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TO THE ENVIRONMENTAL DEFENSE CENTER (EDC)
COMMENT LETTER,

***“THE FINAL REVISED RECOVERY PLAN FOR
THE SOUTHERN SEA OTTER”***

(181 pages, about 9 MB),

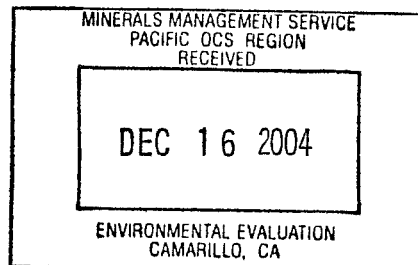
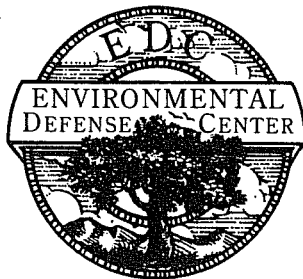
MAY BE ACCESSED AS 3 SEPARATE FILES FROM
THE MMS PACIFIC OCS REGION’S WEBSITE AT:

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December 15, 2004



Minerals Management Service
Attn: Suspension – EA Comments
Office of Environmental Evaluation
770 Paseo Camarillo
Camarillo, CA 93010-6064

Re: Draft Environmental Assessments in Support of the Proposed Suspensions of Production for AERA's Lion Rock Unit, Point Sal Unit, Purisima Point Unit, Santa Maria Unit, and Lease 409; Nuevo Energy Company's Bonito Unit; Arguello, Inc.'s Rocky Point Unit, Samedan Oil Corporation's Sword Unit and Gato Canyon Unit; and Venoco, Inc.'s Cavern Point Unit

Dear Minerals Management Service:

The following comments are submitted by the Environmental Defense Center ("EDC"), a public interest environmental law firm, on behalf of our clients the Sierra Club (Los Padres Chapter), Defenders of Wildlife, The Otter Project, Surfrider Foundation, Environment California, Get Oil Out!, Santa Barbara Channelkeeper, and Citizens Planning Association of Santa Barbara County, regarding the Draft Environmental Assessments ("EAs") prepared in support of the proposed Suspensions of Production for the thirty-six (36) federal oil and gas leases located off the coasts of Santa Barbara, Ventura and San Luis Obispo Counties.¹ The purpose of the requested suspensions is to avoid expiration of the leases. Without the suspensions, the leases would expire, without compensation, and no further exploration or development would be allowed.

Accordingly, as we stated in our scoping comments, the Minerals Management Service ("MMS") must evaluate all of the consequences that would result from the suspensions, not just the activities that are proposed over the next 13 - 37 months. The Draft EAs must be revised, and an Environmental Impact Statement ("EIS") prepared, to consider the reasonably foreseeable activities and the indirect, secondary, related, connected and cumulative impacts that may result if the lease terms are suspended. In addition, an EIS is required to analyze the potential environmental impacts that may result from the shallow hazards surveys that are proposed to take place during the

¹ EDC hereby incorporates by reference the comments submitted by the Natural Resources Defense Council, our co-counsel in State of California v. Norton, 311 F.3d 1162 (9th Cir. 2002).

immediate suspension term. Finally, MMS must revise the stated “Need for the Proposed Action” to reflect the true scope of the proposed action, namely, the development of oil and gas from the thirty-six leases. With an appropriate statement of need, MMS must then analyze a reasonable range of alternatives, including conservation, efficiency, renewables, and other environmentally preferred options.

Finally, before proceeding any further with environmental review for the leases contained within the Lion Rock and Santa Maria Units, as well as Lease 409, the Secretary of the Interior must announce her intention to expire these leases for failure to comply with the “due diligence” requirements of the Outer Continental Shelf Lands Act (“OCSLA,” 43 U.S.C. §1301 *et seq.*).² No activities are proposed for these twelve leases and therefore they do not qualify for a suspension under OCSLA.

I. The National Environmental Policy Act Requires Preparation of an EIS.

A. The Santa Barbara Channel is an Area of Incredible Ecological Sensitivity and Significance.

The Santa Barbara Channel is nationally recognized as an incredibly diverse and biologically sensitive ecosystem. For this reason, the Channel Islands National Park and National Marine Sanctuary were established in 1980. In fact, one of the main reasons the Sanctuary was established was to protect this region from the threats posed by offshore oil and gas development.

Historically, the waters of the Santa Barbara Channel form one of the most biologically productive ecosystems found on Earth. Unlike most of coastal California, which faces due west and the open ocean, the coastal waters of the Channel are on a south facing coast and caught between two land masses, the South Coast and the Northern Channel Islands. The western section of the Channel is a meeting place of the cool northern California Current and warm Southern California Countercurrent. This type of ecosystem is termed a “transition zone.” Transition zones are known to promote large concentrations of both biomass and species diversity as they are the confluence between two or more ecologically distinct systems.

In addition, upwelling provides unusually high concentrations of nutrients, especially macrozooplankton, which are one of the primary driving forces behind the Channel’s biological productivity and diversity. Wind patterns around Point Conception and in the Channel create these frequent seasonal upwellings, which through the process of thermal induction, forces deep, nutrient laden ocean waters to rise up the water column into the biologically rich Euphotic Zone (upper sunlight zone of the sea, less than 120 meters deep from the surface). Upwelling effects can reach the point of drawing up ocean waters from as deep as 2000 feet.

Due to these factors, the Santa Barbara Channel and Southern California Bight boast unparalleled species density and diversity, including numerous endangered, threatened and sensitive marine

²/ 43 U.S.C. §§1334(a)(1), 1337(b)(4); 30 C.F.R. 250.171.

species such as blue, gray, and humpback whales, southern sea otter (which, for the last few decades, has been attempting to recolonize the coastal waters of the Channel), southern steelhead, marbled murrelet and brown pelican. The blue whale, the largest mammal to ever live on earth, maintains its highest recorded seasonal concentration of individuals in any of the world oceans around the Southern California Bight.

One of the results of this world renowned ecosystem is a high number of state and federally protected marine areas. From Point Arguello to Point Mugu, in both state and federal waters, there are 21 protected areas, ranging in size from less than an acre to thousands of cubic acres. (See Figure 1, below.) There is no other place on the entire west coast of the continental US with such a concentration of marine protected areas.

FIGURE 1. STATE AND FEDERAL MARINE PROTECTED AREAS

1. Vandenberg Marine Resources Protected Act Ecological Reserve	8. Anacapa Islands Ecological Reserve	15. Skunk Point Marine Reserve – Santa Rosa Island
2. Channel Islands Biosphere Reserve	9. Santa Barbara Island Ecological Reserve	16. South Point Marine Reserve – Santa Rosa Island
3. Channel Islands National Marine Sanctuary	10. Santa Barbara and Anacapa Island ASBS	17. Gulf Island Marine Reserve – Santa Cruz Island
4. Channel Islands National Park	11. Richardson Rock Marine Reserve – San Miguel Island	18. Scorpion Marine Reserve – Santa Cruz Island
5. Santa Barbara Channel Ecological Preserve	12. Harris Point Marine Reserve – San Miguel Island	19. Painted Cave Marine Conservation Area – Santa Cruz Island
6. San Miguel Island Ecological Preserve	13. Judith Rock Marine Reserve – San Miguel Island	20. Anacapa Island Marine Reserve
7. San Miguel, Santa Rosa, and Santa Cruz Island Areas of Special Biological Significance (ASBS)	14. Carrington Point Marine Reserve – Santa Rosa Island	21. Anacapa Island Marine Conservation Area

Unfortunately, in spite of the high levels of marine biological production and protection, the coastal waters of the Santa Barbara Channel and Southern California Bight are in trouble. Years of pollution, over fishing, kelp harvesting, and other human related impacts have left these beautiful marine habitats in a severely degraded condition. Further offshore oil and gas development activities will only exacerbate these threats and impacts.

These waters and resources are especially vulnerable to the introduction of pollutants, such as from offshore oil and gas development, due to the presence of the Channel gyre. This gyre creates a somewhat closed system that is created by the Southern California Bight, Northern Channel Islands, and the confluence of the warm and cold ocean currents. The Channel gyre forms when the warm Southern California Countercurrent meets the much stronger, cold California Current, and the warmer current is forced into a counterclockwise rotational pattern that directs its waters south and eastward toward the Northern Channel Islands. Without the Islands, these waters would flow out into the deep ocean. However, the Islands create a natural barrier which, depending upon season,

ocean temperatures, and wind patterns, creates a huge counterclockwise rotating gyre in the entire Channel. Thus, pollutants tend not to escape into the larger Pacific Ocean, but instead disperse throughout the Channel ecosystem. This means that pollution from platforms along the South Coast can end up polluting habitats on the Channel Islands. This is especially true for platform discharges off the coast of Point Conception, where ocean currents are much stronger and the energy of the currents is focused on the western portions of San Miguel Island and the many federally protected ecosystems found on and around the Island.

