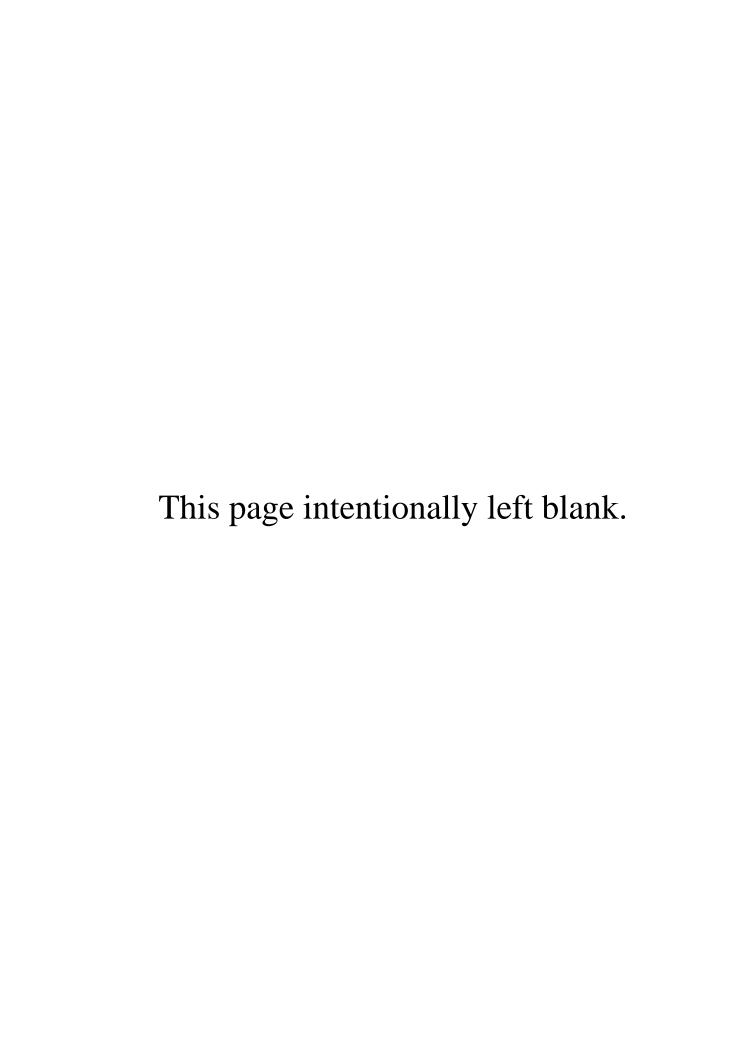
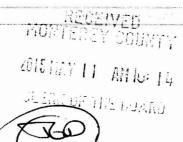
Attachment F





May 8, 2015

Ms. Gail T. Borkowski, Clerk of the Board Monterey County Board of Supervisors 168 West Alisal St., 1st Floor Salinas CA 93901

Dear Ms. Borkowski:

Please find enclosed materials pertaining to our appeal of the Planning Commission's Adoption of the Mitigated Negative Declaration and Approval of Temporary Use Permit PLN140395 to Allow Production Testing for Oil and Gas at Existing Well Bradley Minerals Well 2-2:

- 1. Notice of Appeal form
- 2. Appeal document
- 3. Check for \$1738.07 made out to County of Monterey
- 4. Envelopes with labels of other parties

If you have any questions or require anything further from us please do not hesitate to contact me at (415) 436-9682 x321.

Sincerely,

Clare Lakewood

Staff Attorney

Center for Biological Diversity

351 California St., Ste. 600

San Francisco, CA 94104





2015 FBY 11 AM IU: 15



NOTICE OF APPEAL

CLEAR OF THE LIDERAL OF PUTY

Monterey County Code Title 19 (Subdivisions) Title 20 (Zoning) Title 21 (Zoning)

No ap	peal will be accepted until a written decision is given. If you wish to file an appeal, you must do					
so on	or before*_ (10 days after written notice of the decision has been mailed to the applicant).					
Date (of decision <u>*</u> .					
1.	Please give the following information:					
	a) Your name Clare Lakewood					
	b) Address 35 California St Ste 600 City San Francisco Zip 99109					
	c) Phone Number 415 - 632 - 5321					
2.	Indicate your interest in the decision by checking the appropriate box:					
	☐ Applicant					
	□ Neighbor					
	Other (please state) <u>Environmental organization commenter</u>					
3.	If you are not the applicant, please give the applicant's name: Porter Estate Company Bradley Ranch LLC					
4.	J 11					
5.	body.					
	File Number Type of Application Area					
a)	Planning Commission: PLN 140395 Use Permit					
b)	Zoning Administrator:					
c)	Subdivision Committee:					
d)	Administrative Permit:					

5.	What is the nature of your appeal?								
	a)	Are you appealing the approval or the denial of an application? (Check appropriate box)							
	b)	If you are appealing one or more conditions of approval, list the condition number and state the condition(s) you are appealing. (Attach extra sheets if necessary).							
6.	Check the appropriate box(es) to indicate which of the following reasons form the basis for your appeal:								
	There was a lack of fair or impartial hearing; or								
	×	The findings or decision or conditions are not supported by the evidence; or							
	Ø	The decision was contrary to law.							
7.	You must next give a brief and specific statement in support of each of the bases for appeal that you have checked above. The Board of Supervisors will <u>not</u> accept an application for appeal that is stated it generalities, legal or otherwise. If you are appealing specific conditions, you must list the number of each condition and the basis for your appeal. (Attach extra sheets if necessary). Ple>se_see_stleched appeal document. As part of the application approval or denial process, findings were made by the decision making body (Planning Commission, Zoning Administrator, Subdivision Committee or Director of Planning and Building Inspection). In order to file a valid appeal, you must give specific reasons why you disagree with the findings made. (Attach extra sheets if necessary). Ple>see_stleched appeal document								
8.	You are required to submit stamped addressed envelopes for use in notifying interested persons that a public hearing has been set for the appeal. The Resource Management Agency - Planning Department will provide you with a mailing list.								
9.	receiv	appeal is accepted when the Clerk to the Board's Office accepts the appeal as complete on its face, es the filing fee \$ 1728.07 and stamped addressed envelopes.							
APPE	LLANT	SIGNATURE DATE 5/8/15							
ACCE	PTED _	DATE							





CENTER for BIOLOGICAL DIVERSITY

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OLEMA UP THE BUARD



May 7, 2015

Via Federal Express Overnight

Ms. Gail T. Borkowski, Clerk of the Board Monterey County Board of Supervisors 168 West Alisal St., 1st Floor Salinas CA 93901

Re: Appeal of the Planning Commission's Adoption of the Mitigated Negative Declaration and Approval of Temporary Use Permit PLN140395 to Allow Production Testing for Oil and Gas at Existing Well Bradley Minerals Well 2-2

Dear Ms. Borkowski:

Pursuant to Chapter 21.80 of the Monterey County Code of Ordinances, the Center for Biological Diversity ("Center") hereby appeals the April 29, 2015, decision of the Monterey County Planning Commission to adopt the Mitigated Negative Declaration ("MND") and approve Temporary Use Permit PLN140395 to allow production testing for oil and gas at existing well Bradley Minerals Well 2-2 ("the Project").

