

# Organizations



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Palos Verdes - South Bay Group / Angeles Chapter

August 12, 2013

Mr. Ken Robertson  
City of Hermosa Beach  
Community Development Director  
1315 Valley Drive  
Hermosa Beach, California  
Email: [kr Robertson@hermosabch.org](mailto:kr Robertson@hermosabch.org)

RECEIVED  
AUG 12 2013  
COMMUNITY DEV. DEPT.

Re: Scoping Comments for the E&B Oil Development Project in Hermosa Beach

Dear Mr. Robertson,

E & B Natural Resources proposes a substantial oil and gas production facility—potential production and transport of 8,000 barrels of oil and 130,000 cubic feet of gas daily—in one of the most densely populated areas in California. Of 18 environmental factors considered in the Notice of Preparation, the Project will have “potentially significant impacts” on 16. Proximity to residential areas assures high risk of exposure to air pollutants associated with oil and gas production. There is a risk of serious industrial accidents spreading to nearby densely populated areas and possibly the ocean, thereby impacting human health and marine life. Moreover, the proposed Project represents an about face for the City from a policy perspective.

The voters of Hermosa Beach are in an unusual position that affords them the opportunity to determine the direction they want to go. The Sierra Club urges that the EIR comprehensively and objectively address all issues and present the information to the public in a manner that will enable the voters to fully understand the issues and potential impacts of the Project on themselves and their environment prior to the election regarding whether or not to overturn the City’s ban on oil and gas production within its borders on land and off shore.

The Project will have impacts to the public and the environment beyond the borders of Hermosa Beach, however, and these impacts must be addressed in the EIR and brought to the attention of neighboring communities. In addition, as a general matter, we urge

- that the EIR not only identify impacts and potential mitigations, but clearly identify for the public those issues that cannot be mitigated—not hidden in lengthy text, but set apart—for these are the factors that voters will weigh in their decision making. Issues that cannot be mitigated are most likely to have adverse impacts on people’s lives.
- that all analyses, including cost analyses, list the projected range of costs to environment and health for various scenarios, estimating probabilities of the adverse impacts occurring over the life of the project. This should be based on what science now knows regarding the impacts of burning fossil fuels, transporting fossil fuels, toxic muds, leaks and spills related to drilling, and toxic fumes polluting the air.
- that, in the interest of community involvement, the Draft EIR be issued after the winter holidays to increase the likelihood that the public will have the time to digest what is anticipated to be a very lengthy document. The matter is too important to do otherwise.

P.O Box 2464 • Palos Verdes Peninsula, California 90274



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Our specific comments on the NOP are organized, below, by environmental factors listed in the NOP as having potentially significant impacts:

**Aesthetics:**

The visibility analysis referenced in the NOP should include an actual visual representation of the Project. Balloons and/or a crane should show all dimensions of the drilling tower, workover rigs, and any above ground tanks or other large equipment to be used on site, whether on a temporary or permanent basis. Also, provide photos of comparable walls, drilling towers, workover rigs, and tanks—which have been in use for more than a year in other places—so the public can see the effects of weathering, rust, etc. Clarify whether the 32 foot wall would stay up during the drilling of the 30 permanent wells, and that each of those wells will take a month to drill, for a total of 30 plus months. Confirm that the drilling will go on 24 hours/day for these approximately 3 years and that the sound barrier will not block all audible noise from the drilling, including at night.

Identify locations within 5 miles of the Project site that have night lighting comparable to what is expected at the Project site, in order for the public to view real-life comparables to assess the impact of night lighting and glare before making their decision.

The NOP indicates that certain “maintenance activities would typically be accomplished by utilizing a service rig or “workover” rig” and that such rig may operate up to 90 days per year.” Describe the size of the workover rig and what maintenance activities would require its use; whether it would be stored on site or transported; and whether the days of operation would be expected to be consecutive or intermittent.

In the event that the analysis of roads and emergency access leads to recommended mitigation in the form of roadway expansion and other changes, provide graphics clearly illustrating the locations of the recommended changes and routes. The graphics should enable the public to visualize the potential changes to the community as a result of such mitigation measures and assist them in making an informed decision regarding the full scope of the Project’s impacts.

**Air Quality:**

The NOP indicates that “[s]ensitive receptors, including nearby residences and open space areas are located in the immediate vicinity of the Project site. Construction of the Proposed Project may expose these sensitive receptors to increased pollutant concentrations.” Provide quantitative estimates of impact on air pollution in the local area as well as the overall LA basin, which is already subject to unacceptable pollution levels.

Identify the specific source of odor and odorless emissions anticipated in terms of chemical content and in particular those known to be carcinogenic and/or known to be linked to other health issues. Specify anticipated duration, frequency, and range of concentrations of the emissions in terms residents can understand.

Indicate whether diesel construction equipment and diesel-fueled backup generators would be fueled with low-sulfur diesel fuel.

**Biological Resources:**

Analyze potential impacts to resident and migratory wildlife in the ocean, along the greenbelt adjacent to the project site, and at other inland locations, including in the vicinity of the proposed pipelines.

When analyzing potential oil spills from Project related activities, identify significant oil drilling projects nationwide that have not resulted in any oil spills of any size and identify what policies, procedures and/or actions are known or suspected to account for these results in order that the public and government agencies can require that such policies, procedures and/or actions be taken in connection with the Project to assure the greatest possible protection for land and sea habitats and creatures.

A severe well, tank, or pipeline spill could end up in the ocean thereby having a significant adverse impact on the marine environment. The NOP indicates that “[p]reventative 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.” Specify what constitutes “routine” and “periodically”, that is, spell out the frequency of such inspections and maintenance; describe in detail what such inspection and maintenance involve; and describe the known or potential impacts on the community and environment of such inspections and maintenance. Accidents happen when they are not expected. That is why they are accidents. Provide a detailed explanation of the specific measures E&B will take in the event of a system or equipment failure. Discuss the pros and cons of containment berms around the production facility and pipelines in order to contain potential spills. If such containment berms are advisable, describe their physical characteristics and aesthetic impacts.

Conduct a thorough analysis of any known natural oil seepage off the coast of Hermosa, Manhattan and Redondo to establish a baseline. Thoroughly evaluate how the risks and effects of extraction actions by E&B, such as underground pressure changes resulting from drilling and water injection methods, may exacerbate the current seepage. Identify the level of seepage at which E&B will be required to cease operations.

#### **Geology and Soils:**

The NOP states, “Within the last 60 years at least 60 events of magnitude 5.0 or greater have occurred in the Southern California Region. There is a high probability that other significant events will occur in this century. The seismically active nature of these faults could be a potentially significant impact to the Project due to ground shaking, fault rupture, liquefaction, lateral spreading and seismic settlement.” Create a simulation video of a range of scenarios, including a worst case scenario, illustrating the potential impacts to structures, soils, sea, and wildlife of the largest possible earthquake for the region and the effects thereof vis a vis earth movement, liquefaction, subsidence, blow out, leak, or otherwise, should such an event occur during any one or more of the phases or locations of the Project, in order for the public to better understand the risks described in the EIR.

Although the Geosyntec "Subsidence and Induced Seismicity Technical Report" states that the "potential for damaging subsidence to occur as a result of the proposed oil development project is less than significant", the cost of damages from significant subsidence in an urban area like Hermosa Beach would be very high. Analyze the advisability of replacing total produced fluids with water injection at a 1:1 ratio rather than risking such damages.

Identify any and all possible relevant differences between the Project and the Wilmington-Long Beach area project(s) referenced in the NOP as support for fluid replacement controlling subsidence. In addition, the NOP indicates that “most of the subsidence, if it occurs, would likely take place in offshore areas. Therefore, identify other oil drilling projects of a similar nature to the Project that have and have not resulted in subsidence and analyze the similarities between those projects and the Project environment as well as the potential impacts, including to the surf break. Sea level is rising and the scientific consensus is that rapid acceleration will occur between now and 2100. The combined effects of rising sea level plus upper limits of subsidence caused by drilling should be modeled as a function of time. Maps should be prepared showing probable maximum shoreline inundation during storms at decadal intervals, with and without subsidence, up to at least 2100. An economic analysis should be presented comparing worst case costs with and without drilling-induced subsidence. The worst case should assume leakage of all injected water.

#### **Greenhouse Gas Emissions:**

The NOP indicates that the EIR will identify greenhouse gas emissions, either directly or indirectly, from the Project that may have a significant impact on the environment. Include all greenhouse gas emissions generated in the event that the maximum projected oil and gas production is achieved, refined and

consumed. Compare and contrast the projected greenhouse gas emissions as a result of the Project to the amount of reduced greenhouse gas emissions residents and businesses may achieve in their private efforts to protect the environment and fight climate disruption. Compare the "cost" of the Project in terms of such emissions to the "benefits" achieved in this regard by the Green Idea House, as one example, to demonstrate the extent to which such private citizen efforts will be negated by the Project.

Evaluate all the ways in which the Project undermines Hermosa Beach policies, plans, and programs related to public transit, bicycle and pedestrian facilities.

**Hazards and Hazardous Materials:**

Previous landfill at the project site is contaminated by lead, arsenic, barium, and petroleum hydrocarbons in soil and groundwater. Thoroughly describe clean-up methods that might be required by appropriate regulatory agencies and delineate potential impacts on human health and the environment.

The NOP states, "Hermosa Valley Elementary School is located near the Project site. The EIR will evaluate potential Project impacts associated with hazardous emissions, materials, substances, or waste within one-quarter mile of an existing or proposed school." Because of the Project's proximity to the elementary school and residences, and therefore the increased likelihood that an accident will have an adverse impact on the very families who have the opportunity to vote whether to approve the Project or not, it is imperative that the public be informed of any and all similar projects approved and developed within a densely populated urban area. Discuss in detail whether or not there have been any reported adverse impacts from hazardous emissions, materials, substances, or waste from other similar projects. State where, how, and why they occurred and what was done to correct the conditions. If a determination is made that there are no "similar" projects, state that. Describe experiences at drilling sites such as Beverly Hills High School together with an analysis of how emissions from the Project will compare, the scientific basis for the analysis, and uncertainties in the projection. Analyze the risk that water injection will release toxic chemicals from cracked underwater structures as well as the risk of leaks from slashes or breaks in the pipelines below the ocean floor or extending to the shore. Include a discussion regarding how E&B will be accountable for damage to boats, marine life, tourism, etc.

Provide detailed descriptions of the "enclosed ground flare," and the "closed loop system". The public needs to understand and thoroughly evaluate them for safety and potential impacts to human health both when working properly and in the event of system failure.

All analyses of potential hazards and system failures should include an assessment of the potential for accidents as well as terrorist attacks.

Evaluate whether climate change may increase any potential negative impacts of hazardous emissions as a result of the Project on human health and wildlife.

Identify all components of the NOP-referenced "liquid slurry of drilling mud".

In the "Errata to Planning Application" Page 4, Attachment B, it is stated: "Alarms and sensors will be installed for gas detection, including hydrogen sulfide (S/O) ~~and carbon dioxide~~." If the sensors are measuring the air, then it would seem useful to be measuring for large concentrations of carbon dioxide, which can also be toxic or asphyxiating in high concentrations. In addition, methane and/or Lower Explosive Limit (LEL) sensors must be present, as well as oxygen sensors.

The Application states that in Stage 2 up to 250,000 cubic feet per day of gas would be combusted. Describe what precautions would be taken so that the exhaust gas would not impact public health. For example H<sub>2</sub>S in the gas would be combusted to SO<sub>2</sub>. Indicate the distance between the combustor and residences and the extent to which the distance is great enough to ensure that adequate dilution of exhaust gases will occur.

**Hydrology and Water Quality:**

The NOP states, “during Phase 1, approximately 2,000 gallons per day of water would be required for clearing and grading operations and construction. The City’s domestic water provider, California Water Service Company (CalWater), would provide this demand with no impacts to their system via the 6 inch line in 6th Street. During Phase 2 drilling, 130,000 gallons per well of water would be used. In order to offset the demand for potable water, the Project would use reclaimed water supplied from a reclaimed water system operated by West Basin Municipal Water District, which would provide this water demand with no impact to their system. During Phase 3, approximately 2,000 gallons per day of water would be required in addition to up to 10,000 gallons per day during pipeline installation. CWS would provide this demand with no impacts to their system.” Confirm (or correct the statement) that the assessment that the Project’s demands on water would not impact their system was conducted under present conditions as well as projected conditions over the life of the Project including under conditions of prolonged drought and climate disruption.

Clarify where and how many pipelines will be installed and drilled to what depths under the ocean floor and to extraction sites on land. Since the NOP indicates that the drainage pattern on the Project site would change and may increase the amount of surface runoff generated by the Project site, assess the impacts to water quality and wildlife as a result of worst case toxins release generated at the Project site running off into storm drains into the ocean.

In all cases provide analyses based on current conditions as well as conditions projected to be in place as a result of the impacts of climate change, such as a rise in sea level.

**Land Use and Planning:**

Identify the recommended and actual ratio of residents to open space within Hermosa Beach to draw residents’ attention to the issue of re-zoning an area for “light manufacturing” as opposed to other possibilities that offer residents benefits that such re-zoning does not.

The NOP properly identifies multiple policy and planning documents that will be impacted by the Project and, indeed, will require amendments in order for the Project to proceed. The potential for the Project to impact other more recently adopted City goals and policies must also be addressed, including the impact on the City’s designation as a Blue Zone. Analyze all the ways in which this community improvement initiative-- in particular the smoke-free policy for all outdoor public places and a Bicycle Master Plan and Living Streets Policy that commit the City to making its streets friendly for cyclists and pedestrians--is likely to be undermined if the Project is implemented.

**Noise:**

Clarify whether the 32 foot wall would stay up during the drilling of the 30 permanent wells and 4 water extraction wells. Given the fact that each of those wells will take a month to drill, confirm that the wall will be up for a total of 34 plus months.

Confirm that the drilling will go on 24 hours/day for these approximately 3 years and that the sound barrier will not block all audible noise from the drilling, including at night.

The NOP indicates that certain “maintenance activities would typically be accomplished by utilizing a service rig or “workover” rig” and that such rig may operate up to 90 days per year.” Provide information about the noise generated by such a rig and confirm that the rig may operate during all 10 of the hours established for operation each weekday over approximately 3 months each year.

The NOP further indicates that “[t]he 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.” Explain this process and analyze the noise impacts on humans and animals.

Delineate neighboring citizens' rights with respect to limiting persistent or recurring sound disturbances. Describe steps that will need to be taken in the event that enforcement is necessary, including lengthy administrative and/or judicial proceedings, in order that the public may know in advance how long it may take to achieve compliance.

**Public Services:**

The NOP indicates that particular emphasis will be placed on the potential for fires during drilling operations. Identify instances of fires that have occurred during drilling operations at other project sites across the country, their proximity to residences and/or schools, and their impacts.

The NOP indicates that "[t]he Applicant proposes a program for temporary parking for the drilling employees on private property that would be owned, leased, or rented by the Applicant". Explain how many parking spaces and whether Applicant foresees converting residential properties into parking lots. In addition, thoroughly delineate any and all potential impacts of the Project on public parking that is already limited in the City.

**Recreation:**

Evaluate the Project's construction and operational impacts on recreation at the greenbelt, beaches, oceans and otherwise. Evaluation should be on an incremental basis and include possible disruptions due to accident, terrorism, or climatic event.

**Transportation/Traffic:**

Clearly delineate, for ease of reference by the public, what substances will be transported to and from the Project sites, what type and size of trucks will be used for each of the various substances, the general time of day (morning, afternoon, evening, overnight) transport will occur in each case, and potential hazards and impacts associated with the same. Describe the probable routes that will be used and detours the public might have to take when inland pipes are laid in street right-of-ways. Describe the probable effects on traffic conditions.

**Utilities and Service Systems/Wastewater:**

Identify how the City and E&B can assure residents that they will not be deprived of water during drought years as a consequence of the Project. If and when reclaimed water storage facilities dry up, explain whether and the extent to which E&B will stop oil and gas extraction, or will continue with oil and gas extraction despite damage to residential and public landscapes.

Determine to what extent West Basin's recycled water supply would meet the Project's water quality requirements. E&B states that they will need 130,000 gallons of water for the drilling phase only. For 34 wells that amounts to 4,420,000 gallons of water that could otherwise be used for landscaping and other purposes. (This must also be included in the cost/benefit analysis.)

The volume of required reclaimed water from the West Basin water recycling facility for 1:1 replacement of total produced fluids would be significantly larger than present estimates for such water, which do not account for 1:1 replacement of total produced fluids. The Project should be required to pay for upgrading the West Basin water recycling facility to produce such an increase in volume.

Analyze the impacts to the ecosystem when "tertiary disinfected recycled water" is pumped into the drill holes. Describe the possibilities of different kinds of toxins being released into the ocean through cracks in the shale.

**Mandatory Findings of Significance:**

Include an analysis of the impacts of the Project on climate change and associated health and environmental impacts as a stand-alone Project as well as cumulatively with other oil and gas drilling projects that lead to transport, refining, production, and consumption of fossil fuels.

The EIR should also specify:

- which agencies will monitor environmental compliance and at what level of attention
- who has authority to require compliance
- how quickly government authorities must be notified about environmental problems
- who is responsible for environmental remediation
- consequences for non-compliance
- requirements for bonding for environmental damage

The Sierra Club opposes the Project given the large number of serious environmental concerns outlined in the NOP. Governmental approval should be withheld based on existing environmental quality regulations. The preferred alternative to the Project should be NO PROJECT.

Very truly yours,



Hersh Kelley  
Executive Committee Chair  
Palos Verdes-South Bay Regional Group  
Sierra Club





Ken Robertson  
Community Development Director  
City of Hermosa Beach 1315 Valley Drive  
Hermosa Beach, CA 90254

**RECEIVED**  
AUG 15 2013  
COMMUNITY DEV. DEPT

Dear Ken,

We are writing on behalf of our organizations and our members in Hermosa Beach in advance of the Environmental Impact Report for the E & B Oil Development Project to express our concerns that the proposed oil drilling, processing and transportation associated with the project will needlessly risk Hermosa Beach's healthy environment, clean water and public safety.

Earthworks was founded in 1988 and works to protect communities and the environment from the destructive impacts of extractive industries. Clean Water Action has worked to protect our nation's waterways and drinking water and to prevent health threatening pollution since 1972.

Our review of the scoping document for the proposed Hermosa Beach oil development raised significant concerns that the community will not be adequately protected from the risks associated with the project. From our experience around the country, oil and gas development in densely-populated urban areas is inherently more risky than in rural areas; the nearest neighbors are residents and businesses, thus the risks harm from accidents, emergencies and failures increase precipitously. Oil and gas industry documents indicate that five percent of wells suffer cement casing failures immediately after drilling, and news media from across the nation reports frequent accidents occurring on drilling sites. How will E & B ensure that the no well failures, spills, blowouts, truck accidents, pipeline failures, or other common oil field accidents do not occur among the 30 wells and significant associated infrastructure planned for the site on 555 6<sup>th</sup> Street in Hermosa Beach?

Emissions from the site, particularly as it is in close proximity to homes and businesses and is located upwind from a populous urban area, is another concern. The site proposes gas flaring until gas pipeline construction is complete, on-site back-up electrical generators during the drilling phase, and increased truck traffic, all of which could have significant air quality impacts. Additionally, on-site storage of liquids produced from the wells and remediation of contaminated soil on the site could lead to additional emissions of unknown chemicals with potentially significant

health impacts. How will E & B ensure that emissions from all phases of this project be minimized to the point that there are no negative health, environmental or climate impacts?

The project's impacts will not be limited to the site itself; during early phases Hermosa Beach will experience greater truck traffic, and in later phases new pipelines will be constructed to transport oil and gas. The transport of oil and gas away from the site is one concern. Another is how E & B transports drill cuttings and waste materials away from the site, and how drilling fluids or chemicals needed for working over the wells are transported to the site. How will E & B ensure that no harm occurs to Hermosa Beach in the transport of drilling chemicals and materials to and from the site, including the target mineral, oil?

Many communities across the country have found themselves ill-prepared for the impacts of urban drilling and the risks of pipeline ruptures and other accidents that can occur on site. We strongly urge that Hermosa Beach and E & B ensure that the environment and community are not harmed before this proposal is allowed to proceed.

Sincerely,



Jennifer Krill  
Earthworks



Andrew Grinberg  
Clean Water Action



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AUG 14 2013

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NATURAL RESOURCES DEFENSE COUNCIL

August 12, 2013

Via Email ([krbertson@hermosabch.org](mailto:krbertson@hermosabch.org)) and U.S. Mail

Mr. Ken Robertson  
City of Hermosa Beach  
Community Development Director  
1315 Valley Drive  
Hermosa Beach, CA 90254

**RE: Notice of Preparation – Draft Environmental Impact Report, E & B Oil Development Project**

Dear Mr. Robertson:

On behalf of the Natural Resources Defense Council (“NRDC”), which has more than 1.3 million members and activists, over 250,000 of whom live in California, I am writing in response to the above-referenced Notice of Preparation (“NOP”) to prepare an Environmental Impact Report (“EIR”) for the E & B Oil Development Project (“Project”) in Hermosa Beach.

