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Via Electronic Mail

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Eric Gilles, Assistant Division Chief
California State Lands Commission
100 Howe Street, Suite 100-South
Sacramento, CA 95825
Email: CEQAcomments@slc.ca.gov
Fax: (916) 574-1885

RE: Comments on Venoco South Ellwood Field Notice of Project

The devastating oil spill that fouled miles of California's coastline last week shows why the California State Lands Commission (the "Commission") should reject a proposal for new oil development off Santa Barbara. The devastating Santa Barbara spill occurred as the Commission considers a request from Venoco, Inc. to expand offshore drilling into new areas off California's coast from Platform Holly and transport that oil through the pipeline that just ruptured. The Commission should not approve any project or activity that will increase the danger of incidents like this oil spill. Instead, the Commission should consider decommissioning these pipelines and offshore oil and gas development. Indeed, the oil spill highlights the disturbing reality that oil spills are part of the ugly cost of dirty fossil fuel development, and that oil production and transportation should not be allowed along California's coast or in its offshore waters.

On May 19, 2015, the Plains All American Pipeline (Line 901) ruptured near Santa Barbara dumping an estimated 105,000 gallons of crude oil into the environment, fouling coastlines and threatening wildlife and coastal communities. More than 20,000 gallons spilled into the coastal waters, and the oil contaminated more than nine square miles of ocean. Witnesses saw whales swimming in the oil sheen, dead fish and crustaceans on shore. Official reports document 16 dead birds and nine dead mammals including a sea lion that died during rescue efforts and two dead dolphins. Rescue attempts continue on oiled brown pelicans, western grebe, an elephant seal and sea lion. The State Department of Fish and Wildlife closed fishing and shellfish harvesting in the area, beaches in the area have also been closed, and Governor Jerry Brown declared a state of emergency in Santa Barbara.

Meanwhile, the Commission is analyzing a proposal that will increase reliance on that same pipeline that spewed oil into a sensitive coastal environment. Using a loophole in state law that prohibits leasing in state waters, Venoco seeks to amend the boundaries of its existing lease (Lease No. PRC 3242) to allow it to develop 3,400 acres in the California Coastal Sanctuary (the "Proposed Project"). Venoco estimates the proposal would increase oil production by 6,400 barrels per day, which would be transported to Las Flores and through the just-ruptured Plains All American Pipeline.

In light of the oil spill, there are many significant environmental issues, project alternatives and mitigation measures that the Commission must analyze if the Proposed Project moves forward. Specifically, the Commission cannot approve the Proposed Project without a thorough analysis that takes into account the recent oil spill, the reliance of the Proposed Project on aging infrastructure, and the effects of prolonging the operation of Platform Holly. Moreover, several key issues merit particular attention in the Commission's environmental review: (1) impacts of oil spills on sensitive marine ecosystems, (2) the dangers of offshore and coastal pipelines, (2) the climate impact, (4) other risks, and (5) an evaluation of an alternative that leaves Line 901 shut down and speeds decommissioning of Platform Holly.

In short, the Center for Biological Diversity (the "Center") urges the Commission to reject the Proposed Project in its entirety. No projects that rely on the Plains All American Pipeline should go forward without a full vetting of the oil spill and an alternative that phases out production and hazardous oil transportation. The Proposed Project threatens California's coastal communities, its pristine coastal environments, numerous species of wildlife, and only exacerbates the climate crisis. Rather than authorizing the Proposed Project, the Commission should use last week's oil spill as an opportunity to begin to break our addiction to dirty fossil fuels and focus its attention on projects that promote sustainable energy, and thereby comply with its mandate to provide stewardship for California's lands and waters through protection, preservation and restoration.

1. Oil Spills Injure and Kill Wildlife and Destroy Sensitive Habitat

As the Commission is well aware, oil spills significantly harm wildlife and the environment. Offshore oil and gas development is hazardous at all stages, from drilling the well to transporting the oil and gas to burning the fossil fuels. The Commission's analysis of the Proposed Project must thoroughly take into account the new information about oil spills demonstrated from the recent Refugio oil spill near Santa Barbara and the Deepwater Horizon oil spill in the Gulf of Mexico. The oil produced by the Proposed Project will be transported from Platform Holly through pipelines to the Ellwood Onshore Facility to Line 96 to Las Flores and then through the damaged Line 901 to Gaviota and beyond. Offshore wells and these pipelines pose the inevitable risk of oil spills that will damage the environment.