The Planning Commission ("Commission") placed the Project at issue on its agenda for hearing on July 30, 2014. The Center submitted written comments on the Project on July 29, 2014. Following this first hearing, on January 9, 2015, Monterey County ("the County") prepared an initial study and MND. On April 29, 2015, the Center submitted to the Commission comments on the MND. At the April 29, 2015, hearing the Commission adopted the MND and approved the Project's temporary use permit.

The Center appeals the Commission's decision because the MND for the Project does not comply with the requirements of the California Environmental Quality Act. As a result of this noncompliance, the Commission's adoption of the MND, approval of the Project, and its associated findings and decisions were in error and not consistent with the law. Detailed factual and legal grounds for this appeal are set forth in the Center's July 29, 2014, and April 29, 2015, comments, which are attached to this appeal as Attachment A and Attachment B, respectively. Those letters and their attachments are hereby incorporated by reference.

Grounds for appeal include, but are not limited to the Commission's following unlawful actions or oversights:

- 1) the failure to produce a full Environmental Impact Report ("EIR") analyzing the significant impacts that could result from the Project;
- 2) given the need to consider the whole of the project in the environmental review, the failure to consider or mitigate reasonably foreseeable activities, including the production of oil using enhanced recovery techniques;
- 3) the failure to consider or mitigate reasonably foreseeable impacts of the Project, including:
 - a. the production and disposal of wastewater;
 - b. impacts on water resources, including water contamination;
 - c. significant greenhouse gas emissions that could result from the Project; and
- 4) the failure to consider or mitigate significant potential impacts to water, including water contamination.

These grounds are identified and fully set forth in the in the Center's July 29, 2014, and April 29, 2015, comments and additionally supported in the material contained in their attachments. Further, this appeal summarizes these grounds below for the Board of Supervisor's convenience.

The Center and its members are "aggrieved" within the meaning of Monterey County Code section 21.80.050(A). The Center is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center's Climate Law Institute works to reduce greenhouse gas emissions and other air pollutants to protect biological diversity, the environment, and public health. Specific objectives include ensuring that the impacts of oil and gas operations – encompassing the climate, environmental, and public health impacts of operations themselves, as well as the combustion of the produced oil and gas– are accurately accounted for, considered, and mitigated if approved in accordance with science and applicable law. Here, as noted above, the County's approval of the Project could cause a range of significant harms, including harms to water, air quality, the climate, threatened and endangered species, seismicity, and public health. As such, the Commission's decision adversely affects the Center's organizational interests.

The Center has more than 50,000 members, including members and activists who reside in Monterey County and the areas where the harms of the Project will be felt. Center members have recreational, scientific, and educational interests in the region at issue, and are particularly interested in protecting the native, imperiled, and sensitive species – such as the San Joaquin kit fox and California condor – and their habitats that the Project will affect. The Center's members therefore will be directly and adversely affected by the County's approval of the Project and adoption of the MND.

A. Discussion

I. Legal Background

The Legislature enacted CEQA to "[e]nsure that the long-term protection of the environment shall be the guiding criterion in public decisions." The Supreme Court has repeatedly held that CEQA must be interpreted to "afford the fullest possible protection to the environment." CEQA also serves "to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action." If CEQA is "scrupulously followed," the public will know the basis for the agency's action and "being duly informed, can respond accordingly to action with which it disagrees." Accordingly, CEQA "protects not only the environment but also informed self-government."

CEQA applies to all "discretionary projects proposed to be carried out or approved by public agencies." Before taking any action, a public agency must conduct a "preliminary review" to determine whether the action is a "project" subject to CEQA. A "project" is "the whole of an action" directly undertaken, supported, or authorized by a public agency "which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." Pub. Res. Code § 21065; CEQA Guidelines § 15378(a). Under CEQA, "the term 'project' refers to the underlying activity and not the governmental approval process." The definition of "project" is "given a broad interpretation in order to maximize protection of the environment."

Subject to certain exceptions, if an action is a "project" subject to CEQA, "the agency must 'conduct an initial study to determine if the project may have a significant effect on the environment." ¹⁰ If the initial study indicates that there is no substantial evidence of any significant environmental impact, the agency may adopt a negative declaration. ¹¹ However, where there is substantial evidence in the record supporting a fair argument that a project may

⁶ Pub. Res. Code § 21080(a).

¹¹ Nelson v. County of Kern, 190 Cal.App.4th 252, 267 (2010).

¹ No Oil, Inc. v. City of Los Angeles, 13 Cal. 3d 68, 74 (1974).

² Wildlife Alive v. Chickering, 18 Cal. 3d 190, 206 (1976) (quotation omitted).

³ Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal., 47 Cal. 3d 376, 392 (1988) ("Laurel Heights Γ").
⁴ Id.

⁵ *Id*.

⁷ See, Muzzy Ranch Co. v. Solano County Airport Land Use Comm'n, 41 Cal. 4th 372, 380 (2007).

⁸ California Unions for Reliable Energy v. Mojave Desert Air Quality Mgmt. Dist., 178 Cal. App. 4th 1225, 1241 (2009) (auoting Orinda Ass'n v. Bd. of Supervisors, 182 Cal. App. 3d 1145, 1171-72 (1986)).

⁹ Lighthouse Field Beach Rescue v. City of Santa Cruz, 131 Cal. App. 4th 1170, 1180 (2005) (internal quotation omitted).