NRDC has been working for years to protect communities from the health and environmental impacts of oil drilling and other risky well stimulation and production activities. Here in Southern California, we have been working with public health advocates and residents in Baldwin Hills and Culver City to address a wide range of community concerns relating to the Inglewood Oil Field, the largest urban oil field in the country. We are also working with communities in central California to establish effective local safeguards and increase industry and agency transparency with regard to oil drilling and well stimulation operations.

Because our members and activists care deeply about protecting California’s coastal communities and ecosystems, we have been following the Project very closely and have a number of concerns, which we hope to raise in the coming months as the environmental review process unfolds. Generally speaking, the EIR needs to address all of the adverse impacts the Project will have on the natural and human environment, including, but not limited to, impacts on air quality, cultural and historical resources, biological resources, water quality and supply, geology, local and regional transportation patterns and traffic circulation, greenhouse gas emissions, and regional water infrastructure. The EIR also must propose adequate mitigation measures, include a comprehensive discussion of alternatives, and address the Project’s compliance with other laws as required under CEQA.

The EIR must also contain an accurate and complete project description. Courts have long held that “[a]n accurate, stable, and finite project description” is an essential part of an informative and legally sufficient EIR. *See, e.g., County of Inyo v. City of Los Angeles*, 71 Cal. App. 3d 185, 193 (1977). An accurate project description is needed to provide agencies and the public with “an intelligent evaluation of the potential environmental effects of a proposed activity.” *McQueen v. Board of Directors of the Mid-Peninsula Regional Open Space District*, 202 Cal. App. 3d 1136, 1143 (1988).

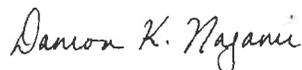
We are concerned that the project description in the Scoping Document is not clear as to what types of oil drilling, production, well stimulation, injection, or other activities will be conducted as part of the Project. For example, at the Public Scoping Meeting that took place on July 24, 2013, the EIR consultant made representations that the Project would not involve the use of hydraulic fracturing (“fracking”), a controversial well stimulation method in which large quantities of water and chemicals are injected at high pressure into the subsurface to fracture the rock and extract oil and gas. However, we found nothing in the Scoping Document to confirm this representation.

Moreover, the Scoping Document is unclear as to whether well stimulation methods other than fracking will be employed as part of the Project. During the debate over Senate Bill 4 (SB 4), the fracking bill that is currently making its way through the Legislature, we learned that well stimulation methods such as acidization and acid matrix stimulation are being used in California and may pose similar threats to groundwater, air quality, and public health as fracking. Hermosa Beach residents deserve to know whether these types of methods are under consideration for the Project.

The lack of clarity regarding the project description has led to confusion within the community. At the Public Scoping Meeting, the EIR consultant was unable to answer questions about what specific well stimulation and production methods would be used. For these reasons, we urge the City to clarify all aspects of the project description before the next round of public participation and community engagement.

Thank you in advance for considering our comments. Please ensure that we are notified of the availability of the draft EIR. We would also appreciate being notified if the schedule changes markedly from what is presently outlined in the NOP.

Very truly yours,



Damon Nagami  
Senior Attorney  
Director, Southern California Ecosystems Project

## Yu-Ying Ting

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**From:** David Hobstetter <dhobstetter@biologicaldiversity.org>  
**Sent:** Monday, August 12, 2013 4:33 PM  
**To:** Ken Robertson  
**Cc:** 'Andrea Weber'  
**Subject:** Comments on NOP of DEIS for the E&B Oil Project  
**Attachments:** 13 8 12 Final Comments on Hermosa Beach EB NOP of EIR.pdf

Dear Mr. Robertson,

Please find attached to this email a copy of the Center for Biological Diversity's Comments on the City of Hermosa Beach's Notice of Preparation of a Draft Environmental Impact Report for the E & B Oil Development Project. We are also sending you a hard copy of the attached comments, along with a compact disc containing the cited references. Please do not hesitate to contact me if you have any questions.

Sincerely,  
David

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David R. Hobstetter  
Center for Biological Diversity  
Climate Law Institute Staff Attorney  
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AUG 12 2013  
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CENTER for BIOLOGICAL DIVERSITY

August 12, 2013

*Via Email and Federal Express  
CD of Attachments Provided with Hard Copy*

Mr. Ken Robertson  
City of Hermosa Beach  
Community Development Director  
1315 Valley Drive  
Hermosa Beach, California, 90254  
krobertson@hermosabch.org

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**AUG 12 2013**

COMMUNITY DEV. DEPT.

**Re: Comments on the City of Hermosa Beach's Notice of Preparation of a Draft Environmental Impact Report for the E & B Oil Development Project**

Dear Mr. Robertson,

Thank you for the opportunity to comment on the Notice of Preparation ("NOP") of a draft environmental impact report ("EIR") for the E & B Oil Development Project ("Project"). The full Project would involve, among other things, the drilling and long-term production of oil and gas from 30 horizontal wells, and the construction and operation of two pipelines and four water injection wells. Such activities will potentially have negative effects on water, air quality, public health, the climate, and seismicity. Further, such potential impacts are of great concern because the Project will take place in an urban setting and only a short distance from a school, multiple parks, a greenbelt/trail, and homes. Clearly, the proposed Project site is a completely inappropriate location for oil and gas activities and the City of Hermosa Beach ("City") should not allow the Project to move forward. However, if the City insists upon moving forward with the Project, it is absolutely essential that it prepare a thorough and complete EIR. As explained below, it is of particular importance that the City analyze potential impacts on or related to: the enhanced recovery techniques the Project may use, the expected characteristics of the wells drilled, air quality, the climate, water quality and quantity, coastal and marine ecosystems and species, public health, and seismicity. Also, the City should further clarify how, in light of the potential demands of the settlement agreement and initiative process, its consideration of the Project will conform to the requirements of CEQA.

The Center for Biological Diversity ("Center") is a national, nonprofit conservation organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center also works to reduce greenhouse gas emissions to protect biological diversity, our environment, and public health. The Center has over 625,000 members and online activists, including many who live in Los Angeles County. Center members have recreational, scientific, and educational interests in the lands at issue, and are particularly

*Arizona • California • Nevada • New Mexico • Alaska • Oregon • Montana • Illinois • Minnesota • Vermont • Washington, DC*

David Hobstetter, Staff Attorney • 351 California St., Suite 600 • San Francisco, CA 94104  
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interested in protecting the many native, imperiled, and sensitive species and their habitats that may be affected by the proposed gas leasing.

**I. The EIR must analyze the enhanced recovery techniques the Project may use and the potential characteristics of the Project's wells.**

The City's NOP does not state whether the Project will employ fracking or other enhanced recovery techniques in order to produce oil and gas. Unless the Project approval or some other document – which in this case could be the referendum or the 1993 conditional use permit – ensures that such enhanced recovery techniques are prohibited, the EIR must analyze all such techniques that the Project may use. These techniques include, but are not limited to, hydraulic fracturing (“fracking”), cyclic steam injection, steam flooding, fracture acidizing, matrix acidizing, frac packing, enzyme enhanced recovery, and gas lifting.

It is particularly important that the EIR consider fracking because fracking is a technique regularly used to produce oil or gas from wells. According to the Bureau of Land Management, 90 percent of oil and gas wells drilled on public lands today are fracked.<sup>1</sup> While complete information on California wells is not available since DOGGR does not currently track or monitor the practice, the voluntary reporting site FracFocus indicates that over 1,000 wells have been fracked in California since January 2, 2011.<sup>2</sup> This figure is by definition an underestimate since reporting is entirely voluntary. Thus, in the absence of an express prohibition, the City must assume that the Project will involve fracking. Moreover, there are additional indications that the Project will involve fracking; in particular, the NOP states that the production wells will be drilled horizontally, which is a technique commonly used in combination with fracking to maximize the amount of formation that is fractured. In considering the impacts of fracking, the City must take into account the overwhelming evidence that fracking is harmful to air quality,<sup>3</sup> the climate,<sup>4</sup> water quantity,<sup>5</sup> water quality,<sup>6</sup> and public health;<sup>7</sup> and that fracking related activities can result in earthquakes.<sup>8</sup>

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<sup>1</sup> U.S. Department of the Interior Bureau of Land Management, Proposed Rule - Oil and Gas; Well Stimulation, Including Hydraulic Fracturing, on Federal and Indian Lands, 77 Fed. Reg. 27691 (May 11, 2012).

<sup>2</sup> FracFocus, Home Search Page, [www.fracfocus.org](http://www.fracfocus.org) (last visited August 7, 2013).

<sup>3</sup> See, e.g., Colborn, Theo et al., Natural Gas Operations from a Public Health Perspective, 17 Human and Ecological Risk Assessment 1047 (2011); McKenzie, Lisa et al., Human Health Risk Assessment of Air Emissions from Development of Unconventional Natural Gas Resources, *Sci Total Environ* (2012) (“McKenzie 2012”), doi:10.1016/j.scitotenv.2012.02.018.

<sup>4</sup> See, e.g., Howarth, Robert, et al., Methane and the greenhouse-gas footprint of natural gas from shale formations, *Climatic Change*, doi 10.1007/s10584-011-0061-5 (Mar. 31, 2011); Howarth, Robert, et al., Venting and Leaking of Methane from Shale Gas Development: Response to Cathles et al. (2012); Wang, Jinsheng, et al., *Reducing the Greenhouse Gas Footprint of Shale* (2011).

<sup>5</sup> See, e.g., U.S. Government Accountability Office, Information on Shale Resources, Development, and Environmental and Public Health Risks GAO-12-732 (Sep. 2012); New York State Department of Environmental Conservation, Revised Draft Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program, Well Permit Issuance for Horizontal Drilling and High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs at 5-93 (Sep. 7, 2011).

<sup>6</sup> See, e.g., Fontenot, Brian E. et al., An evaluation of water quality in private drinking water wells near natural gas extraction sites in the Barnett Shale Formation, *ENVIRONMENTAL SCIENCE & TECHNOLOGY* at 4 (2013); Vidic, R.D. et al., Impact of Shale Gas Development on Regional Water Quality, *SCIENCE* 340 (2013); U.S. Environmental Protection Agency, Draft Investigation of Ground Water Contamination near Pavillion, Wyoming (2011).

Acidization is also a technique being used with increasing regularity in California. Acidizing involves the injection of large amounts of acid – commonly hydrochloric acid – into the well. This acid can spill or leak into the environment. In Pennsylvania, an oil and gas company spilled 4,700 gallons of hydrochloric acid, with some of the acid breaching containment, reaching a creek tributary and killing fish.<sup>9</sup> Exposure to hydrochloric acid can be harmful. It is corrosive to the eyes, skin, and mucous membranes.<sup>10</sup> It is also listed as a hazardous air pollutant under the Clean Air Act,<sup>11</sup> and exposure to hydrochloric acid fumes can cause irritation of the respiratory system and pulmonary edema in humans.<sup>12</sup> In addition, acid treatments, just like hydraulic fracturing, can contain other hazardous additives, including *inter alia* corrosion inhibitors, surfactants, solvents, iron control agents, and non-emulsifiers,<sup>13</sup> creating the risk that these substances could escape into the environment.

Another highly hazardous enhanced recovery technique is steam injection, which includes both cyclic steam injection and steam flooding. Steam injection is associated with the creation of “large temperature variations and formation movements,” putting extreme pressure on the ground and well, and sometimes resulting in well failure or the migration of fluids and steam.<sup>14</sup> In fact, the practice can deform the ground so much as to result in “surface expressions,” which is when the steam, oil, gas, and whatever else might be mixed in underground have come bubbling to, or even exploding out of the surface of the ground.<sup>15</sup> Such a surface expression killed a Chevron worker who went to investigate steam coming from a surface expression caused by cyclic steaming in Kern County’s Midway-Sunset oil field.<sup>16</sup> When approaching the plume of steam, the worker fell into a sinkhole when the ground gave way.<sup>17</sup> These same underground

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<sup>7</sup> See, e.g., McKenzie 2012; Colborn 2011; Bamberger, Michelle & Robert E. Oswald, Impacts of Gas Drilling on Human and Animal Health, *NEW SOLUTIONS*, Vol. 22(1) 51-77 (2012).

<sup>8</sup> See, e.g., BC Oil and Gas Commission, Investigation of Observed Seismicity in the Horn River Basin (Aug. 2012) (“BC Oil 2012”); Keranen, Katie, Potentially induced earthquakes in Oklahoma, USA: Links between wastewater injection and the 2011 MW 5.7 earthquake sequence (2013); van der Elst, Nicholas J. *et al.*, Enhanced Remote Earthquake Triggering at Fluid-Injection Sites in the Midwestern United States, 341 *SCIENCE* 164 (2013).

<sup>9</sup> Detrow, Scott, 4,700 Gallons Of Acid Spill At Bradford County Drilling Site (July 5, 2012), available at <http://stateimpact.npr.org/pennsylvania/2012/07/05/4700-gallons-of-acid-spill-at-bradford-county-drilling-site/>.

<sup>10</sup> U.S. Environmental Protection Agency, Hydrochloric Acid (Hydrogen Chloride) (Jan. 2000), <http://www.epa.gov/ttnatw01/hlthef/hydrochl.html> (last visited May 6, 2013) (“EPA Hydrochloric Acid”)

<sup>11</sup> U.S. Environmental Protection Agency, The Clean Air Act Amendments of 1990 List of Hazardous Air Pollutants, <http://www.epa.gov/ttnatw01/orig189.html> (last visited May 6, 2013).

<sup>12</sup> EPA Hydrochloric Acid.

<sup>13</sup> Frenier, Wayne W. *et al.*, Abstract: Effect of Acidizing Additives on Formation Permeability During Matrix Treatments, *Society of Petroleum Engineers* (Feb. 2002), available at <http://www.onepetro.org/mslib/servlet/onepetroreview?id=00073705>.

<sup>14</sup> Xie 2008.

<sup>15</sup> California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, Report of Occurrences, The Chevron Fatality Accident, June 21, 2011, and Area Surface Expression Activity, Pre and Post Accident, Sections 21 & 22 T.32S./R.23E., Midway-Sunset Oil Field, Kern County (May 2012) (“Accident Report”); California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, Reports of Occurrence: Surface Expressions in Bakersfield (2011) (“Spill Binder”).

<sup>16</sup> Department of Conservation Division of Oil, Gas and Geothermal Resources, Executive Summary of Report of Occurrences: The Chevron Fatality Accident June 21, 2011 and Area Surface Expression Activity Pre and Post Accident – Sections 21 & 22 T.32S./R.23E., Midway-Sunset Oil Field Kern County (May 2012). (“Accident Report ES”); Accident Report at 2.

<sup>17</sup> Accident Report at 2.

displacements and surface expressions can also cause spills of hazardous fluids, which can result in water contamination.

The EIR must fully analyze the potential for enhanced recovery techniques to be used and the potential impacts resulting from the use of those techniques.

Additionally, the EIR should provide a complete discussion of the potential characteristics of the wells. For instance, the EIR should discuss the potential depths of the wells, the potential horizontal length of the wells, and whether a single well head may have multiple horizontal sections. Further, the EIR should disclose all target formations and discuss the characteristics of each of these formations and what type of techniques companies typically employ to exploit such deposits.

## **II. The EIR must analyze potential impacts to air quality.**

The City must also consider the numerous ways that the Project could harm air quality. Oil and gas operations emit numerous air pollutants, including volatile organic compounds (“VOCs”), nitrogen oxides (“NO<sub>x</sub>”), non-methane hydrocarbons (“NMHCs”), particulate matter (“PM”), hydrogen sulfide, and methane.

Oil and gas operations emit large amounts of VOCs and NO<sub>x</sub>.<sup>18</sup> Both VOCs and NO<sub>x</sub> are ozone precursors, and thus, due to emissions of these pollutants, many regions around the country with substantial oil and gas operations are now suffering from extreme ozone levels.<sup>19</sup> The primary sources of NO<sub>x</sub> are engines used in drilling and flaring.<sup>20</sup>

VOC emissions, which make up about 3.5 percent of the gases emitted by oil or gas operations,<sup>21</sup> are particularly hazardous.<sup>22</sup> VOCs emissions include the BTEX compounds – benzene, toluene, ethyl benzene, and xylene – which are Hazardous Air Pollutants.<sup>23</sup> Health effects associated with benzene include “acute and chronic nonlymphocytic leukemia, acute myeloid leukemia, chronic lymphocytic leukemia, anemia, and other blood disorders and immunological effects.”<sup>24</sup> Further, maternal exposure to benzene has been associated with an

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<sup>18</sup> Sierra Club et al. comments on New Source Performance Standards: Oil and Natural Gas Sector; Review and Proposed Rule for Subpart OOOO (Nov. 30, 2011) (“Sierra Club Comments”) at 13.

<sup>19</sup> Armendariz, Al, Emissions for Natural Gas Production in the Barnett Shale Area and Opportunities for Cost-Effective Improvements (2009) (“Armendariz”) at 1, 3, 25-26; Wendy Koch, *Wyoming’s Smog Exceeds Los Angeles’ Due to Gas Drilling*, USA Today (May 9, 2011); Craft, Elena, Environmental Defense Fund, *Do Shale Gas Activities Play a Role in Rising Ozone Levels?* (2012); Streater, Scott, *Air Quality Concerns May Dictate Uintah Basin’s Natural Gas Drilling Future*, N.Y. Times, (Oct. 1, 2010); Colorado Dept. of Public Health and Environment, Conservation Commission, *Colorado Weekly and Monthly Oil and Gas Statistics* (July 6, 2012) at 12; Four Corners Air Quality Group, *Four Corners Air Quality Task Force Report – Report of Mitigation Options* (2007) at vii.

<sup>20</sup> See, e.g., U.S. Environmental Protection Agency, *Oil and Natural Gas Sector: Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution*, Background Technical Support Document for the Proposed Rules, 76 Fed Reg 52738 (2011); Armendariz at 24.

<sup>21</sup> Brown, Heather, Memorandum to Bruce Moore USEPA / OAQPS / SPPD re Composition of Natural Gas for use in the the Oil and Natural Gas Sector Rulemaking (July 28, 2011) (“Brown Memo”) at 3.

<sup>22</sup> McKenzie 2012; Food & Water Watch, *The Case for a Ban on Fracking* (2012).

<sup>23</sup> 42 U.S.C. § 7412(b).

<sup>24</sup> McKenzie 2012 at 2.

increase in birth prevalence of neural tube defects; and xylene exposure can cause eye, nose, and throat irritation, difficulty in breathing, impaired lung function, and nervous system impairment.<sup>25</sup> In fact, many of the volatile chemicals associated with drilling and oil and gas waste are associated with serious effects to the respiratory, nervous, or circulatory systems.<sup>26</sup> Also, a recent study sampling air quality near Colorado gas wells found additional cause for concern regarding VOC emissions: among other things, it found methylene chloride in high concentrations.<sup>27</sup> The study states that for the wells tested “[m]ethylene chloride, a toxic solvent not reported in products used in drilling or hydraulic fracturing, was detected 73% of the time; several times in high concentrations,” including one reading of 1730 ppbv.<sup>28</sup> While the source of the methylene chloride was not entirely clear, the study reported that it is stored on well pads for cleaning purposes.

In addition, the study of Colorado gas wells also found high levels of multiple NMHCs, which can be associated with multiple health effects, including potentially effects to the endocrine system at very low concentrations.<sup>29</sup> NMHCs generally make up almost 18 percent of produced natural gas, and operations ultimately emit large amounts of these pollutants. Moreover, like VOCs and NO<sub>x</sub>, NMHCs are ozone precursors.

Particulate matter is another pollutant the oil and gas industry emits in significant quantities. The heavy equipment regularly used burns diesel fuel, generating fine particulate matter.<sup>30</sup> The particulate matter emitted by diesel engines is a particularly harmful.<sup>31</sup> Vehicles also kick up fugitive dust, which is particulate matter, by traveling on unpaved roads.<sup>32</sup> Further, both NO<sub>x</sub> and VOCs, which are heavily emitted by the oil and gas industry, are particulate matter precursors.<sup>33</sup> Some of the health effects associated with particulate matter exposure are “premature mortality, increased hospital admissions and emergency department visits, and development of chronic respiratory disease.”<sup>34</sup>

Oil and gas operations can also emit hydrogen sulfide. The hydrogen sulfide is contained in the natural gas and makes that gas “sour.”<sup>35</sup> Hydrogen sulfide may be emitted during all stages of operation, including exploration, extraction, treatment and storage, transportation, and refining. EPA has identified large parts of California –including the region at issue – as areas where

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<sup>25</sup> *Id.*

<sup>26</sup> Colborn 2011.

<sup>27</sup> Colborn 2012.

<sup>28</sup> *Id.*

<sup>29</sup> Colborn 2012.

<sup>30</sup> Earthworks, Sources of Oil and Gas Pollution (2011),

[http://www.earthworksaction.org/issues/detail/sources\\_of\\_oil\\_and\\_gas\\_air\\_pollution](http://www.earthworksaction.org/issues/detail/sources_of_oil_and_gas_air_pollution) (last visited Feb 19, 2013).