Given this incredibly unique and sensitive environmental setting, MMS must be especially thorough in analyzing the potential effects of extending the offshore oil and gas leases.

B. MMS Must Consider the Impacts of Future Development and Production Activities on the Leases.

EDC represented eight environmental organizations in the litigation that required MMS to conduct environmental review of these lease suspensions. State of California v. Norton, 311 F.3d 1162 (9th Cir. 2002). While we are pleased that MMS is finally initiating the environmental review process, we are extremely disappointed that the federal government is adopting such a short-sighted view of the suspensions and associated environmental review. Rather than evaluate the full import of the suspensions, and the fact that they will keep the leases alive for future exploration, development and production, MMS only intends to look at the immediate lease terms and the activities that will take place during those terms. Specifically, MMS asserts that because no or minimal physical activities will take place on the leases during the immediate suspension terms, there is no requirement to prepare full EISs. On the contrary, MMS is obligated to consider *all* of the direct and indirect effects that may reasonably be expected to flow from the granting of these lease suspensions. To that end, MMS must prepare an EIS to address reasonably foreseeable exploration, development and production activities.³ MMS must also analyze and compare the benefits and impacts of various alternatives, including conservation, efficiency and renewable sources of energy.

By limiting the scope of environmental and project review, MMS ignores a fundamental requirement of the National Environmental Policy Act (“NEPA”): that key environmental issues must be identified *early in the planning process*, before any irreversible and irretrievable commitment of resources is made, and so that planning decisions can be shaped to reflect environmental values.⁴ Although MMS has stated an intention to prepare EISs later in the oil development process, such deferral does not address the purpose of a lease suspension, which

³/ Notably, when these leases suspensions were originally requested in 1999, MMS intended to prepare EISs for *32 of the 36 leases*, including: Gato Canyon Unit (Leases 0460 and 0464), Sword Unit (Leases 0319, 0320, 0322 and 03232A), Bonito Unit (Leases 0443, 0445, 0446, 0449, 0499 and 0500), Point Sal Unit (Leases 0415, 0416, 0421 and 0422), Purisima Point Unit (Leases 0426, 0427, 0432 and 0435), Santa Maria Unit (Leases 0425, 0430, 0431 and 0434), Lion Rock Unit (Leases 0396, 0397, 0402, 0403, 0408 and 0414) and Lease 0409. See Exhibit A attached to EDC’s scoping comments.

⁴/ 40 C.F.R. §1501.2; Andrus v. Sierra Club, 442 U.S. 347, 351 (1979); Kleppe v. Sierra Club, 427 U.S. 390, 409 (1976); State of California v. Norton, 311 F.3d at 1175, citing Metcalf v. Daley, 214 F.3d 1135, 1143 (9th Cir. 2000); Thomas v. Peterson, 753 F.2d 754 (9th Cir. 1985); Save The Yaak Committee v. Block, 840 F.2d 714, 718 (9th Cir. 1988).

extends the full rights of the underlying lease, as compared with the purpose of an Exploration Plan (“EP”) or a Development and Production Plan (“DPP”), which is to address a certain activity on the lease but not the decision as to whether the entire lease should remain active.⁵ As such, an EIS must be prepared now to ensure that the report “can serve practically as an important contribution to the decision making process.”⁶ In this case, the decision is whether to extend the lease, not whether to allow a specific exploratory activity or development and production activity to occur.

Pursuant to NEPA, a federal agency must evaluate the *direct, indirect, and cumulative effects* of a proposed agency action and consider *connected actions*.⁷ “Effects” include “indirect effects,” which are defined as those effects “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.”⁸ Future exploration and development activities on the oil leases are a reasonably foreseeable consequence of the lease suspensions under consideration by MMS here. Indeed, making possible such future activities is the *raison d’etre* of the requested suspensions. Without the suspensions, exploration, development and production would not be possible, and the leases would expire.⁹

In this case, EISs are required for the following reasons:

- MMS may not chop or **segment** a proposed action into small pieces to avoid the application of NEPA, or to avoid a more detailed assessment of the environmental effects of the overall action.¹⁰ In this case, the various phases of oil and gas development are all part of one overall proposed action.
- The Lease suspensions are **connected** to future activities on the leases. Actions are connected if they are closely related and if they are interdependent parts of a larger action and depend on the larger action for their justification.¹¹ Similarly, oil exploration, development and production activities are dependent upon the granting

⁵/ State of California v. Norton, 311 F.3d at 1174. See also Thomas v. Peterson, 753 F.2d at 760, wherein the Court rejected the Forest Service’s argument that cumulative environmental effects would be adequately analyzed and considered in an EA or EIS of future timber sales.

⁶/ 40 C.F.R. §1502.5.

⁷/ 42 U.S.C. §4332(2)(C); 40 C.F.R. §1508.7, 1508.8, 1508.25.

⁸/ 40 C.F.R. §1508.8(b); City of Davis v. Coleman, 521 F.2d 661 (9th Cir. 1974).

⁹/ Although issuing a lease does not create a vested right to develop the resources covered by that lease (Secretary of the Interior v. California, 464 U.S. 312, 317 (1984)), the issuance of a lease or lease suspension does grant the right to pursue development of the lease (State of California v. Norton, 311 F.3d at 1173, n6) and more often than not leads to the development and production of the underlying lease. As the National Research Council pointed out in 1989, the “enormous amounts of money” invested in the leasing process, coupled with the fact that the Department of the Interior had never cancelled a lease, created a perception that a decision to lease is “tantamount to a decision to develop and produce, provided that commercial reserves are found in a lease area.” *The Adequacy of Environmental Information For Outer Continental Shelf Oil and Gas Decisions: Florida and California*, National Academy Press (1989).

¹⁰/ 40 C.F.R. §1508.25(a); Save the Yaak Committee v. Block, 840 F.2d at 720.

¹¹/ 40 C.F.R. 1508.25(a)(1); Thomas v. Peterson, 753 F.2d at 758; Earth Island Institute v. US Forest Service, 351 F.3d 1291, 1305 (9th Cir. 2003).

of the lease suspensions, and the suspensions and future development activities are interdependent parts of large action. Clearly, oil exploration and development cannot proceed without the sale or suspension of an oil lease, and the lease would not be sold or suspended but for the contemplated exploration and development of those leases. Thus, the effect of such exploration, development and production must be included in the NEPA review of the lease suspensions.¹² It would be irrational to extend the leases without expecting the lessees to also seek permission to produce the oil and gas. Thus, both activities must be evaluated in the same NEPA document.

- An EIS is necessary to fully analyze the **cumulative effects** of the lease suspensions. Cumulative effects are those effects that result from incremental impacts of a proposed action when added to other past, present, and reasonably foreseeable future actions.¹³ Courts have required a cumulative impacts analysis when the record raises “substantial questions” as to whether the collection of anticipated actions will have “significant environmental impacts.”¹⁴ In fact, a lead agency should prepare an EIS, rather than an EA, for proposed actions for which it is reasonable to anticipate cumulatively significant impacts.¹⁵ The cumulative effects of all phases of each of these projects, as well as the combined effects of all of the projects together, must be analyzed in an EIS.

MMS cites Village of False Pass v. Clark, 733 F.2d 605 (9th Cir. 1984) for the proposition that the agency can phase the environmental review for these leases. However, the agency’s interpretation of that case is incorrect. False Pass actually holds that a forward-looking impact statement *should* be done at the preliminary stage of oil leasing activities under OCSLA. In False Pass, the plaintiffs challenged the adequacy of an EIS prepared for an oil lease sale in the Bering Sea, based on the EIS’s failure to perform an analysis of an oil spill totaling 100,000 barrels of oil. False Pass, 733 F.2d at 607. The Ninth Circuit rejected the plaintiffs’ claim, noting that the OCSLA establishes a staged process for development of offshore oil leases and that more detailed analysis of issues such as a 100,000-barrel oil spill *could* be considered at a later stage of the process, since the act of issuing an oil lease does not give the lessee a right to proceed with full exploration, development or production on the lease. Id. at 615-616.

However, False Pass does not justify the decision to avoid preparation of an EIS in this case. First, the False Pass case deals with the *initial* sale of oil and gas leases, whereas the instant case deals

¹²/ Save the Yaak Committee v. Block, 840 F.2d at 719, 721.

