F-1. Hydraulic Fracturing Prohibited

The use of hydraulic fracturing as a well stimulation technique for enhanced hydrocarbon production shall be prohibited on the project site.

F-2. Pipelines

All pipelines installed for the Project shall not go below the depth authorized by the State Division of Oil, Gas & Geothermal Resources. After completion of the construction of any such pipelines, Operator shall restore the surface of the area impacted by the construction of such pipeline as nearly as practicable to its condition immediately prior to such construction.

F-4. Fire Marshal Position

Operator shall fund a full-time dedicated Fire Marshal position for the Hermosa Beach Fire Department for the full Term of the Development Agreement.

F-5. Training

Operator shall pay for annual training for Hermosa Beach Fire Department personnel and fire personnel from the City's automatic aide partners on fighting oil fires.

F-6. Odor (from HIA)

In the event of frequent reports of odor emanating from the site, Operator shall pay for additional studies and/or periodic air monitoring. If the studies or monitoring indicate that additional control measures should be implemented to reduce the frequency of noticeable odors, Operator shall include those measures as project conditions.

F-7. Notice (from HIA)

During Phase 3 pipeline construction, Operator shall provide written notification of impending construction activities, including the dates and times of activities that may produce excessive noise, to all residents within 100 feet of the construction activities. Notice shall be provided no less than 72 hours before construction begins.

F-8. Light impact reduction (from HIA)

Operator shall pay for or provide black-out blinds or curtains for bedrooms with direct line-of-sight to the exposed side of the electric drill rig that will be lit at night. The amount of payment or the brand of blinds/curtains shall be pre-approved by the City Manager, and may be provided through a direct mail program.

F-9. Community Relations (from HIA)

As recommended in Intrinsik's Health Impact Assessment for the project, and at the City Council's discretion, the Operator may be required to pay for the costs associated with (1) organizing a Community Liaison Committee; (2) a follow-up Community Health Assessment; and/or (3) a quality of life health survey.

[Continue to following page for Mitigation Measures]

EXHIBIT "D-3"

Mitigation Measures/Mitigation Monitoring Plan from Section 8.0 of FEIR (as revised at Hermosa Beach City Council certification hearing on July 8, 2014 per Resolution 14-6908).

8.0 Summary of Mitigation Measures and Mitigation Monitoring Plan

8.1 Mitigation Monitoring Program

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

8.2 Monitoring Authority and Enforcement Responsibility

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

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

Any mitigation measure study or plan that requires the approval of the City must allow at least 60 days for adequate review time. When a mitigation measure requires that a mitigation program

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

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

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

8.3 Mitigation Compliance Responsibility

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

8.4 General Monitoring Procedures

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

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

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

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

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

8.5 Mitigation Monitoring Table

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

- Mitigation Measure (description of the mitigation measure identified in Chapter 4);
- Monitoring/Plan Requirements (monitoring or plan requirements necessary to verify compliance with the mitigation measure);

- Method of Verification (this is how the responsible agency can determine if the mitigation measure has been implemented);
- Timing (this identifies when action needs to be taken on mitigation measure); and
- Responsible Agency (this is the agency that is responsible for assuring compliance with the mitigation measure).

Table 8-1 Aesthetics and Visual Resources

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
EM-1	Prior to issuance of the first grading and/or construction permits, the Applicant shall enter into agreements with the City to provide funding for the implementation and administration of an environmental monitoring program, including an environmental monitor, to ensure compliance with each Agency's environmental Conditions of Approval. The monitor shall assist the Agencies in condition compliance and mitigation monitoring for all applicable construction and operational stages of the Oil Project, as specified in a scope of work, as approved by the Agencies. The monitoring program shall include a post-construction program to monitor measures that extend beyond the construction period (e.g., success of landscaping, etc.), as well as monitor certain mitigation measures required during the operational phase. The monitor will prepare a working monitoring plan that reflects the Agencies - approved environmental mitigation measures/conditions of approval. This plan will include: 1. Goals, responsibilities, authorities, and procedures for verifying compliance with environmental mitigations;	Conditions included within the Development Agreement, including administrative measures to ensure bonding, payment methods and insurance	Before the start of Phase 1	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	2. Lines of communication and reporting methods; 3. Daily and weekly reporting of compliance; 4. Construction crew training regarding environmental sensitivities; 5. Authority to stop work; and 6. Action to be taken in the event of non-compliance. The environmental monitor shall be under contract to the Agencies. Costs of the monitor, monitoring program, and any Agency administrative fees, shall be paid by the Applicant. The Applicant shall also be responsible for funding work required by permit conditions requiring use of individuals with special expertise (e.g., geologist, noise engineer, etc.). The Agencies' environmental monitor will coordinate the monitoring efforts of the specialist, including communication with the Agencies, reporting and availability (at appropriate times: prior to issuance of construction permits, or during construction, as required by applicable permit conditions).			
AE-1a	Material choice of electrical drill rig acoustical shroud shall be of neutral sky color which is selected for its ability to reduce visual impact, in coordination with and approval by the City Community Development Director.	Approval of Construction Documents and Specifications and field-	Prior to issuance of permits	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
		demonstration		
AE-1b	The sound attenuation wall shall be replaced by a permanent wall with design features installed at the end of Phase 3. The intent is to provide stability of views and opportunities for positive visual elements that partially mitigate the visual presence of the walls from the Hermosa Greenbelt and other sensitive views in the immediate Project vicinity. The permanent wall shall be allowed to be provided in lieu of the 16-foot block wall. Landscape design shall be allowed to be adjusted to respond to façade articulations, though quantities and densities shall be maintained. The permanent wall shall be designed with architectural features in coordination with and approval of the City Community Development Director.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
AE-2a	Design of the sound attenuation wall exterior façade shall be required to include design articulations that are complementary to the character, scale, and quality of the surrounding environment. The intent is to mitigate the visual impact of the wall from the Hermosa Greenbelt and other sensitive views in the immediate project vicinity. The following measures of success shall be met: 1) Articulations of façade decrease scale and proportion of mass into smaller increments that more closely resemble those of adjacent buildings; and 2) Colors, detailing and material use are varied to a level consistent with existing	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	visual environment.			
AE-2b	Planting area growth medium shall be capable of supporting the long term health and growth of the landscape design. Requirements shall be: 1) Demonstrated free of debris and construction waste (asphalt, concrete, etc) to a minimum depth of 3 feet within all planted areas. Wall footings shall be designed to limit encroachment into planted areas; 2) Soils analysis report shall be conducted by a certified soil scientist. Report shall include recommendations to meet the intent of this mitigation measure; and 3) If soils are determined to be unsuitable to support plant growth, they shall be amended or removed/replaced to meet requirements of soils analysis for plant pallette selected.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
AE-2c	Vine plantings where used shall meet the following conditions: 1) be self-attaching or structure supported; 2) have demonstrated success in the City; 3) be planted at a density to achieve full coverage at maturity; 4) be planted at a minimum 5 gallon size; and 5) be required on the visible portion of the west wall at the temporary parking facility.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
AE-2d	All trees shall be required to be a minimum of 20’ in height at installation and meet the American Standard for Nursery Stock (ANSI Z60.1-2004). If a tree species alternate is proposed, it shall be required to be an equal to the species	Approval of Construction Documents and	Prior to issuance of permits and	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	proposed in the Project Application in the following characteristics: 1) Dense evergreen with similar form and habit; 2) Probability of achieving a minimum of 35-40 feet at maturity; and 3) Comply with Municipal Code Chapter 8.60 and 8.56.	Specifications and Inspection	during construction	
AE-3a	Pipeline alignments and valve box locations shall be designed to avoid the removal or modification of trees, hedgerows, and/or large shrubs to the extent feasible.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	Cities of Hermosa Beach, Redondo Beach, and Torrance
AE-3b	If landscaped areas, streetscapes, plazas and/or parklands are required to be temporarily disturbed, they shall be restored to their previous condition following completion of construction. Avoidance of disturbance shall be the preferred option, especially where landscape elements act to screen views (hedges, large shrubs, etc) or where they act as community gateways (Redondo Beach at Hwy-1).	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	Cities of Hermosa Beach, Redondo Beach and Torrance
AE-3c	Block color/s selection and pattern (if applicable) shall be complementary to adjacent buildings. A buffer of shrubs and vines shall be planted to match the existing character and quality of the adjacent properties.	Approval of Construction Documents and	Prior to issuance of permits and	Cities of Hermosa Beach,