<sup>31</sup> Bay Area Air Quality Management District, Particulate Matter Overview, Particulate Matter and Human Health (2012).

<sup>32</sup> U.S. Environmental Protection Agency, Regulatory Impact Analysis for the Proposed Revisions to the National Ambient Air Quality Standards for Particulate Matter (June 2012),

[http://www.epa.gov/ttnecas1/regdata/RIAs/PMRIACombinedFile\\_Bookmarked.pdf](http://www.epa.gov/ttnecas1/regdata/RIAs/PMRIACombinedFile_Bookmarked.pdf) at 2-2, (“EPA RIA”)

<sup>33</sup> EPA RIA at 2-2.

<sup>34</sup> U.S. Environmental Protection Agency, National Ambient Air Quality Standards for Particulate Matter Proposed Rule, 77 Fed. Reg. 38,890, 38,893 (June 29, 2012).

<sup>35</sup> Sierra Club Comments.

natural gas tends to contain hydrogen sulfide.<sup>36</sup> Long-term exposure to hydrogen sulfide is linked to respiratory infections, eye, nose, and throat irritation, breathlessness, nausea, dizziness, confusion, and headaches.<sup>37</sup>

Further, oil and gas operations emit significant amounts of methane. In addition to its role as a greenhouse gas, methane contributes to increased concentrations of ground-level ozone, the primary component of smog, because it is an ozone precursor.<sup>38</sup> This effect can be substantial. One paper found that “[r]educing anthropogenic CH<sub>4</sub> emissions by 50% nearly halves the incidence of U.S. high-O<sub>3</sub> events . . . .”<sup>39</sup>

### **III. The EIR must analyze the potential climate impacts of the Project.**

Oil and gas operations are a major cause of climate change. Emissions result from oil and gas exploration, development, and production operations and the combustion of oil or gas for energy. Of great concern are methane emissions. Natural gas emissions are generally about 84 percent methane.<sup>40</sup> Methane is a potent greenhouse gas that contributes substantially to global climate change. Its global warming potential is approximately 33 times that of carbon dioxide over a 100 year time frame and 105 times that of carbon dioxide over a 20 year time frame.<sup>41</sup>

Oil and gas operations release large amounts of methane.<sup>42</sup> While the exact amount is not clear, EPA has estimated that “oil and gas systems are the largest human-made source of methane emissions and account for 37 percent of methane emissions in the United States or 3.8 percent of the total greenhouse gas emissions in the United States.”<sup>43</sup> In some fields, methane emissions rates are startlingly high. One recent study of a field in Uintah County, Utah, found huge amounts of produced natural gas – perhaps as much as 11.7 percent – leaking into the atmosphere.<sup>44</sup> Methane leakage is also a problem in Southern California. A recent study of methane emissions in the Los Angeles Basin found that a startling 17 percent of total methane produced was leaked or vented to the atmosphere.<sup>45</sup>

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<sup>36</sup> U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Report to Congress on Hydrogen Sulfide Air Emissions Associated with the Extraction of Oil and Natural Gas (EPA - 453/R - 93 - 045), at III-68 (Oct. 1993) (“USEPA 1993”).

<sup>37</sup> *Id.* at i.

<sup>38</sup> 76 Fed Reg 52,738.

<sup>39</sup> Fiore, Arlene et al., Linking ozone pollution and climate change: The case for controlling methane, 29 *Geophys. Res Letters* 19 (2002); *see also* Martin, Randal et al., Final Report: Uinta Basin Winter Ozone and Air Quality Study Dec 2010 - March 2011 (2011) at 7.

<sup>40</sup> Brown Memo at 3; Power, Thomas, *The Local Impacts of Natural Gas Development in Valle Vidal, New Mexico*, University of Montana (2005).

<sup>41</sup> Howarth 2011; Shindell, Drew, Improved Attribution of Climate Forcing to Emissions, 326 *Science* 716 (2009) (“Shindell 2009”).

<sup>42</sup> Natural Resources Defense Council, *Leaking Profits* (2012) (“NRDC, *Leaking Profits*”).

<sup>43</sup> U.S. Environmental Protection Agency, Natural Gas STAR Program, Basic Information, Major Methane Emission Sources and Opportunities to Reduce Methane Emissions (2012) (“USEPA, Basic Information”); *see also* Petron, Gabrielle, et al., Hydrocarbon emissions characterization in the Colorado Front Range: A pilot study, 117 *Journal of Geophysical Research* (2012).

<sup>44</sup> *See, e.g.*, Karion, Anna et al., Methane emissions estimate from airborne measurements over a western United States natural gas field, doi: 10.1002/grl.50811 (2013).

<sup>45</sup> Peischl, J. et al., Quantifying sources of methane using light alkanes in the Los Angeles basin, California (2013).

Other pollutants that will be emitted by the Project also warm the climate. In particular, oil and gas operations result in the emission of large amounts of NO<sub>x</sub> and VOCs. Both of these pollutants are precursors of tropospheric ozone,<sup>46</sup> which is an important contributor to climate change.<sup>47</sup> Further, oil operations result in significant carbon dioxide emissions from the combustion of fossil fuels through the operation of engines or through flaring.<sup>48</sup>

Also, the refining and burning of any oil or gas that the Project produces will generate greenhouse gas emissions. In considering such emissions, it is important to note that the quality of oil and gas varies from place to place. For instance, while some formations yield light, sweet crude that among varieties of crude necessitates a relatively low energy input to refine, much of the oil produced in California is heavy oil that requires large energy inputs to produce and refine.<sup>49</sup> Here, the NOP indicates that maximum potential daily production values are 8,000 barrels of oil and 2.5 million cubic feet of natural gas.<sup>50</sup> The combustion of this oil and gas will result in significant greenhouse gas emissions.

In producing the EIR the City must consider all of these emissions, including, but not limited to, direct emissions from the operation of combustion engines, flares, and other Project equipment or machinery; the leakage of natural gas; indirect emissions from induced activities; and emissions from the refining and combustion of the oil and gas produced.

#### **IV. The EIR must analyze the potential impacts to water quality and quantity.**

Oil and gas activities in general are significant threats to water in large part because the waste these operations produce are highly hazardous, with many chemicals in these waste streams being known carcinogens, like benzene. Solid and fluid oil exploration wastes can generally be placed into three categories: produced water, drilling fluids and cuttings, and associated wastes.<sup>51</sup> Produced water can contain harmful substances like benzene, arsenic, lead, hexavalent chromium, barium, chloride, sodium, sulfates, and boron,<sup>52</sup> and it also can be radioactive.<sup>53</sup> Additionally, oil and gas operations generate a lot of produced water with California operations producing a bit less than three billion barrels per year.<sup>54</sup>

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<sup>46</sup> Earthworks, Oil and Gas Air Pollution Factsheet (2006), available at [http://www.earthworksaction.org/library/detail/oil\\_and\\_gas\\_pollution\\_fact\\_sheet/](http://www.earthworksaction.org/library/detail/oil_and_gas_pollution_fact_sheet/).

<sup>47</sup> Shindell 2009

<sup>48</sup> Zahniser, Angela, Characterization of Greenhouse Gas Emissions Involved in Oil and Gas Exploration and Production Operations (2007).

<sup>49</sup> California Environmental Protection Agency Air Resource Board, Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Low Carbon Fuel Standard, Appendix C, Calculation of Baseline Crude Average Carbon Intensity Value at C-5 (2011).

<sup>50</sup> The City should clarify whether this is a per-well estimate, or an estimate for the entire Project.

<sup>51</sup> Mall, Amy, Petition for Rulemaking Pursuant to Section 6974(a) of the Resource Conservation and Recovery Act Concerning the Regulation of Wastes Associated with the Exploration, Development, or Production of Crude Oil or Natural Gas or Geothermal Energy at 7 (Sep. 8, 2010).

<sup>52</sup> *Id.* at 8.

<sup>53</sup> See E&ENews, *Proposed law would force drillers to test waste for radiation* (Feb. 14, 2013).

<sup>54</sup> California Division of Oil, Gas and Geothermal Resources, 2011 Preliminary Report of California Oil and Gas Production Statistics at 3 (Apr. 2012).

Drilling fluids and drill cuttings are also potentially harmful.<sup>55</sup> Drilling fluids in reserve pits have been found to contain chromium, lead, and pentachlorophenol at hazardous levels, and oil-based drilling fluids can also contain benzene.<sup>56</sup> Drilling fluids may contain numerous carcinogenic and toxic substances, including arsenic, mercury, and benzene.<sup>57</sup>

Associated wastes include, among other things, oily sludges, workover wastes, and well completion and abandonment wastes.<sup>58</sup> These wastes are generally the lowest in volume, but are nevertheless of great concern because they can contain a range of chemicals and naturally occurring materials that are threats to health and safety.<sup>59</sup> For example, some associated wastes have been found to potentially be ignitable and others can contain toxic heavy metals, such as lead.<sup>60</sup>

These hazardous wastes from oil operations regularly contaminate the environment and can reach aquifers and surface waters.<sup>61</sup> Surface pits in particular are a major hazard. For instance, New Mexico data shows 743 instances of groundwater contamination due to surface pits, almost entirely over the last three decades.<sup>62</sup> Additionally, the transportation and disposal of substances related to oil and gas operations can result in serious impacts. Pipelines are common sources of leaks resulting in environmental contamination, and the injection of waste into disposal wells can cause contamination. Also, many other extremely harmful spills and releases occur during the transport or disposal of wastes, including spills from equipment failures, accidents, negligence, or dumping.<sup>63</sup> Moreover, well failure or a lack of containment of underground fluids can allow fluids to escape beyond the well and confining zone and contaminate water. Although it is unclear how often wells in California fail because DOGGR asserts it does not track this data, industry reports elsewhere indicate that the failure rate could be high. For instance, up to 60 percent of offshore wells in the Gulf of Mexico experience sustained casing pressure, which is a significant problem indicating that there is communication to the annulus from a sustained pressure source due to inadequate zonal isolation.<sup>64</sup>

In addition to the dangers of water contamination, oil and gas operations consume large amounts of water. Here, the NOP estimates that drilling a well alone will consume about 130,000

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<sup>55</sup> U.S. Congress, Office of Technology Assessment, *Managing Industrial Solid Wastes from Manufacturing, Mining, Oil and Gas Production, and Utility Coal Combustion – Background Paper* at 67 (1992).

<sup>56</sup> *Mall* at 10.

<sup>57</sup> *Id.* at 10-11 (quoting Oil & Gas Accountability Project, *Pit Pollution – Backgrounder on the Issues, with a New Mexico Case Study* (2004)) (internal quotation marks omitted).

<sup>58</sup> *Mall* at 11.

<sup>59</sup> *Id.*

<sup>60</sup> *Id.*

<sup>61</sup> Natural Resources Defense Council, *Petition for Rulemaking Pursuant to Section 6974(a) of the Resource Conservation and Recovery Act Concerning the Regulation of Wastes Associated with the Exploration, Development, or Production of Crude Oil or Natural Gas or Geothermal Energy* at 17 (Sep. 8, 2010) (“NRDC *Petition for Rulemaking*”).

<sup>62</sup> New Mexico Oil and Conservation Division, *OGAP Analysis of data provided in New Mexico Energy, Minerals and Natural Resources Dep’t, Oil and Conservation Div., Cases Where Pit Substances Contaminated New Mexico’s Ground Water* (2008).

<sup>63</sup> California Dept. of Fish and Game, *Environmental Incident Report: Vintage Production California LLC Tar Creek Crude Oil and Produced Water Spills, January 30, 2007 and February 6, 2007*.

<sup>64</sup> Brufatto, Claudio et al., *From Mud to Cement – Building Gas Wells* (2003).

gallons of water, meaning that the drilling of 30 wells will consume almost 4 million gallons of water. Additional water will be consumed during other stages, including 2,000 gallons per day during clearing and grading operations.<sup>65</sup>

Many aspects of the Project could result in serious impacts to water, including the drilling production of oil and gas from 30 wells and the construction and operation of the pipelines. CEQA requires that the City consider all of the potential impacts to water quality and quantity described above in the EIR.

#### **V. The EIR must analyze potential impacts to coastal and marine ecosystems.**

The Environmental Impact Report must analyze the impacts of the proposed Project on California's rich coastal and marine ecosystems. This is especially true because the Project is expected to involve the drilling of directional wells to access fossil fuel deposits in tidelands. California has many species of whales, porpoises, dolphins, pinnipeds, and sea otters. There are over 500 species of fish that occur offshore of southern California. The coastal waters off California are a productive foraging region for whales, sea turtles, and they support a myriad of wildlife.

The coastal region where this Project occurs also provides habitat for many protected species. Blue, fin, sei, humpback, and sperm whales, as well as other marine mammals like sea otters use southern California seawaters. Leatherback, loggerhead, green, and olive ridley sea turtles also occur in this area. Endangered white and black abalone are found in the intertidal areas. Protected fish, including the tidewater goby and southern California steelhead population, are in the area. Threatened and endangered sea birds including the California least tern, western snowy plover, and light-footed clapper rail are also present in the project area. The beach spectacle-pod, which is a California threatened species, may also be present in the area. The EIR must take into account the potential for direct, indirect, and cumulative impacts to protected species and their habitat.

First, the report should analyze impacts from oil spills, oil spill response, and other discharges associated with oil drilling. Sea otters and sea birds can be particularly vulnerable to oil spills, and the nearshore areas that fish and other wildlife depend on as nursery and foraging areas are at risk from a spill. Juvenile and larval fish and other marine animals can be particularly vulnerable to oil. Oil spill response activities can also have environmental impacts. For example, the use of chemical dispersants to respond to oil spills in California may increase the toxicity of oil to certain animals. In addition to a thorough analysis of potential oil spill impacts, other impacts to water quality must also be considered. The release of drilling fluids and other chemicals could contaminate the coastal area and waters. This deserves a comprehensive evaluation in the report.

Second, the impacts from noise and light pollution on the coastal and marine environment must be analyzed. The construction and drilling can increase noise pollution in the area. The increasing noise of the marine environment can interfere with marine mammal behaviors and communications. It can cause displacement and disruption of normal behaviors. Seabirds are also

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<sup>65</sup> The City should clarify whether this is a per-well figure.

vulnerable to disorientation from coastal lighting and oil and gas operations increase light pollution. Artificial light attracts seabirds at night, especially nocturnally active species such as auks, shearwaters, and storm-petrels, and disrupts their normal foraging and breeding activities in several ways. In a phenomenon called light entrapment, seabirds continually circle lights and flares on vessels and energy platforms, instead of foraging or visiting their nests, which can lead to exhaustion and mortality. Seabirds also frequently collide with lights or structures around lights, causing injury or mortality, or strand on lighted platforms where they are vulnerable to injury, oiling or other feather contamination, and exhaustion.

Third, the possibility of erosion, destabilization, and subsidence of the coastal lands and tidelands should be considered. The drilling and possible hydraulic fracturing of the wells can increase ground instability. The tidelands that the project proposes for drilling can be affected by changes in pressure and structure from the drilling and stimulation activities. Additionally, sea level rise and extreme storm events, such as those during El Niño years, can affect beaches. The interaction between the Project's impacts and the effects of sea level rise and severe storms should be analyzed because the drilling area is close to the ocean and can result in increased runoff of pollutants or inundation of the drilling pad and operations.

#### **VI. The EIR must analyze the public health impacts of the Project.**

As explained above, oil and gas operations result in significant impacts to, among other things, air and water quality and coastal and marine environments. This is great cause for concern because the Project site is in a densely populated area. It is only about a half mile away from a school, and is very near multiple parks, including South Park, which has a playground, and the Hermosa Valley Greenbelt/Trail. Also, the proposed Project site is surrounded by residences, with some residences sitting only a few hundred feet away. Thus, the proposed location basically guarantees that people – including those in sensitive groups, such as children or the elderly – will be exposed to pollutants the Project generates. The EIR must thoroughly analyze the potential impacts to public health.

#### **VII. The EIR must analyze the potential for the Project to cause earthquakes.**

The Project will involve the withdrawal of fluids out of the ground and the injection of fluids into the ground, and may involve the use of enhance recovery techniques, such as fracking. These activities are known to trigger earthquakes. The EIR must fully analyze the potential for the Project to cause or contribute to earthquakes.

Scientists have long known that oil and gas activities are capable of triggering earthquakes, with records of the connection going back to the 1920s.<sup>66</sup> In California, oil and gas extraction has in the past likely induced strong earthquakes, including two over 6.0 in magnitude.<sup>67</sup> Recent studies have also drawn a strong connection between the recent rise in waste water injection and increased earthquake rates.<sup>68</sup> Waste water injection has potentially

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<sup>66</sup> National Research Council, *Induced Seismicity Potential in Energy Technologies* (2012) (“NRC 2012”) at 3.

<sup>67</sup> NRC 2012 at 28.

<sup>68</sup> van der Elst 2013.

been triggering seismic events in Ohio,<sup>69</sup> Oklahoma,<sup>70</sup> and Texas.<sup>71</sup> In addition, fracking has been found to contribute directly to seismic events,<sup>72</sup> and even if the earthquakes that fracking directly generates are small, fracking could be contributing to increased stress in faults that leaves those faults more susceptible to otherwise naturally triggered earthquakes of a greater magnitude.<sup>73</sup>

**VIII. The EIR must analyze all direct, indirect and cumulative impacts, must consider a range of alternatives, and must fully mitigate potentially significant impacts, and must clarify how CEQA will apply to the Project.**

Finally, the City must fully analyze all direct, indirect, and cumulative impacts, including the implications of the Project for other activities. For instance, the City should consider whether the Project could demonstrate that certain techniques, such as fracking or acidization, are helpful in achieving the economic production of oil or gas from a particular formation or type of formation, and how such a demonstration could lead to development elsewhere or a further intensification of activities at the project site. Also, the City should consider a full range of alternatives to the Project, including a no-action alternative, and provide complete analysis of whether the Project is consistent with California's greenhouse gas reduction goals. Further, the City must fully mitigate all potentially significant impacts.

Also, the City should clarify how its consideration of the Project will comply with CEQA. Importantly, because the City is putting the Project on the ballot as the result of a settlement agreement that may demand the inclusion of specific provisions in the ballot initiative, it is unclear how a consideration of alternatives and mitigation measures can usefully inform the content of the ballot measure. Further, the City states that the specific content of the ballot measures will be determined prior to ballot publication, but it is not clear whether the public will have the opportunity to comment on the specific ballot language the City ultimately intends to use. The City should further clarify the process through which it will craft the ballot language and the extent to which the public will be involved in the process.

**Conclusion**

Thank you for the opportunity to submit these comments. We look forward to a thorough discussion of the issues discussed above in the EIR. Please contact David Hobstetter, dhobstetter@biologicaldiversity.org, (415) 632-5321, if you have any questions of would like to discuss these issues further.

Respectfully submitted,

---

<sup>69</sup> Ohio Department of Natural Resources, Executive Summary: Preliminary Report on the Northstar 1 Class II Injection Well and the Seismic Events in the Youngstown, Ohio, Area (2012) ("Ohio DNR Northstar"); Fountain, Henry, *Disposal Halted at Well After New Quake in Ohio*, New York Times (January 1, 2012).

<sup>70</sup> Keranen 2013; Holland, Austin, Examination of possibly induced seismicity from hydraulic fracturing in the Eola Field, Garvin County, Oklahoma, Oklahoma Geological Survey Open-File Report OF1-2011 (2011) ("Holland").

<sup>71</sup> Frohlich, Cliff, Two-year survey comparing earthquake activity and injection-well locations in the Barnett Shale, Texas, Proceedings of the National Academy of Sciences (2012).

<sup>72</sup> BC Oil 2012.

<sup>73</sup> See van der Elst (2013).

/s/ David R. Hobstetter  
David R. Hobstetter  
Staff Attorney  
Center for Biological Diversity  
351 California St., Ste. 600  
San Francisco, CA 94104

Encls:

List of References Cited and Attached to Hard Copy of Comments

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**Frances Estrada**

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**From:** Liz Crosson <liz@lawaterkeeper.org>  
**Sent:** Monday, August 12, 2013 2:51 PM  
**To:** Ken Robertson  
**Cc:** Toffer MacKay; Brian Meux  
**Subject:** Scoping Comments - E&B Oil Development Project  
**Attachments:** Hermosa Oil Drilling Scoping Comments\_LA Waterkeeper\_Aug 2013.pdf

**RECEIVED**  
**AUG 12 2013**  
COMMUNITY DEV. DEPT.

Dear Mr. Robertson,

Please accept the attached comments on behalf of Los Angeles Waterkeeper.