¹⁰ Muzzy Ranch Co. v. Solano County Airport Land Use Comm'n (2007) 41 Cal. 4th 372, 380.

have a significant effect on the environment, the agency must prepare an environmental impact report.¹²

Where, as here, there is substantial evidence in the record to support a fair argument that the Project may have a significant effect on the environment, preparation of an EIR is required. This "fair argument" test "establishes a low threshold for initial preparation of an EIR, which reflects a preference for resolving doubts in favor of environmental review." ¹⁴

By contrast, a negative declaration is appropriate only when there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment.¹⁵ If evidence demonstrating a significant impact exists, an EIR must be prepared, even if the lead agency also can point to substantial evidence in the record supporting its determination that no significant effect will occur.¹⁶ The lead agency may not dismiss evidence because it believes that there is contrary evidence that is more credible.¹⁷

II. The MND Fails to Consider Reasonably Foreseeable Impacts from the Project

In general, an agency must consider "[a]ll phases of project planning, implementation, and operation." This includes future development that will foreseeably occur if the agency approves the project. Oil and gas production leads inevitably to refining and combustion of those fossil fuels. Each step in the process creates a new and potentially significant set of environmental harms, whether to water, air, biological resources, or greenhouse gas emissions. These and other impacts must be accounted for in any comprehensive analysis of extraction projects. The project will also directly result in substantial amounts of wastewater, which contains benzene and other harmful chemicals. As discussed further below, the potential harm from wastewater should also be evaluated.

III. The MND Fails to Consider the Harm from Well Stimulation or Enhanced Oil Recovery Techniques

Unless the Project Approval is expressly conditioned upon a permanent prohibition on well stimulation and enhanced oil recovery techniques, CEQA requires that the impacts of those

¹² Cal. Pub. Res. Code §§ 21100; 21151; CEQA Guidelines § 15064(a)(1) (f)(1).

¹³ Pub. Res. Code §§ 21100, 21151; CEQA Guidelines § 15064(a)(1), (f)(1); Communities for a Better Env't v. South Coast Air Quality Mgmt. Dist., 48 Cal. 4th 310, 319 (2010); No Oil, Inc., 13 Cal. 3d at 82.

¹⁴ Architectural Heritage Assn. v. County of Monterey, 122 Cal. App. 4th 1095 (2004).

¹⁵ Pub. Res. Code §§ 21064.5, 21080(c); CEQA Guidelines §§ 15006(h), 15064(f)(2), 15070(b), 15369.5.

¹⁶ Architectural Heritage, 122 Cal. App. 4th at 1109-10.

¹⁷ Pocket Protectors v. City of Sacramento, 124 Cal. App. 4th 903, 935 (2005).

¹⁸ CEQA Guidelines § 15063.

¹⁹ City of Antioch v. City Council (1st Dist. 1986) 187 Cal.App.3d 1325, 1333-1336.

²⁰ See, e.g., California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, *Benzene in Water Produced from Kern County Oil Fields Containing Fresh Water* (1993).

techniques be fully disclosed and analyzed "early enough to serve, realistically, as a meaningful contribution to public decisions,"21 or in short, now. There is no such absolute prohibition on the approval. The MND states that no well stimulation is proposed as part of the project.²² However, both hydraulic fracturing ("fracking") and acidization were both previously used on the Bradlev Minerals 2-2 well, and further, oil and gas companies commonly employ such techniques and other enhanced recovery methods in California, including fracking, cyclic steam injection, steam flooding, fracture acidizing, matrix acidizing, gravel packing, frac packing, enzyme enhanced recovery, and gas lifting. These enhanced recovery techniques involve the use or handling of highly hazardous substances and are major threats to public health and the environment.²³ The MND admits that one form of well stimulation, acidizing, will be employed to clean the well. Acidizing compounds contains dozens of toxic chemicals with known serious adverse health effects. Not only are the hydrochloric acid and hydrofluoric acid dangerous, but acidizing fluids can also contain methanol, formaldehyde, naphthalene, 2-butoxyethanol, and xylenes. Such chemicals can contaminate air or water and put nearby communities at risk.²⁴ It is particularly important to consider harm from acidizing for this particular project because fracking and acidizing of the well in the past resulted in casing failure at a depth either within a freshwater aquifer, or close to a freshwater aquifer.²⁵ Acidizing and other forms of well stimulation are reasonably foreseeable and should receive a full analysis.

Impact of Acidizing

The MND's air quality analysis does not include potential effects from acidizing or other well stimulation techniques. The South Coast Air Quality Management District has collected data on various types of well stimulation, including acidizing used for the purpose of well maintenance.²⁶ The data show that even the activities characterized by industry as "well maintenance" use dozens of harmful chemicals that are volatile and can escape into the air. The impact of these chemicals should be fully analyzed.

Impact of Steam Injection

The MND also fails to consider the potential effects of steam injection. Cyclic steaming is a method sometimes applied to heavy-oil reservoirs to boost recovery during the primary recovery phase. During the process, the operator injects steam at very high temperature and

²¹ Save Tara v. City of West Hollywood, 45 Cal. 4th 116, 129 (Oct. 30, 2008).

²² MND at 2.

²³ See, e.g., Center for Biological Diversity, Dirty Dozen: The 12 Most Commonly Used Air Toxics in Unconventional Oil Development in the Los Angeles Basin (2013) ("Dirty Dozen").

²⁵ Monterey County Land Use Advisory Committee, Report to the Monterey County Planning Commission on PLN 140395, 24, 27 (2014) ("Report to PC").

²⁶ See, e.g., Dirty Dozen.

pressure into the well.²⁷ The well is then shut in, allowing the steam to heat up the surrounding formation, which thins the heavy-oil so that it can more easily flow toward, through, and out of the well.²⁸ Operators will repeat this cycle of soak-and-produce until the response becomes marginal. The use of steam injection here is reasonably foreseeable because the technique is used extensively in the nearby San Ardo Oil Field.²⁹

The MND relies on production levels in the San Ardo field to estimate the production of the Bradley Minerals Wells,³⁰ but fails to explain why the harmful oil extraction techniques used in the San Ardo Field would not be used at the nearby Bradley Minerals Wells. Steam injection is a dangerous technique companies regularly use in California, putting extreme pressure on the ground and well, and sometimes resulting in well failure or the migration of fluids and steam. It is also energy and water intensive and results in large amounts of air pollution emissions.

A problem of particular note is that the repeated soaking of the formation with very hot steam creates "large temperature variations and formation movements," putting extreme pressure on the ground and well, and sometimes resulting in well failure or the migration of fluids and steam. Indeed, "[c]yclic steam injection presents some of the harshest conditions" under which a well can be placed. Thus, it is not surprising that rates of well casing failure from "excessive deformation, buckling, and collapse" are especially high in cyclic steam injection wells. Further, the injection of hot steam can deform the surrounding formation and overlying ground so much that cyclic steaming can result in the migration of fluids and steam. This can sometimes pollute underground aquifers. It can also result in "surface expressions," which is another way of saying that the steam, oil, gas, and whatever else might be mixed in underground have come bubbling to, or even exploding out of the surface of the ground.