¹³/ 40 C.F.R. §§1508.7, 1508.25(a)(2); Thomas v. Peterson, 753 F.2d at 759; Save the Yaak Committee v. Block, 840 F.2d at 720-721; Earth Island Institute v. US Forest Service, 351 F.3d at 1291; Idaho Sporting Cong. v. Rittenhouse, 305 F.3d 957, 973 (9th Cir. 2002); Klamath-Siskiyou Wildlands Center v. Bureau of Land Management, 2004 DJDAR 13198 (9th Cir. Oct. 29, 2004).

¹⁴/ Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1214 (9th Cir. 1998); Kern v. United States BLM, 284 F.3d 1062, 1076 (9th Cir. 2002) (an EA “may be deficient if it fails to include a cumulative impact analysis”).

¹⁵/ 40 C.F.R. §1508.25(c).

with leases that were sold up to 36 years ago and have been the subject of extensive prior exploration and study. Therefore, MMS possesses much more specific and less remote information upon which to base its environmental review. Second, in False Pass, an EIS was prepared, whereas in this case MMS does not intend to prepare an EIS for any of the lease suspensions. In fact, even though the EIS in False Pass was prepared at the leasing stage, the agency did analyze the impacts of future development, including the risk of an oil spill. The Court specifically held that although “[t]he lease sale itself does not directly mandate further activity that would raise an oil spill problem, [citation omitted]...it does require an overview of those future [oil spill] possibilities” under NEPA. Id. at 616, emphasis added. The Court further pointed out that once leases are sold, “immense amounts of money change hands, expensive exploration projects are undertaken, and the Department of the Interior and various state agencies plan for the consequences of the lease program.” 733 F.2d at 619.¹⁶ In other words, *the Court found that in granting a lease sale, the agency must consider future activities on the leases and the related environmental impacts.* The Court then specifically relied on the fact that the EIS did analyze a potential oil spill of 10,000 barrels or more as providing a sufficiently detailed analysis of oil spill threats to satisfy NEPA at that stage of the oil leasing process. Id. As such, the Court affirmed that MMS must consider the impacts from later development and production when considering actions at the oil leasing stage.

In this case, the Ninth Circuit Court of Appeals has pointed out the similarity between oil leasing and the proposed lease suspensions. As the Court held, “[a]lthough a lease suspension is not identical to a lease sale, the very broad and long term effects of these suspensions more closely resemble the effects of a sale than they do the highly specific activities reviewed under [CZMA section 1456(c)(3)].” California v. Norton, 311 F.3d at 1174. The Ninth Circuit specifically rejected the argument that the lease suspensions could be segmented from later phases of exploration, development and production. “These lease suspensions represent a significant decision to extend the life of oil exploration and production off of California’s coast, *with all of the far reaching effects and perils that go along with offshore oil production.*” Id., 311 F.3d at 1173, emphasis added. Thus, MMS cannot divorce the suspensions under consideration here from the subsequent exploration and development activities that may follow and that the suspensions are intended to make possible. Instead, MMS must evaluate these reasonably foreseeable post-suspension activities in its NEPA analysis of the suspensions themselves.

Although in other circumstances it may sometimes be difficult to ascertain the nature and impact of activities early in the offshore leasing process, such limitations do not exist here. In this case, the leases are 20 – 36 years old and have been subject to years of planning and exploration. As MMS acknowledges (*Federal Defendants’ Report*, State of California v. Norton, supra, pp. 3-7), most of the leases have already been subject to exploratory drilling. In fact, the EAs themselves cite the numerous past activities that have occurred on the leases, including preparing EPs, drilling test wells, conducting seismic surveys, shallow drilling hazards surveys and marine biological surveys. The EAs also reference the many analyses that have been conducted to interpret survey data and help delineate the potential for recovery of oil and gas from the leases. In response to these past

¹⁶/ The False Pass decision also points out the difficulties in calling a total halt to exploration and development activities once the leasing process moves forward. 733 F.2d at 618, n. 41. In fact, cancellation of a lease may require the payment of a substantial amount to the lessee. 43 U.S.C. §1334(a)(2)(C).

activities, MMS has issued Producibility Determinations for all of the Units in question, thereby further pointing to the wealth of information available about the oil and gas development potential for the leases. Notably, two of the EAs are intended to allow the lessees to submit revised *DPPs*, thus confirming that exploration is complete and specific development plans are in the works. (See EAs for Nuevo Energy Company's Bonito Unit and Arguello Inc.'s Rocky Point Unit.)

In addition to the prior exploration activities and planning that have occurred on these leases, MMS completed a five-year study, from 1995-2000, that provides extensive information about the future level of activities on these 36 leases. See Final California Offshore Oil and Gas Energy Resources Study (COOGER), OCS Report MMS 99-0043, January 2000.¹⁷ The COOGER report not only provides information about development activities, but it also analyzes various development and production scenarios and presents detailed information about the need for onshore infrastructure to support such development. As stated in the report, "*The scope of the COOGER study is focused on the potential development of existing offshore oil and gas leases over a 20-year period from the end of 1995 through 2015. Projections of future industrial development and local conditions are presented in 5-year increments in the years 2000, 2005, 2010 and 2015 to provide a view of changes over time.*" COOGER, page 1-5, emphasis added.¹⁸ Chapter 3 of the report is entitled "Determination of Future Baseline and Potential Development Scenarios" and outlines scenario-specific development and production based on the "maximum potential development of existing leases." Clearly, MMS has sufficient information in this case to analyze future development and production scenarios and potential environmental effects. (See Exhibit B attached to EDC's scoping comments.)

The Ninth Circuit also found ample evidence at this stage in the process that the proposed lease suspensions could result in significant environmental effects. The Court cited evidence in the record concerning "the effects of the lease suspensions on the threatened southern sea otter," impacts to "the Monterey Bay National Marine Sanctuary and the Channel Islands National Marine Sanctuary," and the fact that "there has been continuous and significant public controversy over the environmental effects of offshore oil activities in California for the past thirty years, and that there has been significant public controversy over these lease extensions in particular." State of California v. Norton, 311 F.3d at 1176-1177; see also Exhibit C attached to EDC's scoping comments.

Despite this judicial pronouncement, MMS continues to fail to consider the effects that will result from these lease suspensions.

C. MMS Must Prepare an EIS To Address the Full Range of Activities On The Leases.

As stated above, MMS must address the indirect, reasonably foreseeable, connected and cumulative effects that will result from these lease extensions. Future development activities are not remote, hypothetical, or speculative, given the extensive history of the leases.

¹⁷/ All documents cited herein are incorporated by reference.

¹⁸/ At the time of the COOGER report, it was expected that activities on the leases would begin forthwith. Although the dates have changed, the development and production prospects remain the same.

As evidence of this fact, the COOGER report sets forth various development scenarios, including: no further offshore development (beyond the current production facilities and operations); further offshore development within existing onshore facility capacity; and maximum development of existing leases, including the expansion of onshore facility capacity. (See Exhibit B attached to EDC's scoping comments.) The COOGER report specifies how many offshore and onshore facilities would be required, and how many barrels of oil would be developed, *by facility and region*, for each development scenario. Id. Under NEPA, MMS is required to analyze the potential effects of these development scenarios.

An EIS is also required to address new information that has emerged since the last time environmental review was conducted for these leases. The record from the 1999 suspensions is replete with evidence concerning new information, including updated knowledge regarding risks, impacts and threats from offshore oil and gas development, the establishment of the Channel Islands National Park and National Marine Sanctuary and the Monterey Bay National Marine Sanctuary, new protections afforded species under the state and federal Endangered Species Acts, the 1990 amendments to the Clean Air Act, the enactment of the Oil Pollution Act of 1990, and new information regarding the long-term effects of oil spills. (See Exhibit C attached to EDC's scoping comments.)

Accordingly, MMS must conduct environmental review for: exploration activities (including seismic surveys, drilling, and air gun surveys); development (including platform and pipeline installation, drilling, discharge of drilling muds and cuttings); production; processing (including construction of new facilities); transportation (including new pipelines, marine terminals, and potential tankering, rail transport or trucking of Santa Maria Basin crude); refining; consumption; and eventual decommissioning and abandonment of facilities.

In its analysis, MMS must consider impacts associated with the construction and operation of new facilities, as well as the impacts caused by extending or expanding use of existing facilities. Such extensions may increase risks due to the aging condition or out-dated technology of the facilities. In addition, MMS should identify whether new refineries will be required to handle the oil downstream. Does adequate refinery capacity exist to handle the new proposed production? If not, will new facilities be constructed, or will other sources of oil be "backed out?" If other sources (including onshore production) will be backed out, what is the net benefit of the proposal to extract more oil offshore?