Best,  
Liz Crosson  
Executive Director  
Los Angeles Waterkeeper  
310-394-6162 x100



August 12, 2013

Mr. Ken Robertson  
Community Development Director  
City of Hermosa Beach  
1315 Valley Drive  
Hermosa Beach, CA 90254

**RECEIVED**

AUG 12 2013

COMMUNITY DEV. DEPT

SENT VIA EMAIL: [krobertson@hermosabch.org](mailto:krobertson@hermosabch.org)

**Subject: NOTICE OF PREPARATION OF A DRAFT EIR, SCOPING PERIOD**

Dear Mr. Robertson,

Los Angeles Waterkeeper (formerly Santa Monica Baykeeper) appreciates the opportunity to submit scoping comments on the proposed E & B Oil Development Project in the City of Hermosa Beach. Los Angeles Waterkeeper submits these comments and recommendations on behalf of our members and supporters. Our mission is to protect and restore Santa Monica and San Pedro Bays, as well as all adjacent waterways in Los Angeles County. We fulfill our mission through litigation, advocacy, restoration, and community action. The following comments briefly outline some of our major concerns with the limited information available so far.

The E&B Oil Development Project in Hermosa Beach proposes to develop a 1.3 acre site for drilling and production, approximately half a mile from the Pacific Ocean, directly across from the Hermosa Valley Greenbelt and surrounded by residential housing. During several phases of the project, E&B Natural Resources and their contractors would need to contend with seven abandoned oil and gas wells within a quarter mile of the proposed site<sup>1,2</sup>. The residents of this area may experience an increase of induced seismic events from oil and gas production activities, specifically Class II water injection wells<sup>3-12</sup>. Furthermore, the environment will be exposed to countless chemicals and the threat of oil and gas leaks. Based on this understanding, the following are recommendations for the scope of the Draft EIR:

- Based on the site proximity to abandoned wells, the EIR should focus on potential environmental degradation from abandoned wells and potential leaks during site preparation and oil and gas production activities.
- The EIR should address the risk of induced seismic activity to the environment from Class II water injection wells and oil and gas production.
- Baseline subsidence monitoring has been limited to land only, although tidelands drilling will occur under the seafloor. Thus, baselines should be established offshore. The EIR should examine the effects from subsidence occurring both onshore and

offshore.

- The EIR should address the potential pollution of aquifers from produced water reinjection.
- The EIR should assess the impact on local water supply due to the significant use of potable water proposed.
- The EIR should assess the project's potential to violate water quality standards and waste discharge requirements under the federal Clean Water Act and Porter-Cologne. Potential water quality impacts should be assessed for the construction, development, and implementation phases of the project.
- The EIR should examine High Rate Gravel Packing that may be used as a completion method for this project.
- Hermosa Beach contains areas designated as critical habitat for the threatened Western Snowy Plover. The EIR should address the threats to the federally threatened species from the proposed project.

Thank you for your consideration in this matter.

Sincerely,



Liz Crosson  
Executive Director  
Los Angeles Waterkeeper



Jonathan MacKay  
toffermac@gmail.com

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Events In The Youngstown, Ohio, Area. (Ohio Department of Natural Resources,  
2012).

**Frances Estrada**

---

**From:** Stacey Armato <staceyarmato@gmail.com>  
**Sent:** Monday, August 12, 2013 4:20 PM  
**To:** Ken Robertson  
**Subject:** eir scoping comment from SHBO  
**Attachments:** SHBO EIR Comments.pdf

**RECEIVED**  
**AUG 12 2013**  
COMMUNITY DEV. DEPT.

Hi there, Ken.

Here are the comments for the EIR from Stop Hermosa Beach Oil. Please let me know that you received this.

Thanks!  
Stacey

Stacey Armato  
11611 San Vicente Blvd.  
Suite 1020  
Los Angeles, CA 90049  
310-445-9400 office  
310-709-8177 cell  
310-806-4559 fax



August 12, 2013

TO: Mr. Ken Robertson, City of Hermosa Beach, Community Development Director,  
1315 Valley Drive, Hermosa Beach, California, 90254  
(310) 318-0242 kroberson@hermosabch.org

FROM: Stacey Armato, Stop Hermosa Beach Oil

cc.: Dr. Tom Williams, PhD, Citizens' Coalition for a Safe Community

RE: E&B Oil Development Project (Project Application)  
(E&B Natural Resources Application)

Subject: Comments on Application, CEQA Notice of Preparation, Initial Study (Scoping), and Related Documents.

**RECEIVED**

**AUG 12 2013**

COMMUNITY DEV. DEPT

Members of Stop Hermosa Beach Oil (SHBO) along with other organizations have reviewed the Project Application (PA), Notice of Preparation (NOP), Initial Study (IS), and various other supporting documents available to the public regarding the Project:

SHBO is also gathering various public statements by E&B and its various consultants regarding the Project and its various facilities and activities that are referred to as part of the Project, or as yet not included in the Project.

SHBO is very concerned with the incompleteness and inadequacy of the Scoping and EIR preparation process to date.

SHBO is also concerned that the Applicant has made many public announcements which appear to conflict with or contradict elements provided or absent in their submittals and CEQA documents.

SHBO has attached detailed comments to this letter. They are arranged in the expected order of the Environmental Impact Report (EIR).

SHBO would like its comments to be incorporated into the preparation and content of the Draft EIR (DEIR) which may lessen the expected volume of comments for the DEIR in 2014.

Stacey Armato  
Michael Collins  
George Schmeltzer

cc: Dr. Tom Williams, Citizens' Coalition for a Safe Community, ctwilliams2012@yahoo.com

A. Scoping and CEQA Process and Outcomes

Various documents circulated during the Scoping Process differed in terminology and contents, e.g., hard copy handout at Scoping Meeting had different proposed sections for the DEIR than those presented in the Meeting and those in the Initial Study (IS). The SHBO therefore requires preparation/circulation of a Scoping Report by Sep.16 and periodic, monthly, updates of Report with the Table of Contents, Glossary, and Definitions for the DEIR through Dec.23, 2013.

We expect the DEIR to be voluminous and therefore require DEIR circulation only after Jan.6, 2014 (to avoid the holiday season) in order to promote the greatest public interests in the Project and review of the DEIR and to avoid potential for further delays.

SHBO also requires that all CEQA documents be made available electronically through the State of California Clearinghouse.

As the expected DEIR will exceed 1000 (some say maybe 10,000 pages) we require that the "Project Manager" determine an appropriate Review Period, not of 60 days but 90 days if >2500pgs to provide meaningful and well documented comments.

The applicable review period shall be the minimum time permitted by Sections 15082, 15087, and 15105 of the CEQA Guidelines unless the project manager determines that a longer period is justified.

To further improve the character of the comments and ease of document and comment referencing, SHBO requires the anticipated voluminous DEIR to be fully digitally searchable to facilitate public review.

SHBO notes that the hardcopy/presentation Scoping materials and the IS did not refer to any alternatives, options, or variants, and SHBO considers this to be a serious error, deficiency, and bias approach.

Because of the long-history and various references to documentation, SHBO requests a centralized publically accessible bibliography \*references) be established along with the Scoping Report and DEIR Table of Contents so that all related documents which shall be entered into the CEQA process are known and available prior to the circulation of the DEIR.

Many interpretations, controversies, and differences of technical/specialists' opinions on various issues appears to have arisen during 1990 to date. SHBO requires that the Scoping Report at least list the current and updated list of potential "Controversies" and "Differences of Specialists Opinions" and assignments to specific chapters of the DEIR (Table of Contents).

B. Public Announcements

SHBO and others have noted that the Applicant's public verbal and written statements may differ from and be more detailed than various statements within the NOP/IS, e.g.:

[http://www.dailybreeze.com/opinions/ci\\_23369287/tom-bakaly-hermosas-future-is-hands-residents?IADID=Search-www.dailybreeze.com-www.dailybreeze.com](http://www.dailybreeze.com/opinions/ci_23369287/tom-bakaly-hermosas-future-is-hands-residents?IADID=Search-www.dailybreeze.com-www.dailybreeze.com)

par.9 ...the city also chose to undertake two additional studies: a cost/benefit analysis and a health impact assessment for the proposed oil production project.

10 The health impact assessment will evaluate the proposed project's potential impact on the community's health.

10 The cost/benefit analysis will assess the costs and the benefits that may occur should Hermosa Beach voters either approve or reject the proposed oil production project.

11 ...E&B...conducted its own economic study, the city...independent review of the key financial considerations...project's impacts on property values and tourism...potential revenues and costs for the city and the Hermosa Beach City School District.

To date, the IS does not specifically reference the processing of the Health Impact Assessment (HIA) and the Cost/Benefit Analysis (CBA), SHBO therefore requires that the HIA be incorporated under Air Quality assessments and the CBA and any other available economic analyses be incorporated under a new environmental sector section: Socioeconomics, as used in other California EIRs.

E&B/Applicant's outside PR Claims:

"...utilize today's latest, proven technology...potential...issues..."

"Technologies provide maximum...protection."

SHBO also requires that all written statements (news releases, articles, opinion editorials, etc.) from the Applicant and City (Lead Agency) representatives with regard to the Project shall be considered as formal elements and conditions under the DEIR and shall be so compiled and included as appendices within the DEIR.

SHBO requires that from such a compilation various DEIR sectors shall provide compendia of the "latest proven" and "maximum achievable" protection technologies and shall apply such to each sector.

EXAMPLES: California's E&B Resources Scopes Hermosa Beach's 45M Barrel Potential by Robin Dupre, Rigzone Staff, Tuesday, August 06, 2013 E&B Natural Resources Management, a California-based oil company, is proposing to develop a 1.3 acre site...use directional drilling of 30 wells to access oil and gas reserves in the tidelands and within an onshore area known as the uplands...will access known and already developed oil reserves both onshore and offshore from a single location, stated the company.

"We are proposing a project that has the potential to deliver an extraordinary financial benefit to the community," Steve Layton, president of E&B Natural Resources, told Rigzone. "We can understand that we must...demonstrate that we can operate ... in a safe and environmentally responsible manner...establish trust."

...life expectancy of the project is 35 years...in four phases with the first three phases taking less than two years to complete...[25 or 35 years, three, four, or five phases (construction-1&3, drilling-2&4, completions-2&4, and production-5] "Changes to the project design and operations will likely be required to reduce impacts and address other issues identified through the environmental impact report and other city processes," stated the company in a press release...utilize a closed loop system for all its recovery and processing operations, and be fully contained within a single site, protecting the neighborhood and surrounding community from the risk of spill or accident."

The company estimates that around 45 million barrels of oil can be recovered, with the city standing to gain as much as \$500 million over 30 years – a 15.33 percent of the project's gross revenue as royalties. [1.5mmbbl/yr, 4100bbl/d; \$16.7M/yr, \$46K/d; \$11-12/bbl]

Next year [2014], Hermosa residents will vote whether to lift the current drilling ban or not...

...If voters reject the drilling offer, Hermosa Beach is responsible to pay the \$17.5 million...drilling ban is lifted, the city only owes the company \$3.5 million...paid from oil revenues from the project. [\$3.5M/30 = \$115-120K/yr, \$320/day]

Furthermore, E&B will not use fracking methods on any of the wells and plans to use an automated system that can quickly shut off wells in case of a blowout or spill, according to the company. The company, which plans to tap in to the Torrance oil field, will not use pump jacks or visible wellheads, and the last known blowout to occur on Torrance was in the 80s.

"The oil recovery project will safely produce ... from existing resources, not develop new ones – effectively maximizing efficient oil recovery," stated the company.

C. Comments for NOP, Initial Study, and Related Sections (PA Appendices and Attachments) for the DEIR Using Presumed Table of Contents, as above

1. Scoping/CEQA Process

As indicated elsewhere and below, the Notice of Preparation (NOP), the Initial Study (IS), and the numerous documents of the Project Applicant's application (PA) and appendices and attachments were in fact too voluminous to adequately review in their entirety. Related sections are not cross-referenced or compiled in a manner to ease the public's review and meaningful comments within the limited time available. SHBO shall continue submitting additional comments to those already submitted and perhaps expand to those section where it was impractical to comment and meet the deadline of August 12, 2013.

Crossing referencing between the numerous documents also caused confusion, and such referencing must become simplified through the single DEIR document which must include all supporting information under the sign

2. Project Purpose & Needs

SHBO's review of all documents did not locate any specific "Purposes and Needs" for the Project and only found vague references to the "Applicant's Objectives" of the Project Application (PA) included in NOP/IS references. This is a serious omission-incompleteness-inadequacy for the basic foundation of the DEIR.

SHBO understands that Alternatives must be based on the meeting the Project's "Purposes and Needs" and must be assessed against a clear, concise array of specific "Purposes and Needs". The NOP/IS does not provide such for the justification in the one page brief reference to Alternatives.

SHBO does not consider the vague "objectives" as summarized below from the Project Planning Application (one paragraph) below meet the requirements of Project Purposes and Needs:

<http://www.hermosabch.org/modules/showdocument.aspx?documentid=2104>

PA-1/4 The Applicant's objectives for the proposed project;

22/2 4.0 Project Objectives

...consistent with the March 2, 2012 Settlement Agreement

utilizing directional drilling techniques

project site...current City Maintenance Yard.

...Maximize oil and gas production from the Torrance Oil Field within the City's jurisdiction, maximizing the economic benefits to the City.

oil and gas development project on the project site

utilizes the latest technology and operational advancements

safety and production efficiency

provide...safe and meets the applicable environmental requirements.

...construction and drilling activities on the project site

incorporating technological advancements, operational practices, and design features

related to air quality, odors, noise, hazards, and water quality to

minimize the potential impacts

on the adjacent community and the environment.

...provide landscaping, hardscape, signage, lighting, and other design features

minimize the visual effects...on the adjacent community.

...Implement operational practices and incorporate design features

provide safe vehicular ingress and egress

during temporary construction activities and the ongoing operation...

SHBO considers inclusion of a single specific site as part of objectives, purposes, and/or needs contradicts development of the referenced alternatives for other sites and demonstrate inherent bias of the Applicant and the Scoping preparers against other alternative for the DEIR. All objectives require conversion to the Project's purpose(s) and need(s) without limitations as to past histories or specific site preferences.

SHBO considers use of "maximize" or "minimize" for any parameter is inadequately defined to assess the proposed Project and alternatives and thereby render any alternative as totally inadequate and perhaps incomplete.

Based on statements in the Application, crude oil and gas would be produced from the Tidelands portion of the HB area of the Field, while produced water would be injected beneath the Uplands portion. Such production/injection would alter the economic benefits for HB and affects considers of sectoral setting, assessments and mitigation. The objectives specifically reference "...maximizing the economic benefits to the City..." which in turn relates to the total gas and oil production, expenditures in the city, employment, property tax valuation, costs of transmission, costs of mitigation and risk reduction, and emergency reserves/guarantees. SHBO requires that this inclusion in objectives, and thereby Purposes and Needs requires including socioeconomic consideration in the DEIR.

SHBO considers that the IS, Scoping Meeting, and DEIR makes certain Assumptions which are not consistent with the Scope of most DEIRs: High pressure stimulation/completion measures have not been included in the Project Application, therefore the DEIR preparer states that such stimulation measures would not be used. The preparer does not appreciate that once approved the Project can incorporate such stimulation within a ten-day application period. Therefore SHBO requires that the Scope of the DEIR include within the Project Description prohibition of any activities and/or facilities not specifically included in the DEIR's Project Description.

Similarly, the Application and IS referenced unsuccessful conclusion of the Project if non-commercial production can be achieved. All DEIR's consider that the worst case conditions for impact assessment would be maximum production at the highest levels of operations of facilities (e.g., 8000bbl/d rather than 40000bbl/d). Therefore SHBO requires that the scope of the DEIR must consider the "worst case" assessment based on maximum production and other activities for all sector assessments, rather than a typical, average, or less-than-commercial operations.

Also SHBO notes a total disregard for two-thirds of the total HB study area seaward of the msl/tide zone; no marine and/or seafloor surveys of air quality, water quality, bathymetry, geology, mineral resources (including beach sand for replenishment, oil seeps/breas, etc.), biology, or cultural resources. As indicated in the IS, 30 of 34 wells would be under the tidelands portions of the Project area but would have no setting. SHBO requires a complete surveys, assessments, and mitigation of all environmental conditions and impacts be conducted through the entire Project area and over all production and injection wells.

SHBO also notes that only four phases are considered for the Project which includes simultaneous drilling/completion and production activities during Phase 4. SHBO requires separation of the last ("Fourth") phase into a fourth phase of approximately 1000days including all drilling and completion activities for all 34 wells followed by a 25-30 year "Fifth Phase" (Phase 5) which would include production, reworking, and workover activities, only.

During the current Phase 4, simultaneous drilling, reworking, and production represents the period during the greatest risks for interference and for accidents and therefore must be considered separate from the less apparent surface activities of production, transmission, and maintenance. Risks and impacts must be separated and mitigation measures and best management practices would be very different in the 4th and 5th Phases.

### 3. Project Description

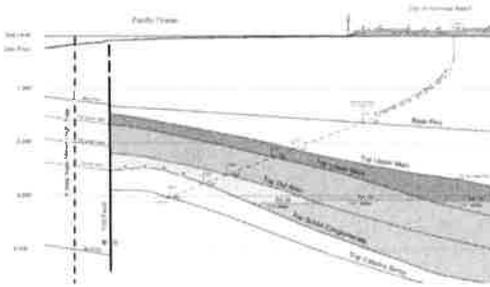
SHBO considers the overall Project Description as totally inadequate and incomplete for preparation of the DEIR and requires extensive additions to the DEIR. As members of SHBO have experience in new and existing oil/gas fields, reservoirs, and production of oil/gas/water, the production context forms the basis for the Project (same as a timber stand for a new saw mill).

SHBO requires the HB Area Field Delineation both vertically and horizontally and estimated reserves in the two designated areas - tidelands and uplands. Such reserve estimates are related to the vertical/lateral connections and eventual best-fit well routes and perforation. SHBO assumes that as good engineering practices for such large investments, the Applicant has developed conceptual and/or preliminary designs and layout which have not been provided other than those below.

SHBO requires that preliminary drafts be provided for:

- all well routes/perforations locations,
- estimates of tidelands/uplands reserves and individual well production rates,
- cross-sections between Hermosa Beach and Redondo Beach Areas of the Torrance Field and reservoir connections across the boundaries and leases in south HB,
- cross-sections between Hermosa Beach and westerly State Lands of the Torrance Field and reservoir connections across the westerly boundaries and leases to the west,

analysis as to how the Project will prevent back-drainage from upslope field areas to the west and south,



#### Properties

As specific parcels and the City's "jurisdiction" are included in the Project Description, SHBO requires that the Project Description includes all properties within the Project Area, including surface and subsurface properties. SHBO requires that all property boundaries be provided along with a listing of owners of subsurface properties. Where leases have been formed and registered, SHBO requires that all leases for exploration and production of petroleum or related minerals be indicated on the subsurface properties maps and listings.

#### Abandonment

Although abandonment is mentioned during Phase 2, SHBO notes that the status of wells at the end of Phase 4 (Operations Phase - 5 preferred) is not provided. SHBO requires that all wells drilled shall be abandoned with full cementing of any space in the well, including exterior annular spaces between the casings and the bedrock, between casing overlaps, and within all internal casing spaces.

#### 4. Project Alternatives

Although the Project site is well documented, the level of detail far exceeds the single page of considerations for all other alternatives (p.SD-55) without any provisions for reference purposes and needs, and thereby the preparer and Applicant clearly show a prejudiced approach to the Project.

#### NOP/IS

55/1+2 basic objective(s)

55/3 ...conduct exploratory drilling and if successful, continue oil and gas production at the Project site in the City of Hermosa Beach.

55/5 ...alternate locations for proposed drilling sites...  
...Alternative pipelines...

55/6 ...many of the Applicant's project objectives...

Although numerous references to objectives exist, the NOP/IS has not converted such objectives to the CEQA "purposes and needs" and therefore provides no means to review the NOP/IS "alternatives" and to establish other alternatives.

SHBO is especially concerned that the "objectives" focus on the "Project Site" as a "purpose" while referring to alternative sites.

SHBO requires that the Purposes and Needs and any related to "Project Objective" be specifically developed so as to expand reasonable alternatives without reference to a specific Project site and be included in the DEIR. We further request that the DEIR contain the following (>5 alternative site numbers & locations)

1. Onshore/Upland - Single Site  
Proposed Site, Other upland HB Sites, Other upland RB/MB Sites  
Variants of upland sites - Containments/Enclosures (Full/Partial Towers)
2. Onshore/Upland - Multiple Sites (Shore to Along East boundary)
3. Offshore/Tideland Platforms  
Enclosed Islands - Long Beach Style  
Open-Structure - Santa Barbara Styles)
4. No Project Alternative - Future without Project

## 5. Sector Setting/Assessment/Significance/Mitigation

### 5.1 General

SHBO has reviewed the NOP/IS and find the information sources for sectors to be largely under the influence of the Applicant, consultant reports either directly or indirectly paid for by the Applicant) with little information gathered from even DOGGR, LACo, Corps of Engrs., or more independent researchers.

SHBO has reviewed other local and/or southern California information sources which must be included as they are in other EIRs, e.g., Historic Photos/Notes of unregistered wells of pre-1930 which can be digitally rendered to locate sites of wells..

SHBO also notes that assessment methods and significance levels are largely unquantified and without references to quantitative models or independent numerical procedures.