²⁷ Xie, Jueren and Yu Liu, Analysis of Casing Deformations in Thermal Wells, C-FER Technologies (2008) ("Xie 2008").

²⁸ MND at 17.

²⁹ See, e.g., , California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, 2006 Annual Report of the State Oil and Gas Supervisor, 192 (2006).

³⁰ MND at 6.

³¹ Xie 2008.

³² Kulakofsky, David & Mike McMillon, Achieving Long-Term Zonal Isolation in Heavy-Oil Steam Injection Wells, a Case History, Hallburton presentation at the IADC/SPE Asia Pacific Drilling Technology Conference and Exhibition 25-27 August 2008 (2008) ("Kulakofsky").

³³ Wu, Jiang & Martin E. Knauss, Casing Temperature and Stress Analysis in Steam-Injection Wells, Soc'y Petroleum Engineers (2006) ("Wu 2006"); see also Wu, Jiang et al., Casing Failures in Cyclic Steam Injection Wells, SPE presentation at the IADC/SPE Asia Pacific Drilling Technology Conference and Exhibition 25-27 August 2008 (2008) ("Wu 2008").

³⁴ California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, Report of Occurrences, The Chevron Fatality Accident, June 21, 2011, and Area Surface Expression Activity, Pre and Post Accident, Sections 21 & 22 T.32S./R.23E., Midway-Sunset Oil Field, Kern County (May 2012) ("Accident Report"); California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, Reports of Occurrence: Surface Expressions in Bakersfield (2011) ("Spill Binder").

. .

These are not just theoretical harms; they have occurred and with disastrous effects. On June 21, 2011, a oil field engineer, Mr. Robert David Taylor, was killed when investigating steam coming from a surface expression caused by cyclic steaming in Kern County's Midway-Sunset oil field.³⁵ When approaching the plume of steam, the ground gave way, and the Mr. Taylor fell into a sinkhole.³⁶ In May 2012, California's Division of Oil, Gas, and Geothermal Resources (DOGGR) issued a report on the tragedy.³⁷ As with the Project at issue, operations in the Midway-Sunset oil field were using cyclic steam injection to exploit shallow heavy oil deposits.³⁸ DOGGR's report describes the extensive damage the cyclic steaming of the deposit had done to the area. In an area of approximately one-half mile by one-quarter mile, roughly thirty surface expressions appeared.³⁹ Most of the surface expressions were described as having a "seep-like characteristic," in which water and oil rose to the surface.⁴⁰ Some of the surface expressions, however, had more violent traits.

On June 22, 2011, a surface expression unexpectedly surfaced and spread within a few minutes, ultimately covering substantial areas of two terraces of land. The surface expression produced about 500 barrels of fluid within the first twenty-four hours, and thousands of barrels of fluid in the subsequent months. DOGGR found that the source of the surface expression was "[s]team injection into shallow diatomite reservoir resulting in surface break-through of steam, water and oil."

Later, two large eruptions occurred at a surface expression near the fatality site. First, at some point during the night before August 5, 2011, an existing "crater site" experienced "a sudden and large explosive eruption that had expelled large rocks and spray of water and oil a distance of 30 to 150 feet"⁴⁴ Second, on the morning of August 17, 2011, an even larger eruption occurred, "expelling fluid and spray to a height of approximately 100 feet, and releasing a steam plume to an even greater height."⁴⁵ The radius of the fluid spray was perhaps eighty yards. ⁴⁶ Onsite personnel reported that the ground trembled. ⁴⁷

³⁵ Department of Conservation Division of Oil, Gas and Geothermal Resources, Executive Summary of Report of Occurrences: The Chevron Fatality Accident June 21, 2011 and Area Surface Expression Activity Pre and Post Accident – Sections 21 & 22 T.32S./R.23E., Midway-Sunset Oil Field Kern County (May 2012); Accident Report at

³⁶ Accident Report at 2.

³⁷ *Id.* at 1.

³⁸ Id. at 9.

³⁹ *Id*.

 $^{^{40}}$ Id

⁴¹ *Id.* at 4; Spill Binder part 3 at 16.

⁴² Accident Report at 10; Spill Binder part 3 at 16.

⁴³ Spill Binder part 3 at 16.

⁴⁴ Accident Report at 7.

⁴⁵ *Id.* at 8.

⁴⁶ Spill Binder part 2 at 11.

⁴⁷ Accident Report at 8.

Surface expressions also have appeared in other California oil fields. For instance, DOGGR's records indicate a significant surface expression appeared on PXP's lease in the Cymric oil field in Kern County, where the company was using cyclic steam injection to stimulate production from an oil deposit located between 1000 and 1500 feet below ground. The surface expression produced thousands of barrels of fluid, with a four foot deep pool covering an area of seventy-five feet by thirty feet.

In addition to causing potentially deadly surface expressions, cyclic steaming can pollute groundwater aquifers. In the winter of 1995, six well casings in a field in Alberta, Canada, failed under the pressure of cyclic steam stimulation. Similar to the Project at issue here, the operations were pursuing heavy oil at relatively shallow depths. The failures released approximately 55,000 cubic meters of "oil, saline produced water, and solids" to the environment, polluting two groundwater aquifers in the process.

The MND fails to consider these serious, potentially deadly, consequences of steam injection.

Impact of Fracking

According to the Bureau of Land Management, 90% of oil and gas wells drilled on public lands today are fracked (hydraulically fractured).⁵² While complete information on California wells is not available since state regulators since state regulators only recently started tracking the practice, available information demonstrates that fracking is common and widespread.⁵³ Thus, in the absence of an express prohibition, fracking is reasonably foreseeable and the County must fully analyze the harms and risks of fracking including impacts to air, water supply, water quality, public health, wildlife, the risk of inducing earthquakes from the fracking itself and from the disposal of the fracking wastewater, and the impact on the community.

The Project's potential use of enhanced recovery techniques creates a reasonable possibility of significant impacts. Because it is reasonably foreseeable that the discovery of economically producible quantities would lead to additional operations that are likely to involve enhanced recovery techniques, the Commission must consider the effects of those additional operations and the utilization of those techniques.

⁵² 77 Fed. Reg. 27691 (May 11, 2012).

⁴⁸ Spill Binder part 6 at 25.

⁴⁹ Kennedy, Alan and Calvin Sikstrom, Assessment and Remediation of a Heavy-Oil Spill into Groundwater Aquifers, International Oil Spill Conference Proceedings: April 1997, Vol. 1997, No. 1, pp. 347-363 (1997). ⁵⁰ Id

⁵¹ *Id*.