The waters where new oil drilling would occur under the Proposed Project host a wealth of biodiversity—more than 500 species of fish live off the shores of southern California. Of particular importance are the eighteen species of whales and dolphins that are considered residents of the area and four species of pinnipeds that have breeding habitat in the Channel Islands National Marine Sanctuary. A variety of large baleen and toothed whales occur in the area including: blue whales (*Balaenoptera musculus*), gray whales (*Eschrichtius robustus*), humpback whales (*Megaptera novaeangliae*), killer whales (*Orcinus orca*), minke whales (*Balaenoptera acutorostrata*), fin whales (*Balaenoptera physalus*), sperm whales (*Physeter macrocephalus*), and right whales (*Eubalaena glacialis*). Of these whales, five species are listed as endangered under the federal Endangered Species Act including: blue, gray, humpback, fin, and sperm whales. Blue whales are known to gather in the Santa Barbara Channel because of the rich feeding grounds that it provides during their migration. The blue whale is the largest animal known to have ever lived on earth. Once numbering over 300,000, the global blue whale

population has been reduced by commercial whaling to likely fewer than 10,000 individuals. Blue whales off California are part of a population comprising about 1,200 animals; scientists estimate that more than one human-caused death of a blue whale each year will impede the recovery of the California population.

An oil spill could have devastating impacts on these marine mammals. Exposure to toxic fumes from petroleum hydrocarbons during oil spills can cause mortality in cetaceans, even years after such accidents.[1] In fact, the day after the spill in Santa Barbara, scientists released a study in which they determined that the Deepwater Horizon oil spill caused adrenal and lung lesions in bottlenose dolphins which led to their deaths.[2] Oil spills also threaten sea otters – the fur of sea otters covered with thick oil negatively affect body insulation, promote hypothermia, and might ultimately cause death.[3]

Sea turtles are also vulnerable and impacts of the proposal on sea turtles should be examined. Leatherback, loggerhead, green, and olive ridley sea turtles inhabit in the area. Critically endangered leatherback sea turtles are the largest sea turtles on the planet. Some of these turtles, weighing between 550 and 2,000 pounds with lengths of up to six feet, migrate across the Pacific Ocean to feed in waters off the U.S. coast. A 2013 study found that the Western Pacific population of leatherback sea turtles, which includes the leatherbacks that feed in West Coast waters, has continued to decline since the 1980s. If these trends continue, researchers predict that extinction may be inevitable in 20 years because the number of turtles will be so low.[4] This population represents the last remaining stronghold of leatherbacks in the Pacific Ocean. During certain seasons the leatherbacks migrate to this area to feed on jellyfish.

There is a dire risk of extinction facing North Pacific loggerhead sea turtles as well. In August 2009, NMFS issued a loggerhead sea turtle status review, finding that the North Pacific population of loggerheads faces a "high likelihood of quasi-extinction."[5] Though this population nests in Japan, where the results of nesting beach census data indicate a decline of 50-90 percent over the past fifty years, it forages further east – including in waters under U.S. jurisdiction. Recent tagging results confirm previous studies showing that southern California is important habitat for loggerhead sea turtles.[6] In fact, loggerhead sea turtles occupy the waters off the coast of Southern California in large enough numbers that NMFS designated a specific conservation