SHBO has identified several issues of "Controversy" or "Differences of Specialists", although the NOP/IS has not done so, e.g., Risks of Blowouts – Onshore / Offshore, Alternative Sites within and Beyond Hermosa Beach, Conduct Marine/Submerged Surveys – Marine Life, geology, subsidence, geology, and Oil/Gas Seeps.

SHBO requires that the Levels of Significance/Mitigations be established as Non-Degradation/Risks or Zero-Net Change due to the unique character and quality of the Project Area.

SHBO further requires a consistent and industry acknowledged standard for all Oil & Gas Terms and Definitions/Glossary.

SHBO requires that all documents and public announcements by the Applicant be incorporated into the DEIR and would be subject to the same levels of review.

SHBO requires that the Draft Mitigation Monitoring and Reporting Plan be included in the DEIR.

### 5.2 Air / GHG Emissions; Odors - VOCs, H2S

As indicated throughout these comments, SHBO considers that any detectable adverse effects and changes in current conditions can have significant impacts for the sensitive character of the "Best Little Beach City" in California. Current public awareness of the Project is rising and would adversely affect some residents even before the referendum in 2014. Just the presence of the oil and gas facilities requires that all property owners notify any prospective property buyers that the facilities are present and operating. Therefore SHBO requires that the issue of odors be dealt with the objective of eliminating any odor from release from any piece of equipment, any area, within the Project Site, and reaching beyond the Site perimeter through a system of tiered counter/mitigation measures.

SHBO requires that the following elements be added to the Odor and gaseous emissions control programs offered in the Application and its supporting documents and to be included in the DEIR:

All equipment which would handle any gaseous, hydrocarbon, or odorous materials be monitored, recorded, and reported in accordance with such requirements of SCAQMD Rule 1173 but shall be conducted on a monthly basis and more frequent if gaseous emissions are found until such time as the City and Community Advisory Panels deem appropriate, but as a minimum three years.

All units of related equipment shall be-

enclosed with gas-impervious coverings,  
 vented only through gas-tight piping with  
 continuous sensor/monitors for H2S, VOCs, and GHG at levels of <1ppm  
 automated closure and/or diverter devices  
 suitable scrubbers for gases and anticipated maximum flows  
 monitored and recorded for real time online review of operations.

All Site Units shall be canopied with gas-tight/impervious materials with appropriate monitors, ventilation, and collectors for complete scrubbing to less than 1ppm other than O2 and N2.

In effect, ZERO releases for all operations for 30-plus years must be required.

SHBO also requires that the Applicant as part of the Air Resources Sector conduct the following:

Meteorological monitoring of the area within 1000ft of the proposed Site at intervals of 10 minutes for temperature, relative humidity, pressure, winds-speeds/directions/turbulence-variability, sunlight, condensation, and other parameters requires for modeling dense gas movements and dispersions, Total VOC, CO, H<sub>2</sub>S, and CO<sub>2</sub> monitoring of the area within 1000ft of the proposed Site at intervals of 10 minutes and levels of +/-1ppm at intervals correlated to meteorological monitoring, Modeling and calibration of dense gas models for the same areas, Odor dispersion tests for various mercaptans or low but detectible levels of H<sub>2</sub>S, Establish a dosage-response level model in conjunction with the tests and modeling.

Sour oil/gas production creates odors & HC/H<sub>2</sub>S emissions and may create hazardous urban conditions. SHBO requires in the DEIR:

a summary of vapor emissions & odor complaints for oil/gas fields, south of I-105 and west of I-405, meteorological modeling for worst-case AQ-coastal conditions, west of Baldwin-Dominguez Hills, estimate of the Project's worst case emissions and dispersion plume down to 3ppm H<sub>2</sub>S from dense gas modeling from the Project Site and emissions under worst case meteorological conditions from five better alternative HB sites, estimate of Project crude oil/gas composition & probable levels of H<sub>2</sub>S and volatile nm-VOC hydrocarbons, and mitigation of full aerial-canopy collection of the Project site with treatment to ambient levels (or non-detection at 0.10ppm).

#### GHG Emissions

As a new field and an industrial emissions source within the City, GHG emissions from the Project must be considered in the DEIR and included in changes from the City's 1990 baseline. SHBO requires that as part of an inventory of gaseous emissions all GHG emissions, especially for CH<sub>4</sub> and NO<sub>x</sub>, shall be monitored, recorded, and treated so as to reduce their total impact on the City's GHG Inventory.

#### 5.4 Water Resources - Marine, Non-Marine, Groundwater

Although the Project Area includes a portion of Santa Monica Bay and thick groundwater resource beneath the site, SHBO noted little information, references, or other considerations for the water resources of the Project Area. SHBO requires that a thorough study of marine and groundwaters be included in the DEIR with especial documentation and inventory for:

Current groundwater levels, flows, and quality within 1500ft of the Project Site and any alternatives, including impacts of tidal fluctuations on the movement of TPH plumes long with a quantitative model of the Project Area,  
Current artificial and natural surface recharging of the groundwater resources,  
Water quality including produced water characteristic compounds (e.g., boron, radon, etc.),  
Artificial and natural surface drainage map of Project Area, and  
Projected tsunami heights, inundations, or severity.

SHBO requires that all imported water to the Project Site be treated as Industrial Wastewater even when contaminated by up to 50% produced water.

SHBO requires the DEIR to include a full water balance model for all O&G operations of production and injection and the effects on field pressures and induced fluid/gas movements in the Project Area

#### 5.5 Earth / Geological Resources

SHBO requires that the Applicant provide a comprehensive search, review and compilation/bibliography from all technical literature, DOGGR and USGS files, etc. regarding the geological and related resources of the Project Area and within two miles of its boundary.

As the Applicant has not claimed confidentiality as yet, SHBO requires that all geological information, surveys, monitoring, etc. in the possession of the Applicant (and its contractors, consultant, and advisors) be provided to the City and be incorporated in the above mentioned bibliography

##### 5.5.1 Physiography and Bathymetry

SHBO requires that a thorough digital topographic and bathymetric map of the Project Area be provided and other sectors assessments and modeling be related to the same physical model base.

5.5.2 Stratigraphy

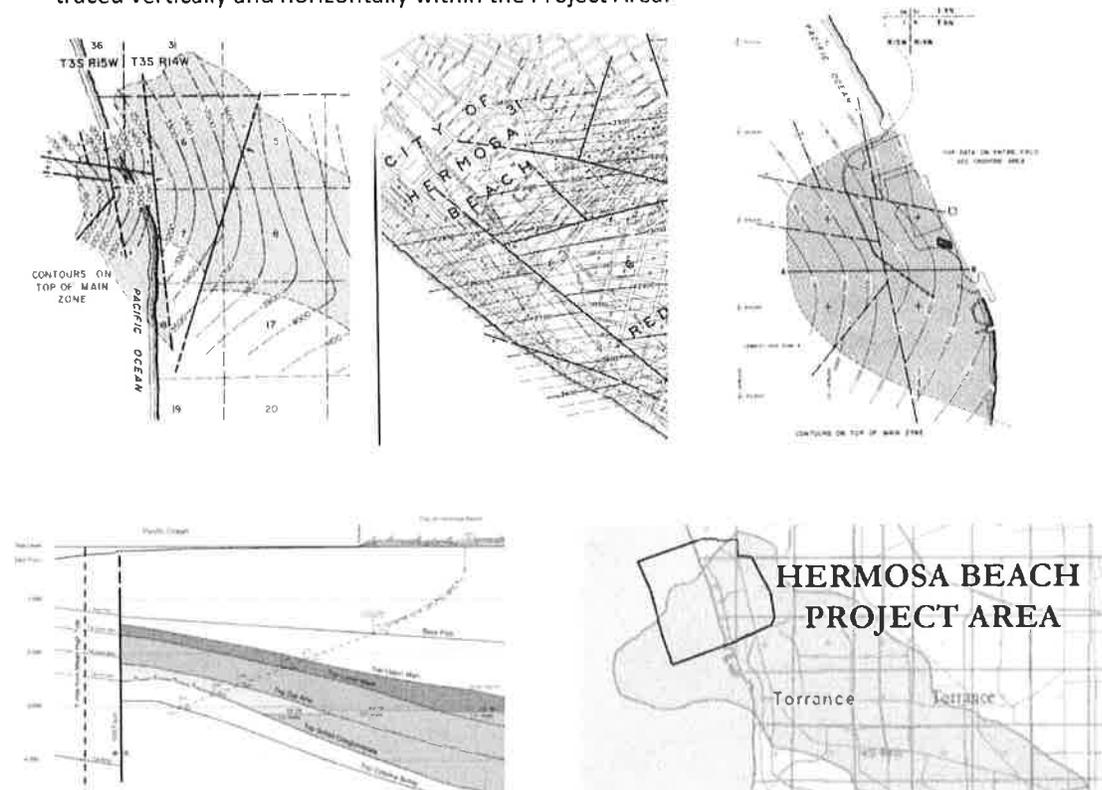
DOGGR commonly requires the establishment of the Uppermost Hydrocarbon Zone (UHZ) and Base of Fresh Water (BFW) with regarding to required casings and cementing. In that DOGGR has no Unit/Field Rules for the entire Torrance Field and the HB or RB Unit/Area, SHBO requires that the DEIR provide these critical items as parts of the Project Description, Geological Resources, or Mineral Resources setting/assessments and incorporate such into the mitigation for Geological and Mineral Resources via a Unit/Field Rule for the HB Project Area.

PA19/2 The proposed project...reserves in the tidelands (off-shore) and uplands (on-shore) in the portions of the Torrance Oil Field within the City's jurisdiction....primary target zones are the Upper Main, Lower Main, and Del Amo Zones with some production potential within the Schist Conglomerate. These are all part of the Puente Formation.

The Schist Conglomerate is often assigned to the Topanga Formation and the lower Puente Formation often includes the "Nodular Shale" unit (member or formation). SHBO requires that the DEIR incorporate a well documented, up-to-date stratigraphic column for both portions of the Project Area.

5.5.3 Structure, Faults, Seismicity, and Ground Movements

SHBO has reviewed various DOGGR publications that show a typical NW-upward tilted stratigraphy broken and raised/lowered (i.e., faulted) by numerous faults within the HB Area and the RB Area which could extend into the HB Area of the Torrance Field. These information appears to dramatically differ from the single fault depiction in the Application and considered in the NOP/IS. SHBO requires that all faults (>5ft displacement) be depicted and traced vertically and horizontally within the Project Area.



SHBO requires that the DEIR include inventory of last ten years of seismic activities (0-+6 RM) within 10 miles of HB and relate shallow (<3mi) vs deep activities and of all microseismicity (-3 to +2 RM) records and relate to shallow/deep tremors

The NOP/IS and Application include many discussions of subsidence but without factual information regarding the existing ground levels of the Project Area and nearby major capital works, e.g., ocean outfalls, piers, breakwaters, etc., and any historical levels which may differ. SHBO requires that the DEIR include an inventory of all primary and secondary benchmarks and elevation measures of any major capital works in and within 1500ft of the Project Area during 2003-2013.

SHBO requires that the DEIR include an inventory of all constructed facilities below sea level in and within 5 miles of the Project Area and any bathymetric/elevation measurements for such facilities for 2003-2013.

SHBO and MRS are familiar with other satellite-based elevation surveys of the Santa Monica Bay coastal areas, and SHBO requires that similar studies be provided in the DEIR for the area south of I-105 and west of I-405. Such a study must be integrated with the other elevations inventories above.

SHBO requires that all fields, areas, and units within the western LA area be reviewed and compiled as an inventory of O&G related subsidence through technical literature research and review of DOGGR/Corps of Engineers files and inquiries.

SHBO requires that any mitigative monitoring plan use the principle of "Non Gradation" as the basis for subsidence "significance" - 0.00ft or 0.0 in.

SHBO requires that the DEIR include a draft equivalent of Unit/Field Rules and state for any detectable subsidence immediate idling of the HB Area until the cause and remedies have been established and implemented.

#### 5.6 Mineral Resources, Regulations, Ground Movement/Responses & Monitoring

SHBO has reviewed available Project and DOGGR documents and finds that the entire Torrance Field, including the Hermosa Beach or Redondo Beach sub-units, pools, or areas, has been operated without any unit/field rules and requirements. Therefore regulations of the Hermosa Field remain at a very generalized level without specific requirements for the unique and important coastal, tidelands, and beach resources. City of Hermosa Beach (HB) thereby has not been pre-empted from requiring additional measures to protect community and occupational safety, health, natural resources, and environmental quality. Specifically, DOGGR has acknowledged that many stimulation, development, and completion methods are not regulated nor are they reported therefore no issue of preemption exists.

SHBO assumes two basic issues: 1. HB has the right and obligation to issue more stringent requirements than those of Federal, State, Regional, or County requirements in order to protect the unique coastal resources and environmental quality; 2. Any impact that degrades the unique coastal environment must be considered as significant.

SHBO recognizes the financial implications of Mineral Resources for the Applicant, HB, and the coastal towns of Santa Monica Bay. However no technical reports or analysis for the HB Field Area or the adjacent Redondo Beach Area of the Torrance Field have been presented for the Mineral Resources section and no reserves have been technically presented for the Project and for tideland and upland reserves and such effects on the financial aspects for Tidelands & Uplands.

SHBO is concerned regarding the total absence of inventory and setting for marine resources throughout the NOP/IS although the IS acknowledges that most oil and gas would be produced from the tidelands while injecting produced water under the uplands portions of the HB Area of the Torrance Field. DOGGR recognizes and has named Offshore oil seeps, including the Hermosa Seep which is not mentioned anywhere in the Mineral Resources discussions. As a recognized migratory route for oil and gas, such a seep and perhaps even more in the tideland portion of the HB Area require inventory, locations, marine life associations, and water quality considerations and assessment as to the Project's effects on such migratory pathways.

SHBO requires that the CEQA process via the considerations of Mineral Resources establish the following elements:

- Delineation of the HB Area and Pools and their relationship with the Redondo Beach Area/Pools of the Torrance Field,

- Draft Injection/Flooding Program for the HB Area and resulting field pressures and reservoir flows,

- Draft HB Unit Rules including-

- Base of Fresh Water, Uppermost Hydrocarbon Zone, etc.,

- Collision Map of all existing active, inactive, idled, and abandoned wells,

- Casing requirements of Conductor, Surface, Intermediate, and Production,

- 100% cementing of all casings and overlaps exterior annular spaces,

100% cementing of all voids in abandoned wells,  
 Bond Integrity Logging on Bi-Annual Basis and Before/After any pressurizing over 0.6psi/foot depth,  
 Delivery of all existing and future surveys, monitoring, recording, and chemical-oil, gas, and water  
 characterizations of each well to HB.

SHBO is concerned that gas production and separation would create odors from HC/H<sub>2</sub>S emissions which may indicate hazardous urban conditions and needs for responses, e.g., fumigation and evacuation. Any event that is reportable would have serious and long term impacts on the recreation and tourist industry and revenues in HB. SHBO finds the current vapor recovery, gas separation, flaring, and odor controls discussion to be totally lacking in chemical characterization of the gas production and quantitative assessments of the separation, scrubbing, flaring, and emergency release/flaring for gases. SHBO requires that suitable dense gas models be used for both operational and emergency releases. SHBO requires that the CEQA process and DEIR include:

Include summary vapor emissions & odor complaints for oil/gas fields south of I-10 x west of I-110 & meteorological modeling for worst-case AQ-coastal conditions, west of Baldwin-Dominguez Hills.

Estimate Project's emissions from summary & provide results of dense gas modeling of the Project Site and emissions under worst case meteorological conditions for five better alternative HB sites.

Provide an estimate of Project crude oil/gas composition & probable levels of H<sub>2</sub>S and volatile nm-VOC hydrocarbons.

Include mitigation of full aerial-canopy collection of the Project site with treatment to ambient levels (or non-detection at 0.01ppb).

Although production and injection operations have been shown to cause significant ground movement and migration of gases and fluids, the Mineral Resources and the Geological Resources discussions have not been specific to the HB Area of the Torrance Field. SHBO assumes that the Applicant is sufficiently knowledgeable to have at least a conceptual or perhaps a preliminary plan for injection and production activities (i.e., flooding program - UIC Class 3) as required for a DOGGR permit to drill an injection well. SHBO requires that the Applicant provide and the DEIR preparer include the best-available scope of the "enhanced oil (and Gas) recovery" plan for the HB Area of the Torrance Field and include assessment of such impacts on the HB and the RB Areas of the Torrance Field.

Furthermore SHBO requires that the Applicant provides a seismic monitoring station for the HB Area suitable for detection of both noticeable tremors (+1-+7RM) and for microseismic tremors (-3 - +1RM) to be installed and operating for at least three months prior to the initiation of any drilling in order to establish a baseline condition if the Project goes forward. SHBO also requires that any future Project include an ongoing compilation and reporting program for oil/gas/water production and injection volumes and relations to all seismic activities

SHBO is concerned regarding injection for disposal of produced fluids and/or gases as the only well profile includes penetration of the "Schist", below the Schist Conglomerate (or "Topanga Formation"). Such a well would appear to be for disposal and perhaps offshore disposal, As no marine related geological or geophysical studies are provided for production reserves at such locations and it is very expensive to drill the Schist, SHBO has assumed that such a well into the Schist would only be for disposal purposes.

SHBO requires that the DEIR include a full draft of all documents typically required for DOGGR consideration of any UIC program for Class 2 and/or Class 3 to assure adequate and complete assessment of the Project.

SHBO notes that DOGGR has had considerable interests in NORMs (naturally occurring radioactive materials), and although no specifically discussed in the NOP/IS, deep drilling into the Schist Conglomerate/Topanga and the Catalina Schist would be expected to encounter trapped NORMs in gases and liquids associated with the Schist (the Franciscan Formation, also a schist of similar age, in central and northern coastal California is considered a major source of NORMs). SHBO requires that either as part of Mineral Resources, or Hazards, or Earth Resources the issue of NORMs be considered as part of setting/inventory, assessments, and mitigation.

SHBO also notes that DOGGR has specific responsibility under regulations related to AB-1960 for preparation and updates of all production facilities usually by field. The NOP/IS and Application does not refer to the DOGGR requirements for the HB, RB, and/or other areas within the Torrance Field or for an overall Plan for the entire Field. SHBO requires that such a plan if existing be incorporated into the DEIR and/or a HB Area -Specific Plan be included as draft in the DEIR either as part of Mineral Resources, or Hazards, or Earth Resources and be considered as part of setting/inventory, assessments, and mitigation.

## 5.7 Hazards/Hazardous Materials – Offshore/Onshore

SHBO's review of all documents shows no information is provided regarding the tidelands portion of the Hermosa Beach Area of the Torrance Field, therefore the entire discussion is inadequate and incomplete, even though reference is made to the "Marine Facility Oil Spill Contingency Plan" which focuses entirely on the upland/supratidal side rather than the offshore tidelands side

Further the SHBO review also showed that some hazards control documents are not referenced nor provided as draft (e.g., DOGGRs AB1960 compliance Plan, NORMs, etc.) while several documents are referenced and included without a single overall integrated program for all hazards.

#### 5.8 Biology - Marine/Non-Marine Surveys and Monitoring

As indicated elsewhere, a serious deficiency of the entire voluminous NOP/IS and PA files is the absence of any consideration for the inventory, assessment or mitigation of marine resources of the Project Area. SHBO requires that the DEIR provide a full factual inventory of marine biology throughout the Project Area.

SHBO is aware of verbal comments regarding production either reducing or increasing seeps of oil and gas along the 103/Palos Verde Fault and how that might improve or impact marine water quality and current dependent marine life, all without any factual information on current conditions. The Applicant's focus on the 103 Fault is inconsistent with the numerous faults indicate by DOGGR (1992) for the Hermosa and Redondo Beaches areas of the Torrance Field and whether they are seeping oil and gas in the tidelands or uplands.

SHBO requires that the DEIR include the following elements for all marine resources within the Project Area:

- Detailed bathymetry of the seafloor,
- Tidal ranges and heights for the beach areas,
- Tidal and sea flow movements and sediment transport,
- Sub-Bottom Profiling Survey to record existing loose and firm sediments,
- Inventory of sea-life within the tidelands,
- Inventory of all oil and gas seeps and associated sea-life within 150ft of seeps.

#### 5.9 Cultural Resources – Historic & Prehistoric

SHBO requires that the DEIR include sub-bottom profiling for all cultural resources within the Project Area, tidelands portions above -200ft msl, e.g., ship wrecks, dumped cargos, prehistoric shell mounds, village sites, etc.

#### 5.11 Land Uses / Planning and Recreation / Tourism

##### 5.11.1 Land Uses and Properties

Existing industrial land uses provide a generally consistent zoning for many intense activities. SHBO requires that the land use inventory include all industrially-zone parcels of 1.0ac or more within the HB and within 500ft of the city's boundary. In addition, SHBO requires that all such parcels be compiled with their conflicting adjacent land uses (e.g., residential, public institutional, store-front commercial, etc.).

SHBO is concerned over effects of State-required property disclosures for the presence of the Project before or after the DEIR is circulated or certified on land uses and properties in central HB.