In sum, an EIS should be prepared to address the following impacts:

- Air pollution – from exploration, construction, drilling, production, vessels, processing, refining, consumption, and facility decommissioning. Although offsets may be required to mitigate impacts from these activities, industry may claim that some activities are exempt (e.g., non-stationary sources; decommissioning activities), and there may be limitations on the availability of offsets;

- Water pollution - from construction, drilling, production, point discharges, marine transportation, and oil leaks and spills;
- Noise pollution - from surveys, vessel traffic, drilling and production;
- Biological harm - from exploration, construction, discharges, noise, vessels, operations, and spills. Oil and gas development will negatively affect endangered and threatened species, whales, dolphins, seals, sea lions, sea otters, fish, sea turtles, sea birds, as well as tidal and terrestrial species and the ecological areas cited above. MMS should identify species that became protected under the state and federal Endangered Species Acts, as well as the Marine Mammal Protection Act, after the initial lease sales¹⁹;
- Impacts to designated ecological areas such as the Channel Islands National Park and Sanctuary (established after the sale of some of the leases in question), as well as the other areas cited above, and conflicts with the potential expansion of the Sanctuary²⁰;
- Public health and safety – from air and water pollution, and accidental toxic gas releases;
- Geology – the Santa Barbara Channel and offshore California region is subject to intense seismic activity;
- Impairment of coastal and ocean views;
- Conflicts with tourist, recreational and commercial enterprises;
- Risk of oil spills;
- Climate change.²¹

The risk of a major oil spill is real, and would have devastating impacts on the Santa Barbara Channel ecosystem described above. The incidence of spills offshore Santa Barbara can be expected to increase if there is an increase of offshore exploration and production here. Although the draft EAs fail to provide any significant treatment of this issue, an earlier Draft Environmental Impact Statement (DEIS) prepared by the MMS in support of delineation drilling at these leases at least made a cursory attempt to characterize the oil spill risk. These estimates, basing future spill

¹⁹/ A proper project description and scope of environmental review is also necessary to ensure adequate consultation under section 7 of the ESA.

²⁰/ The CINMS is conducting a Biogeographic Study in anticipation of a Supplemental Environmental Impact Statement that will be prepared to evaluate options for expanding the current boundaries of the Sanctuary. See www.cinms.nos.noaa.gov/manplan/boundaries.html.

²¹/ A recent study published in the Proceedings of the National Academy of Sciences of the United States of America confirms that continued reliance on fossil fuels has an increasingly significant effect on climate change. ("*Emissions pathways, climate change, and impacts on California*," by Katharine Hayhoe, et al, 2004.)

rates on those observed during recent decades, are never clearly presented for the lay reader. However, they project an appreciably increased risk of a large spill (greater than 1000 barrels), estimating the probability of one or more such spills to be 75-78% given future production from the undeveloped leases. This is in addition to a statistically expected 8 oil spills of smaller size. Three recent oil spills, and the collision of a freighter with an oil platform in the Gulf of Mexico, confirm the likelihood of accidents and spills from oil and gas development.

Clearly, development of these leases is likely to result in oil spills; the question is of what magnitude and in what locations. Despite the potential impact of such spills on the ecologically vibrant marine community in the Santa Barbara Channel, and indeed, in the Channel Islands National Marine Sanctuary, this issue is not addressed in the EAs.

The lessons learned in recent years from studies of the long-term effects of oil spills is that even with intensive remediation efforts, full recovery of the biota within the ecosystem may take generations, and no oil spill is benign. In fact, scientists reviewing the effects of the Exxon Valdez oil spill have recently argued that methods of assessing ecological risks of oil in the oceans should be changed to reflect new knowledge about unexpected persistence of toxic subsurface oils and chronic exposure resulting in delayed and long-term risks and impacts on wildlife (See Charles H. Peterson et al, *Long-Term Ecosystem Response to the Exxon Valdez Oil Spill*, Science, December 2003 and National Academy of Science's National Research Council, *Oil in the Sea III: Inputs, Fates, and Effects*, 2003.)

Given the fact that oil spills resulting from development of the leases can cause irreparable harm to local ecosystems, the EAs must provide publicly-accessible information in layperson's language about the probabilities and effects, both acute and long-term, of such a spill.

Another issue of particular concern to EDC and our clients is the threat to the southern sea otter. The southern sea otter is listed as "threatened" under the Endangered Species Act ("ESA"), and is therefore also recognized as depleted under the Marine Mammal Protection Act ("MMPA"). (Final Revised Recovery Plan for the Southern Sea Otter, U.S. Fish and Wildlife Service (2003), page v, attached hereto and incorporated herein by reference, hereinafter referred to as "Recovery Plan.") The southern sea otter is also listed as a "Fully Protected Species" in California.²²

The southern sea otter population was listed as threatened in 1977 because of (1) its small size and limited distribution, and (2) potential jeopardy to the remaining habitat and population by oil spills (Recovery Plan, p. 10; 42 FR 2965, 1/14/1977). Both the original (1982) and the Revised (2003) Southern Sea Otter Recovery Plans consider a potential oil spill to be the primary threat to sea otter recovery. (Recovery Plan, pp. vi, 10.) The Recovery Plan concludes that (a) an oil spill is likely to occur over the next 30 years (the period during which the 36 leases would be developed) (Recovery Plan, p. 10); (b) the probability of death in sea otters as a result of contact with oil following an oil spill is likely to be no less than 50 percent (see Recovery Plan, Appendix C: "*Using Information About the Impact of the Exxon Valdez Oil Spill on Sea Otters in South-Central Alaska to Assess the Risk of Oil Spills to the Threatened Southern Sea Otter Population*," Allan J. Brody for U.S. Fish

²²/ CA Fish and Game Code §4700(b)(8).

and Wildlife Service Southern Sea Otter Recovery Team, Ventura, California, September 1, 1992); and (c) rehabilitation of oiled sea otters following a major spill is expensive, may be detrimental to some individuals and is of questionable benefit to the population (citing Estes 1991, 1998). (Recovery Plan, pp. 10, 20 – 26, Appendix B: “*Potential Impacts of Oil Spills on the Southern Sea Otter Population*,” Final Report prepared for U.S. Fish and Wildlife Service, R. Glenn Ford and Michael L. Bonnell, January 1995.) The Recovery Plan notes that after the Exxon Valdez spill, most oiled otters were not captured and saved. Id.

Recommendations to limit oil and gas development are key to the Recovery Plan (see, e.g., “Actions Needed” in the Executive Summary: “Protect the population and reduce or eliminate the identified potential limiting factors related to human activities, including: managing petroleum exploration, extraction, and tankering to reduce the likelihood of a spill along the California coast to insignificant levels.” Recovery Plan, page x.) The 36 undeveloped oil leases are cited as a reason for listing the southern sea otter as threatened. (Recovery Plan, p. 11.)

A primary threat to southern sea otter recovery remains the threat of an oil spill. (Recovery Plan, pp. vi, viii, 23, 28, 33.) As stated in the Recovery Plan, “Oil spills, which could occur at any time, could decimate the sea otter population.” (Recovery Plan, p. viii.) Major factors contributing to the mortality of oiled sea otters appear to be 1) hypothermia, 2) shock and secondary organ dysfunction, 3) interstitial emphysema, 4) gastrointestinal ulceration, and 5) stress during captivity. (T.M. Williams et al, Emerging Care and Rehabilitation of Oiled Sea Otters: A guide for Oil Spills Involving Fur-Bearing Marine Mammals, Chapter 1 – The Effects of Oil on Sea Otters: Histopathology, Toxicology, and Clinical History (1995).)

Sea otters are incredibly susceptible to oil pollution. They can be killed outright when their fur is fouled by oil. Otters have no blubber; their fur is their only insulation. Oiled sea otters become hypothermic; crude oil penetrates the fur and destroys its water repellency. (See T.M. Williams, *supra*, Chapter 5.) Sea otters can also die from ingesting the oil. This may happen in two ways: they lick the oil off their fur, and/or they eat contaminated food.

New research from the Exxon Valdez spill reveals not only the short-term, but also the long-term effects of oil spills. (C.H. Peterson et al, *Long-Term Ecosystem Response to the Exxon Valdez Oil Spill*, Science 302: 2082-2086 (2003); B. Ballachey et al, *Correlates to survival of juvenile sea otters in Prince William Sound, Alaska, 1992–1993*, Can.J. Zool. 81: 1494–1510, 2003; J.L. Bodkin et al, *Sea Otter population status and the process of recovery from the 1989 ‘Exxon Valdez’ oil spill*, Mar Ecol Prog Ser. 241:237-253, 2002; R.A. Garrott et al, *Mortality of sea otters in Prince William Sound following the Exxon Valdez oil spill*, Marine Mammal Science 9:343-359, 1993; D.H. Monson et al, *Long-term impacts of the Exxon Valdez oil spill on sea otters assessed through age-dependent mortality patterns*, Proc. Natl. Acad. Sci. U.S.A. 97: 6562–6567, 2000.)