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
		Specifications and Inspection	during construction	Redondo Beach and Torrance
AE-4a	Final acoustical cover material selection shall be required to be fully opaque. Fully opaque shall be defined as completely blocking all light from passing through its surface. The exterior finish shall be low reflectivity and not capable of producing glare.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
AE-4b	Colors and finishes of equipment and surfaces within the soundwall (including the interior face of the soundwall, the interior face of the drill rig acoustical cover, and the physical structure of the drill rig within the acoustical shield) shall have a reflectivity rating of 0.3 or lower.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
AE-4c	All proposed site lighting fixtures associated with the drilling activities shall demonstrate compliance with the mandatory B-U-G ratings for area lighting as required by CalGreen mandatory measures in the 7/1/2012 supplement. The Lighting Zone used to demonstrate compliance shall be LZ-2.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
AE-5a	Colors and finishes of surfaces within the facility, including the interior face of the soundwall, ground materials (darker or asphalt), wall paints and equipment paints to the extent feasible shall have a low reflectivity rating of 0.3 or lower to reduce the potential for glow.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
AE-5b	Final sound wall material/s selection/s (including gates) shall be fully opaque. Fully opaque shall be defined as completely blocking all light from passing through its surface. The exterior finish shall be low reflectivity and not capable of producing glare.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
AE-5c	All proposed site lighting, including fixtures outside the wall, shall be fully shielded. Fully shielded shall be defined as: A luminaire constructed and installed in such a manner that all light emitted by the luminaire, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal plane through the luminaire's lowest light-emitting part (IES/IDA, 2011)	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
AE-5d	The LZ-2 parameters of the Model Lighting Ordinance (IES/IDA, 2011) shall be used to demonstrate that maximum vertical illuminance for the site are not exceeded. For site lighting inside the wall, Table B allowances shall be used.	Approval of Construction Documents and	Prior to issuance of permits and	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	Lighting outside the wall at site entrances shall not exceed that of existing street lighting, which produces a maximum of 1 footcandle. For the purposes of measuring vertical illumination, the plane of the property line shall be extended to an elevation equal to the height of the electric drilling rig.	Specifications and Inspection	during construction	
AE-5e	All proposed site lighting fixtures shall demonstrate compliance with the mandatory B-U-G ratings for area lighting as required by CalGreen mandatory measures in the 7/1/2012 supplement. The Lighting Zone used to demonstrate compliance shall be LZ-2.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Hermosa Beach
AE-6a	Any proposed metering station site lighting shall be fully shielded and shall incorporate permanent features (shields, hoods, etc.) shall incorporate permanent features which prevent light spillage beyond the property line.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	City of Redondo Beach
AE-6b	Light levels and quantities of fixtures shall not exceed that which is needed for security and safety.	Approval of Construction Documents and Specifications and Inspection	Prior to issuance of permits and during construction	Cities of Redondo Beach and Torrance

Table 8-2 Air Quality and GHG's

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
AQ-1a	The Applicant shall submit and implement a Fugitive Dust Control Plan that includes SCAQMD mitigations for fugitive dust mitigation, according to Rule 403, and SCAQMD CEQA Guidelines. Fugitive dust mitigation measures in the plan shall include the following (this mitigation is applicable to both the Proposed Oil Project and the Proposed City Maintenance Yard Project): - Apply water every 3 hours to disturbed areas and unpaved roads within a construction site (61 percent reduction). - Require minimum soil moisture of 12 percent for earthmoving, by using a moveable sprinkler system or water truck. Moisture content can be verified by lab sample or moisture probe (69 percent reduction). - Limit onsite vehicle speeds on unpaved roads to 15 mph and posting of speed limits. - All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches (91 percent reduction). - Install gravel bed trackout apron (3 inches deep, 25 feet long, 12 feet	Plan review, site inspections	Before and during construction Both Oil Project and City Yard	SCAQMD City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	wide per lane, and edged by rock berm or row of stakes) to reduce mud and dirt trackout from unpaved truck exit routes (46 to 80 percent reduction). - Water storage piles by hand or apply cover when wind events are declared, according to SCAQMD Rule 403 when instantaneous wind speeds exceed 25 miles per hour (90 percent reduction). - Appoint a construction relations officer to act as a community liaison concerning onsite construction issues, such as dust generation.			
AQ-1b	The Applicant shall implement a NOx reduction program including the following, or equivalent, measures to the satisfaction of the SCAQMD (this mitigation is applicable to both the Proposed Oil Project and the Proposed City Maintenance Yard Project): - All off-road construction equipment shall be tuned and maintained according to manufacturers' specifications. - Any temporary electric power shall be obtained from the electrical grid, rather than portable diesel or gasoline generators. - All off-road diesel construction equipment with greater than 100-horsepower engines shall meet Tier 3 NOx requirements. - Limit onsite truck idling to less than 5 minutes. - A copy of the certified tier specification, best available control	Plan review, site inspections	Before and during construction	SCAQMD City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	technology documentation, or the CARB or SCAQMD operating permit for each piece of equipment shall be kept onsite during all operations.			
AQ-3a	The Applicant shall limit flaring during Phase 4 to a total of 5 hours per day at the full flaring capacity (or to an equivalent volume of flared gas) during all emergency or routine flaring events in order to ensure that NOx emissions are reduced below the thresholds. Lower NOx emission combustors or other equivalent measures can also be used to satisfy the requirement.	Plan review, site inspections	Before Phase 4 operations	SCAQMD City of Hermosa Beach
AQ-3b	The Applicant shall implement methods to reduce the off-gassing of muds by at least 90 percent through the installation of fully enclosed mud pit areas with vapor control (either through carbon canisters or vapor recovery) and/or the use of mud degassing units routed to vapor control systems. The Applicant shall monitor the muds vapor immediately above the muds exit point from the wellbore and at other areas above the mud pits where muds may be exposed to the atmosphere in order to ensure that hydrocarbon vapors are captured at the minimum rate of 90 percent.	Plan review, site inspections	Before Phase 2 and Phase 4 drilling	SCAQMD City of Hermosa Beach
AQ-4	The Applicant shall limit the microturbine PM emissions to 0.0035 lbs/mmbtu, or an equivalent reduction in the number and/or size of the microturbines, in order to reduce emissions to below the localized thresholds. The City shall be responsible for ensuring that the applicant will be subject to permit conditions	Plan review, site inspections	Before Phase 4 operations	SCAQMD City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	that limit emissions from the set of microturbines, not just individual permit units.			
AQ-5a	The Applicant shall at all times have a gas buster and SCAQMD-approved portable flare at the site and connected for immediate use to circulate out and combust any gas encountered during drilling. The flare shall be capable of recording the volume of gas that is flared. The operator shall report any flared gas from drilling to the Hermosa Beach Fire Chief and the SCAQMD.	Plan review, site inspections	Before Phase 2 drilling	SCAQMD City of Hermosa Beach
AQ-5b	The Applicant shall install a compressor seal vent collection system. In the event of a seal leak, vapors shall be collected and sent to the vapor recovery system or flare for destruction.	Plan review, site inspections	Before Phase 4 operations	SCAQMD City of Hermosa Beach
AQ-5c	The Applicant shall develop and implement an Odor Minimization Plan, submitted to and approved by the City and the SCAQMD. The Odor Minimization Plan shall address reducing the frequency from potential sources of odors from all site equipment, including wells and drilling operations, temporary operations such as truck loading, and measures to reduce or eliminate these odors (e.g., containment, design modifications, carbon canisters). The Plan shall address issues such as facility information, buffer zones, signs with contact information, logs of odor complaints, the protocol for handling odor complaints and odor release investigations and methods	Plan review, site inspections	Before Phase 2 and Phase 4 Drilling ~~operations~~	SCAQMD City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	instituted to prevent a re-occurrence. The Plan shall require that all odor complaints and issues be immediately communicated to the City and that the City shall have the authority to implement and enforce contingency measures to ensure that any nuisance odors from the facility are eliminated.			
AQ-5d	The Applicant shall develop and implement an Air Monitoring Plan. The Plan shall provide for the monitoring of total hydrocarbon vapors and hydrogen sulfide and total hydrocarbon vapors at all perimeter locations of the facility as well as at strategic locations near processing equipment. At all times during operations, drilling, redrilling and workover operations, the Operator shall maintain monitoring equipment that shall monitor and digitally record the levels of hydrogen sulfide and total hydrocarbon vapors. Such monitors shall provide automatic alarms that are audible and visible to the Operator of the drilling equipment, and gas plant, and shall be triggered by the detection of hydrogen sulfide or total hydrocarbon vapors. Alarm points shall be set at a maximum of ~~1~~ 5 and ~~5~~ 10 ppm H_2S and 500 and 1,000 ppm hydrocarbons, with the higher level requiring shut-down of drilling or plant operations and the lower level requiring notification to appropriate agencies, including the Hermosa Beach Fire Department and SCAQMD. A meteorological station to monitor wind speed and direction under the guidance and specification of the SCAQMD shall be	Plan review, site inspections	Before Phase 2 and Phase 4 Drilling ~~operations~~	SCAQMD City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	installed at the site. The Air Monitoring Plan shall be reviewed and approved by the City and the SCAQMD.			
AQ-5e	The Applicant shall use an odor suppressant spray system on the mud shaker tables, and shall install carbon capture canisters on all tanks (permanent and portable) that are not equipped with vapor recovery, containing potentially odiferous materials (for example; the mud baker-type tanks) for all drilling operations so that no odor can be detected at the closest receptor.	Plan review, site inspections	Before Phase 2 and Phase 4 Drilling ~~operations~~	SCAQMD City of Hermosa Beach
AQ-5f	The fugitive component leak detection program under Rule 1173 shall utilize a Leak Detection and Reporting (LDAR) level of monthly detections with an action level of 100ppm, the installation of bellows valves where applicable (valves 2 inches or smaller) and the use of IR cameras or equivalent during monthly detections to ensure that leaking components are minimized at the facility.	Plan review, site inspections	Before Phase 2 operations	SCAQMD City of Hermosa Beach
AQ-6	The Applicant shall provide credits for all GHG emissions generated above the threshold of 10,000 MTCO2e per year. A GHG Reporting and Reduction Plan shall be submitted to the SCAQMD and the City detailing the measures to be implemented to achieve the required reductions, updated annually, and shall include specifications on the protocol, vintage, and registry for any offsite mitigation. The following mitigation credits shall not require prior City or SCAQMD approval:	Plan review, site inspections	Before Phase 4 operations	SCAQMD City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	1. Credits generated within Los Angeles County per an approved SCAQMD protocol; 2. Credits generated within the State of California per an approved SCAQMD protocol; 3. Credits that are generated and verified under the CAPCOA GHG Rx program; 4. Credits that are generated and verified under the voluntary SCAQMD Regulation XXVII; 5. Verified credits registered with the Climate Action Reserve or the American Carbon Registry. In addition, independently verified GHG credits available through other carbon registries that follow specific protocols may be eligible for offsite mitigation, subject to review and prior approval by the City and the SCAQMD. The general criteria for acceptable credits include: • Real: emission reduction must have actually occurred, as the result of a project yielding quantifiable and verifiable reductions or removals. • Additional/Surplus: an emission reduction cannot be required by a law, rule, or other requirement. • Quantifiable: reductions must be quantifiable through tools or tests that			