The Project Application and various supporting documents and the Scoping documents generally refer to the Project Site with regard to the City's ownership and industrial land use zoning as being less adverse in impacts upon the community. Further, references to royalties and economic impacts on the community involve both properties and subsurface property ownership and leases for mineral development and production. DOGGR also requires a statement from any Operator submitting a notice to drill or rework a well as to whether the subsurface and surface properties have coincident boundaries. SHBO requires that the DEIR fully delineates all subsurface property boundaries and ownerships and current leasees and lessors and demonstrate the coincidence or lack thereof for all subsurface properties within the Project Area and any which may be in part within the Project Area but extending beyond the City's jurisdiction and the Project Area.

SHBO further requires that all oil/gas/mineral leases registered with the County of Los Angeles be so listed and related to those required above.

SHBO, as part of the Unit/Field Rules for the HB Area of the Torrance Field, requires that all subsurface properties be obligated to full abandonment of any well through and in any subsurface properties.

#### 5.11.2 Recreation/Tourism

48/3 Further, the Project may negatively impact recreational resources as a result of an accidental release or from noise and visual characteristics associated with oil and gas drilling. The baseline setting and governing policies will be established in conjunction with the Traffic and Circulation and Land Use sections of the EIR, as applicable. The EIR will then assess the Project's potential impacts and compatibility with the existing and potential future recreational uses in the area.

SHBO considers the risk of any oil & gas related event as contrary to the best interests of the City and has required the use of the "Non-Degradation" principle be applied to all impacts, and especially to those related to Recreation/Tourism. Zero risks are the only acceptable criterion for "significant" Impacts.

SHBO requires that the potential impacts to land use valuations and to recreation/tourism activities be thoroughly reviewed and assessed in the Socioeconomic Sector's setting, impacts, and mitigation considerations.

#### 5.12 Socioeconomics - Jobs and Revenues

SHBO has noticed the absence of a Socioeconomic Section amongst the other environmental sectors, although in various reports and documents including the Scoping Document (e.g., SDp25/2 The Project is not expected to result in population growth. Employment generated from the Project would include approximately 2 to 15 jobs during Site Preparation; 5 to 20 jobs during Drilling and Testing; 5 to 35 jobs during Design and Construction; and approximately 4 to 20 jobs during Development and Operations...SDp48/2 However, because the Project would result in approximately one percent growth in jobs, this increase would be less than significant.) socioeconomic aspects and effects are discussed without relations to a particular environmental issue.

Similarly, the Land Use and Environmental Justice sectors commonly include direct and indirect discussions of socioeconomic conditions and Project effects.

Since the Scoping Document and many others have raised socioeconomic sectors. SHBO requires that all aspects of the Socioeconomic Sector be explored the issues and that the proposed Cost/Benefit Analyses be incorporated as a supporting document and appendix for Section 5.12.

#### 5.14 Other Infrastructure Utilities and Services

SHBO has not found any storm drain network maps for the Project Site or Area. SHBO requires that a storm drain network map be provided for the Project Site and prospective alternative sites and must include locations of any ocean or other major outfalls.

SHBO notes that if an emergency occurs at the proposed Project Site, Project Operators would only shutdown the systems and await arrival and suppression by the City's Emergency Services. SHBO requires that a full training program for O&G event conditions be required for all City's first responders and that CCTV transmitters/recorders be included for real time video feed to any first responder agencies.

#### 5.15 Cumulative Effects and Growth Inducement

SHBO considers the proposed Project as a turning point in current activities to provide greater environmental protections for smaller coastal beach communities compared to new major oil and gas developments in denser urban areas from companies with little association with the local affected communities. SHBO is also concerned that once the Project would be approved, the current Applicant may sell off or farm out portions or the total production of the resources to other operators. Similarly long-term mitigation and contingency operations may not adequately funded through various sales or transfers to others.

SHBO also requires that the DEIR consider the assessment of potential promotion of further tideland and offshore oil and gas production development from shoreline cities and project which may be encourage further by such projects in Hermosa Beach.

#### 5.16 Environmental Justice

SHBO members have visited Hermosa Beach (HB) over a span of several decades and are familiar with regional differences within the same relatively small area and population, e.g., south (Redondo) and north (Manhattan) ends of HB with Pier as a boundary. Current tourism and recreational sectors are clearly separated from several residential areas, and past industrial energy-related activities in Redondo Beach adjacent to HB has given the south half of HB a different image than those of the north half.

SHBO requires that the DEIR review socioeconomic, incomes, ages, tourism receipts/taxes, and voter records to ascertain whether identifiable areas can be distinguished and may be impacted different by the Project and prospective alternatives which could raise Environmental Justice issues.

As part of the review and assessment, risks of environmental impacts should be compared to those that benefit, especially for revenues for general funds and more age-focused educational revenues.

**DEIR/CEQA Process**

**Various documents circulated during the Scoping Process differed in terminology and contents, e.g., hard copy handout at Scoping Meeting had different proposed sections for the DEIR than those presented in the Meeting and those in the Initial Study (IS). The CCSC therefore requires preparation/circulation of a Scoping Report by Sep.16 and periodic, monthly, updates of Report with the Table of Contents, Glossary, and Definitions for the DEIR through Dec.23, 2013.**

**We expect the DEIR to be voluminous and therefore require DEIR circulation only after Jan.6, 2014 (to avoid the holiday season) in order to promote the greatest public interests in the Project and review of the DEIR and to avoid potential for further delays.**

**CCSC also requires that all CEQA documents be made available electronically through the State of California Clearinghouse.**

**As the expected DEIR will exceed 1000 (some say maybe 10,000 pages) we require that the "Project Manager" determine an appropriate Review Period, not of 60 days but 90 days if >2500pgs to provide meaningful and well documented comments.**

The applicable review period shall be the minimum time permitted by Sections 15082, 15087, and 15105 of the CEQA Guidelines unless the project manager determines that a longer period is justified.

**To further improve the character of the comments and ease of document and comment referencing, CCSC requires the anticipated voluminous DEIR to be fully digitally searchable to facilitate public review.**

**CCSC notes that the hardcopy/presentation Scoping materials and the IS did not refer to any alternatives, options, or variants, and CCSC considers this to be a serious error, deficiency, and bias approach.**

**CCSC requests a centralized publically accessible bibliography \*references) be established along with the Scoping Report and DEIR Table of Contents so that all related documents which shall be entered into the CEQA process are known and available prior to the circulation of the DEIR.**

**Many interpretations, controversies, and differences of technical/specialists' opinions on various issues appears to have arisen during 1990 to date. CCSC requires that the Scoping Report at least list the current and updated list of potential "Controversies" and "Differences of Specialists Opinions" and assignments to specific chapters of the DEIR (Table of Contents).**

**To date, the IS does not specifically reference the processing of the Health Impact Assessment (HIA) and the Cost/Benefit Analysis (CBA), CCSC therefore requires that the HIA be incorporated under Air Quality assessments and the CBA and any other available economic analyses be incorporated under a new environmental sector section: Socioeconomics, as used in other California EIRs.**

**CCSC also requires that all written statements (news releases, articles, opinion editorials, etc.) from the Applicant and City (Lead Agency) representatives with regard to the Project shall be considered as formal elements and conditions under the DEIR and shall be so compiled and included as appendices within the DEIR.**

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**CCSC requires that from such a compilation various DEIR sectors shall provide compendia of the "latest proven" and "maximum achievable" protection technologies and shall apply such to each sector.**

**Comments for NOP , Initial Study, Related Sections (PA, Apdc.,&Attach.) for the DEIR**

**A. Scoping/CEQA Process**

**The Notice of Preparation (NOP), the Initial Study (IS), and Project Applicant's application (PA) and appendices and attachments were in fact too voluminous and are not cross-referenced or compiled in a manner to ease the public's review and meaningful comments within the limited time available. CCSC shall continue submitting additional comments to those already submitted and perhaps expand on those sections given below.**

**B. Project Purpose & Needs**

**CCSC's review of all documents did not locate any specific "Purposes and Needs" for the Project and all Applicant's objectives are not compatible with the Purposes and Needs of the Project.**

**The NOP/IS does not provide justifications for even the single page brief reference to Alternatives.**

**CCSC considers inclusion of a single specific site as part of objectives, purposes, and/or needs contradicts development of the referenced alternatives for other sites and demonstrate inherent bias of the Applicant and the Scoping preparers against other alternative for the DEIR. All objectives require conversion to the Project's purpose(s) and need(s) without limitations as to past histories or specific site preferences.**

**Based on statements in the Application, crude oil and gas would be produced from the Tidelands portion of the HB area of the Field, while produced water would be injected beneath the Uplands portion. Such production/injection would alter the economic benefits for HB and affects considers of sectoral setting, assessments and mitigation.**

**The objectives specifically reference "...maximizing the economic benefits to the City..." which in turn relates to the total gas and oil production, expenditures in the city, employment, property tax valuation, costs of transmission, costs of mitigation and risk reduction, and emergency reserves/guarantees. CCSC requires that this inclusion in objectives, and thereby Purposes and Needs requires including socioeconomic consideration in the DEIR.**

**CCSC considers that the IS, Scoping Meeting, and DEIR makes certain Assumptions which are not consistent with the Scope of most DEIRs: High pressure stimulation/completion measures have not been included in the Project Application, therefore the DEIR preparer states that such stimulation measures would not be used. The preparer does not appreciate that once approved the Project can incorporate such stimulation within a ten-day application period. Therefore CCSC requires that the Scope of the DEIR include within the Project Description prohibition of any activities and/or facilities not specifically included in the DEIR's Project Description.**

**Also CCSC notes a total disregard for two-thirds of the total HB study area seaward of the msl/tide zone; no marine and/or seafloor surveys of air quality, water quality, bathymetry, geology, mineral resources (including beach sand for replenishment, oil seeps/breas, etc.), biology, or cultural resources. As indicated in the IS, 30 of 34 wells would be under the tidelands portions of the Project area but would have no setting. CCSC requires a complete surveys, assessments, and mitigation of all environmental conditions and**

*impacts be conducted through the entire Project area and over all production and injection wells.*

**CCSC also notes that only four phases are considered for the Project which includes simultaneous drilling/completion and production activities during Phase 4. CCSC requires separation of the last ("Fourth") phase into a fourth phase of approximately 1000days including all drilling and completion activities for all 34 wells followed by a 25-30 year "Fifth Phase" (Phase 5) which would include production, reworking, and workover activities, only. Risks and impacts must be separated and mitigation measures and best management practices would be very different in the 4th and 5th Phases.**

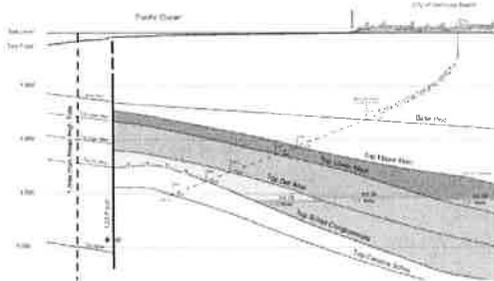
**C. Project Description**

**CCSC considers the overall Project Description as totally inadequate and incomplete for preparation of the DEIR and requires extensive additions to the DEIR. As members of CCSC have experience in new and existing oil/gas fields, reservoirs, and production of oil/gas/water, the production context forms the basis for the Project (same as a timber stand for a new saw mill).**

**CCSC requires the HB Area Field Delineation both vertically and horizontally and estimated reserves in the two designated areas - tidelands and uplands. Such reserve estimates are related to the vertical/lateral connections and eventual best-fit well routes and perforation. CCSC assumes that as good engineering practices for such large investments, the Applicant has developed conceptual and/or preliminary designs and layout which have not been provided other than those below.**

**CCSC requires that preliminary drafts be provided for:**

- all well routes/perforations locations,**
- estimates of tidelands/uplands reserves and individual well production rates,**
- cross-sections between Hermosa Beach and Redondo Beach Areas of the Torrance Field and reservoir connections across the boundaries and leases in south HB,**
- cross-sections between Hermosa Beach and westerly State Lands of the Torrance Field and reservoir connections across the westerly boundaries and leases to the west,**
- analysis as to how the Project will prevent back-drainage from upslope field areas to the west and south,**



**Properties**

**As specific parcels and the City's "jurisdiction" are included in the Project Description, CCSC requires that the Project Description includes all properties within the Project Area, including surface and subsurface properties. CCSC requires that all property boundaries be provided along with a listing of owners of subsurface properties. Where leases have been formed and registered, CCSC requires that all leases for exploration**

**and production of petroleum or related minerals be indicated on the subsurface properties maps and listings.**

#### **Abandonment**

**Although abandonment is mentioned during Phase 2, CCSC notes that the status of wells at the end of Phase 4 (Operations Phase - 5 preferred) is not provided. CCSC requires that all wells drilled shall be abandoned with full cementing of any space in the well, including exterior annular spaces between the casings and the bedrock, between casing overlaps, and within all internal casing spaces.**

#### **4. Project Alternatives**

**Although the Project site is well documented, the level of detail far exceeds the single page of considerations for all other alternatives (p.SD-55) without any provisions for reference purposes and needs, and thereby the preparer and Applicant clearly show a prejudiced approach to the Project.**

**The NOP/IS has not converted such objectives to the CEQA "purposes and needs" and therefore provides no means to review the NOP/IS "alternatives" and to establish other alternatives.**

**CCSC requires that the Purposes and Needs and any related to "Project Objective" be specifically developed so as to expand reasonable alternatives without reference to a specific Project site and be included in the DEIR.**

**CCSC further request that the DEIR contain the following (>5 alternative site numbers & locations)**

- 1. Onshore/Upland - Single Site**  
**Proposed Site, Other upland HB Sites, Other upland RB/MB Sites**  
**Variants of upland sites - Containments/Enclosures (Full/Partial Towers)**
- 2. Onshore/Upland - Multiple Sites (Shore to Along East boundary)**
- 3. Offshore/Tideland Platforms**  
**Enclosed Islands - Long Beach Style**  
**Open-Structure - Santa Barbara Styles)**
- 4. No Project Alternative - Future without Project**

#### **C. Sector Setting/Assessment/Significance/Mitigation**

##### **C.a General**

**CCSC has reviewed the NOP/IS and find the information sources for sectors to be largely under the influence of the Applicant, consultant reports either directly or indirectly paid for by the Applicant) with little information gathered from even DOGGR, DOGGR, LACo, Corps of Engnr., or more independent researchers.**

**CCSC has reviewed other local and/or southern California information sources which must be included as they are in other EIRs, e.g., Historic Photos/Notes of unregistered wells of pre-1930 which can be digitally rendered to locate sites of wells..**

**CCSC also notes that assessment methods and significance levels are largely unquantified and without references to quantitative models or independent numerical procedures.**

**CCSC has identified several issues of "Controversy" or "Differences of Specialists", although the NOP/IS has not done so, e.g., Risks of Blowouts – Onshore / Offshore, Alternative Sites within and Beyond Hermosa Beach, Conduct Marine/Submerged Surveys – Marine Life, geology, subsidence, geology, and Oil/Gas Seeps.**

**CCSC requires that the Levels of Significance/Mitigations be established as Non-Degradation/Risks or Zero-Net Change due to the unique character and quality of the Projec Area.**

**CCSC further requires a consistent and industry acknowledged standard for all Oil & Gas Terms and Definitions/Glossary.**

**CCSC requires that all documents and public announcements by the Applicant be incorporated into the DEIR and would be subject to the same levels of review.**

**CCSC requires that the Draft Mitigation Monitoring and Reporting Plan be included in the DEIR.**

#### **C.b Air / GHG Emissions; Odors - VOCs, H2S**

**As indicated throughout these comments, CCSC considers that any detectable adverse effects and changes in current conditions can have significant impacts for the sensitive character of the "Best Little Beach City" in California. Current public awareness of the Project is rising and would adversely affect some residents even before the referendum in 2014. Just the presence of the oil and gas facilities requires that all property owners notify any prospective property buyers that the facilities are present and operating. Therefore CCSC requires that the issue of odors be dealt with the objective of eliminating any odor from release from any piece of equipment, any area, within the Project Site, and reaching beyond the Site perimeter through a system of tiered counter/mitigation measures.**

**CCSC requires that the following elements be added to the Odor and gaseous emissions control programs offered in the Application and its supporting documents and to be included in the DEIR:**

**All equipment which would handle any gaseous, hydrocarbon, or odorous materials be monitored, recorded, and reported in accordance with such requirements of SCAQMD Rule 1173 but shall be conducted on a monthly basis and more frequent if gaseous emissions are found until such time as the City and Community Advisory Panels deem appropriate, but as a minimum three years.**

**All units of related equipment shall be-  
enclosed with gas-impervious coverings,  
vented only through gas-tight piping with  
continuous sensor/monitors for H2S, VOCs, and GHG at levels of  
<1ppm  
automated closure and/or diverter devices  
suitable scrubbers for gases and anticipated maximum flows  
monitored and recorded for real time online review of operations.**

**All Site Units shall be canopied with gas-tight/impervious materials with appropriate monitors, ventilation, and collectors for complete scrubbing to less than 1ppm other than O2 and N2.**

**In effect, ZERO releases for all operations for 30-plus years must be required.**

**CCSC also requires that the Applicant as part of the Air Resources Sector conduct the following:**

**Meteorological monitoring of the area within 1000ft of the proposed Site at intervals of 10 minutes for temperature, relative humidity, pressure, winds-speeds/directions/turbulence-variability, sunlight, condensation, and other parameters requires for modeling dense gas movements and dispersions,**

**Total VOC, CO, H<sub>2</sub>S, and CO<sub>2</sub> monitoring of the area within 1000ft of the proposed Site at intervals of 10 minutes and levels of +/-1ppm at intervals correlated to meteorological monitoring,**  
**Modeling and calibration of dense gas models for the same areas,**  
**Odor dispersion tests for various mercaptans or low but detectible levels of H<sub>2</sub>S,**  
**Establish a dosage-response level model in conjunction with the tests and modeling.**  
**Sour oil/gas production creates odors & HC/H<sub>2</sub>S emissions and may create hazardous urban conditions. CCSC requires in the DEIR:**  
**a summary of vapor emissions & odor complaints for oil/gas fields, south of I-105 and west of I-405,**  
**meteorological modeling for worst-case AQ-coastal conditions, west of Baldwin-Dominguez Hills,**  
**estimate of the Project's worst case emissions and dispersion plume down to 3ppm H<sub>2</sub>S from dense gas modeling from the Project Site and emissions under worst case meteorological conditions from five better alternative HB sites,**  
**estimate of Project crude oil/gas composition & probable levels of H<sub>2</sub>S and volatile nm-VOC hydrocarbons, and**  
**mitigation of full aerial-canopy collection of the Project site with treatment to ambient levels (or non-detection at 0.10ppm).**

#### **GHG Emissions**

**As a new field and an industrial emissions source within the City, GHG emissions from the Project must be considered in the DEIR and included in changes from the City's 1990 baseline. CCSC requires that as part of an inventory of gaseous emissions all GHG emissions, especially for CH<sub>4</sub> and NO<sub>x</sub>, shall be monitored, recorded, and treated so as to reduce their total impact on the City's GHG Inventory.**

#### **C.c Water Resources - Marine, Non-Marine, Groundwater**

**Although the Project Area includes a portion of Santa Monica Bay and thick groundwater resource beneath the site, CCSC noted little information, references, or other considerations for the water resources of the Project Area.**

**CCSC requires that a thorough study of marine and groundwaters be included in the DEIR with especial documentation and inventory for:**

**Current groundwater levels, flows, and quality within 1500ft of the Project Site and any alternatives, including impacts of tidal fluctuations on the movement of TPH plumes long with a quantitative model of the Project Area,**

**Current artificial and natural surface recharging of the groundwater resources, Water quality including produced water characteristic compounds (e.g., boron, radon, etc.),**

**Artificial and natural surface drainage map of Project Area, and Projected tsunami heights, inundations, or severity.**

**CCSC requires that all imported water to the Project Site be treated as Industrial Wastewater even when contaminated by up to 50% produced water.**

**CCSC requires the DEIR to include a full water balance model for all O&G operations of production and injection and the effects on field pressures and induced fluid/gas movements in the Project Area**

#### **C.d Earth / Geological Resources**

**CCSC requires that the Applicant provide a comprehensive search, review and compilation/bibliography from all technical literature, DOGGR and USGS files, etc.**

*regarding the geological and related resources of the Project Area and within two miles of its boundary.*

**CCSC requires that all geological information, surveys, monitoring, etc. in the possession of the Applicant (and its contractors, consultant, and advisors) be provided to the City and be incorporated in the above mentioned bibliography.**

**C.d.1 Physiography and Bathymetry**

**CCSC requires that a thorough digital topographic and bathymetric map of the Project Area be provided and other sectors assessments and modeling be related to the same physical model base.**