Modeling suggests that an oil spill the size of the Exxon Valdez could impact 90% of the current southern sea otter population with a minimum (immediate) range-wide mortality of 50 percent. (Recovery Plan, pp. 20, C-2; A.J. Brody, et al, *Potential impacts of oil spills on California sea otters: Implications of the Exxon Valdez in Alaska*, Marine Mammal Science 12:38-53, 1996.) Past

efforts to minimize potential effects of an oil spill by relocating otters to San Nicolas Island have proven unsuccessful. (Recovery Plan, pp. 13–14, 20–22.)

In addition to being protected under the ESA, the otter is listed as depleted under the MMPA. Depleted species and their habitat require protection. To be de-listed under the MMPA the population needs to be at the “optimum sustainable population,” defined in the MMPA as “the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element.”²³ According to the Recovery Plan, the lower limit of the optimum sustainable population is estimated to be approximately 8,400 individuals. (Final Revised Recovery Plan, p. vi.) Current levels are at about 2,500. (U.S. Geologic Survey, 2004.)

The Recovery Plan for the Sea Otter identified two approaches that were intended to lead to the delisting of the otter under the ESA: (1) increasing the range of the sea otters in California to lessen the risk of a single oil spill event reducing the otter population below a viable level, and (2) decreasing the likelihood of a major oil spill event within the sea otter’s range. (Recovery Plan at pp. vi, 28, Appendix D-11, 12.) Range expansion into the Southern California Bight and the Santa Barbara Channel is critical to the recovery of the sea otter. According to the July 2000 final Biological Opinion, *Reinitiation of Formal Consultation on the Containment Program for the Southern Sea Otter*, 1-8-99-FW-81, “the best available information indicates that continued, passive expansion of the range of the southern sea otter is necessary for its survival and recovery” (page 31). The literature suggests that colonization in the Channel and at the Channel Islands is critical to the survival and recovery of the sea otter; for example, in the mid-1990’s, approximately 20% of California’s sea otter population was identified at the Islands. (K. Laidre, et al, *An Estimation of Carrying Capacity for Sea Otters Along the California Coast*, Marine Mammal Science 17(2):294-309, April 2001.)

New demographic and radio tagging research also emphasizes the importance of southward expansion range. Sea otters were observed south/east of Point Conception, in substantial numbers, in 1998 (Recovery Plan, p. 3; California Department of Fish and Game, and US Fish and Wildlife Service, unpublished data). Since 2001, sea otters appear to be “resident” between Point Conception and Santa Barbara (The Otter Project, personal communication, data table attached).

Finally, the EAs are incorrect in stating that otters stay close to shore; in fact, otters have been observed further offshore in the Channel and up the coast as far as Monterey. (The Otter Project, personal communication.)

In sum, MMS must evaluate all the potential impacts from future exploration, development and production on the leases, and must consider the impacts of oil spills on sea otters and other marine wildlife.

²³/ 16 U.S.C. §1362(9).

D. MMS Must Consider the Cumulative Effects of the Proposed Projects.

Finally, MMS should prepare one EIS that encompasses the present and future activities that may occur on all 36 leases, rather than providing piecemeal environmental review. These suspensions are related and will result in significant cumulative impacts.²⁴

The EIS should also consider cumulative effects of other regional energy projects such as the proposed BHP Cabrillo Port and Crystal Energy Liquefied Natural Gas projects. Both projects would involve transportation and processing of LNG in this same area, in particular close proximity to the Cavern Point Unit. In fact, the Crystal Energy project would utilize Platform Grace, which may also be involved in the Cavern Point Unit development project. The environmental review for the Cavern Point project should also consider potential impacts regarding the proposed Chevron/Hubbs Fish Farm project at Platform Grace.²⁵

In addition, the EIS should analyze the safety impacts that are likely to occur due to the projected increase in shipping traffic in the area – both in size and quantity of large vessels expected to utilize the shipping lanes located next to these leases. This increase, accompanied by expanded offshore oil and gas production, will result in new and increased safety impacts.

E. The Activities Proposed During the Lease Suspension Terms Will Result in Environmental Effects.

In addition to the wide ranging impacts mentioned above, MMS must fully analyze the potential impacts that would occur due to activities proposed during the immediate suspension terms. MMS understates the environmental consequences of the lease suspensions by arguing that minimal activities will take place during the term of the suspensions.²⁶ However, shallow hazards surveys will be conducted on the Point Sal, Purisima Point and Gato Canyon Units. These surveys may adversely affect marine wildlife, including whales, dolphins, pinnipeds and fishes due to the exposure to very high levels of noise.

Although additional research is required to determine the full extent of how marine wildlife may be affected by underwater acoustics, there is substantial evidence available to demonstrate that impacts can include mortality, physical damage, hearing loss, temporary and permanent threshold shift,

²⁴/ Kern v. U.S. Bureau of Land Management, 284 F.3d 1062, 1075 (9th Cir. 2002); Klamath-Siskiyou Wildlands Center v. Bureau of Land Management, 2004 DJDAR 13198 (9th Cir. Oct. 29, 2004); Blue Mountains Biodiversity Project, 161 F.3d at 1214-1215.

²⁵/ Applications have been submitted for all three projects. The BHP project is currently undergoing environmental review.

²⁶/ As stated above, Lease 409 and the Lion Rock and Santa Maria Unit leases should be expired because *no* activities are proposed during this suspension period.

masking, and non-physical behavioral damage such as changes in feeding, migrating and reproductive habits.²⁷

While AERA Energy and Samedan Oil Corporation are both required to employ measures to minimize and mitigate take of many marine mammal and reptile species during surveying, both mitigation schemes are inadequate in addressing the full range of environmental impacts that may occur as a result of shallow hazards surveying as proposed.

According to NOAA marine mammal stock data, seven beaked whale species, including Baird's beaked whale (*Berardius bairdii*), Cuvier's beaked whale (*Ziphius cavirostris*), and five species of the genus *Mesoplodon* range off the Central and Southern California coast, including the areas encompassing the three units targeted for shallow hazard surveys.²⁸ Beaked whales are known to forage at significant depths (hundreds of meters) and stay under for long durations, sometimes an hour or more.²⁹ In comparison to other marine mammal species, beaked whales are known to be highly elusive and very difficult to spot or observe visually; they are also known to instinctually dive when faced with anthropogenic noise or activity perceived as threatening. (Center for Biological Diversity v. National Science Foundation, Temporary Restraining Order, No. C 02-5065 JL, (N.D. of Cal. 2002).)

These characteristics make beaked whales particularly susceptible to harassment or harm from seismic surveying with airguns, even when surveyors employ the mitigation measures proposed by MMS for Samedan and AERA, such as "ramp-up" and dedicated "spotters" with authority to shut down air gun operations. In Center for Biological Diversity, the Court found that an undetected beaked whale caught in the water column below an airgun blast is "highly susceptible to acoustic trauma," which would obviously result in unmitigated harm, or "take."

More specifically, in its EAs for these SOP's, MMS presents a dangerously simplistic characterization of the proposed surveying, as well as several incomplete, simplistic or misleading arguments for the safety of the shallow hazards surveying as proposed. For example, MMS states that "[p]eak sound pressure for the proposed air gun would be approximately 218 dB. The generated signals would be roughly constant in amplitude over a frequency range of 8-80 Hz. Much of this total output is directed downward." Despite the statement that the sound source is primarily propagated downward, the EAs rely on an attenuation factor that is based upon spherical propagation. The EAs should be revised to evaluate the impacts of downward propagation on species that may occur below the surface. The EAs should then be revised to identify the distance

²⁷/ See, for example, *Sounding the Depths: Supertankers, Sonar and the Rise of Undersea Noise* (Natural Resources Defense Council 1999), *Oceans of Noise: a WDCS Science Report* (S. Dolman, et al., Whale and Dolphin Conservation Society 2003), and *Ocean Noise and Marine Mammals* (National Research Council, National Academy Press 2003).

²⁸/ J.V. Carretta, et al, *U.S. Pacific Marine Mammal Stock Assessments: 2003*, NOAA Technical Memorandum NMFS, Southwest Fisheries Science Center, La Jolla, CA, March 2004.

²⁹/ R. Baird, et al, *Tagging Feasibility and Diving of Cuvier's Beaked Whale (*Ziphius cavirostris*) and Blaineville's Beaked Whales (*Mesoplodon densirostris*) in Hawai'i*. NMFS Southwest Fisheries Science Center, La Jolla, CA, February 2004.

thresholds for 160 dB and 180 dB received sound levels downward, in the direction perpendicular to sea surface.