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	are reliable, based on applicable methodologies, and recorded with adequate documentation. • Verifiable: The action taken to produce credits can be audited and there is sufficient evidence to show that the reduction occurred and was quantified correctly. • Enforceable: An enforcement mechanism must exist to ensure that the reduction project is implemented correctly. • Permanent: Emission reductions or removals must continue to occur for the expected life of the reduction project. Operational/drilling GHG emissions from stationary and mobile sources shall be quantified and reported to the City and to the SCAQMD annually. Emissions reporting will follow the same reporting format and procedures as required by the Mandatory Reporting Rule.			
AQ-7a	All diesel equipment used at the site shall meet EPA Tier 3 emission requirements and be equipped with a CARB Level 3 diesel particulate filter to reduce Diesel PM emissions. Workover rigs operated at the project site shall have cumulative total DPM emissions below 1.5 lbs/year or shall utilize electric drive/sources .	Plan review, site inspections	Before Phase 4 operations	SCAQMD City of Hermosa Beach
AQ-7b	Vapor recovery on crude oil tanks shall achieve a minimum of 99 percent	Plan review,	Before Phase	SCAQMD

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	recovery of fugitive emissions.	site inspections	4 operations	City of Hermosa Beach

Table 8-3 Biological Resources

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
BIO-1	To minimize potential impacts to nesting native bird species, and in compliance with the federal Migratory Bird Treaty Act and Sections 3503, 3503.5, or 3513 of the California Fish and Wildlife Code, initial vegetation removal/trimming shall be done outside the breeding season (breeding season is defined herein as January 15 through August 31 for raptors and February 15 through August 31 for all non- raptor species). If vegetation removal/trimming must be completed during this period, then surveys for nesting birds must be conducted by a qualified, City-approved Biologist, within 3 days prior to vegetation removal or other construction-related disturbances. If nesting birds are observed within the	Plan review, site inspections	Before and during construction	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	project area, then a minimum 100-foot buffer from any non-raptor species and 500 foot buffer from any raptor nest would be established and maintained for the duration of vegetation removal/trimming activities or until nestlings fledge from the nest.			
BIO-2	The Applicant shall submit for City approval and shall implement an Emergency Response Plan that would, in compliance with the California State Oil Spill Contingency Plan (CDFW, OSPR 2014),address protection of biological resources and possible revegetation of any areas disturbed during an oil spill or cleanup activities. The Emergency Response Plan shall, at a minimum, include specific measures to avoid impacts to native vegetation and wildlife habitats, plant and animal species, and environmentally sensitive habitat areas during response and cleanup operations. The Emergency Response Plan shall include provisions for containment and cleanup measures and responsibilities. The plan shall contain: • Definition of the authorities, responsibilities, and duties of all entities involved in oil removal operations, and methods of emergency action agency coordination during and after an oil spill; • Agreements and statements from all resource agencies involved in an oil response and removal operation;	Plan review	Before construction	City of Hermosa Beach OSPR

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	• Procedures and frequencies for regular monitoring and inspections of pipelines and facilities; • Procedures for early detection and timely notification of an oil discharge; • A description of the necessary onsite equipment and details on the placement of the material required to quickly control, contain, and remove any discharged oil; • Assurance that full resource capability is known and can be committed following a discharge; • A description of sensitive biological resources in the SMB that should be prioritized for clean-up activities in the case of an oil spill into the marine environment; • Actions for after discovery and notification of a discharge; • Procedures to facilitate recovery of damages and enforcement measures. The Emergency Response Plan shall be approved by the California Department of Fish and Wildlife (CDFW) Office of Spill Prevention and Response (OSPR). When habitat disturbance cannot be avoided, the Emergency Response Action Plan shall provide stipulations for development and			

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	implementation of site-specific habitat restoration plans and other site-specific and species-specific measures appropriate for mitigating impacts to local populations of special-status wildlife species and to restore native plant and animal communities to pre-spill conditions. Access and egress points, staging areas, and material stockpile areas that avoid specific habitat areas shall be identified. The Emergency Response Action Plan shall include species- and site-specific procedures for collection, transportation and treatment of oiled wildlife. The Emergency Response Plan shall be approved by the City prior to commencing any construction activities.			

Table 8-4 Cultural Resources

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
CR-1	Prior to beginning demolition of the existing City Maintenance Yard Building,	Development	During	Project

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	guidelines shall be developed for the careful exposure of extant elements of the historic brick and mortar furnace. Once exposed, detailed documentation of the furnace shall be undertaken. Documentation shall be guided by the Historic American Engineering Record (HAER) standards. This documentation shall include production of high quality 35-mm photographs and plan drawings of building elements exposed, including but not limited to, a floor plan, any character-defining building features, and elevation drawings. All work carried out pursuant to the recordation of the furnace building shall be conducted by, or under the direct supervision of a person or persons meeting, at a minimum, the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-39 as revised in 1994) as an architectural historian. A written report detailing the HAER-like documentation shall be provided to the City upon completion the work. This report shall be produced on archivally stable materials and filed with the Hermosa Beach Historical Society.	and implementation of a monitoring and documentation plan by a qualified archaeologist.	building demolition within areas of recorded historical resources.	Proponent and Construction Contractor
CR-2a	The design of the New City Maintenance Yard Building shall be compatible in design, styling, material, and massing of the adjacent City Hall complex. The building design should not attempt to replicate the New Formalist style, but it shall not conflict or contrast with the existing building style. The buildings constructed in the New City Maintenance Yard shall be no more than two	Design of the New City Maintenance Building and landscape	Design Phase	Project Proponent and City

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	stories high. They shall not overpower or overshadow the existing building complex.			
CR-2b	The landscaping associated with the proposed New City Maintenance Yard shall replicate the planting types surrounding the City Civic buildings, to the extent possible, in order to blend the new construction into the existing Complex. The final design of both the new building and landscape should be developed in consultation with an historic architect or architectural historian who meets *Secretary of the Interior's Professional Qualifications Standards* (48 FR 44738-39 as revised in 1994).	Design of the New City Maintenance Building and landscape	Design Phase	Project Proponent and City
CR-3a	Prior to any ground-disturbing activities or building removal within the Proposed Project sites, an Archaeological Monitoring Plan shall be developed by a qualified archaeologist with provision for review and input by concerned Native Americans and approval by the City. The Plan will also address worker safety during building demolition and ground disturbing activities and during the implementation of the Remedial Action Plan. The Plan is to include provisions for archaeological and Native American monitoring, detailed documentation of all early twentieth-century artifact-bearing deposits exposed during ground-disturbing site work, and development of a clear collection policy for both prehistoric and historic artifacts, subsequent artifact analysis, reporting of	Development and implementation of a monitoring plan by a qualified archaeologist in consultation with concerned Native	The monitoring plan shall be submitted for review by the City of Hermosa Beach and approval prior to beginning	Project Proponent and Construction Contractor

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	findings, and disposition and/or curation of any significant artifacts recovered. All reports of findings shall be filed with to SCCIC.	American tribes.	development. Plan shall be implemented prior to and during construction.	
CR-3b	Any significant archaeological deposits remaining in the area of the previous City of Hermosa Beach Dump following over-excavation at the Proposed Oil Development Project site must be protected in place. Stabilization and covering of these archaeological deposits shall be monitored by a qualified historical archaeologist meeting the *Secretary of the Interior's Professional Qualifications Standards* (48 FR 44738-39 as revised in 1994).	Following construction any remaining archaeological deposits must be stabilized and covered for protection.	Following over-excavation	Project Proponent and Construction Contractor
CR-4	Should Project-related excavations be designed to exceed 45 feet in depth at the City Dump, or depths greater than 15 feet along the pipelines, or otherwise be shown to have the potential to impact intact San Pedro Sand deposits as described above, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) shall be developed by a qualified paleontologist in consultation with	A paleontological resource monitoring and mitigation	The monitoring plan shall be submitted for review by the	Project Proponent and Construction Contractor

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	the City and implemented prior to or during Project-related ground disturbing activities. The Plan will also address worker safety during building demolition and ground disturbing activities and during the implementation of the Remedial Action Plan.	program (PRMMP) for treatment of the paleontological resources will be developed and implemented.	City of Hermosa Beach and approval prior to beginning development. Plan shall be implemented prior to and/or during construction.	
CR-5	Ground-disturbing activities in the area of the discovery shall immediately be halted or redirected. A temporary construction exclusion zone shall be established surrounding the site to allow for further examination and treatment of the find. A City representative shall immediately notify the Los Angeles County Coroner's office by telephone. By law, the Coroner will determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission who will appoint	The Native American Heritage Commission (NAHC) must be contacted by the Los Angeles	Upon discovery of human remains.	Project Proponent and Construction Contractor

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	the Most Likely Descendent (MLD). Additionally, if the remains are determined to be Native American, a plan will be developed regarding the treatment of human remains and associated burial objects and the plan will be implemented under the direction of the MLD.	County Coroner, and a Most Likely Descendant must be designated. Any further treatment of the remains will occur in consultation with the MLD, the NAHC, and a qualified archaeologist.		