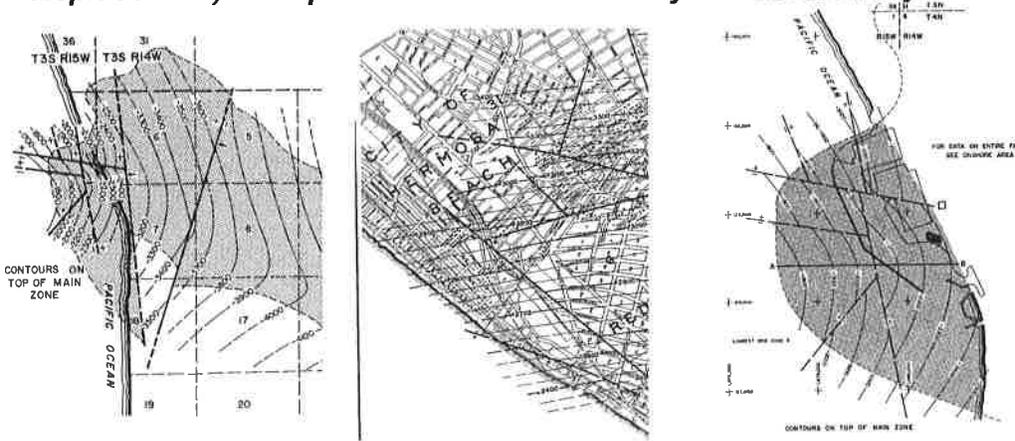
**C.d.2 Stratigraphy**

**DOGGR commonly requires the establishment of the Uppermost Hydrocarbon Zone (UHZ) and Base of Fresh Water (BFW) with regarding to required casings and cementing. In that DOGGR has no Unit/Field Rules for the entire Torrance Field and the HB or RB Unit/Area, CCSC requires that the DEIR provide these critical items as parts of the Project Description, Geological Resources, or Mineral Resources setting/assessments and incorporate such into the mitigation for Geological and Mineral Resources via a Unit/Field Rule for the HB Project Area.**

**The Schist Conglomerate is commonly assigned to the Topanga Formation and the lower Puente Formation without designation often includes the "Nodular Shale" unit (member or formation). CCSC requires that the DEIR incorporate a well documented, up-to-date stratigraphic column for both portions of the Project Area.**

**C.d.3 Structure, Faults, Seismicity, and Ground Movements**

**CCSC has reviewed various DOGGR publications that show a typical NW-upward tilted stratigraphy broken and raised/lowered (i.e., faulted) by numerous faults within the HB Area and the RB Area which could extend into the HB Area of the Torrance Field. These information appears to dramatically differ from the single fault depiction in the Application and considered in the NOP/IS. CCSC requires that all faults (>5ft displacement) be depicted and traced vertically and horizontally within the Project Area.**





**HB Field Area or the adjacent Redondo Beach Area of the Torrance Field have been presented for the Mineral Resources section and no reserves have been technically presented for the Project and for tideland and upland reserves and such effects on the financial aspects for Tidelands & Uplands.**

**CCSC is concerned regarding the total absence of inventory and setting for marine resources throughout the NOP/IS although the IS acknowledges that most oil and gas would be produced from the tidelands while injecting produced water under the uplands portions of the HB Area of the Torrance Field. DOGGR recognizes and has named Offshore oil seeps, including the Hermosa Seep which is not mentioned anywhere in the Mineral Resources discussions. As a recognized migratory route for oil and gas, such a seep and perhaps even more in the tideland portion of the HB Area require inventory, locations, marine life associations, and water quality considerations and assessment as to the Project's effects on such migratory pathways.**

**CCSC requires that the CEQA process via the considerations of Mineral Resources establish the following elements:**

- Delineation of the HB Area and Pools and their relationship with the Redondo Beach Area/Pools of the Torrance Field,**
- Draft Injection/Flooding Program for the HB Area and resulting field pressures and reservoir flows,**
- Draft HB Unit Rules including-**
  - Base of Fresh Water, Uppermost Hydrocarbon Zone, etc.,**
  - Collision Map of all existing active, inactive, idled, and abandoned wells,**
  - Casing requirements of Conductor, Surface, Intermediate, and Production,**
  - 100% cementing of all casings and overlaps exterior annular spaces,**
  - 100% cementing of all voids in abandoned wells,**
  - Bond Integrity Logging on Bi-Annual Basis and Before/After any pressurizing over 0.6psi/foot depth,**
  - Delivery of all existing and future surveys, monitoring, recording, and chemical-oil, gas, and water characterizations of each well to HB.**

**CCSC is concerned that gas production and separation would create odors from HC/H<sub>2</sub>S emissions which may indicate hazardous urban conditions and needs for responses, e.g., fumigation and evacuation. Any event that is reportable would have serious and long term impacts on the recreation and tourist industry and revenues in HB. CCSC finds the current vapor recovery, gas separation, flaring, and odor controls discussion to be totally lacking in chemical characterization of the gas production and quantitative assessments of the separation, scrubbing, flaring, and emergency release/flaring for gases. CCSC requires that suitable dense gas models be used for both operational and emergency releases. CCSC requires that the CEQA process and DEIR include:**

- Include summary vapor emissions & odor complaints for oil/gas fields south of I-10 x west of I-110 & meteorological modeling for worst-case AQ-coastal conditions, west of Baldwin-Dominguez Hills.**
- Estimate Project's emissions from summary & provide results of dense gas modeling of the Project Site and emissions under worst case meteorological conditions for five better alternative HB sites.**
- Provide an estimate of Project crude oil/gas composition & probable levels of H<sub>2</sub>S and volatile nm-VOC hydrocarbons.**
- Include mitigation of full aerial-canopy collection of the Project site with treatment to ambient levels (or non-detection at 0.01ppb).**

**Although production and injection operations have been shown to cause significant ground movement and migration of gases and fluids, the Mineral Resources and the Geological Resources discussions have not been specific to the HB Area of the Torrance Field.**

**CCSC assumes that the Applicant is sufficiently knowledgeable to have at least a conceptual or perhaps a preliminary plan for injection and production activities (i.e., flooding program - UIC Class 3) as required for a DOGGR permit to drill an injection well. CCSC requires that the Applicant provide and the DEIR preparer include the best-available scope of the "enhanced oil (and Gas) recovery" plan for the HB Area of the Torrance Field and include assessment of such impacts on the HB and the RB Areas of the Torrance Field.**

**Furthermore CCSC requires that the Applicant provides a seismic monitoring station for the HB Area suitable for detection of both noticeable tremors (+1-+7RM) and for microseismic tremors (-3 - +1RM) to be installed and operating for at least three months prior to the initiation of any drilling in order to establish a baseline condition if the Project goes forward. CCSC also requires that any future Project include an ongoing compilation and reporting program for oil/gas/water production and injection volumes and relations to all seismic activities**

**CCSC is concerned regarding injection for disposal of produced fluids and/or gases as the only well profile includes penetration of the "Schist", below the Schist Conglomerate (or "Topanga Formation"). Such a well would appear to be for disposal and perhaps offshore disposal, As no marine related geological or geophysical studies are provided for production reserves at such locations and it is very expensive to drill the Schist, CCSC has assumed that such a well into the Schist would only be for disposal purposes.**

**CCSC requires that the DEIR include a full draft of all documents typically required for DOGGR consideration of any UIC program for Class 2 and/or Class 3 to assure adequate and complete assessment of the Project.**

**CCSC notes that DOGGR has had considerable interests in NORMs (naturally occurring radioactive materials), and although no specifically discussed in the NOP/IS, deep drilling into the Schist Conglomerate/Topanga and the Catalina Schist would be expected to encounter trapped NORMs in gases and liquids associated with the Schist (the Franciscan Formation, also a schist of similar age, in central and northern coastal California is considered a major source of NORMs). CCSC requires that either as part of Mineral Resources, or Hazards, or Earth Resources the issue of NORMs be considered as part of setting/inventory, assessments, and mitigation.**

**CCSC also notes that DOGGR has specific responsibility under regulations related to AB-1960 for preparation and updates of all production facilities usually by field. The NOP/IS and Application does not refer to the DOGGR requirements for the HB, RB, and/or other areas within the Torrance Field or for an overall Plan for the entire Field. CCSC requires that such a plan if existing be incorporated into the DEIR and/or a HB Area -Specific Plan be included as draft in the DEIR either as part of Mineral Resources, or Hazards, or Earth Resources and be considered as part of setting/inventory, assessments, and mitigation.**

#### **C.f Hazards/Hazardous Materials – Offshore/Onshore**

**CCSC's review of all documents shows no information is provided regarding the tidelands portion of the Hermosa Beach Area of the Torrance Field, therefore the entire discussion is inadequate and incomplete, even though reference is made to the "Marine Facility Oil Spill Contingency Plan" which focuses entirely on the upland/supratidal side rather than the offshore tidelands side**

**Further the CCSC review also showed that some hazards control documents are not referenced nor provided as draft (e.g., DOGGRs AB1960 compliance Plan, NORMs, etc.) while several documents are referenced and included without a single overall integrated program for all hazards.**

#### **C.g Biology - Marine/Non-Marine Surveys and Monitoring**

**As indicated elsewhere, a serious deficiency of the entire voluminous NOP/IS and PA files is the absence of any consideration for the inventory, assessment or mitigation of marine resources of the Project Area. CCSC requires that the DEIR provide a full factual inventory of marine biology throughout the Project Area.**

**CCSC is aware of verbal comments regarding production either reducing or increasing seeps of oil and gas along the 103/PalosVerde Fault and how that might improve or impact marine water quality and current dependent marine life, all without any factual information on current conditions. The Applicant's focus on the 103 Fault is inconsistent with the numerous faults indicate by DOGGR (1992) for the Hermosa and Redondo Beaches areas of the Torrance Field and whether they are seeping oil and gas in the tidelands or uplands.**

**CCSC requires that the DEIR include the following elements for all marine resources within the Project Area:**

**Detailed bathymetry of the seafloor,  
Tidal ranges and heights for the beach areas,  
Tidal and sea flow movements and sediment transport,  
Sub-Bottom Profiling Survey to record existing loose and firm sediments,  
Inventory of sea-life within the tidelands,  
Inventory of all oil and gas seeps and associated sea-life within 150ft of seeps.**

#### **C.h Cultural Resources – Historic & Prehistoric**

**CCSC requires that the DEIR include sub-bottom profiling for all cultural resources within the Project Area, tidelands portions above -200ft msl, e.g., ship wrecks, dumped cargos, prehistoric shell mounds, village sites, etc.**

#### **C.i Land Uses / Planning and Recreation / Tourism**

##### **C.i.1 Land Uses and Properties**

**Existing industrial land uses provide a generally consistent zoning for many intense activities. CCSC requires that the land use inventory include all industrially-zone parcels of 1.0ac or more within the HB and within 500ft of the city's boundary. In addition, CCSC requires that all such parcels be compiled with their conflicting adjacent land uses (e.g., residential, public institutional, store-front commercial, etc.).**

**CCSC is concerned over effects of State-required property disclosures for the presence of the Project before or after the DEIR is circulated or certified on land uses and properties in central HB.**

**The Project Application and various supporting documents and the Scoping documents generally refer to the Project Site with regard to the City's ownership and industrial land use zoning as being less adverse in impacts upon the community. Further, references to royalties and economic impacts on the community involve both properties and subsurface property ownership and leases for mineral development and production. DOGGR also requires a statement from any Operator submitting a notice to drill or rework a well as to whether the subsurface and surface properties have coincident boundaries. CCSC requires that the DEIR fully delineates all subsurface property boundaries and ownerships and current leasees and lessors and demonstrate the coincidence or lack thereof for all subsurface properties within the Project Area and any which may be in part within the Project Area but extending beyond the City's jurisdiction and the Project Area.**

**CCSC further requires that all oil/gas/mineral leases registered with the County of Los Angeles be so listed and related to those required above.**

**CCSC, as part of the Unit/Field Rules for the HB Area of the Torrance Field, requires that all subsurface properties be obligated to full abandonment of any well through and in any subsurface properties.**

**C.i.2 Recreation/Tourism**

**CCSC considers the risk of any oil&gas related event as contrary to the best interests of the City and has required the use of the "Non-Degradation" principle be applied to all impacts, and especially to those related to Recreation/Tourism. Zero risks are the only acceptable criterion for "significant" impacts.**

**CCSC requires that the potential impacts to land use valuations and to recreation/tourism activities be thoroughly reviewed and assessed in the Socioeconomic Sector's setting, impacts, and mitigation considerations.**

**C.j Socioeconomics - Jobs and Revenues**

**CCSC has noticed the absence of a Socioeconomic Section amongst the other environmental sectors, although in various reports and documents including the Scoping Document (e.g., SDp25/2) socioeconomic aspects and effects are discussed without relations to a particular environmental issue.**

**Similarly, the Land Use and Environmental Justice sectors commonly include direct and indirect discussions of socioeconomic conditions and Project effects.**

**Since the Scoping Document and many others have raised socioeconomic sectors. CCSC requires that all aspects of the Socioeconomic Sector be explored the issues and that the proposed Cost/Benefit Analyses be incorporated as a supporting document and appendix for Section 5.12.**

**C.k Other Infrastructure Utilities and Services**

**CCSC has not found any stormdrain network maps for the Project Site or Area. CCSC requires that a stormdrain network map be provided for the Project Site and prospective alternative sites and must include locations of any ocean or other major outfalls.**

**CCSC notes that if an emergency occurs at the proposed Project Site, Project Operators would only shutdown the systems and await arrival and suppression by the City's Emergency Services. CCSC requires that a full training program for O&G event conditions be required for all City's first responders and that CCTV transmitters/recorders be included for real time video feed to any first responder agencies.**

**C.l Cumulative Effects and Growth Inducement**

**CCSC considers the proposed Project as a turning point in current activities to provide greater environmental protections for smaller coastal beach communities compared to new major oil and gas developments in denser urban areas from companies with little association with the local affected communities. CCSC is also concerned that once the Project would be approved, the current Applicant may sell off or farm out portions or the total production of the resources to other operators. Similarly long-term mitigation and contingency operations may not adequately funded through various sales or transfers to others.**

**CCSC also requires that the DEIR consider the assessment of potential promotion of further tideland and offshore oil and gas production development from shoreline cities and project which may be encourage further by such projects in Hermosa Beach.**

**C.m Environmental Justice**

**CCSC members have visited Hermosa Beach (HB) over a span of several decades and are familiar with regional differences within the same relatively small area and population, e.g., south (Redondo) and north (Manhattan) ends of HB with Pier as a boundary. Current tourism and recreational sectors are clearly separated from several residential areas, and**

***past industrial energy-related activities in Redondo Beach adjacent to HB has given the south half of HB a different image than those of the north half.***

***CCSC requires that the DEIR review socioeconomic, incomes, ages, tourism receipts/taxes, and voter records to ascertain whether identifiable areas can be distinguished and may be impacted different by the Project and prospective alternatives which could raise Environmental Justice issues.***

***As part of the review and assessment, risks of environmental impacts should be compared to those that benefit, especially for revenues for general funds and more age-focused educational revenues.***

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**Re: Notice of Preparation/Scoping Document—E & B Oil Development Project**

Dear Mr. Robertson,

On behalf of the Surfrider Foundation Headquarters and the South Bay Surfrider Chapter, we submit the following comment letter regarding the Notice of Preparation (“NOP”) of a Draft Environmental Impact Report (“DEIR”), for E&B’s Oil Development Project (“Project”). The Surfrider Foundation (Surfrider) is a non-profit grassroots organization dedicated to the protection and enjoyment of our world’s oceans, waves and beaches. Surfrider has over 20,000 members/supporters in California, and maintains 90 chapters worldwide fueled by a powerful network of activists.

We greatly appreciate the opportunity to comment on the NOP. Surfrider has identified several areas of concern that must be considered during the DEIR process. While we have identified multiple concerns, this letter simply focuses on discrete issues that we believe will adversely harm intertidal and coastal resources.

**Biological Impacts:**

Several decades ago, the Santa Monica Bay (SMB) was in poor environmental health, however after major efforts to restore and to protect SMB, it is now considered a healthy ecosystem. In fact, the State of California recently established Marine Protected Areas (MPAs) in SMB. Surfrider is concerned that potential oil leaks and spills would render MPAs weak and defenseless. Surfrider strongly suggests the EIR explore possible impacts to MPAs and have a specific oil spill contingency plans for MPAs.

Considering the sensitive nature of SMB, it is imperative that the DEIR analyze accumulative impacts for the entire Bay. Surfrider is concerned that the NOP omits potential, accumulative impacts to SMB— and given the risky nature of oil drilling,

the Applicant must analyze **all** potential impacts; including but limited to: impacts associated from pipeline and well construction onshore and offshore, and a detailed analysis of how an oil spill would not only impact the immediate area of Hermosa Beach, but also the entire Bay.

The Hydrology And Water Quality Study report within the Project Application contains a paragraph that encapsulates most of Surfrider's biological concerns. Throughout this letter we will highlight those specific concerns, however we believe it's worth reiterating the warnings that come directly from E&B documentation.

*“The project would include site demolition, grading, construction of site improvements, etc... These activities would result in surface disturbances across the project site that could **potentially affect surface runoff water quality, groundwater quality, and the hydrological character of the project site.** Drilling, production, and the reinjection of processed produced water into the oil-producing reservoir below the oil water contact **could have the potential to affect groundwater quality.** The introduction of oil and water to the surface from the wells, together with separation, processing, piping, and truck loading operations have the potential to **result in leaks or spills resulting from a blowout during the drilling, a rupture of a production tank or piping, or an offsite oil truck accident or oil pipeline rupture**”.<sup>1</sup>*

### **Onshore Impacts:**

Phase 1 of the project will require substantial grading of terrain. The DEIR must carefully analyze two important issues associated with the grading. First and foremost, of the DEIR must include an accumulative impact analysis about how grading could trigger further erosion in surrounding areas. The interface between terrestrial and marine ecosystems is complicated and subsequent erosion to surround ecosystems must be accounted for in the DEIR.

Secondly, Surfrider is concerned about the contaminated soil that is presently at the site from a preexisting landfill. As the NOP states, contamination includes lead, arsenic, barium and petroleum hydrocarbons both in the soil and groundwater.<sup>2</sup> The EIR must include a remediation plan with specific information about handling and processing contaminants *and* that plan must be reviewed/approved by other regulatory agencies well in advance of grading.

Thirdly, we are concerned about construction of oil-drilling infrastructure (rig, pipelines, wells, tanks, etc.) and how this intensive construction could harm onshore coastal resources. Therefore the EIR must thoroughly articulate mitigation measures to protect onshore resources during construction of infrastructure.

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<sup>1</sup> Hydrologic Report: <http://www.hermosabch.org/modules/showdocument.aspx?documentid=2145>

<sup>2</sup> NOP: <http://www.hermosabch.org/modules/showdocument.aspx?documentid=3013>

<sup>3</sup> NOP: <http://www.hermosabch.org/modules/showdocument.aspx?documentid=3013>

### **Public Access, Recreation and Aesthetic Concerns:**

Major tenets of Surfrider are to: protect coastal recreation, public access, and ensure the coastal zone remains as natural as possible. As mentioned in the NOP, the “project may negatively impact recreational resources as a result of an accidental release or from noise and visual characteristics associated with oil and gas drilling”<sup>3</sup>. Mitigating visual and noise impacts might not be entirely possible despite Applicant's attempts.

Surfrider strongly suggests that the DEIR analyze Section 30251 of the Coastal Act to ensure the project meets the following requirements: “The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be *visually compatible with the character of surrounding areas*, and, where feasible, to restore and enhance visual quality in visually degraded areas”.<sup>4</sup>

In terms of recreation, Surfrider is concerned that the project would commandeer parking spots that people currently use to access the beach. For example, some Surfrider members use parking spots at the Maintenance Yard to access the beach. The DEIR must fully analyze accumulative impacts of recreation due to loss of parking *and* impairment of aesthetics.

The DEIR must equally contemplate Section 30212.5 of the Coastal Act: “Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, **of overcrowding or overuse by the public of any single area.**”<sup>5</sup>

### **Hydrological and Water Quality Concerns:**

Surfrider is concerned about water quality impacts and how this project could impede on the hydrological characteristics of the proposed site. First we are gravely concerned about contamination of groundwater. As cited in the Hydrological report, “... reinjection of processed water into oil reservoir could affect groundwater quality... [M]ost of the groundwater in the WCB remains at an elevation below sea level due to historic over pumping, so the importance of maintaining the seawater barrier wells to keep out the intruding seawater is critical.”<sup>6</sup>

In order to protect groundwater, the DEIR must explicitly: provide diagrams and detailed plans of how directional drilling will avoid groundwater locations; establish a baseline of groundwater conditions including seasonal and long term water level and water quality trends; and must also identify mitigation for water quality contamination.

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<sup>3</sup> NOP: Impacts to recreation page 48. <http://www.hermosabch.org/modules/showdocument.aspx?documentid=3013>

<sup>4</sup> Coastal Act: <http://www.coastal.ca.gov/coactact.pdf>

<sup>5</sup> Coastal Act: <http://www.coastal.ca.gov/coactact.pdf>

<sup>6</sup> Hydrological <http://www.hermosabch.org/modules/showdocument.aspx?documentid=2145>

While Project Application declares impacts to groundwater will be avoided, there is plenty of skepticism about directional drilling and how this type of well technology can adversely impact groundwater.