What's more, if the direction of most intense sound propagation is downward and underwater, the use of trained human spotters watching the sea surface is of very limited effectiveness in preventing ensouffication of protected marine creatures that minimize their time at the surface. Because protected marine species such as beaked whales are known to flee to these subsurface zones, this inconsistency must be clarified by MMS and its implications must be fully discussed.

In addition, if MMS is relying on ramp-up procedures to reduce probability that a protected animal is caught below the air gun blast, what evidence is there that ramp-up will work?³⁰ What measures will the surveyors employ to minimize and mitigate take of protected marine species such as beaked whales that may be caught unobserved in the water column below the air gun? For a complete assessment of the environmental implications of these SOP's, MMS must answer these questions.

Regarding the potential physiological impacts on marine mammals from exposure to shallow hazard surveying noise, MMS states:

The most recent published summaries of information regarding marine mammal hearing and sensitivities relative to acoustic impacts are Thillet (2000) and Appendix G of MMS (2004), which are incorporated here by reference. Richardson et al. (1991) discussed the possibility that the intense but intermittent sound pulses produced by airguns might damage the auditory systems of marine mammals. Comparing with humans the authors hypothesized that a received level of 195-215 dB might cause immediate hearing damage. Given the source level reported above for the air gun to be used in the proposed shallow hazards surveys, it is apparent that animals would have to be within 8m of the air gun to be subject to such injury. [Samedan EA, p. 4-18. AERA EA, p. 4-19.]

In discussing "marine mammal hearing and sensitivities relative to acoustic impacts," MMS misleadingly concludes "animals would have to be within 8m of the air gun to be subject to such injury [immediate hearing damage]." *Id.* This conclusion is incomplete and misleading for two key reasons.

First, it is based on simplistic modeling that apparently fails to account for MMS's stated position that most sound energy is directed downward (rather than radiated spherically). For instance, does the proposed 8m threshold for immediate hearing damage hold as true for animals immediately below the air gun as for animals to the side or behind the sound source? Does this threshold hold

³⁰/ According to the National Research Council, "...startle responses are one reason many seismic surveys are required to "ramp up" the signal so fewer animals will experience the startle reaction and so that animals can vacate the area of loudest signals. *There is no evidence, however, that this action reduces the disturbance associated with these activities.* The ramp-up of a playback signal or a seismic air-gun array takes place over a short timescale (a few tens of minutes maximum) compared to the changing received levels an animal experiences as it swims toward a stationary signal source. (National Research Council, *Ocean Noise and Marine Mammals*," The National Academies Press, Washington, D.C., 2003, emphasis added.)

true for the diversity of protected species that inhabit the three Units targeted for surveying? Without explicitly answering such questions, MMS's conclusion remains a misleading generalization that fails to characterize air gun noise and thus its potential for environmental impact.

Second, after incorporating by reference Appendix G of MMS (2004)³¹ (referred to herein as “MMS (2004)”), MMS fails to discuss the pertinent data therein on harmful and fatal physiological but *non-auditory* impacts from sound energy observed in protected marine mammal species exposed to intense noise from sources such as active sonar and air guns. That data is discussed below; however, it should first be stated that for MMS to refer to MMS (2004)— a comprehensive and up-to-date summary of important research— merely in passing, and then refer to 13 year-old research (Richardson et al. (1991)) alone to draw its conclusion on “marine mammal hearing and sensitivities” is irresponsible and deceptive. Agency documents show that acoustic impacts to protected species are not limited to auditory structures, and yet there is no explicit reference or discussion of such impacts in the EAs for the AERA and Samedan SOP's.

MMS (2004) details two distinct mechanisms by which cetaceans such as beaked whales (which occur in the Gulf of Mexico as well as off the coast of California) may suffer harmful or fatal physiological trauma from sonar and air gun sounds. Furthermore, the document reports that these impacts, discussed below, can occur at received levels significantly below those cited in MMS's AERA and Samedan EAs as causing auditory damage such as temporary threshold shift (TTS) or permanent threshold shift (PTS). The data in MMS (2004) data is directly applicable to environmental impacts that may occur should the SOP's be granted, and yet MMS fails to raise these important issues, or discuss the probability or mitigation of either impact.

First, MMS (2004) reports that low-frequency pulses from sources including air guns could induce resonance in the “soft-bounded air spaces of the cetacean middle ear, sinus cavities and lungs,” resulting in serious trauma to the tissues surrounding these spaces. The authors state that “resonance effects with respect to seismic sources are... worthy of consideration,” and report that “even given the relatively short stimulus of a seismic pulse... resonance may theoretically amplify an incident sound level by 20 dB and that a mere few oscillations at resonance may be enough to cause physiological trauma to tissue structures.” This information raises serious questions for the shallow hazard surveying proposed under the Samedan and Aera SOP's that MMS fails to consider in its environmental analyses. For example, over what distances from the air gun sound source, both horizontally and vertically, are harmful and fatal resonance effects in protected marine species a potential danger? What measures will MMS employ to keep animals out of that zone of impact, both at the sea surface and below the air gun? MMS must discuss this potential impact and answer such questions explicitly in its analysis.

MMS (2004) details a second potential mechanism of impact to cetacean non-auditory physiology from air gun sound energy, the inducement of harmful or fatal decompression sickness (DCS). The

³¹/ Minerals Management Service, *Geological and Geophysical Exploration for Mineral Resources on the Gulf of Mexico Outer Continental Shelf: Final Programmatic Environmental Assessment. Appendix G: Marine Mammal Hearing and Sensitivity to Acoustic Impact*. Gulf of Mexico OCS Region, New Orleans, LA, 2004.

authors cite significant evidence that high intensity anthropogenic noise from sources such as active sonar and air guns may cause a panic response in some deep diving marine mammals such as beaked whales, leading them to surface too quickly for adequate nitrogen decompression. The resulting bubble growth in joints, organs and tissues can then cause trauma or death through hemorrhaging and embolisms of fat and air. MMS (2004) also reports that mere exposure to sound may result in bubble growth in cetacean tissues and thus induce DCS, without any alteration of behavior:

Current thinking is now that bubble activation and subsequent DCS might occur by static diffusion in body tissues, which once triggered by an initial acoustic pulse would not require continued ensonification to take effect (i.e., the effect would “run-away” by static diffusion once microbubbles present in marine mammal tissues had been “activated”). [MMS (2004)]

Furthermore, MMS (2004) reports evidence that damaging physical effects— particularly behavioral or acoustic inducement of DCS— in deep diving cetaceans can occur at received levels as low as ~165 dB re 1 μ Pa, i.e. “at received sound levels considerably lower than those required to produce TTS and PTS in auditory structures.” The report continues:

The balance of evidence strongly suggests that these beaked whale stranding events [in the Bahamas and the Mediterranean] are acoustically induced, and that they occur in response to received sound levels much lower than would be expected to give rise to “normal” physical trauma in marine mammals. Beaked whales appear to be particularly at risk from anthropogenic acoustic activity. Beaked whales are deep divers, and... this may increase their risk of being exposed to higher energy levels from downward-directed seismic pulses. [MMS (2004)]

MMS’s own documents thus state that air gun noise has significantly greater potential for causing harm in protected marine species than the agency reports in the EAs for granting SOP’s to Samedan and AERA. Despite this explicit warning from MMS’s own report, the agency fails to present or consider this evidence in light of seismic surveying in the Point Sal, Purisima Point, and Gato Canyon Units. Instead, MMS states: “Animals entering the 160 dB impact zone may be harassed, amounting to an *insignificant* impact.” (Emphasis added.) Meanwhile, MMS (2004) suggests that physical *harm* may result from exposure to levels above 165 dB; this is another contradiction that must be clarified. Furthermore, for MMS to incorporate MMS (2004) by reference, and then contradict, or fail to even discuss, highly pertinent data therein is misleading and deceptive.

Arguing for the safety of air gun blasting to odontocetes (particularly delphinids), MMS states:

“Richardson et al. (1991) reported no published information on the reaction of odontocetes to seismic sound. They pointed out that the sounds emitted by air guns are at frequencies well below the frequency ranges of the vocalizations and optimum hearing of odontocetes but that sound pulses recorded underwater many kilometers away from gun arrays sometimes include substantial energy at frequencies of several hundred Hertz. They concluded that airgun pulses would probably be audible to odontocetes under these circumstances.” [Samedan EA, p. 4-20; AERA EA, p. 4-20.]

