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SURFRIDER FOUNDATION

Via Email: krobertson@hermosabch.org

August 12, 2013

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

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 rom 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***".[1]

<u>Onshore Impacts:</u>

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. [2] The EIR must include a remediation plan with specific information about handling and processing contaminates *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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[1] Hydrologic Report: http://www.hermosabch.org/modules/showdocument.aspx?documentid=2145
[2] NOP: http://www.hermosabch.org/modules/showdocument.aspx?documentid=3013
[3] NOP: http://www.hermosabch.org/modules/showdocument.aspx?documentid=3013

Public Access, Recreation and Aesthetic Concerns:

Major tenets of Surfrider are to: protect costal 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"[3]. 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". [4]

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.**" [5]

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." [6]

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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[3] NOP: Impacts to recreation page 48. http://www.hermosabch.org/modules/showdocument.aspx?documentid=3013
[4] Coastal Act: http://www.coastal.ca.gov/coastact.pdf
[5] Coastal Act: http://www.coastal.ca.gov/coastact.pdf
[6] 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. [7]

While the Applicant asserts the water used for the project would not impact West Basin Municipal Water District supply, we are skeptical.[8] 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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[7] http://www.hermosabch.org/modules/showdocument.aspx?documentid=2145
[8] 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", i*t 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.[9] "

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. [10]

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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[9] *E&B Oil Development Project Information On Drilling Activities"*
http://www.hermosabch.org/modules/showdocument.aspx?documentid=2103
[10] 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 contradictive that the Applicant ensure an avoidance of onshore subsidence, yet also admits possible subsidence offshore. [11]

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

[11] Coastal Act: http://www.coastal.ca.gov/coastact.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. [12] 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.[13] 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. [14] 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 costal 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,

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Craig W. Cadwallader

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Surfrider Foundation - South Bay Chapter

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[12] http://online.wsj.com/article/SB10001424052702304879604575582693951448732.html
[13] http://pressdemocrat.com/article/20130802/articles/130809891?title=Coast's-oil-spill-defenses-called-inadequate#page=2
[14] http://www.tampabay.com/news/environment/water/gulf-oil-spill-killed-millions-of-microscopic-creatures-at-base-of-food/2113157