Table 8-5 Fire Protection and Emergency Response

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
FP-1a	The Applicant shall ensure adequate (3,000-5,000 gpm) water supplies are available from the existing water lines and hydrant system, by extending the 8 inch water main or some other source for water supplies that provides sufficient water supply rates, pressure and duration to comply with codes, standards and requirements of the LACFD and the HBFD. Installation of a fire pump, or installation of a piping connection to area water mains that can supply the flows, may be required to ensure the appropriate water flow and pressure requirements. The Applicant shall ensure that all area hydrants and water supplies are tested annually as to the NFPA standards for water flows and pressures, and shall ensure that the results are reported to the City of Hermosa Beach and the Hermosa Beach Fire Department.	Review of water flow calcs and tests, annual reviews	Before Phase 2	City of Hermosa Beach HBFD
FP-1b	The Applicant shall coordinate with the HBFD to integrate a community alert notification system for the proposed project into the City's existing alert system to automatically notify area residences and businesses in the event of an emergency at the project site that would require residents to take shelter or take other protective actions. The Applicant shall implement programs to ensure that all immediate neighbors are provide ample opportunity to participate in the notification system.	Review and testing of system	Before Phase 2	City of Hermosa Beach HBFD
FP-1c	The Applicant shall fund an additional FTE position at the HBFD, or equivalent,	Training and	Before Phase	City of

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	for personnel with specific capabilities in inspection and code compliance associated with oil and gas production facilities. This arrangement shall be to the satisfaction of the HBFD.	hiring completed at HBFD	2	Hermosa Beach HBFD
FP-1d	The Applicant shall develop emergency response plans addressing the facility's fire-fighting capabilities pursuant to the most recent NFPA requirements, Los Angeles County Fire Code, LACFD, California Code of Regulation, and API requirements, in coordination with and to the satisfaction of the LACFD and the City of Hermosa Beach Fire Department. These plans shall include, but not be limited to, fire monitor placement, water capabilities, fire detection capabilities, fire foam requirements, facility condition relating to fire-fighting ease and prevention, and measures to reduce impacts to sensitive resources. The plan should also address coordination with local emergency responders and area schools and daycare facilities.	Review and approval of plans	Before Phase 2	City of Hermosa Beach HBFD
FP-1e	The Applicant shall ensure that the emergency response planning includes development of evacuation plans of neighbors for an emergency scenario at the facility,. The plan shall be reviewed by the LACFD, HBFD and the City annually and updated as needed. The relevant portions of the plan shall be distributed to the public utilizing a method determined by the reviewing Agencies.	Review of plan revision	Before Phase 2 and Phase 4	City of Hermosa Beach HBFD
FP-1f	The Applicant shall ensure and make funding available to 1) upgrade the	Review of	Before Phase	City of

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	dispatch system and procedures within Hermosa/Torrance/Redondo to implement a CAD-to-CAD system to improve dispatch times; and 2) extend the mutual aid agreements to become automatic aid agreements between the Hermosa Beach Fire Department, Redondo Beach Fire Department and the Torrance Fire Department and to include the Torrance HAZMAT unit, or provide for funding to provide additional equipment and to train a sufficient number of Hermosa Beach, Redondo Beach and/or Manhattan Beach Emergency Response personnel to provide first response HAZMAT capabilities.	Mutual Aid agreement revision	2 and Phase 4	Hermosa Beach HBFD
FP-1g	The Applicant shall ensure, during Phase 2 and Phase 4, that the site shall have sufficient water containment capabilities, as per guidance and approval of the Fire Department. Area storm drains along 6th Street and Cypress Avenue shall be equipped with flapper-type valves to enable the closure of the storm drain system in the event of potential overflow.	Review of plan and onsite inspections	Before Phase 2 and Phase 4	City of Hermosa Beach HBFD
FP-2a	The Applicant shall ensure that design and construction comply with applicable codes and standards for equipment spacing, particularly those related to flare location and distances to public areas and distances from well drilling equipment to buildings. If this cannot be achieved, additional requirements shall include the construction of thermal radiation barriers or insulation on the crude oil tanks, installation of thermal barriers/walls around the flare stack,	Third party audit report review	Before Phase 2 and Phase 4	City of Hermosa Beach HBFD

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	increasing the height of the flare stack during drilling, relocation of the flare stack, providing thermal radiation modeling to estimate the impacts of equipment on the crude tanks and process piping and public areas and the design and construction of blast walls as per API 752. Fire rated barriers shall be established, as per LACFD requirements, to ensure that all buildings within 100 feet of well drilling would be protected from thermal radiation. Thermal assessments shall be completed to ensure that the thermal radiation from the flare is within acceptable levels (as per API RP 521) and does notproduce damage to other equipment or nearby walls/soundwalls. The design and construction compliance status shall be verified by third-party audits under the direction of the City.			
FP-2b	Fire protection measures specific to the crude oil containment system shall be provided, including the installation of manual fire foam systems with automatic detection and notification (to both the operators and the HBFD) capable of foaming in the perimeter of the crude oil containment system, wellhead area and the area immediately adjacent to combustion or spark producing equipment within or immediately adjacent to the crude oil containment area. The system shall be capable of being remotely activated from a safe location in the event of a crude oil fire. The highest level electrical classification achievable shall be	Review of design documents	Before Phase 2 and Phase 4	City of Hermosa Beach HBFD

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	designated for all equipment located within the crude oil containment and wellhead area.			

Table 8-6 Geological Resources/Soils

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
GEO-1a	In coordination with the Caltech Seismological Laboratory, the Applicant shall install an accelerometer at the Project Site to determine site-specific ground accelerations as a result of any seismic event in the region (Los Angeles/Orange County and offshore waters of the Santa Monica Bay and San Pedro Channel). The drilling operator shall cease operations and inspect all onsite oil field-related pipelines, storage tanks, and other infrastructure following any seismic event that exceeds a ground acceleration at the Project Site of 13 percent of gravity (0.13 g). The drilling operator shall not reinstitute operations at the Project Site and associated pipelines until it can be determined that all oil	Inspection by a California Registered Civil Engineer	Following any seismic event that results in substantial ground accelerations at the Project Site, as pre-determined by	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	field infrastructure is structurally sound.		a California-licensed geotechnical engineer.	
GEO-1b	All seismic related recommendations provided by NMG Geotechnical (2012) shall be incorporated into the Proposed Oil Project design. These measures shall include, but not be limited to the following: - Drilled-in-place piles or cast-in-drilled-hole piles shall be constructed for foundations in the landfill area, i.e., northeast Project Site, to reduce seismically induced settlement. - Ground improvement techniques, including high pressure grout injection, i.e., compaction grouting, shall be used in the landfill area to reduce seismically induced settlement and allow construction of conventional shallow foundations. - Seismic design criteria for horizontal and vertical accelerations, identified in Tables 10 and 11 of the geotechnical report, shall be used during Proposed Project design (including incorporation of updated seismic design criteria from the 2013 California Building Code). - During Phase 1, the upper 2 to 4 feet of soil in the vicinity of the proposed well cellars shall be excavated and replaced with compacted fill. In addition, the	Review and approval of geotechnical report.	Approve geotechnical report prior to issuance of grading permit.	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	basement under the maintenance building shall be removed and filled in with compacted fill. In addition, the basement under the maintenance building shall be removed and filled in with compacted fill. - During Phase 3, the eastern portion of the site shall be excavated approximately 7 feet deeper than the majority of the proposed building pad, with a minimum of 3 feet of overexcavation below design grades, and recompacted to provide a uniform fill blanket below proposed tanks, compressors, and other equipment. - Asphalt pavement and underlying subgrade soils shall be designed to accommodate the proposed drill rig. Positive surface drainage shall be provided to direct runoff away from slopes and structures and toward suitable drainage devices. Ponding of water on structural pads shall not be allowed.			
GEO-2a	Injection pressures associated wastewater injection shall not exceed reservoir fracture pressures as specified in California Code of Regulations Title 14, Division 2, Section 1724.10, and as approved by the California Division of Oil, Gas, and Geothermal Resources..	Comparing pressure measurements on each injection well to formation	During waste water injection operations	California Division of Oil and Gas and Geothermal Resources (DOGGR)