⁵³ See Division of Oil Gas and Geothermal Resources, California Department of Conservation, Interim Well Stimulation Treatment Notices database, *available at* http://www.conservation.ca.gov/dog/Pages/IWST_disclaimer.aspx.

IV. The MND Fails to Consider the Harm Resulting from Produced Water

According to state regulators, oil fields in California produce on average 15 barrels of this produced water for every barrel of oil extracted.⁵⁴ Produced water can contain high concentrations of benzene, a known carcinogen, and other harmful chemicals.⁵⁵ In addition to containing chemicals used in well stimulation, wastewater can contain many harmful chemicals in the produced water, including heavy metals such as lead, mercury, and arsenic; polycyclic aromatic hydrocarbons; and even naturally occurring radioactive material.⁵⁶ The oil industry's own tests show that high levels of benzene and other harmful chemicals are almost always found in flowback water.⁵⁷

The MND states that wastewater from the test wells will be delivered to a wastewater disposal facility, but provides no details or specificity and fails to adequately describe the full harm that may result from wastewater disposal. In California, oil and gas wastewater is most commonly disposed of in disposal wells, but is also dumped into open pits⁵⁸ and even used to irrigate food crops.⁵⁹ As discussed further below, each of these disposal methods has serious health and environmental consequences, and the management of wastewater is rife with legal violations. In sum, the oil industry and state regulators are simply incapable of handling the current volume of oil and gas wastewater in a safe or legal manner. Thus it is essential that the County require the applicant to specify the disposition of the project's wastewater and include a full analysis of this issue in the environmental review. The MND is woefully inadequate on this critically important issue.

California's Underground Injection Control (UIC) program is managed by the Department of Conservation, Division of Oil, Gas, and Geothermal Resources, which has admitted to that hundreds of wastewater disposal wells across the state are illegally disposing of waste into aquifers protected by federal law.⁶⁰ Though true extent of damage to protected

⁵⁶ While data gaps exist for chemical compositions of California produced water, studies of other oil fields have detected harmful chemicals; *see*, e.g., Benko, K., Produced Water in the Western United States: Geographical Distribution, Occurrence, and Composition, 25 Environmental Engineering Science 2 (2008); Pampanin, Daniela & Magne Sydnes, M., *Chapter 5: Polycyclic Aromatic Hydrocarbons a Constituent of Petroleum: Presence and Influence in the Aquatic Environment*, Hydrocarbon (Vladimir Kutcherov and Anton Kolesnivikov eds. 2013) at 87.

⁵⁷ Cart, Julie, High levels of benzone found in fracking waste water. LA Times, Feb. 11, 2015.

⁵⁴ California Department of Conservation Division of Oil, Gas, and Geothermal Resources, 2013 Preliminary Report of California Oil and Gas Production Statistics, Publication No. PR03 (May 2014) *available at:* http://ftp.consrv.ca.gov/pub/oil/annual reports/2013/PR03 PreAnnual 2013.pdf

⁵⁵ DOGGR, 1993 Benzene Study.

⁵⁷ Cart, Julie, *High levels of benzene found in fracking waste water*, LA Times, Feb. 11, 2015, http://www.latimes.com/local/california/la-me-fracking-20150211-story.html#page=1

⁵⁸ Cart, Julie, *Hundreds of Illicit Oil Wastewater Pits Found in Kern County*, L.A. Times, Feb. 26, 2015, http://www.latimes.com/local/lanow/la-me-ln-pits-oil-wastewater-20150226-story.html.

⁵⁹ Cart, Julie, Central Valley's Growing Concern: Crops Raised With Oil Field Water, L.A. Times, May 2, 2015, http://www.latimes.com/local/california/la-me-drought-oil-water-20150503-story.html#page=1.

⁶⁰ See Bohlen, Steve, Division of Oil, Gas, and Geothermal Resources, Letter to EPA Region IX, dated February 6, 2015, at Enclosure B, disclosing 490 illegal disposal wells and 1,987 enhanced oil recovery wells injecting into protected aquifers.

aquifers is still unknown, the Chief Deputy of the State Water Resources Control Board has confirmed that these illegal disposals have caused contamination of aquifers.⁶¹ In April, 2015, emergency regulations were passed that purport to allow disposal of wastewater into protected aquifers until as late as February, 2017.⁶² The disposal of wastewater via an injection well risks further contamination of groundwater resources.

Further, new studies show that wastewater injection is the likely cause of increased seismic activity in other states.⁶³ The MND fails to analyze the effect of disposing of wastewater in injection wells located near faults. In fact, the MND fails to state *any* facts about where the wastewater would go. The MND is inadequate because it fails to consider the effect of wastewater disposal despite the dangers of aquifer contamination and increased seismicity in California.

V. The MND Fails to Consider Significant Impacts on Water Resources

While the operator indicates it will store its waste in tanks, there is no prohibition against the use of sumps, either in the conditions of approval or applicable law.⁶⁴ The MND does not discuss whether any sump (storage pits) will be constructed and used for wastewater. Thus, it is reasonably foreseeable that the Project could involve the construction and use of one or more sumps, and CEQA requires an analysis of such sumps, their characteristics, and the potential resulting environmental impacts. While the construction and use of a sump could have a range of impacts, including to air quality and the climate, the Commission's failure to perform an analysis of the potential impacts of such activity puts water resources at particularly great risk. New Mexico data shows 743 instances of groundwater contamination due to surface pits, almost entirely over the last three decades.⁶⁵ Pits have resulted in numerous instances of contamination in Colorado as well.⁶⁶ In one instance, an individual became sick after drinking tap water drawn from a spring that had been contaminated when the liner of a surface pit leaked, leading to the release of waste.⁶⁷ The state investigated the contamination and found benzene in the

⁶¹ Ensuring Groundwater Protection: Is the Underground Injection Control Program Working?: Hearing Before Senate Natural Resources and Water Committee and Senate Environmental Quality Committee, 2015 Sen., 2015-2016 Sess. 74, (Ca., 2015) ("March 2015 Senate Hearing"), 74 (statement of Jonathan Bishop, Chief Deputy of the State Water Resources Control Board).

⁶² 14 CCR § 1760.1, 1779.1.

⁶³ See, e.g., Peterson et al., Incorporating Induced Seismicity in the 2014 United States National Seismic Hazard Model—Results of 2014 Workshop and Sensitivity Studies, April 2015, US Geological Society, *available at* http://pubs.usgs.gov/of/2015/1070/

⁶⁴ See, e.g., 14 C.C.R. § 1770.

⁶⁵ New Mexico OGAP Analysis.

⁶⁶ Mall at 18-19.