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[1] Venn-Watson, S. *et al.* Adrenal Gland and Lung Lesions in Gulf of Mexico Common Bottlenose Dolphins (Tursiops truncatus) Found Dead following the Deepwater Horizon Oil Spill. *PLoS ONE* 10, e0126538 (2015).
[2] *Id.*
[3] Peterson, C. H. *et al.* Long-Term Ecosystem Response to the Exxon Valdez Oil Spill. *Science* 302, 2082–2086 (2003); Monson, D. H., Doak, D. F., Ballachey, B. E., Johnson, A. & Bodkin, J. L. Long-term impacts of the Exxon Valdez oil spill on sea otters, assessed through age-dependent mortality patterns. *Proc. Natl. Acad. Sci.* 97, 6562–6567 (2000).
[4] Storr, Kevin, UAB research says 2,000 pound turtle could be extinct within 20 years (Feb. 26, 2013) http://www.uab.edu/news/latest/item/3216-uab-research-says-2000-pound-turtle-could-be-extinct-within-20-years.
[5] T. A. Conant et al., Loggerhead Sea Turtle (Caretta caretta) 2009 Status Review Under the U.S. Endangered Species Act, Report of the Loggerhead Biological Review Team to the National Marine Fisheries Service, 46 (Aug. 2009).
[6] M. Abecassis et al., A Model of Loggerhead Sea Turtle (Caretta caretta) Habitat and Movement in the Oceanic North Pacific, PLoS ONE 8(9): e73274. (2013) http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0073274 at Fig.9B (showing predicted hotspots of habitat on Sept. 12, 2005).

area east of the 120° W meridian during an El Nino event in order to protect loggerheads from entanglement in fishing gear. To protect loggerheads, fishing is also heavily restricted and generally prohibited within the west coast U.S. EEZ and on the high seas east of 150° W and north of the equator.[7]

Although not protected under the Endangered Species Act, North Pacific white sharks provide a key role in this ecosystem. This distinct population numbers only about 300 individuals and has fidelity to waters off of California[8] Top predators play an important top-down role in structuring the California Current Large Marine Ecosystem given that there is an extensive density of top predators in the region.[9] White sharks play a key role in regulating prey populations,[10] and impacts of shark depletion can radiate through the food web in complex and unpredictable ways. The role of white sharks as apex predators consuming other large predators such as elephant seals and sea lions has been reported routinely at the Farallones.

Protected fish include the tidewater goby and southern California steelhead population, and closer to shore endangered and threatened seabirds such as the western snowy plover and California lest tern nest near the shore, while endangered white and black abalone inhabit the intertidal area of the Santa Barbara Channel.

Oil spills are a major threat during the ongoing nesting season for both western snowy plovers and California clapper rail nest (which occurs from mid May to mid June). Nesting colonies rely on sandy or gravelly areas free of humans and predators for courtships and mating. Nests are usually located on barren or sparsely vegetated areas near the water that could be compromised with crude oil or during cleanup activities. Food sources for adults and chicks can also be affected during oil spills as they hunt primarily in shallow waters where small fish, like silversides smelts and anchovies are abundant.

In short, the biological community in the vicinity of the Proposed Project is extremely sensitive, and is among California's most important marine habitats. In this area, many special status species are already struggling for their survival, and several species can claim environmental contaminants as a threat to their continuing existence. The risk of yet another oil spill poses a significant risk to the conservation and recovery of these imperiled species.

2. Oil and Gas Pipelines Are Dangerous

The Commission's environmental review must fully disclose the danger of transporting oil and gas through pipelines, and the more hazardous alternatives of transport by rail and tanker

[7] Gear and Fishing Restrictions, 50 C.F.R. § 660.712(a); Exceptions to Prohibitions Relating to Sea Turtles, 50 C.F.R. § 223.206(d)(9).
[8] Chapple, T., S. Jorgensen, S. Andersen, P. Kanive, P. Klimley, L. Botsford and B. Block, A first estimate of white shark, Carcharodon carcharias, abundance off Central California, Biology Letters 7(4): 581-583(2011).
[9] *Id.*
[10] Brown, A., D. Lee, R. Bradley and S. Anderson, Dynamics of white shark predation on pinnipeds in California: Effects of prey abundance. Copeia 2: 232-238 (2010).

should be eliminated from consideration. The Center conducted an independent analysis of federal records that found that since 1986, 621 oil and gas pipeline leaks, spills, explosions and other significant incidents in California have caused at least $769 million in damages, 200 injuries and almost 50 deaths. The study is based on records from the federal Pipeline and Hazardous Materials Safety Administration, which maintains a database of all U.S. pipeline incidents that are classified as "significant," those resulting in death or injury, damages more than $50,000, more than five barrels of highly volatile substances or 50 barrels of other liquid released, or where the liquid exploded or burned. Nationally, there have been nearly 8,000 significant incidents with U.S. pipelines, involving death, injury, and economic and environmental damage, since 1986 — more than 300 per year.