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
		fracture pressure		and Hermosa Beach Public Works Department
GEO-2b	In coordination with the Caltech Seismological Laboratory, the Applicant shall install an accelerometer at the Project Site to determine site-specific ground accelerations as a result of any seismic event in the region (Los Angeles/Orange County and offshore waters of the Santa Monica Bay and San Pedro Channel). Readings from the accelerometer shall be recorded at the Oil Field and transmitted in real-time to the Caltech Seismological Laboratory. The drilling operator shall cease operations and inspect all onsite oil field-related pipelines, storage tanks, and other infrastructure following any seismic event that exceeds ground acceleration at the Project Site of 13 percent of gravity (0.13 g). The drilling operator shall not reinstitute operations at the Project Site and associated pipelines until it can be determined that all oil field infrastructure is structurally sound.		Monthly	City of Hermosa Beach
GEO-2c	In the event that monitoring indicates that Proposed Oil Project-induced seismicity is occurring, wastewater injection operations shall be adjusted to alleviate such seismicity. The drilling operator shall first receive approval from	Seismicity monitoring	Following monthly monitoring, as	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	the California Division of Oil, Gas, and Geothermal Resources prior to any change (increase) in the injection operations.		necessary	
GEO-3	All slope stability related recommendations provided by NMG Geotechnical (2012) shall be incorporated into the Proposed Oil Project design. Temporary excavations shall be stabilized per the latest edition of Cal/OSHA requirements for loose sands, including shoring or laying back of trench walls. Shoring along the northern perimeter of the Project Site shall be designed by an experienced structural engineer due to the proximity to existing buildings that must be protected from potential settlement and lateral movements.	Submit temporary shoring plans and calculations.	Prior to permit issuance	City of Hermosa Beach
GEO-4a	Prior to approval of the first Phase 4 drilling permit, the Applicant shall have submitted and the City of Hermosa Beach and the California Coastal Commission shall have approved a Subsidence Monitoring and Avoidance Program, for both onshore and offshore areas. The onshore monitoring plan shall be completed throughout the life of this project, in accordance with Appendix A, Subsidence Monitoring Program, of the Subsidence and Induced Seismicity Technical Report, E&B Oil Development Project (Geosyntec Consultants 2012), included as Appendix _F of this EIR. The offshore monitoring plan shall be completed throughout the life of this project in accordance with the Offshore Subsidence Monitoring Program and Possible	Monitor subsidence with GPS technology.	Prior to Phase 4 ~~Annually~~	Hermosa Beach Public Works Department

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	Mitigation Measures, Hermosa Beach, California (Coastal Environments 1998), included as Appendix _F of this EIR. The latter shall be updated, as applicable, to reflect advances in science since 1998. In addition, Section 7.6, Mitigation of Onshore Subsidence, of the latter report, shall not be applied to this mitigation measure, as the onshore monitoring program would be completed in accordance with the Geosyntec Consultants (2012) report.			
GEO-4b	The Subsidence Monitoring Program shall include: Ground elevation survey methodologies with high vertical resolution; including onshore surface elevations and offshore bathymetric elevations; Prior to Phase 4 ~~II~~ drilling, establishment of a network of onshore and offshore survey or subsidence monitoring locations, including continuous GPS stations, GPS benchmarks, and tautly anchored offshore monitoring points, positioned within the City, outside the City, and in offshore areas, that are sufficiently spaced to draw conclusions about subsidence within the zone of influence of the Project; Because subsidence can occur for a variety of reasons, establishment of control points outside the zone of influence to allow differentiation of possible subsidence effects related to other activities;	Monitor subsidence with GPS technology.	Prior to Phase 4 ~~Annually~~	Hermosa Beach Public Works Department

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	Use of InSAR imagery technology to evaluate regional subsidence patterns both within and beyond the proposed oil field; Sufficient monitoring frequency to establish trends in subsidence in order to distinguish background ground movement from any subsidence caused by proposed oil field operations; Reservoir monitoring, including documentation of produced fluid volume (oil, gas and water) and reservoir pressures at similar frequency to ground elevation measurements; Reporting requirements; and Action levels, as specified in the onshore and offshore subsidence monitoring reports. Surveying for both vertical and horizontal ground movement shall be completed along the perimeter and throughout the interior of the oil field, including both onshore and offshore areas, utilizing Global Positioning System technology in combination with a network of ground stations. The onshore continuous monitoring GPS stations shall include: Hermosa Beach Pier. The pier will serve as the furthest offshore point in the onshore monitoring program. Longfellow Outfall. This Outfall is larger and more structurally stable than some			

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	of the other outfalls along the City's coast. King Harbor Jetty. This location was selected to achieve a distribution of continuous monitoring points along the coast of Hermosa Beach. This will help provide a limited regional picture of the subsidence between survey events.			
GEO-4c	An onshore and offshore baseline subsidence report shall be completed and made available to the City of Hermosa Beach and the California Coastal Commission at least two months and no more than six months prior to planned commencement of Phase 4 ~~II~~ drilling operations. Subsidence monitoring reports shall be completed annually and the results shall be forwarded to the California Coastal Commission and the City of Hermosa Beach for review, no more than one month following the end of each annual monitoring cycle. In addition, results shall be forwarded to the adjoining City of Redondo Beach and City of Manhattan Beach.	Coordinate with Hermosa Beach Public Works Department	At least two months prior to Phase 4 ~~2~~ drilling operations	Hermosa Beach Public Works Department
GEO-4d	In the event that the Global Position System monitoring indicates that significant subsidence, as defined by the onshore and offshore subsidence monitoring reports described in GEO-4a, is occurring in and/or around the Proposed Project area, wastewater or water reinjection operations shall be increased to alleviate such subsidence. The Applicant shall coordinate with the California Division of Oil, Gas and Geothermal Resources, which will approve increased	Coordinate with California Division of Oil and Gas and Geothermal Resources	Following monitoring results indicating subsidence	California Division of Oil and Gas and Geothermal Resources (DOGGR)

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	levels of wastewater or water reinjection operations in accordance with the approved Subsidence Monitoring Program. The Applicant will also coordinate with the City of Hermosa Beach, Public Works Department, to verify that subsidence has been mitigated sufficiently. The Applicant will also coordinate with the City of Hermosa Beach, Public Works Department, to verify that subsidence has been mitigated sufficiently.	(DOGGR)		and Hermosa Beach Public Works Department
GEO-4e	In the unlikely event that subsidence related mitigation induces seismicity, corrective actions related to subsidence shall proceed until baseline surface elevations have been achieved, as subsidence related damage would likely be more pronounced in comparison to damage associated with Project related micro-seismicity. Upon reestablishment of baseline elevations, drilling operations shall cease until a balance between subsidence avoidance and induced seismicity avoidance can be established, as agreed upon by the California Division of Oil, Gas and Geothermal Resources, the California Coastal Commission, and the City of Hermosa Beach.	Coordinate with California Division of Oil and Gas and Geothermal Resources (DOGGR)	Following monitoring results indicating subsidence	California Division of Oil and Gas and Geothermal Resources (DOGGR) and Hermosa Beach Public Works Department
GEO-6	A Registered Civil Engineer shall analyze surficial and near-surface soils at the Project Site subsequent to grading and prior to on-site construction, to determine whether expansive soils are present. Similarly, soils at the Proposed	Soil auger and analytical laboratory	Prior to final design	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	City Maintenance Yard Project Site and along the proposed pipeline route shall be analyzed for soil expansion potential. In the event that clay-rich, expansive soils are present, foundations shall be designed to accommodate expansive soils and pipelines shall be placed within a blanket of non-expansive soils to prevent structural damage and/or failure. Foundation and pipeline design shall be reviewed and approved by a Registered Civil Engineer.			
GEO-7a	Proposed Oil Project design must conform to the recommendations of HDR Schiff (2012), included within Appendix C in NMG Geotechnical (2012), or as per the City Engineer, and should occur prior to completion of the final Project design.	Design for protection against corrosion	Prior to final design	City of Hermosa Beach
GEO-7b	All buried metal pipelines shall be coated and placed under impressed cathodic protection. To monitor for internal corrosion, corrosion coupons or equivalent measures can be utilized.	Under impressed cathodic protection	Prior to final design	City of Hermosa Beach
GEO-7c	External pipe inspections shall be conducted for the exposed pipeline sections to ensure atmospheric coatings are in good conditions. All external inspections shall be documented and reviewed by the operations management and repairs documented, when necessary.	Visual inspections	Monthly	City of Hermosa Beach
GEO-7d	In accordance with California Division of Oil, Gas, and Geothermal Resources	Prepare under	Prior to final	California

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	pipeline regulations (Public Resources Code Sections 3013 and 3782), a pipeline management plan shall be implemented for the Project Site. Similarly, in accordance with United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration regulations, a pipeline management plan shall be implemented for proposed pipelines located beyond the perimeter of the Project Site. These plans shall include, but not be limited to mechanical testing, including ultrasonic and hydrostatic testing.	guidance of California Department of Conservation Division of Oil, Gas, and Geothermal Resources and United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration	design	Division of Oil and Gas and Geothermal Resources (DOGGR), United States Department of Transporta-tion, Pipeline and Hazardous Materials Safety Administra-tion, and Cities of Hermosa Beach,