⁶⁷ Colorado Oil and Gas Conservation Commission, Cause No. 1V, Order No. 1V, Docket No. 1008-OV-06, Notice of Administrative Order by Consent (2010), *available at* http://cogcc.state.co.us/Hearings/Notices/2010/10 August/1008-OV-06.AOC.Notice.pdf.

groundwater that exceeded standards by 32 times and benzene in faucet water that exceeded standards by 13 times, as well as elevated levels of toluene and xylenes.⁶⁸

Operation of the well will obviously introduce the risk of spills and accidents, but the MND contains no adequate discussion of this issue. U.S. EPA's findings indicate that multiple spills have occurred in the San Ardo Oil Field over the last few years, including spills from leaking tanks, and a spill of 1,700 barrels of an unspecified fluid.⁶⁹ Rather than consider the impacts of potential spills, the MND unlawfully defers the preparation of a spill response plan.⁷⁰ Despite the history of spills in the San Ardo Oil Field and EPA's finding that California's UIC program does not sufficiently protect water resources, the MND does not consider the potential for the Project to contaminate water in the ways discussed above.

VI. The MND Fails to Consider Significant Impacts of Greenhouse Gas Emissions

Oil and gas operations are a major cause of climate change. Emissions result from oil and gas exploration, development, and production operations and the combustion of oil or gas for energy. The processing, refining, and burning of the oil produced by the Project will generate additional greenhouse gas emissions. The processing and refining of crude oil is a polluting and energy-intensive process that results in substantial greenhouse gas emissions. The combustion of the oil will also result in large amounts of carbon dioxide emissions; according to the U.S. Environmental Protection Agency, combusting a barrel of oil results in the emission of 0.43 metric tons of carbon dioxide equivalent.⁷¹

Of great concern are methane emissions. Natural gas emissions are generally about 84 percent methane. Methane is a potent greenhouse gas that contributes substantially to global climate change. Its global warming potential is approximately 33 times that of carbon dioxide over a 100 year time frame and 105 times that of carbon dioxide over a 20 year time frame. Oil and gas operations release large amounts of methane. While the exact amount is not clear, EPA has estimated that oil and gas systems are the largest human-made source of methane emissions and account for 37 percent of methane emissions in the United States or 3.8 percent of the total greenhouse gas emissions in the United States. Also, evidence indicates that a huge percentage of the natural gas produced in the United States is ultimately emitted to the

⁶⁸ Mall at 19.

⁶⁹ Walker, James D., California Class II Underground Injection Control Program Review, Report submitted to Ground Water Office USEPA Region IX at 107 (June 2011) ("UIC Program Review").

⁷⁰ Approval at 15.

⁷¹ U.S. EPA, Calculations and References, Clean Energy, http://www.epa.gov/cleanenergy/energy-resources/refs.html (last accessed May 7, 2015).

⁷² Howarth, Robert, et al., Methane and the greenhouse-gas footprint of natural gas from shale formations, Climactic Change, doi 10.1007/s10584-011-0061-5 (Mar. 31, 2011) ("Howarth 2011").

⁷³ Natural Resources Defense Council, Leaking Profits (2012) ("NRDC, Leaking Profits").

⁷⁴ U.S. EPA, Natural Gas STAR Program, Basic Information, Major Methane Emission Sources and Opportunities to Reduce Methane Emissions (2012) ("USEPA, Basic Information").

atmosphere. Preliminary results from a field study in the Uinta Basin of Utah suggest that the field leaked methane at the rate of nine percent of total production.⁷⁵

For the oil industry, emissions result primarily from field production operations, oil storage tanks, and production-related equipment. Emissions are released as planned, during normal operations and unexpectedly due to leaks and system upsets. Significant sources of emissions include well venting and flaring.⁷⁶

Other pollutants that the Project will emit also warm the climate. In particular, oil and gas operations result in the emission of large amounts of nitrogen oxides (" NO_X ") and volatile organic compounds ("VOCs"). Both of these pollutants are precursors of tropospheric ozone, which is an important contributor to climate change. Further, oil operations result in significant emissions of carbon dioxide – the primary driver of climate change – from the combustion of fossil fuels through the operation of engines or through flaring.

The MND made two errors in its approach to calculating emissions and determining their significance. First, in its analysis, the County uses a 10,000 MT CO2E per year threshold, and states that emissions would be significant if the Project "would result in more than 10,000 MT CO2E per year." This threshold is too high and not adequately supported. Secondly, the MND uses a global warming potential of 23 for methane. It fails to specify the timeframe to which this global warming potential is applied, rendering the figure meaningless. Even if a timeframe were specified, the stated potential is woefully below current data which establishes that fossil methane's global warming potential is 87 times higher than carbon dioxide over a 20-year period and 36 times higher over a 100-year period.⁷⁸

Although approval of the Project would allow one year of unrestricted extraction of oil, the MND's analysis omits many of the emissions that will result. First, the MND fails to consider the emissions from the transmission, refining, and combustion of the oil, incorrectly and unlawfully dismissing those emissions as subject to separate review. There is no evidence that separate environmental review will ever be conducted, and even if there were some reason to believe that a separate review will be forthcoming in the future, it doesn't excuse the County from its duty to fully disclose, analyze and mitigate all of *this* project's impacts.

Secondly, the MND fails to consider the effect of fugitive emissions. Fugitive emissions, emissions that result when air pollutants leak from wells and machinery can occur at every stage

⁷⁷ Shindell, Drew T., et al., Improved Attribution of Climate Forcing to Emissions, 326 Science 716 (2009) ("Shindell 2009").

⁷⁵ Tollefson, Jeff, Methane leaks erode green credentials of natural gas, Nature / News (Jan. 2, 2013).

⁷⁶ USEPA, Basic Information.

⁷⁸ Myrhe, Gunnar & Drew Shindell, *Chapter 8: Anthropogenic and Natural Radiative Forcing* in Climate Change 2013: The Physical Science Basis, Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (2013)., Table 8.7 at 714, Cambridge Univ. Press (2013).

of extraction and production, often leading to high volumes of gas being released into the air. Even where waste fluid is stored in so-called "closed loop" storage tanks, fugitive emissions can escape from tanks. The MND expressly states that it considers fugitive emissions during tank loading, but fails to consider fugitive emissions that may leak from the well itself, the production machinery or the storage tanks. The MND is incomplete, unclear, and fails as an informational document because the true nature and effect of the project's fugitive emissions is hidden from view by the review documents.