Again relying on 13 year old data, MMS argues that while air gun blasting is audible to odontocetes, it tends to be comprised of sound largely outside the range of optimal odontocete hearing and thus of minimal consequence. MMS continues: “As evidence for habituation to such sound, Turnpenny and Nedwell (1994) cite the fact that a stable population of *Tursiops truncatus* lives in Scotland’s Moray Firth, where seismic surveying has occurred regularly since 1965. Also, seismic operators occasionally see dolphins near operating air guns.” MMS fails to include all pertinent data, however; reporting on the character of air gun sound and its potential for impact on odontocetes, MMS (2004) states:

The frequency spread of airgun pulse power extends across the entire human audio range of 20 Hz to 20 kHz, and into the ultrasonic range, >20 kHz. ...Due to the increasing sensitivity of the dolphin auditory system as frequency increases, these high frequency components cannot simply be ignored.

Furthermore, (MMS 2004) concludes that cetacean habituation to intense anthropogenic noises may have a much more negative implication than presented by MMS in its EAs for Samedan and AERA, namely that desensitization to the acoustics signals is a result of permanent hearing damage already caused by those noises, rather than intentional toleration of the sound. That is, odontocetes such as *Tursiops* may sustain Level A harassment (as defined by the MMPA) despite being “habituated” to air gun blasts.

This inconsistency within MMS reveals that current data is far from conclusive on the range of environmental impacts caused by air gun noise. In its analyses of shallow hazard surveying for AERA and Samedan, MMS should discuss all existing relevant data as well as what remains unknown, in order to best develop the comprehensive, precautionary measures to protect marine mammal species that is required by law. As it stands, the agency appears to be reviewing the scientific record selectively, in order to minimize their legal responsibility.

In sum, significant further analysis of potential environmental impacts from seismic activity must be completed by MMS before the proposed shallow hazard surveying, and any other future air gun activity, can occur safely on the AERA and Samedan Units. The current environmental analyses contain several significant inconsistencies in this area, and lack consideration or proposals for mitigation of several hazards to marine protected species MMS itself associates with airgun blasting. MMS (2004) recommends that seismic surveyors “adopt precautionary measures, maintain vigilance of observation during [geophysical and geotechnical] operations, and adopt all required mitigation measures to the highest standard.”

The current EAs for the Samedan and AERA SOP’s do not demonstrate an adherence to these recommendations. Because the EAs lack discussion of all existing pertinent scientific data, MMS should reevaluate more thoroughly the safety of the shallow hazard surveys associated with the proposed SOP’s. Expanded safety measures to truly minimize the threat of harassment of harm to marine mammal species, including deep-diving cetaceans, may include:

1. Expand the effectiveness of spotting by using aerial and passive acoustic monitoring, and by training human spotters in beaked whale behavior;
2. Require the operators to shoot air guns at minimal required sound levels, and lengthen ramp up time;
3. Conduct real time acoustic monitoring to determine actual air gun noise propagation vertically as well as horizontally, and adjust exclusion zones based on that empirical data;
4. Develop measures to insure marine protected species are not “caught” in the water column below the air gun during blasting.

In light of the foregoing, an EIS should be prepared to fully evaluate the potential impacts of the proposed shallow hazards surveys. In addition, the mitigation measures suggested in the EAs are inadequate to fully mitigate the impacts of the surveys and further analysis is therefore required.

II. MMS Should Analyze Alternatives to Increased Oil and Gas Production.

- A. The Statement of Need Must Be Expanded to Accurately Reflect the Purpose and Effect of the Proposed Actions and to Allow Consideration of a Reasonable Range of Alternatives.

Given the wide-ranging local, regional and even global impacts cited herein, it is critical that other alternatives be given credible consideration and discussion. MMS attempts to avoid consideration of a range of alternatives, however, by characterizing the “Need for the Proposed Action” as simply allowing the oil companies to update and revise Exploration Plans (“EP’s”) and Development and Production Plans (“DPP’s”), conduct surveys, collect and analyze data, and undergo further technical and environmental review. In all cases, MMS restricts its analysis to the activities that will occur during the next 13 – 37 months and ignores the fact that the critical and overarching purpose of the suspensions is to prevent the leases from expiring so that the oil companies can develop and produce oil and gas.

This narrow statement of need limits the scope of alternatives available to the agency. In fact, MMS limits itself to only two options – either allow the suspensions to go forward, or deny them (by formal action or by taking “no action”) in which case they will expire. This approach violates NEPA by unreasonably constraining the range of alternatives available for review.³² When determining the range of alternatives to be considered, the agency must consider not only the scope of the *proposed* action, but also the indirect effects of the action.³³ Accordingly, the statement of need must be revised to address the entire project, which is to allow for the development and production of oil and gas resources off the coast of California.

³²/ City of Carmel-by-the-Sea v. Dept. of Transportation, 123 F.3d 1142, 1155 (9th Cir. 1995): “The stated goal of a project necessarily dictates the range of ‘reasonable’ alternatives and an agency cannot define its objectives in unreasonably narrow terms;” see also Westlands Water District v. U.S. Department of the Interior, 376 F.3d 853, 865 (9th Cir. 2004); Muckleshoot Indian Tribe v. United States Forest Service, 376 F.3d 853, 865 (9th Cir. 2004).

³³/ Border Power Plant Working Group v. Dept. of Energy, 260 F.Supp.2d 997, 1030-1031 (S.D. Cal. 2003).

B. MMS Must Identify and Analyze a Reasonable Range of Alternatives.

Many alternatives exist that can easily match the energy that would be obtained from the development of these leases.³⁴ Obviously, preparation of an EIS would require MMS to analyze a range of alternatives.³⁵ The alternatives analysis is central to an environmental analysis.³⁶ Even an EA, however, must include a discussion of alternatives.³⁷ The two alternatives identified in the EAs³⁸ are unreasonably restrictive and do not provide a “reasonable range” of alternatives for the agency to choose from.

In order to fully identify and analyze available alternatives, MMS must quantify and qualify the oil and gas to be produced from these leases. How much, if any, of the oil will be used as vehicle fuel? How much for other uses? How much for asphalt? Alternatives exist for all of these uses, and must be identified and analyzed as part of the environmental review process.

The Draft Environmental Impact Statement prepared by the MMS in 2001 estimated the total reserves for the 36 undeveloped leases to be 558 million barrels of oil and 208 billion cubic feet of natural gas, to be developed over 15 to 18 years (in the case of the oil) and 20 to 25 years (in the case of the natural gas). (MMS, Delineation Drilling Activities in Federal Waters Offshore Santa Barbara County, California, Chapter 1 p.7, 2001.) Of this, it is unclear how much would be sweet, light oil and how much would be unsuitable for most energy uses (i.e. asphalt production).

Oil is inarguably an increasingly scarce commodity on which many societal activities currently depend. However, developing the reserves off the California coast would not have a significant impact on oil prices or supply. As a percentage of worldwide oil production, these leases will be insignificant, averaging 100,000 barrels a day over 15 years (total worldwide oil production reached 68 million barrels per day--24.8 billion barrels in 2003, according to Oil and Gas Journal). Nationally, we consume 20 million barrels of oil a day. As such, the oil and gas that could be produced from these leases would satisfy our nation’s energy demand for less than two months and yet impact our marine environment and coastal communities for decades.

Additionally, regional refinery capacity is already near its limit. (California Energy Commission, Final Adopted AB 2076 Report, "*Reducing California's Petroleum Dependence*," p. 1, August 2003, page 1.) Therefore, additional supplies from offshore drilling would compete against in-state independent suppliers, not displace foreign imports. In this case, the development of these leases

³⁴/ According to the COOGER report, much of the oil from the Santa Maria Basin leases will actually be used for asphalt due to the heavy characteristics of the oil. See Exhibit B attached to EDC’s scoping comments. Alternatives also exist in this area; for example, recycled tires and other materials can be used to make asphalt.

³⁵/ 40 C.F.R. 1502.14.

³⁶/ Id.

³⁷/ 40 C.F.R. 1508.9(b); Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228-29 (9th Cir. 1998) (stating that consideration of alternatives is critical to goals of NEPA even where proposed action does not trigger EIS process).

³⁸/ The “No Action” and “Deny Suspension” alternatives are essentially the same, as they would both result in the expiration of the leases.

may not create any net benefit, and an alternative would be continued production from in-state suppliers.

In any event, local oil reserve exploitation will not meet the projected increases in demand for oil. Recognizing the need to develop alternatives to oil dependence, the California legislature conducted a study that identified a number of options to reduce oil demand in the state, including measures to improve vehicle fuel economy, development of fuel cell technology, and alternate fuels (solar power, ethanol, etc.) This study found that moderate fuel economy changes, implemented now, would save more than half a billion barrels of oil in 2020 alone--*equivalent to the entire projected undeveloped offshore oil reserves*. (See California Energy Commission, Final Adopted AB 2076 Report, "Reducing California's Petroleum Dependence," August 2003.)