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
				Redondo Beach, and Torrance
GEO-7e	All concrete in contact with the high sulfate or corrosive soils shall be Type V concrete in accordance with the 2010 California Building Code.	Pour proper concrete adjacent to corrosive soils	During construction	City of Hermosa Beach

Table 8-7 Safety, Risk of Upset and Hazards

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
SR-1a	The Applicant shall cause to be prepared an independent third-party audit, under the direction and supervision of the City, of the gas and crude oil plants and pipelines, once constructed, including the well pads, to ensure compliance with Fire Code, applicable API and NFPA codes, EPA RMP, OSHA PSM, DOGGR and SPCC and emergency response plans requirements. All audit items shall be implemented in a timely fashion, and the audit shall be updated annually, as directed by the City and the Los Angeles County Fire Departments. The final installation of the facilities shall include a seismic assessment, including walkthroughs, of equipment to withstand earthquakes prepared by a registered Structural Engineer in compliance with Local Emergency Planning Committee Region 1 CalARP guidance and the seismic assessment shall be updated, with walkthrough inspections, annually to ensure compliance with the codes and standards at the time of installation.	Review of audit reports	Before Phase 4 operations and annually thereafter	LACFD HBFD Cities of Redondo Beach and Torrance

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
SR-1b	The Applicant shall ensure that the crude oil spill containment areas shall be designed as Class I Division I areas according to NFPA and NEC, or that spark producing equipment (such as the flare) would be isolated from the containment area, in order to reduce the potential for crude oil fires. The refrigeration system shall utilize non-flammable refrigerant.	Review of design documents	Before Phase 3 construction	City of Hermosa Beach HBFD Cities of Redondo Beach and Torrance
SR-1c	The Applicant shall ensure that all crude-oil truck haulers and a sufficient number of onsite personnel (at least two per shift) are trained in HAZMAT (to the HAZWOPER technician level at least) spill response and that each truck carries a spill response kit.	Site inspections, review of contracts	Before Phase 2 drilling	City of Hermosa Beach HBFD Cities of Redondo Beach and Torrance

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
SR-1d	The Applicant shall install automatic valves on the gas pipeline that will automatically shut down under a low pressure scenario at the Processing Facility Area for all pipelines leaving the processing plant, and shall install a backflow prevention device at the main gas pipeline tie-in location, to prevent the release of gas from the main transmission pipeline in the event of a rupture in the gas pipeline. The second, return pipeline shall remain isolated from the main gas pipeline during normal operations.	Review of design documents	Before Phase 3 construction	City of Hermosa Beach HBFD Cities of Redondo Beach and Torrance
SR-1e	The Applicant shall ensure that warning tape is installed above the pipelines within the pipeline trench to warn third parties that pipelines are located below the warning tape and that the pipelines are capable of utilizing a smartpig.	Review of design documents	Before Phase 3 construction	City of Hermosa Beach HBFD Cities of Redondo Beach and Torrance

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
SR-1f	The odorant system shall have its own, smaller containment area around it limiting the spilled pool size to the minimum size attainable, in order to prevent any offsite impacts. Transfer of odorant shall utilize carbon canisters and a canister change-out/maintenance program to ensure that filling of odorant tanks do not cause offsite impacts.	Review of design documents	Before Phase 3 construction	City of Hermosa Beach HBFD
SR-1g	The comingled produced gas shall be continuously monitored for hydrogen sulfide. If H_2S levels in the produced gas from any individual well exceeds 100 ppm, then that well shall be shut in and abandoned as per DOGGR requirements. Wells shall be tested when fluids first flow, when the well is placed into production and periodically thereafter in order to ensure that all wells operate below 100 ppm H2S.	Review of design documents and in-field inspections	Before Phase 2 drilling	City of Hermosa Beach HBFD ~~Cities of Redondo Beach and Torrance~~

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
SR-2	The Applicant shall sample soil during Phase 1 grading to ensure that soil lead contamination levels are below 9,500 mg/kg and that soil contaminated with TPH are below the regulatory guidelines. If soils are encountered above these levels, then those soils shall be removed from the site and transported to a disposal site. This may necessitate implementing the RAP during Phase 1 if substantial amounts of contamination are encountered.	Review of design documents and in-field inspections	Phase 1	City of Hermosa Beach

Table 8-8 Hydrology and Water Quality

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
HWQ-2a	The Applicant shall properly maintain the associated crude oil pipelines, storage tanks, and processing facilities within and outside the Project Site, including smart-pigging according to State of California Office of the State Fire Marshal requirements and the standards outlined by the Department of Oil, Gas and Geothermal Resources, and the Los Angeles Regional Water Quality Control Board. The Applicant shall visually inspect onsite storage tank and processing equipment at least daily and provide a visual inspection of the crude oil pipeline right-of-way ~~inspections~~ on a weekly basis.	Review of maintenance reports	Before Phase 4 operations Annually	Cities of Hermosa Beach, Redondo Beach, and Torrance
HWQ-2b	The Applicant shall install a leak detection system for crude pipelines to the ~~Exxon Mobil Refinery~~ transfer of custody location. The system shall include pressure and flow meters, flow balancing, supervisor control and data acquisition system, and a computer alarm system in the event of a suspected leak. Temperature, pressure, and flow shall be monitored at each pipeline entry and exit. If any variable deviates by more than 10 percent of the normal operating range, the system shall trigger both audible and visual alarms. Flow balancing shall be conducted every 5 minutes, 1 hour, 24 hours, and 48 hours with the accuracy defined once the system is established and tested.	Review of system design and testing results	Before Phase 4 operations	Cities of Hermosa Beach, Redondo Beach, and Torrance

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
HWQ-2c	Personnel at the site shall be trained in equipment use and containment and cleanup of an oil spill. Dry cleanup methods, such as absorbents, shall be used on paved and impermeable surfaces and shall be included in a spill trailer maintained onsite. Spills in dirt areas shall be immediately contained with an earthen dike and the contaminated soil shall be dug up and discarded in accordance with local and state regulations.	Review of training and equipment	Before Phase 2 and Phase 4 operations and intermittently thereafter	Cities of Hermosa Beach, Redondo Beach, and Torrance
HWQ-2d	Oil spills shall be contained and cleaned according to measures outlined in the then-current California Stormwater Quality Association Best Management Practice Handbook.	Review of training and incident reports	Before Phase 2 and Phase 4 operations, and intermittently thereafter	Cities of Hermosa Beach, Redondo Beach, and Torrance

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
HWQ-2e	A United States Environmental Protection Agency, Spill Prevention, Control, and Countermeasure Plan, approved by the City of Hermosa Beach Fire Department, shall be implemented in the event of a spill. The Plan, which shall include a spill response trailer, equipment, and personnel training shall be completed prior to Phase 2 and Phase 4, and in compliance with the California State Oil Spill Contingency Plan (California Department of Fish and Game, Office of Spill Prevention and Response 2010) and the Los Angeles/Long Beach Oil Spill Contingency Plan (California Department of Fish and Wildlife 2011). Spill cleanup shall be completed under the oversight of the lead regulatory agency, with respect to oil spills, as identified in the Spill Prevention, Control, and Countermeasure Plan.	Review of reports	Before Phase 2 and Phase 4 operations	Cities of Hermosa Beach, Redondo Beach, and Torrance
HWQ-2f	The well cellar shall be lined with an impermeable membrane to prevent oil-based substances from seeping into groundwater supplies. All drilling muds storage shall be contained within Baker-type enclosed tanks, which shall be sized to accommodate high intensity rainfall events without overtopping.	Review of design documents, field inspection	Before Phase 2 and Phase 4 operations	Cities of Hermosa Beach, Redondo Beach, and Torrance

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
HWQ-2g	The Applicant shall install a check valve in the crude oil pipeline at the Herondo and Valley drive where the crude oil pipeline turns eastward and starts uphill.	Review of design documents, field inspection	Before Phase 4 operations	Cities of Hermosa Beach, Redondo Beach, and Torrance
HWQ-2h	The Applicant shall fund and install, under the direction of the Hermosa Beach Public Works Department, an oil/grit separators or oil/water separator located along Herondo Street downstream of Valley Drive, in order to capture small to medium sized spills before they reach the ocean. Installation and maintenance costs shall be provided by the Applicant and the devices shall be inspected by the Applicant to ensure that the "trap" is operational before any storm events.	Review of design documents, field inspection	Before Phase 4 operations, and intermittently thereafter	Cities of Hermosa Beach, Redondo Beach, and Torrance
HWQ-2i	The Applicant shall utilize a smaller 6" ERW pipe and a heat and impact resistant coating at a minimum comparable to a 3-layer fusion bonded epoxy (such as BrederoShaw 3LPP) and weld coverings equivalent to sleeves with epoxy primer. Specification of the pipe and coating shall approved by the City.	Review of design documents, field inspection	Before Phase 4 operations	City of Hermosa Beach, CSFM

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
HWQ-2j	The Applicant shall install a 3 sack slurry starting 6 inches above the pipe to the base of the pavement or ground surface and lay strips of warning tape over the top to prevent third-party damage.	Review of design documents, field inspection	Before Phase 4 operations	City of Hermosa Beach