The emissions from the transport, refining and combustion of the produced oil, and fugitive emissions, missions will undercut the state's goals to reduce greenhouse gas emissions. That project must be discussed in light of the state's goals and mandates, including the most recent Executive Order which mandates a 40% reduction of GHGs below 1990 levels by 2030. This is a necessary but significant reduction, and cannot be achieved without a steep and rapid reduction in fossil fuel use and production. This project would take us in exactly the opposite direction. The emissions from flaring, fugitive emissions and evaporation from open tanks will have similar effects. Those impacts must be disclosed to the public, analyzed, and avoided or mitigated now, not at some unspecified future time.

VII. The Environmental Documentation Is Deficient in Its Mitigation of Impacts On Biological Resources

The MND is deficient in numerous additional regards that frustrate CEQA's disclosure and protection mandates. The finding of no significant impact with regard to biological resources is not supported. Numerous special status animals use the vicinity of the project site, and the mitigation measures incorporated do not reduce the impact to these species and their habitat to "less than significant." The project site admittedly serves as habitat for the San Joaquin kit fox, which is known to inhabit the area. The project will directly destroy habitat, increase habitat fragmentation, and increase the risk that kit foxes will be hit by vehicles and otherwise harmed by project activity. The critically imperiled California condor also inhabits the area and can be harmed or killed by ingesting toxic substances such as spilled oil and other chemicals or by ingesting microtrash. The mitigation measures that are incorporated may somewhat lessen the chances of individual kit foxes or condors, but they cannot be said to reduce the impacts to "less than significant." The harms and risks remain even after mitigation. There are additional feasible mitigation measures, such as compensatory habitat restoration or preservation, which have not even been considered or addressed.

⁸⁰ California Exec. Order No. B-30-15 (Apr. 299, 2015).

⁷⁹ Miller, S. M. et al., Anthropogenic Emissions of Methane in the United States, Proc. Natl. Acad. Sci. Early Edition, DOI: 10.1073/pnas.1314392110 (2013) ("Miller 2013").

VIII. Further Deficiencies

A mitigation and monitoring plan must be included for all mitigation measures that have been adopted, but no adequate plan has been included. Important pieces of the project and/or its mitigation, such as a spill response plan, have been unlawfully deferred.

The cumulative impacts analysis is particularly important because our health, environment, and wildlife so often suffer the death of a thousand cuts. Yet the MND contains no real or adequate cumulative impacts analysis.

B. Conclusion

For the reasons stated above, in the Center's April 29, 2015 comment letter, and July 29, 2014 comment letter, and in the attachments to this appeal and the Center's comment letters, we ask that the Board of Supervisors find that the Planning Commission's findings and decisions were in error, reverse the Planning Commission approval of the Project, and vacate the use permit.

Thank you for your consideration of this matter. If you have any questions, please contact Clare Lakewood, (415) 632-5321, clakewood@biologicaldiversity.org.

Respectfully submitted,

Clare Lakewood Staff Attorney Center for Biological Diversity

351 California St., Ste. 600 San Francisco, CA 94104

Encls:

List of References Cited and Attached to Appeal

Attachment A – Center for Biological Diversity Comments on Temporary Use Application PLN140395 to allow production testing for oil and gas at existing well Bradley Minerals Well 2-2 (July 29, 2014)

Attachment B – Center for Biological Diversity Update to Comments on Temporary Use Permit PLN140395 to allow production testing for oil and gas at existing well Bradley Minerals Well 2-2 and Mitigated Negative Determination (April 29, 2015)

Compact Disk of References Cited and Attached to Appeal

Compact Disk of Complete Set of References cited in Attachment A

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ATTACHMENT A



CENTER for BIOLOGICAL DIVERSITY

July 29, 2014

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

Grace Bogdan, Project Planner
Monterey County Resource Management Agency
Planning Department
168 West Alisal Street, 2nd Floor
Salinas, CA 93901
bogdang@co.monterey.ca.us

Re: PLN140395 – Center for Biological Diversity's Comments on Trio Petroleum LLC's Application for a Permit Covering Oil Activities at Bradley Mineral Well 2-2

Dear Ms. Bogdan:

The Center for Biological Diversity ("Center") submits the following comments¹ concerning Monterey County's ("County") consideration of Trio Petroleum LLC's ("Trio") application for a temporary use permit (PLN140395) for the testing for oil and gas using an existing well (Bradley Minerals Well 2-2).²

The Center is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center also works to reduce greenhouse gas emissions to protect biological diversity, our environment, and public health. The Center has more than 775,000 members and online activists, including many who live in Monterey County. Center members have recreational, scientific, and educational interests in the areas at issue, and are particularly interested in protecting the many native, imperiled, and sensitive species and their habitats that may be affected by the proposed action.

We request that the County deny the permit. As detailed below, to the degree the County wishes to approve the permit, it cannot lawfully do so absent full California Environmental Quality Act ("CEQA") review. Further, to the extent the County wishes to continue its consideration of whether CEQA review is required for the project at all, we request that the

¹ All sources cited below are incorporated by reference into this comment letter. For the convenience of the Monterey County Planning Commission, I have provided copies of a few particularly important studies along with this comment letter; these studies are identified by an asterisk placed after the period or semi-colon following the initial citation for the study.

² Monterey County Land Use Advisory Committee, Report to the Monterey County Planning Commission on PLN140395 (2014) ("Report to PC").

County provide additional time for the public to comment on the project and its numerous significant potential effects.

Discussion

I. Legal Background

The Legislature enacted CEQA to "[e]nsure that the long-term protection of the environment shall be the guiding criterion in public decisions." No Oil, Inc. v. City of Los Angeles, 13 Cal. 3d 68, 74 (1974). The Supreme Court has repeatedly held that CEQA must be interpreted to "afford the fullest possible protection to the environment." Wildlife Alive v. Chickering, 18 Cal. 3d 190, 206 (1976) (quotation omitted). CEQA also serves "to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action." Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal., 47 Cal. 3d 376, 392 (1988) ("Laurel Heights I"). If CEQA is "scrupulously followed," the public will know the basis for the agency's action and "being duly informed, can respond accordingly to action with which it disagrees." Id. Accordingly, CEQA "protects not only the environment but also informed self-government." Id.