The Proposed Project will prolong use of aging infrastructure and the Plains All American Pipeline is an integral part of the Proposed Project. The pipeline that ruptured on May 19 was constructed in 1987, and the Commission certified an Environmental Impact Report that determined that it was probable that the segment from Las Flores to Gaviota would have a 9.5 barrel or greater spill once every five years, or 0.22 incidents per year. The pipeline from Platform Holly to the Ellwood Onshore Facility is more than 45 years old with a surf-zone crossing that was replaced in 1997. A "June 2010 inspection of the crude oil emulsion pipeline identified 'extensive' corrosion, primarily internal and found along the bottom half of the pipeline, ranging in wall loss from 20 percent to 67.3 percent."[11]

Platform Holly should be decommissioned; indeed, at the time Platform Holly was constructed, it was anticipated to be decommissioned between 2015 and 2020. However, the Proposed Project is aimed at prolonging oil and gas development at this Platform by bringing new wells online and increasing oil and gas production. The significant effects on the environment and public health of extending the lifespan of the platform, pipelines, and other infrastructure must be thoroughly analyzed.

3. Greenhouse Gas Emissions and Impacts from the Proposed Project

The Commission's notice indicates that the Proposed Project would generate greenhouse gas emissions during oil drilling and production activities. The Proposed Project will also generate greenhouse gas emissions through the consumption of the oil drilled from the Proposed Project. Not only must the Commission determine all of the Proposed Project's greenhouse gas contribution, it must also analyze what climate impacts it will have. For example, climate change impacts may include increased drought and flood events, ocean acidification, sea level rise and more frequent storms might affect the project area. The Commission must consider these impacts and what implications they might have for how the Proposed Project should be carried out.

The offshore oil drilling sector is among the largest contributors to greenhouse gas emissions in the United States. The oil and gas sector ranks second to power plants in U.S.

[11] County of Santa Barbara, Line 96 Pipeline Modification Project Final Environmental Impact Report at 4.2-10 (June 2011) (noting that the EIR did state that none of the defects warranted replacement or repair).

greenhouse gas emissions and it is responsible for 40% of methane emissions—a powerful climate change driver. The offshore sector reported emissions of 6.2 million metric tons of CO_2 in 2013.

Ocean acidification – caused by the absorption of CO_2 into seawater – has already caused the pH of our oceans to change by 30 percent since industrial times.[12] The primary impacts of such acidification is that it strips seawater of chemicals that animals require to build their shells and skeletons,[13] and has been found to have negative consequences for almost every type of animal with impacts on survival, reproduction, metabolism and growth.[14] Acidification also contributes to the toxicity of harmful algal blooms that poison marine mammals and cause paralytic shellfish poisoning in humans. Ocean acidification is also exacerbated by the emission of SOx and NOx.[15] As all three of these pollutants will be emitted by the Proposed Project, it will exacerbate this significant problem.

Climate change and ocean acidification represent the most significant long-term threat to the future of biodiversity in the Santa Barbara Channel. Climate change is already causing changes in distribution, phenology, physiology, genetics, species interactions, ecosystem services, demographic rates, and population viability: many animals and plants are moving poleward and upward in elevation, shifting their timing of breeding and migration, and experiencing population declines and extirpations.

4. The Proposed Project Will Have Several Other Significant Detrimental Environmental Impacts

In addition to the threats from oil drilling due to oil spills, the Proposed Project will have several other significant environmental impacts that the Commission must consider in its analysis, including detrimental impacts on air quality and increasing the risk of earthquakes. Air toxins emitted during oil and gas development and operations included volatile organic compounds and polycyclic aromatic hydrocarbons.[16] The study found that harmful chemicals were emitted throughout the drilling process, and air sampling detected many chemicals known to have harmful human health effects, including acetaldehyde, benzene, formaldehyde, isoprene, naphthalene, and many more.[17] Health effects associated with benzene include "acute and