### **Reinjection Of Produced Water**

In general, Surfrider is concerned about the reinjection of produced water into the oil reservoir for many reasons. First we are concerned about how waste from produced water will be collected, stored and disposed of.

Secondly we are concerned about how the chemistry of the reservoir could change if reclaimed water is injected. While it is encouraging the Applicant aims to use reclaimed (rather than potable water) it is unclear how reclaimed water might interact with natural conditions of the reservoir. Along those same lines, Surfrider is concerned about hydrogen sulfide levels of the reservoir (as originally identified by the Coastal Commission in the 90s when the project was first created). Therefore the EIR must articulate how reinjection of produced water (created from reclaimed water) would **not** have negative effects on the reservoir. The DEIR must prescribe treatment measures for produced water to eliminate potential contamination of the "native" condition of the oil reservoir.

The question of water ratios during reinjection is also concerning to Surfrider. For example, Surfrider is concerned that variations in the subsurface pressures brought about by fluid extraction and fluid injections may exacerbate the seepage conditions in Santa Monica Bay, creating the potential to foul Los Angeles County beaches. A thorough analysis of the impact on seepage should be included in the Draft EIR. On the flip side, we are concerned that if not enough water is re-injected, it could cause subsidence (we will later discuss those concerns).

According to the Applicant's Water Quality Study, during Phase 1, 2,000 gallons per day of water would be required. During Phase 2 drilling, 130,000 gallons per well of water would be used. During Phase 3, approximately 2,000 gallons per day of water would be required in addition to up to 10,000 gallons per day during pipeline installation.<sup>7</sup>

While the Applicant asserts the water used for the project would not impact West Basin Municipal Water District supply, we are skeptical.<sup>8</sup> The EIR must explicitly evaluate current water uses for West Basin Municipal Water District and project how a **continued** use could impact supply. For example, if the project continue through Phase 4, that could mean several decades of drilling, and it's impossible to predict what California's water situation will be like then. It's imperative the DEIR provide and current supply and projected supply.

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<sup>7</sup> <http://www.hermosabch.org/modules/showdocument.aspx?documentid=2145>

<sup>8</sup> NOP <http://www.hermosabch.org/modules/showdocument.aspx?documentid=3013>

West Basin in their "Will Serve" letter has offered to make available up to 375 acre-feet of recycled water (Application Attachment L, page 5), but doesn't indicate whether this is on an annual basis, for the lifetime of the Project. The potential to utilize the West Basin supplied recycled water for the purpose of well stimulation is also a concern.

In the Attachment C of the Project Application, "*E&B Oil Development Project Information On Drilling Activities*", it is clear well stimulation is being considered and the language is so nuanced, that some of the practices seem marginally akin to hydraulic fracturing. The report says:

"During well completion, it is sometimes necessary to stimulate the producing zone to improve the permeability of the oil rock and increase the flow of oil into the well casing. *This may be accomplished by the use of a perforation-washing tool that individually breaks down and cleans out each perforation, or occasionally by the use of acid to dissolve some of the particles blocking the flow path of the oil in the formation. Such a treatment usually improves the flow of oil into the casing.*"<sup>9</sup>

Based on the report submitted by E&B, it is unclear if well stimulation will be used and if the practice of acidizing will be used. The EIR must make it abundantly clear if hydraulic fracturing will be utilized, especially considering the State currently lacks a regulatory framework to permit hydraulic fracturing. In addition, the EIR must thoroughly describe treatment and disposal processes of fluids.

Our final concern about water quality pertains to "drill muds. In May, at the Surfrider Community Forum, we asked the E&B representative what chemicals would be included in the drill muds and we were reassured that they are "EPA approved chemicals". The Project Application explains that nontoxic chemical will be used for drill muds. The DEIR must provide a detailed list of chemicals used in drill muds and provide research on past situations where other oil companies have used "non-toxic" chemicals for muds in offshore drilling operations. Further, the DEIR must analyze how the "non-toxic" chemicals could potentially impact oil reservoir after re-injection. <sup>10</sup>

### **Seismic and Geological Concerns:**

Project Application explains" "Most of the initial water injection is planned for portions of reservoir zones located beneath on-shore areas; therefore, most of the subsidence, if it occurs, would likely take place in offshore areas". Surfrider strongly suggests that the DEIR contain analysis of section 30262 (5) of the Coastal Act that requires the following: "The development will not cause or contribute to subsidence

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<sup>9</sup> *E&B Oil Development Project Information On Drilling Activities*"

<http://www.hermosabch.org/modules/showdocument.aspx?documentid=2103>

<sup>10</sup> Attachments to Project Application <http://www.hermosabch.org/modules/showdocument.aspx?documentid=2103>

hazards unless it is determined that adequate measures will be undertaken to prevent damage from such subsidence". We find it contradictory that the Applicant ensure an avoidance of onshore subsidence, yet also admits possible subsidence offshore. <sup>11</sup>

Surfrider is concerned by the Project description calls for a less than 1:1 replacement of total produced fluids some subsidence cannot be precluded, and further, most of the subsidence, if it occurs, would likely take place in offshore areas. However, the oil development Project includes a subsidence monitoring plan for the Hermosa Beach area with action levels that should minimize or eliminate the potential for damaging amounts of subsidence to occur (Geosyntec 2012).

Unfortunately, that monitoring plan does not include the offshore areas where significant damage may occur to the topography of the seabed. The evidence of subsidence of the King Harbor breakwater and the resulting damage in the 1980s is troubling since this Project does not adequately monitor offshore subsidence potentials. The prospect of subsidence offshore also has the potential to disturb the Super Fund site off of Palos Verdes, possibly releasing toxic chemicals into the water table. Also, previous evidence of subsidence of the King Harbor breakwater is evidence of damage that may occur to shoreline surf break, with the potential to seriously impact recreational opportunities.

It appears that an equivalent of 8,000 barrels of water will not be replaced under the current Project plan. Does E&B intend to offset this deficit with recycled water resources from West Basin Water District? Surfrider asks that analysis be included in the DEIR of the potential unseen offshore subsidence potential in it's impact on ocean waves, and we ask that an analysis be made of the potential for extended beach run-up during a tsunami event as the result of a lowered seabed brought about by subsidence.

There is no mention, nor is it understood, how offshore subsidence would be measured, and what measures would be taken to mitigate detected subsidence, which may be exacerbated by the significant weight of ocean water on the offshore targeted oil field location. We ask that an approved ocean bottom subsidence monitoring plan be implemented in addition to the establish of a mitigation plan, similar to that posed for the onshore segment, to deal with both onshore AND offshore subsidence potentials.

No mention is made of the potential for catastrophic damage to and failure of the 34 drilled wells from significant seismic events on the Palos Verdes and Inglewood-Newport faults identified in the Application, and the potential for oil to be released into the ocean. The fanning out of 34 drill holes and slant drilling from a highly concentrated area and pattern seems to expose the drill holes to high risk of damage

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<sup>11</sup> Coastal Act: <http://www.coastal.ca.gov/coactact.pdf>

and potential spills from major seismic activity on the Palos Verdes, Inglewood-Newport, or other active faults that can impact the proposed drilling area. The Application does not specify the exact location and extent of each drill hole, which raises concern to the ability to properly assess the risk of damage and potential oil spills.

### **Directional Drilling**

Surfrider is gravely concerned about the practice of directional drilling for well creation. Recently, more evidence (and criticism) has surfaced regarding the unsafe practice of directional drilling, primarily in regards to the cementing process.<sup>12</sup> Directional drilling is relatively new within the industry and it is imperative that the DEIR sufficiently addressed problems associated with this type of drilling.

### **Oil Spills Preparedness**

Recently, state legislators and concerned coastal advocates warned that California is woefully unprepared for large spills.<sup>13</sup> Another concern articulated by coastal advocates was that chemical dispersants tend to be the primary oil spill response tool. Scientific findings from the Gulf of Mexico spill prove that dispersants can be extremely harmful to marine life.<sup>14</sup> Surfrider urges that chemical dispersants not be used and defer to independent, best available science to consider ceasing all chemical dispersant use. If E & B plans to use dispersants, the DEIR must examine alternatives. Finally, the DEIR must include elaborate oil spill contingency plans that are vetted with other coastal resources agencies prior to any permits approvals.

### **Conclusion**

Thank you once again for considering our comments. We plan to submit comments for both the DEIR and the FEIR. We hope that the DEIR documents will not be distributed during the holiday season. Surfrider also requests formal scoping report be prepared by E&B so the public can see all the comments that were made on the NOP.

Very Sincerely,

*Stefanie Sekich-Quinn*

Stefanie Sekich-Quinn  
CA Policy Manager  
Surfrider Foundation, HQ

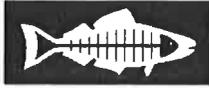
*Craig W. Cadwallader*

Craig W. Cadwallader  
Chapter Chair  
Surfrider Foundation - South Bay Chapter

<sup>12</sup> <http://online.wsj.com/article/SB10001424052702304879604575582693951448732.html>

<sup>13</sup> <http://pressdemocrat.com/article/20130802/articles/130809891?title=Coast's-oil-spill-defenses-called-inadequate#page=2>

<sup>14</sup> <http://www.tampabay.com/news/environment/water/gulf-oil-spill-killed-millions-of-microscopic-creatures-at-base-of-food/2113157>



## Heal the Bay.

August 12, 2013

Ken Robertson, Director  
Community Development Department  
1315 Valley Drive  
Hermosa Beach, CA 90254  
[kr Robertson@hermosabch.org](mailto:kr Robertson@hermosabch.org)

### **Re: Comments on Notice of Preparation and Scoping Document for Draft Environmental Impact Report for the E&B Oil Development Project**

Dear Mr. Robertson:

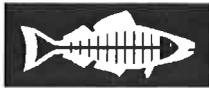
On behalf of Heal the Bay, a non-profit environmental organization with over 15,000 members dedicated to making the Santa Monica Bay and Southern California coastal waters and watersheds safe and healthy for people and local ecosystems, we welcome the opportunity to submit these comments on the Notice of Preparation and Scoping Document (NOP) for the Draft Environmental Impact Report (DEIR) for the E&B Oil Development Project. We are concerned about the precedent setting nature of opening up new oil operations in Santa Monica Bay ("the Bay"), especially because this project would involve revoking the current moratorium on oil drilling in Hermosa Beach. Heal the Bay has weighed in on our concerns and offered alternative suggestions regarding oil operations in Santa Monica Bay before- we completed a careful analysis of the Chevron's Offshore Marine Terminal lease extension DEIR and Final EIR in 2010, and plan to do thoughtful research and outreach to other experts when reviewing this DEIR. Many of Heal the Bay's volunteers and members are Hermosa Beach and South Bay residents- a precedent-setting project of this magnitude has the potential to undermine the positive environmental work that your residents, and our volunteers, have done over the past 25+ years.

Due to the substantial risk involved with operating an oil development project in a coastal city along the Bay, this project and its associated DEIR should reflect careful and detailed research of environmentally superior alternatives as an oil spill could significantly affect the physical and biological environments of the Bay. We have already seen the catastrophic effects of oil spills, and E & B does not have a perfect record. We cannot underscore the real risk of an oil spill in the Bay, and how important it is for Hermosa Beach to thoroughly evaluate alternatives for this project and properly identify infrastructure that would minimize the risks.

#### **General Comments**

As we stated in verbal comments during the scoping meeting on July 24, 2013, it is imperative that the DEIR evaluate worst-case scenarios in its environmental impact evaluations, and the associated mitigation measures should reflect this level of impact. An oil spill in the Bay would be disastrous to the marine environment; residents and visitors who live near and recreate on Los Angeles County beaches; our local economy and tourism; water quality; and the health of marine life.

Furthermore, it is critical that a thorough cumulative impact evaluation of this Project is conducted in the DEIR. In Section 2.2 Project Location, it appears the NOP only includes the facility, and does not include pipelines and wells- both on and offshore as a part of the Project's area. However, under Section 2.3 Project Phasing, the description of the Project includes areas far from the physical facility. We recommend the DEIR evaluate a project location scope that includes the entire footprint of the operations, including where pipelines and wells will be constructed, as well as the bottom-hole locations that "may be several



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thousand feet from the surface locations of each well”.<sup>1</sup> Additionally, the range in which impacts from a spill, emissions, or increased geologic activity may be affected due to operations should be included as part of the project location scope in the DEIR evaluation, for both individual and cumulative impacts. We are concerned with the impacts to open space land and public recreation areas, and will closely evaluate those impacts in the DEIR.

### 2.3.1 Phase 1 - Site Preparation

We are pleased to see that the DEIR will “evaluate the impacts associated with any additional investigation and cleanup” of the “contamination associated with the previous landfill use at the site.”<sup>2</sup> Since this contamination includes “lead, arsenic, barium and petroleum hydrocarbons both in the soil and groundwater,” careful consideration of the risks of exposing and releasing these contaminants into the community and environment should be thoroughly evaluated.

### Cumulative Impacts

Thorough cumulative impact evaluation is an important element of an environmental impact report, and in-particular for a high-risk project, such as the proposed oil drilling operation. We urge the DEIR to include an evaluation of potentially releasing contaminated sediments from the sea floor, particularly those from the Palos Verdes Shelf Superfund site. The Palos Verdes Shelf Superfund site is an area contaminated by millions of pounds of DDTs and PCBs that were discharged by the Montrose Chemical Corporation via their ocean outfalls off White Point. DDTs and PCBs are both toxic chemicals that are slow to break down in the environment, and can accumulate in plants and animals as they move up through the food web. Half a century after the initial contaminate discharge began, more than 110 tons of DDTs and 11 tons of PCBs remain in the sediments at the ocean bottom, and bioaccumulation of these chemicals has affected sea birds, fish, and other animals throughout the Southern California Bight. They also pose a threat to human health through contaminated fish consumption. Over the past decade, following a ten-year \$140,200,000 settlement, extensive plans and projects to restore the natural resources have been implemented by a suite of restoration and monitoring actions addressing injuries to fishing and fish habitat, bald eagles, peregrine falcons and various seabirds. Stirring up and potentially re-releasing the contaminated sediments from the sea floor is a cumulative impact we anticipate reviewing in the DEIR.

### 2.3 Project Phasing: Phase 2- Drilling and Testing

We expect to see specific and clear details and evaluation in the DEIR of potential environmental impacts of the “bottom-hole locations (that) may be several thousand feet from the surface locations of each well.”<sup>3</sup> Please include specific sizes, lengths, and expand the scope of the impacts to include these areas as well-particularly in the tidelands and offshore areas. Additionally, we suggest including an evaluation of the disposal site for the mud that is not reused, as well as other waste generated by the test drilling.<sup>4</sup>

Regarding the gas flaring that “would continue until the gas pipeline is constructed as part of Phase 3 of the Project,” we would like to see the evaluation include how tall and how often flaring could be in a worst-case scenario. Furthermore, community health impacts associated with these flaring activities should be evaluated, as well as the impacts to local wildlife species such as birds protected under the Migratory Bird Treaty Act. Additionally, how would the gas flaring operations be monitored?

## IV. Biological Resources

<sup>1</sup> Notice of Preparation and Scoping Document for Draft Environmental Impact Report for the E & B Oil Development Project (NOP); Page 9

<sup>2</sup> NOP Page 9

<sup>3</sup> NOP Page 9

<sup>4</sup> NOP Page 10



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The proposed Project has very real potential for oil spills, and the increase in risk is significant, given there are no current oil drilling operations in the Bay. Significant biological impacts would likely result from an oil spill, including increased exposure risks resulting from spilled oil and impacts to biota and habitats from both the spill, and cleanup, and remediation activities. Oil spills have the potential to significantly impact marine life and habitats in the Bay and throughout the Southern California Bight, in part because they can spread rapidly over great distances, and can be difficult to detect and cleanup. Our state and local community has made significant investments to protect and enhance marine and coastal habitats in the Bay- such as establishing marine protected areas (MPAs) in Malibu, Palos Verdes and Catalina Island; restoring Malibu Lagoon; Santa Monica Bay Restoration Commission's National Estuary Program; and the planned restoration of Ballona Wetlands. An oil spill would directly undermine these long-term and important efforts.

In the area to be evaluated for impacts in the DEIR, we urge you to evaluate a geographic range (including the many marine species and habitats within that range) that could be affected by an oil spill, pipe or well burst, and the actual drilling activities. This should include modeling for a worst-case scenario and the potential for these risks. In addition, we anticipate seeing the DEIR include an analysis of the potential impacts to the aforementioned restoration and protection efforts (MPAs, Malibu Lagoon, etc.)

### **VI. Geology & Soils**

Since "the proximity of the Project site to ... active faults would likely result in ground shaking during moderate to severe seismic events" and "the seismically active faults in the region could be a potentially significant impact to the Project due to seismic ground shaking," a thorough evaluation of the risk of an oil spill due to an earthquake affecting pipelines and operations should be included in the DEIR.<sup>5</sup> In addition, please include an evaluation of how earthquakes could be induced/exacerbated by drilling activities.

Regarding subsidence, we recommend the DEIR include an evaluation of environmental impacts of subsidence in the nearshore and offshore environment, in addition to cumulative impacts to/with other projects, as "most of the initial water injection is planned for portions of reservoir zones located beneath on-shore areas; therefore, most of the subsidence, if it occurs, would likely take place in offshore areas."<sup>6</sup> The potential of subsidence to disturb contaminated sediments in the Bay should also be assessed.

### **IX. Hydrology and Water Quality**

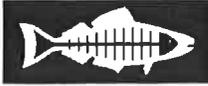
In addition to obtaining a construction permit and developing a Standard Urban Storm Water Mitigation Plan under the National Pollution Discharge Elimination System (NPDES) for the construction phase of the Proposed Project, the Proposed Project will likely need an industrial storm water permit under the NPDES program. Unauthorized non-storm water discharges can contribute a significant pollutant load to receiving waters. Under an industrial stormwater permit, the Project proponent would need to develop a Storm Water Pollution Prevention Plan (SWPPP) that aims to eliminate unauthorized non-storm water discharges to the facility's storm drain system, including a spill response component. This discussion is inappropriately absent from the Scoping Document and should be discussed in the DEIR.

The Scoping Document discusses an "impermeable membrane" that will contain drilling muds. The DEIR should evaluate the composition of the drilling muds to determine the potential impact if there is a spill. The DEIR should evaluate how often the muds will be disposed of and the maximum capacity of the containment unit. Also the DEIR should provide more detail on the proposed containment structure, in order to fully evaluate the potential for a spill and discharge to receiving waters.

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<sup>5</sup> NOP Page 31

<sup>6</sup> NOP Page 33



## Heal the Bay.

Section 3 discusses a Water Quality Study that will be included in the DEIR. Although the Scoping Document mentions that Phase II will utilize reclaimed water, it is unclear if the use of reclaimed water was evaluated for Phase I and III. In order to properly assess the demand for potable water and the ability to offset the demand by using reclaimed water, this should also be evaluated for Phases I and III.

### **Other: Climate Change and Sea Level Rise Evaluation**

The United States Geological Survey's Coastal Vulnerability Index rates most of the Southern California coast as "highly vulnerable" to coastal change due to sea level rise (SLR) and climate change.<sup>7</sup> As higher sea levels, increased storm surges, and inland flooding coincide, projected inundation is likely to impact water supply canals, wastewater treatment plants, power plants, and other critical infrastructure throughout California.<sup>8</sup> Adaptation and preparation for the effects of climate change, such as increased storm intensity and SLR, is imperative. California State and local governments in the Los Angeles region are beginning to move forward to plan for the impacts of climate change on our coastline. The City of Los Angeles will soon be releasing its first assessment of vulnerabilities to assets, resources, and communities due to climate change-driven SLR and storm events. We recommend that the DEIR include plans to address the impacts of SLR for the lifespan of the Project. These plans should integrate and be consistent with state and local climate change adaptation planning, recent science projecting SLR and storm surge impacts to the coast, local coastal climate change modeling to assess threats and vulnerabilities, and identify planning actions.

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We plan to submit detailed comments on the DEIR after a thorough analysis of the document, as the proposed Project is of great concern to Heal the Bay's staff, members, and volunteers. The precedent setting nature of opening up new oil operations in Santa Monica Bay and the risk of this project significantly affecting the physical and biological environments of our coast warrants a very comprehensive DEIR that considers worst-case scenarios and cumulative effects. The proposed Project, and potential oil spills, would significantly affect our local economy and tourism, water quality, the greater Los Angeles community, and the health of marine life.

Please feel free to contact us if you have any questions regarding our comments.

Sincerely,

Sarah Abramson Sikich  
Coastal Resources Director

Dana Roeber Murray  
Marine & Coastal Scientist

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<sup>7</sup> "Considering sea level rise as a coastal hazard," Proceedings of Coastal Zone '07 Portland, OR, (July 22-26, 2007); California Climate Adaptation Strategy

<sup>8</sup> California Climate Change Center, "The Impacts of Sea-Level Rise on the California Coast," (May 2009), available at [www.pacinst.org/reports/sea\\_level\\_rise/report.pdf](http://www.pacinst.org/reports/sea_level_rise/report.pdf); CA Climate Adaptation Strategy, p. 65, 68.