Table 8-9 Noise and Vibration

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
NV-1a	Increase the height of the noise barrier on all sides of the site to 24-feet (24-feet is the maximum feasible height for a noise barrier during Phase 1). Minimum sound insulation performance of the barrier shall remain at STC-25.	Review of design documents and in-field inspections	Before Phase 1	City of Hermosa Beach
NV-1b	The gates on the east and south sides of the site shall be ~~24-feet high,~~ consistent with the height of the acoustical barrier around the perimeter of the site. The gates shall have no holes or gaps in them and shall be designed to deliver a minimum sound insulation performance of STC-25.	Review of design documents and in-field inspections	Before Phase 1	City of Hermosa Beach
NV-1c	All acoustical barriers around the site shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.49, 0.72, 0.74, 0.29, 0.21, 0.14.	Review of design documents and in-field inspections	Before Phase 1	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
NV-2a	Increase the height of the noise barriers on all sides of the site from 32-feet to 35-feet (35-feet is the maximum height allowed). Minimum sound insulation performance of the barrier material should be STC-32.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach
NV-2b	The gates on the east and south sides of the site shall have no holes or gaps in them and shall be designed to deliver a minimum STC of 32. Any gaps above the gates must be closed off, by extending the acoustical barrier material from the sides. The intent is to maintain the acoustical integrity of the STC-32 noise barrier in all locations.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach
NV-2c	All acoustical barriers around the site shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.49, 0.72, 0.74, 0.29, 0.21, 0.14.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
NV-2d	Install pads on the V-door and other appropriate areas, timbers and pads on the drill deck, pads between drill and casing pipe while in storage and pad and timbers at the boards on the mast to reduce metal-on-metal noise.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach
NV-2e	Provide full acoustical enclosures around the mud pumps. The enclosures shall be ~~factory-~~assembled by a manufacturer with a proven track-record of building noise-reducing enclosures for industrial applications. The total sound power level radiated by the enclosure shall not exceed 77 dBA, including noise contributions from: the access door(s), observation windows, ventilation openings and ventilation fans (if required).	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach
NV-2f	Provide enhanced inlet and outlet silencers for the Hydraulic Power Unit enclosure and upgrade the walls, roof and floor of the enclosure as necessary to limit the total sound power level radiated by the enclosure to 77 dBA.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
NV-2g	The acoustical shroud around the drilling mast shall be comprised of acoustical ~~blankets~~ material with a minimum STC rating of 25. The acoustical ~~blankets~~ material shall provide continuous coverage of three sides of the mast and shall cover the uppermost 26-feet of the fourth side.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach
NV-2h	Provide acoustical treatment within the combustor fan housing and/or at the ventilation openings, as necessary to limit the total sound power level radiated by the housing (including contributions from the door and ventilation openings) to 86 dBA.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach
NV-2i	Eliminate use of the combustor during drilling in Phase 2 or prior to the initiation of production occurring concurrent with drilling in Phase 2, acoustical treatment shall be provided: within the combustor fan housing and/or ventilation openings, as necessary to limit the total sound power level radiated by the housing (including contributions from the door and ventilation openings) to 86 dBA; and to the combustor stack to limit the power level radiated by the stack to 80 dBA..	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
NV-2j	During the drilling portion of Phase 2, implement a "Super-Quiet Mode" of operation between the hours of 2AM and 5AM, during which time drilling would essentially be suspended to minimize noise. Super-Quiet Mode would impose the following additional measures and limitations: no pipe-handling of any kind anywhere on the project site, shakers switched off, top drive and rig floor completely enclosed on four sides by acoustical ~~blankets~~ material with a minimum STC rating of 25, operation of the top drive limited to "exercising" the pipe string only, top drive travel limited to the bottom half of the drilling rig mast. Super-Quiet Mode shall be implemented from the outset of drilling work during Phase 2; however, if monitoring shows consistently that noise emissions for normal drilling operations (with mitigation measures NV2a through NV2i in place) would result in less-than-significant impact during all or part of the period between 2AM and 5AM, the Applicant may, at the discretion of the City, be permitted to reduce the hours Super-Quiet Mode operations, or eliminate Super-Quiet Mode altogether.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
NV-3a	Increase the height of the noise barriers on all sides of the site from 32-feet to 35-feet (35-feet is the maximum height allowed). Minimum sound insulation performance of the barrier material should be STC-32.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach
NV-3b	The gates on the east and south sides of the site shall have no holes or gaps in them and shall be designed to deliver a minimum STC of 32. Any gaps above the gates must be closed off, by extending the acoustical barrier material from the sides. The intent is to maintain the acoustical integrity of the STC-32 noise barrier in all locations.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach
NV-3c	All acoustical barriers around the site shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.49, 0.72, 0.74, 0.29, 0.21, 0.14.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
NV-3d	Provide acoustical treatment within the combuster fan housing and/or at the ventilation openings, as necessary to limit the total sound power level radiated by the housing (including contributions from the door and ventilation openings) to 86 dBA.	Review of design documents and in-field inspections	Before Phase 2	City of Hermosa Beach
NV-4a	Increase the height of the noise barrier on all sides of the site to 24-feet (24-feet is the maximum feasible height for a noise barrier during Phase 3). Minimum sound insulation performance of the barrier shall remain at STC-25.	Review of design documents and in-field inspections	Before Phase 3	City of Hermosa Beach
NV-4b	The gates on the east and south sides of the site shall be ~~25-feet high,~~ consistent with the height of the acoustical barrier around the perimeter of the site. The gates shall have no holes or gaps in them and shall be designed to deliver a minimum sound insulation performance of STC-25.	Review of design documents and in-field inspections	Before Phase 3	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
NV-4c	All acoustical barriers around the site shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.49, 0.72, 0.74, 0.29, 0.21, 0.14.	Review of design documents and in-field inspections	Before Phase 3	City of Hermosa Beach
NV-6a	Increase the height of the noise barriers on all sides of the site from 32-feet to35-feet (35-feet is the maximum height allowed by zoning code). Minimum sound insulation performance of the barrier material shall be STC-32.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach
NV-6b	The gates on the east and south sides of the site shall have no holes or gaps in them and shall be designed to deliver a minimum STC of 32. Any gaps above the gates must be closed off, by extending the acoustical barrier material from the sides. The intent is to maintain the acoustical integrity of the STC-32 noise barrier in all locations.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
NV-6c	All acoustical barriers around the site shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.49, 0.72, 0.74, 0.29, 0.21, 0.14. In the event that a permanent 35-foot wall is built, the interior surfaces of the wall (i.e. those facing inwards towards the drilling and production operations) shall be treated with exterior grade acoustical panels offering equivalent sound absorption performance to that specified in this Measure above a height of 10-feet from the ground.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach
NV-6d	Install pads on the V-door and other appropriate areas, timbers and pads on the drill deck, pads between drill and casing pipe while in storage and pad and timbers at the boards on the mast to reduce metal-on-metal noise.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach
NV-6e	Provide full acoustical enclosures around the mud pumps. The enclosures shall be ~~factory-~~assembled by a manufacturer with a proven track-record of building noise-reducing enclosures for industrial applications. The total sound power level radiated by the enclosure shall not exceed 77 dBA, including noise contributions from: the access door(s), observation windows, ventilation openings and ventilation fans (if required).	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
NV-6f	Provide enhanced inlet and outlet silencers for the Hydraulic Power Unit enclosure and upgrade the walls, roof and floor of the enclosure as necessary to limit the total sound power level radiated by the enclosure to 77 dBA.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach
NV-6g	The acoustical shroud around the drilling rig mast shall be comprised of acoustical ~~blankets~~ material with a minimum STC rating of 25. The acoustical ~~blankets~~ material shall provide continuous coverage of three sides of the mast and shall cover the uppermost 26-feet of the fourth side.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
NV-6h	During the drilling portion of Phase 4, implement a "Super-Quiet Mode" of operation between the hours of 2AM and 5AM, during which time drilling would essentially be suspended to minimize noise. Super-Quiet Mode would impose the following additional measures and limitations: no pipe-handling of any kind anywhere on the project site, shakers switched off, top drive and rig floor completely enclosed on four sides by acoustical ~~blankets~~ material with a minimum STC rating of 25, operation of the top drive limited to "exercising" the pipe string only, top drive travel limited to the bottom half of the drilling rig mast. Super-Quiet Mode shall be implemented from the outset of drilling work during Phase 4; however, if monitoring shows consistently that noise emissions for normal drilling operations (with mitigation measures NV6a through NV6g in place) would result in less-than-significant impact during all or part of the period between 2AM and 5AM, the Applicant may, at the discretion of the City, be permitted to reduce the hours of Super-Quiet Mode operations, or eliminate Super-Quiet Mode altogether.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
NV-7a	Increase the height of the masonry walls on the north and west sides of the site to a minimum of 27-feet.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach
NV-7b	Apply outdoor acoustical panels to all available surfaces of the north and west walls that face the production operations above a height of 10-feet above the ground. The purpose of the acoustical panels is to control reflection of production noise in the direction of the sensitive uses to the east and south. The acoustical panels shall offer the following minimum sound absorption performance: Center Frequency (Hz), 125, 250, 500, 1k, 2k, 4k - Sound Absorption Coefficient, 0.28, 0.68, 0.95, 0.86, 0.89, 0.72.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach
NV-7c	Well workover rigs shall be powered by electric drive/sources or “ultra-quiet” generators or engines - either diesel or natural gas-powered - that are capable of operating below the noise significance thresholds for daytime operation.	Review of design documents and in-field inspections	Before Phase 4	City of Hermosa Beach