[12] James C Orr et al., "Anthropogenic Ocean Acidification over the Twenty-First Century and its Impacts on Calcifying Organisms," 437 *Nature* 681-86 (2005).
[13] Alan Barton et al., "The Pacific Oyster, Crassostrea Gigas, Shows Negative Correlation to Naturally Elevated Carbon Dioxide Levels: Implications for Near-Term Ocean Acidification Effects," 57 *Limnology and Oceanography* 698-710 (2012).
[14] Kristy J. Kroeker, et al., "Impacts of Ocean Acidification on Marine Organisms: Quantifying Sensitivities and Interaction with Warming." 19 *Global Climate Change Biology* 1884-1896 (2013).
[15] S.C. Doney et al., "Impact of Anthropogenic Atmospheric Nitrogen and Sulfure Deposition on Ocean Acidification and the Inorganic Carbon System," 104 *Proc. of the Nat. Academy of Sciences* 14580 (2007).
[16] Theo Colborn, et al., "An Exploratory Study of Air Quality near Natural Gas Operations," Human and Ecological Risk Assessment: An International Journal (November 26, 2012).
[17] *Id.* at 29-32, Table 4.

chronic nonlymphocytic leukemia, acute myeloid leukemia, chronic lymphocytic leukemia, anemia, and other blood disorders and immunological effects."[18]

The Proposed Project would have significant environmental impacts because offshore oil drilling can induce earthquakes and the pipeline and project are in an area of high seismic risk. Scientists have long known that oil and gas activities are capable of triggering earthquakes, with records of the connection dating back to the 1920s.[19] More recent studies have drawn a strong connection between the recent rise in wastewater injection – the disposal method that would be adopted under the Proposed Project – and increased earthquake rates.[20] The USGS recently recognized that wastewater disposal from fracking is a "contributing factor" to the six-fold increase in the number of earthquakes in Oklahoma.[21] Another recent study also found that wastewater injection is responsible for the dramatic rise in the number of earthquakes in Colorado and New Mexico since 2001.[22] Wastewater injection has been scientifically linked to earthquakes of magnitude three and greater in at least six states: Arkansas,[23] Colorado,[24] Ohio,[25] Oklahoma,[26] Texas,[27] and New Mexico.[28] The largest of these earthquakes occurred near Prague, Oklahoma and had a magnitude of 5.7 – the biggest in the state's history.[29] It destroyed 14 homes, damaged a federal highway, injured two people, and was felt in 14 states.[30] The risk that oil and gas drilling in California will cause an earthquake is a real threat, as over half of California's 1,553 active and new wastewater injection wells are within ten miles of recently active faults, and at least 30 of California's offshore wastewater injection wells are located within three miles of a fault. Dozens more wastewater injection wells line the southern California

[18] McKenzie 2012, Food & Water Watch (2012) *The Case for a Ban on Fracking.*
[19] National Research Council (2012) *Induced Seismicity Potential in Energy Technologies* at 3.
[20] Van de Elst, Nicholas J. et al., Enhanced Remote Earthquake Triggering at Fluid-Injection Sites in the Midwestern United States, 341 *Science* 164 (2013).
[21] Sumy, D. F., *et al.* 2014. Observations of static Coulomb stress triggering of the November 2011 *M*5.7 Oklahoma earthquake sequence, *J. Geophys. Res. Solid Earth,* 119, 1904–1923, *DOI:10.1002/2013JB010612; USGS, Record Number of Oklahoma Tremors Raises Possibility of Damaging Earthquakes, http://earthquake.usgs.gov/regional/ceus/products/newsrelease_05022014.php (May 2, 2014).*
[22] Justin L. Rubinstein, et al. 2014. The 2001 – Present Induced Earthquake Sequence in the Raton Basin of Northern New Mexico and Southern Colorado. *Bulletin of the Seismological Society of America*, 2014 DOI: 10.1785/0120140009.
[23] E&E News, USGS, Okla. warn of more drilling-related earthquakes in State, Mike Soraghan. Oct. 25, 2013.
[24] *Id.*
[25] Ohio Dept. of Nat. Resources (2012) *Executive Summary: Preliminary Report on the Northstar 1 Class II Injection Well and the Seismic Events in the Youngstown, Ohio Area*; Fountain, Henry, Disposal halted at well after new quake in Ohio, *New York Times*, Jan. 1, 2012.
[26] Holland, Austin, Examination of possibly induced seismicity from hydraulic fracturing in the Eola Field, Garvin County, Oklahoma, Oklahoma Geological Survey Open-File Report OF1-2011 (2011).
[27] Frohlich, Cliff (2012) Two-year survey comparing earthquake activity and injection-well locations in the Barnett Shale, Texas. *Proceedings of the National Academy of Sciences*.
[28] Rubinstein, J. L, et al. 2012. The 2001-present triggered seismicity sequence in the Raton Basin of southern Colorado/Northern New Mexico, Abstract S34A-02 presented at 2012 Fall Meeting, AGU, San Francisco, Calif. Dec. 3-7, 2012.
[29] Kearnen, K.M. et al. 2013. Potentially induced earthquakes in Oklahoma, USA: links between wastewater injection and the 2011 M_w 5.7 earthquake sequence. Geology 41:699-702.
[30] *Id.*