As stated in our scoping comments; the environmental review reports must analyze the energy that may be achieved through conservation, efficiency and renewable sources such as wind and solar. According to the Rocky Mountain Institute, not only are new technologies capable of improving the efficiency of cars and light trucks by up to five times, but they are also capable of increasing the efficiency in buildings by five to ten times, in heavy industrial processes by two to four times, in high-tech semiconductor fabs by up to eight times, and in data centers by nine times. In addition to wind and solar alternatives, hydrogen reformers, microturbines, low-temperature desiccants, bioethanol, biodiesel, recovery of waste heat and other clean energy technologies are now available and could easily be expanded.

The environmental analyses must compare the impacts of such clean energy sources and alternatives to the impacts of these proposed lease suspensions and the activities that are proposed thereon.

Conclusion

The extension of the 36 leases offshore California will cause significant effects on the environment, both directly and indirectly. MMS must not segment the environmental review process by deferring its analysis to future, more limited, phases of oil and gas development. Instead, MMS must prepare an EIS *now* to ensure a timely and adequate analysis of all of the activities and impacts that will occur on these leases, to allow the public a meaningful review process, and to ensure that planning decisions are based on complete information and reflect environmental values. The EIS should evaluate the cumulative effects that will result from the suspension of all thirty-six leases. Finally, the EIS should examine the full range of impacts that would result from development of these leases, as well as a broad range of alternatives that would achieve the same goals without the negative, and potentially disastrous, consequences.

Sincerely,



Linda Krop
Chief Counsel

December 15, 2004

Suspension – EA Comments

Page 23

att: Final Revised Recovery Plan for the Southern Sea Otter
The Otter Project Sea Otter distribution data

cc: U.S. Senator Barbara Boxer
U.S. Senator Dianne Feinstein
U.S. Representative Lois Capps
Secretary of the Interior Gale Norton
U.S. Fish and Wildlife Service
U.S. NOAA Fisheries
Channel Islands National Marine Sanctuary
Channel Islands National Park
Governor Arnold Schwarzenegger
California Attorney General Bill Lockyer
California Coastal Commission
County of Santa Barbara
County of San Luis Obispo
County of Ventura
Natural Resources Defense Council
Sierra Club (Los Padres Chapter)
Defenders of Wildlife
The Otter Project
Surfrider Foundation
Environment California
Get Oil Out!
Santa Barbara Channelkeeper
Citizens Planning Association of Santa Barbara County

The Otter Project - Southern sea otter distribution data

Place	GPS Longitude	1/31/01	2/15/01	2/16/01	2/21/01	2/22/01	2/28/01	3/1/01	3/2/01	3/8/01	3/9/01	3/14/01	3/15/01	3/16/01	3/19/01	3/27/01	3/28/01	3/29/01	4/2/01	4/9/01	4/10/01	4/12/01	4/18/01	
Santa Barbara Harbor	119.41																							
Thousand Ships	119.42		1																					
	119.44																							
	119.46			1																				
	119.48																							
	119.50																							
Coit Oil Point	119.52																							
	119.54																							
	119.56	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1
Elwood	119.58				3																			
	120																							
	120.02																							
Religio	120.04																							
	120.06	1																						
	120.08				1																			
	120.10																							
Gardula	120.12																							
	120.14																							
	120.16																							
	120.18																							
	120.20																							
	120.22																							
	120.24																							
Coit Anchorage	120.26																							
Government Point	120.28			2	1	1	1	2	1	1	1	9	11	11	14	19	19	15	42	53			63	50
Pl. Conception	120.30																							
TOTAL		2	4	5	5	3	4	8	4	3	4	12	13	19	18	22	22	19	44	56	Weather	66	54	

ECOSLO

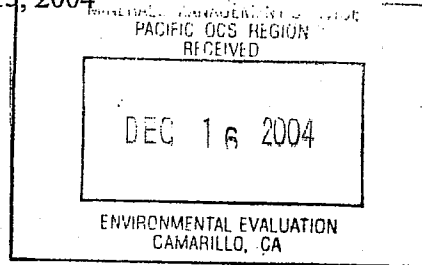
**ENVIRONMENTAL CENTER
OF SAN LUIS OBISPO COUNTY**

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December 13, 2004

Minerals Management Service
Pacific OCS Region
Office of Environmental Evaluation
770 Paseo Camarillo
Camarillo, CA 93010



RE: MMS Draft Environmental Assessments (EA's) for MMS Suspension Decisions on Undeveloped Leases

Thank you for this opportunity to comment on the MMS Draft Environmental Assessments (EA's) for MMS Suspension Decisions on Undeveloped Leases on behalf of the Environmental Center of San Luis Obispo (ECOSLO). The Environmental Center has worked to protect and enhance the natural environment of San Luis Obispo County through education and community activism for over thirty-three years.

ECOSLO has historically submitted comments on MMS activities in the coastal areas adjacent to and bordering San Luis Obispo County. The Environmental Center urges the preparation of Environmental Impact Statements (EIS) rather than the Environmental Assessments (EA) currently being reviewed for the *MMS Suspension Decisions for Undeveloped Leases*. An EA does not adequately address potential environmental effects that would result from extension and eventual development of these leases.

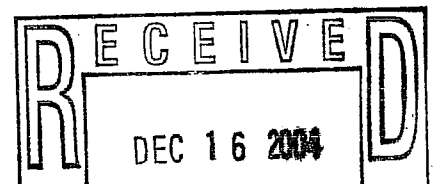
The MMS concluded that the extension of the leases would not harm the environment because the purpose of the extensions is to simply allow the oil companies more time to prepare plans, conduct studies and submit information to MMS. The MMS must consider all of the potential activities that may occur on the leases and the impacts that would result from such activities. They must also consider these impacts on a cumulative basis. The Environmental Assessments fail to consider cumulative impacts of previous leases, the preparation of revised plans, including exploration, and the prospective future actions of continued oil extraction. All impacts must be evaluated cumulatively including impacts on: ecosystem rarity or uniqueness; ecosystem stress; baseline ecosystem "naturalness" or pristine qualities; genetic resources; ecosystem interdependency; indicator species; and ecosystem recovery potential. Seismic activity must also be thoroughly evaluated.

The Environmental Assessments ignore the real potential adverse impacts on the environment. We urge the Minerals Management Service to reject the Environmental Assessments and require Environmental Impact Statements for the *MMS Suspension Decisions on Undeveloped Leases*. The natural environment and human health depend on your attention to these concerns.

Environmentally yours,

Pamela Heatherington
Pamela Heatherington
Executive Director

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Marine Interests Group San Luis Obispo County

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Dave Rymal
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at large, ret'd California State Parks

Margaret Webb
MBNMS Advisory Council

Dean Wendt, Ph.D.
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Patricia Wilmore
SLO Chamber of Commerce

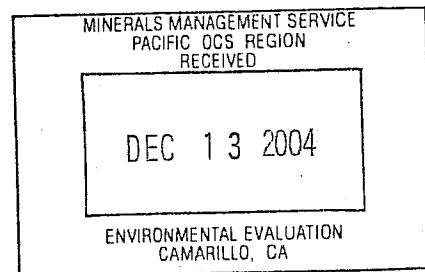
Jim Wood
Chair, Morro Bay Harbor Advisory Board

Web site:
www.mbnep.org/mig

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December 13, 2004

Minerals Management Service
Pacific OCS Region
Office of Environmental Evaluation
770 Paseo Camarillo
Camarillo, CA 93010



RE: MMS Draft Environmental Assessments (EA's) for MMS Suspension Decisions on Undeveloped Leases

This comment is offered on behalf of the Marine Interest Group (MIG) of San Luis Obispo. The MIG began in January 2003 as a forum including elected officials, business people, conservationists, fisherman, scientists and citizens to promote understanding of the marine resources off the coast of San Luis Obispo County and the needs and interests of the stakeholders involved with their use and enjoyment.

The Marine Interest Group supports the preparation of an Environmental Impact Statement (EIS) rather than the Environmental Assessment (EA) currently being reviewed. The EA does not adequately address potential environmental impacts on a cumulative basis. The Council on Environmental Quality defines cumulative effects as "the impact on the environment which results from the incremental impact of the action when added to other past, present and future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR sec 1508.7)." The Environmental Assessments fail to consider cumulative impacts of past leases, the preparation of the revised plans and the foreseeable future actions of continued oil extraction.

We believe that the law requires MMS to consider all of the potential activities that may occur on the leases and the impacts that would result from such activity. The potential harm to marine wildlife, our commercial and recreational fishing industry, coastal resources and the economy of San Luis Obispo provoke our concerns.

Thank you for your consideration of our concerns.

*Marine Interests Group
of San Luis Obispo County*

Action taken: December 10, 2004