Table 8-10 Transportation and Circulation

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
TR-1a	For Phases 1-3, the Applicant shall fund, through and in consultation with the School District and Safe Routes to School, an afternoon crossing guard to be stationed at the Project Site area to ensure pedestrians passing nearby the Project Site have assistance in crossing the streets and the entrances/exit of the Project Site. Alternately, the Applicant shall ensure that trucks do not travel to and from the Project Site unless school is in session (i.e. truck travel prohibited on Valley Drive after 2:48 p.m., on Wednesdays after 1:45 p.m. or on school minimum days after 12:45 p.m.). The Applicant shall consult with the School District to ensure timing is current.	Review of contracts and site inspections	Prior to construction activities	City of Hermosa Beach
TR-1b	For Phases 1-3, the Applicant shall install, subject to the approval of the City Public Works Department, warning signs and blinking yellow lights one block north and south (if applicable with possible one-way on Valley Drive) of the Project Site warning vehicle traffic that trucks may be entering and exiting the roadway. Blinking lights shall only operate when trucks are utilizing the roadway (not 24 hours per day).	Review of design documents and site inspections	Prior to construction activities	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
TR-1c	The Applicant shall ensure that all trucks accessing the Project Site and utilizing the Pier Avenue/Valley Drive intersection are less than 65 feet long to prevent safety hazards at the double intersection on Pier Avenue between Valley Drive and Ardmore Avenue. If trucks longer than 65 feet are required, then flagger shall be used at the Pier Avenue and Valley/Ardmore intersection.	Review of contracts and site inspections	Phase 1-4 Prior to construction activities	City of Hermosa Beach
TR-1d	For Phases 1-3, the Applicant shall, with the approval and coordination of the City Public Works Department, either 1) restripe Valley Drive south of Pier Avenue to be a southerly directed one-way street. No on-street parking shall be allowed on Valley Drive between 6th Street and 8th Street to allow for sufficient line of sight for trucks entering and exiting the Project Site; or 2) restripe the section of Valley Drive between 2nd Street and Herondo Street to make it two-way and direct all truck traffic along Herondo Street to approach the project site from the south.	Review of design documents and site inspections	Prior to pipeline construction activities	City of Hermosa Beach
TR-2a	Pipeline construction activities within the Pipeline right-of-way shall be limited to weekday between the hours of 9:00 a.m. and 3:00 p.m., unless the applicable municipality approves a specific exception to the time limit for periods of limited duration, subject to measures required by the municipality to protect the public health and safety. The Applicant shall coordinate with adjacent jurisdictions throughout the design and construction phase.	Review of design documents and site inspections	Prior to pipeline construction activities	Cities of Hermosa Beach, Redondo Beach, and Torrance

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
TR-2b	The applicant shall implement a Construction Traffic Management Plan (CTMP) during Pipeline construction that includes the following pursuant to the procedures and subject to approval of the applicable municipality: 1) Require the Pipeline contractor(s) to obtain and follow street construction permits in the affected areas (Cities of Hermosa Beach, Redondo Beach, and Torrance, and Caltrans facilities - PCH and Hawthorne Boulevard); 2) Develop detour and traffic management plans consistent with the affected City's standard roadway plans (e.g., Torrance Street Standard T603), the California Manual of Uniform Traffic Control Devices (MUTCD), or the Work Area Traffic Control Handbook (WATCH); 3) Revise Pipeline construction schedules to minimize access impacts to adjacent residents and businesses; and 4) Ensure that all affected residences and business have adequate emergency access during all times and phases of construction. The Applicant shall coordinate with adjacent jurisdictions throughout the design and construction phase.	Approval of CTMP	Prior to pipeline construction activities	Cities of Hermosa Beach, Redondo Beach, and Torrance

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
TR-3a	The applicant shall be prohibited from routing Proposed Oil Project-related heavy truck exceeding 20,000 pounds on 190th Street between Anza Avenue and PCH, except during Pipeline construction. The Applicant shall comply with all requirements of the applicable city.	Use of alternative route	Phases 1-4	Cities of Hermosa Beach, Redondo Beach, and Torrance
TR-3b	The applicant shall route inbound and outbound heavy (>20,000 pounds) truck traffic along PCH and Artesia Boulevard, which are designated truck routes.	Use of alternative route	Phases 1-4	Cities of Hermosa Beach, Redondo Beach, and Torrance
TR-3c	Applicant shall supply private parking sufficient to meet all parking demands and shall direct all employees and contractors to park within Applicant's private parking areas, or to utilize an alternative parking program approved by the City.	Review of Plans and onsite inspections	Phase 1-4	City of Hermosa Beach
TR-4a	The City shall design the permanent Proposed City Maintenance Yard so that it does not enter/exit directly onto Valley Drive.	Review of Plans	Phase 3	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
TR-4b	If the permanent Proposed City Maintenance Yard Project affects the sidewalk, then the design shall incorporate a sidewalk design along Valley Drive which utilizes a landscape buffer to separate the pedestrians from the street.	Review of Plans	Phase 3	City of Hermosa Beach

Table 8-11 Water Resources

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
WR-1	Prior to approval of demolition and new construction, a Registered Civil Engineer in the State of California shall evaluate the capacity of the existing sewer line system, beginning at the proposed tie-ins on Valley Drive for the Proposed City Maintenance Yard Project and 6th Street for the Proposed Oil Project, and continuing downstream to the Sanitation Districts of Los Angeles County sewer system, prior to any connections. A 7-day capacity performance test shall be performed, based on Sanitation Districts of Los Angeles County average wastewater generation factors, to determine baseline and peak flows, and to ensure the sewer has adequate capacity in the downstream areas. The	Area study of the proposed sewer line and a 7-day performance capacity test should be performed at select	Prior to issuance of permit	City of Hermosa Beach

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
	capacity analysis shall be submitted to the City Public Works Department and the Districts for review and approval. In the event that existing sanitary sewer facilities are insufficient to accommodate increased flows from the Project Site, the Applicant shall provide mobile sanitary facilities (i.e., toilet, sink, and urinal) for onsite personnel, as necessary.	downstream locations to verify the adequacy of the existing sewer.		
WR-2	Implement MM HWQ-2a through HWQ-2d.	See HWQ-2a through HWQ-2d	See HWQ-2a through HWQ-2d	See HWQ-2a through HWQ-2d
WR-3a	The Applicant shall complete a site-specific Area of Review/Zone of Endangering Influence analysis, per Division of Oil, Gas, and Geothermal Resources requirements, to determine if oil and gas wells are present that might serve as conduits for injected liquids to migrate upward to underground sources of drinking water. In the event that such wells are present, those wells shall be plugged and abandoned such that underground sources of drinking water (i.e., less than 10,000 mg/L total dissolved solids) are protected. Plugging and abandonment of those wells shall include zonal isolation plugs outside all casings and shall be completed per current Division of Oil, Gas, and Geothermal Resources standards.	Coordination with Division of Oil, Gas, and Geothermal Resources	Prior to initiation of injection operations	City of Hermosa Beach and Division of Oil, Gas, and Geothermal Resources

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
WR-3b	The Applicant shall confine injected fluids into the intended zone of injection in order to adequately protect underground sources of drinking water. Injection well cement shall be placed at the base of all underground sources of drinking water, and not just at the base of fresh water, to protect water with total dissolved solids content ranging from 3,000 mg/L to 10,000 mg/L.	Coordination with Division of Oil, Gas, and Geothermal Resources	During injection well drilling and injection operations	City of Hermosa Beach and Division of Oil, Gas, and Geothermal Resources
WR-3c	The Applicant shall complete step-rate tests, using bottom-hole and surface pressure gauges, such that maximum allowable surface injection pressures are set at a maximum of 95 percent of the fracture pressure of the formation being injected.	Coordination with Division of Oil, Gas, and Geothermal Resources	Prior to injection operations	City of Hermosa Beach and Division of Oil, Gas, and Geothermal Resources

Proposed Oil Project and Pipeline Mitigation Measures				
Mitigation Measure	**Requirements**	**Compliance Verification**		
		Method	**Timing**	**Responsible Party**
WR-3d	The Applicant shall ensure that the hydrostatic pressure in overlying West Coast Basin aquifers is not exceeded during injection over the active life of the disposal wells. To ensure that this does not occur, the static reservoir pressure shall be monitored on a periodic basis, per Division of Oil, Gas, and Geothermal Resources requirements, and injection into the receiving zone shall cease if and when the hydrostatic pressure is exceeded.	Coordination with Division of Oil, Gas, and Geothermal Resources	Prior to injection operations	City of Hermosa Beach and Division of Oil, Gas, and Geothermal Resources
WR-3e	The Applicant shall meet with Division of Oil, Gas, and Geothermal Resources staff annually to review the status of the waste water injection wells. Any deficiencies identified by Division of Oil, Gas, and Geothermal Resources staff shall be immediately rectified by the Applicant.	Coordination with Division of Oil, Gas, and Geothermal Resources	Annually following initiation of Phase 2	City of Hermosa Beach and Division of Oil, Gas, and Geothermal Resources