coast, often located close to one or more faults.[31] This is a particular concern for the Proposed Project as the Commission's notice indicates that Venoco would need to create additional injection wells for waste generated by its drilling operations.

5. Consider an Alternative that Phases Out Oil Production from Platform Holly and Ends Hazardous Oil Transportation

The Commission should evaluate an alternative to the Proposed Project that shifts away from increased oil and gas development and lessens the risk of pipeline leaks and oil spills. The California Environmental Quality Act ("CEQA") mandates that significant environmental damage be avoided or substantially lessened where feasible. Pub. Res. Code § 21002; Guidelines §§ 15002(a)(3), 15021(a)(2), 15126(d). A rigorous analysis of reasonable alternatives to the project must be provided to comply with this strict mandate. "Without meaningful analysis of alternatives in the EIR, neither courts nor the public can fulfill their proper roles in the CEQA process." *Laurel Heights Improvement Ass'n v. Regents of University of California*, 47 Cal.3d 376, 404 (1988). Moreover, "[a] potential alternative should not be excluded from consideration merely because it 'would impede to some degree the attainment of the project objectives, or would be more costly." *Save Round Valley Alliance v. County of Inyo*, 157 Cal. App. 4th 1437, 1456-57 (2007) (quotations omitted).

The Commission's notice of the project indicates that the Commission's review will include three alternatives to the Proposed Project – a no project alternative, processing at Platform Holly, and processing production at the Las Flores Canyon Processing Facility. However, the Commission must also consider an alternative that phases out oil production from Platform Holly, leaves Line 901 shut down, and ends hazardous oil transportation.

Platform Holly – the platform from which Venoco would drill offshore wells under the Proposed Project – was originally constructed in 1965 and predicted to be decommissioned between 2015 and 2020. Allowing new drilling operations from the Platform would not begin the decommissioning process. Rather, the Proposed Project would prolong the life of Platform Holly and the significant, attendant environmental impacts of oil drilling, production and transportation activities, each of which are only heightened by the age of the Platform. The Commission should consider an alternative that decommissions Platform Holly and its associated infrastructure. The consideration of such an alternative is necessary in order to adequately protect the environment and public health from the myriad detrimental impacts of oil and gas development, production, transportation and consumption, including dangerous oil spills that can kill and injure marine life and devastate coastal communities.

The Commission's notice also states that its environmental review will likely reject consideration of alternative energy sources from its alternatives analysis. The Commission should not reject such analysis. Instead, the Commission must consider an alternative that would replace oil produced from the Proposed Project with equivalent energy production from clean,

[31] FracTracker.org, http://maps fractracker.org/latest/?webmap=99ae030fd5844eadb3d14398cbcdafbd.

alternative energy sources. Indeed, the Commission – which is supposed to be a steward of California's lands and waters through protection, preservation and restoration – should take this opportunity to promote sustainable energy production and practices in order to move California away from dirty fossil fuels and expand our clean energy economy.

Conclusion

In declaring a state of emergency Governor Brown stated that "[w]e will do everything necessary to protect California's coastline." Authorizing the Proposed Project would do just the opposite. We urge the Commission to reject the Proposed Project and thereby prevent dangerous new oil drilling and pipeline transportation along California's coast.

Sincerely,

/s/ Miyoko Sakashita

Miyoko Sakashita, Oceans Director
Center for Biological Diversity
miyoko@biologicaldiversity.org

/s/ Kristen Monsell

Kristen Monsell, Staff Attorney
Center for Biological Diversity
kmonsell@biologicaldiversity.org