CEQA applies to all "discretionary projects proposed to be carried out or approved by public agencies." Pub. Res. Code § 21080(a). Before taking any action, a public agency must conduct a "preliminary review" to determine whether the action is a "project" subject to CEQA. See Muzzy Ranch Co. v. Solano County Airport Land Use Comm'n, 41 Cal. 4th 372, 380 (2007). A "project" is "the whole of an action" directly undertaken, supported, or authorized by a public agency "which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." Pub. Res. Code § 21065; CEQA Guidelines § 15378(a). Under CEQA, "the term 'project' refers to the underlying activity and not the governmental approval process." California Unions for Reliable Energy v. Mojave Desert Air Quality Mgmt. Dist., 178 Cal. App. 4th 1225, 1241 (2009) (quoting Orinda Ass'n v. Bd. of Supervisors, 182 Cal. App. 3d 1145, 1171-72 (1986)). The definition of "project" is "given a broad interpretation in order to maximize protection of the environment." Lighthouse Field Beach Rescue v. City of Santa Cruz, 131 Cal. App. 4th 1170, 1180 (2005) (internal quotation omitted).

Subject to certain exceptions, if an action is a "project" subject to CEQA, "the agency must 'conduct an initial study to determine if the project may have a significant effect on the environment." Muzzy Ranch Co. v. Solano County Airport Land Use Comm'n (2007) 41 Cal.4th 372, 380. If the initial study indicates that there is no substantial evidence of any significant environmental impact, the agency may adopt a negative declaration. Nelson v. County of Kern (2010) 190 Cal.App.4th 252, 267. However, where there is substantial evidence in the record supporting a fair argument that a project may have a significant effect on the environment, the agency must prepare an environmental impact report. Cal. Pub. Res. Code §§ 21100; 21151; CEQA Guidelines § 15064(a)(1) (f)(1).

CEQA does not apply to a project that exempt from the Act's application. CEQA directs the Secretary of the Resources Agency to promulgate a list of classes of projects that have no

significant effect on the environment. Cal. Pub. Res. Code § 21084. These classes of projects that have no significant impact on the environment are listed as "Categorical Exemptions" in the CEQA Guidelines. See CEQA Guidelines § 15300 et seq. Because such projects are presumed to pose no danger to the environment, a public agency need not examine them under CEQA. Importantly, however, for more than 30 years, courts have placed strict limits on the use of categorical exemptions because public agencies may not use categorical exemptions for any project for which "there is any reasonable possibility that a project or activity may have a significant effect on the environment" Wildlife Alive v. Chickering (1976) 18 Cal.3d 190, 205. This longstanding prohibition has endured because to invoke an exemption for projects where adverse impacts may occur would be incompatible with CEQA's mandate that any project that may have an adverse effect must go through the CEQA process.

CEQA's exemptions are to be construed narrowly and are not to be expanded beyond the scope of their plain language. The agency must carry the burden of showing that substantial evidence supports the agency's contention that the project falls within the categorical exemption. *Magan v. County of Kings* (2002) 105 Cal.App.4th 468, 474. Further, CEQA analysis is required if the project falls under one of the exceptions to the categorical exemptions. For instance, CEQA analysis is required if "cumulative impact of successive projects of the same type in the same place, over time is significant," or if the activity will "have a significant effect on the environment due to unusual circumstances." CEQA Guidelines § 15300.2.

II. The Project Does Not Fall Within the Categorical Exemption for Existing Facilities

The Monterey County Land Use Advisory Committee ("LUAC") states that CEQA review is not required for this project because it is "categorically exempt from CEQA per Section 15301" of the CEQA Guidelines.³ Section 15301 creates an exemption for "Existing Facilities." The Guidelines define the categorical exemption for existing facilities as follows:

Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. . . . The key consideration is whether the project involves negligible or no expansion of an existing use.

CEQA Guidelines § 15301. The project at issue here does not qualify for this exemption because the project involves a substantial increase in the use of the facility "beyond that existing at the time of the lead agency's determination." See id.

The reason for this is straight forward: there is no use of the facility at this time, which is the "time of the lead agency's determination." Trio acquired the well from Venoco, Inc., but Trio has never had a valid use permit for the well; the use permit Venoco was operating under has expired. Trio did operate at the well unlawfully for a short period, but closed the well in May

⁴ Report to PC at 4.

³ Report to PC at 6.

2014 after receiving a stop-work notice from the County. Consequently, there is no existing use of the well and CEQA review is needed to analyze how Trio's operations may affect the environment relatively to the existing environmental baseline. See Communities for a Better Environment v. South Coast Air Quality Management Dist. (2010) 48 Cal. 4th 310, 321 ("the impacts of a proposed project are ordinarily to be compared to the actual environmental conditions existing at the time of CEQA analysis").

The LUAC provides no substantial evidence that the project qualifies for the existing use categorical exemption. The LUAC attempts to characterize the project as one of "continued operation," but this ignores the fact that the "key consideration is whether the project involves negligible or no expansion of an existing use," meaning the use "existing at the time of the lead agency's determination." CEQA Guidelines § 15301. As explained in more detail below, Trio's project may harm the environment in a number of very serious ways. Comparing these impacts to the environmental baseline of no oil operations at the well demonstrates that there is a reasonable possibility that [the] project . . . may have a significant effect on the environment," and that no categorical exemption may apply. Wildlife Alive, 18 Cal.3d at 205. In particular, there is a reasonably possibility that Trio's operations may result in significant effects due to its use of enhanced recovery techniques and may result in significant effects to water, the climate, air quality, wildlife, and seismicity. Other impacts not detailed below will also result, including increased noise and traffic.

a. The Project May Result in Significant Impacts to Due to Its Use of Enhanced Recovery Techniques

The LUAC states that no well stimulation is proposed as part of the project. However, both hydraulic fracturing ("fracking") and acidization were both previously used on the Bradley Minerals 2-2 wells, and further, oil and gas companies commonly employ such techniques and other enhanced recovery methods in California, including fracking, cyclic steam injection, steam flooding, fracture acidizing, matrix acidizing, gravel packing, frac packing, enzyme enhanced recovery, and gas lifting. These enhanced recovery techniques involve the use or handling of highly hazardous substances and are major threats to public health and the environment.

The LUAC generally dismisses the need to consider the impacts of enhanced recovery now, stating that the County will receive notification when such operations are proposed and will require analysis at that point. But this cannot excuse the County from its duty to analyze all of the reasonably foreseeable impacts of its current approval now. Because well stimulation is a reasonably foreseeable future activity, the County must analyze the risks and dangers from this activity before approving the permit. Even were the County's proposed new well stimulation ordinance (REF130051) already enacted, the fact that the County would issue a later approval for well stimulation would not allow it to segment the project approval and approve an earlier stage

⁵ Report to PC at 4.

⁶ Report to PC at 12.

⁷ Report to PC at 5.

⁸ Report to PC at 5.

⁹ See, e.g., Center for Biological Diversity, Dirty Dozen: The 12 Most Commonly Used Air Toxics in Unconventional Oil Development in the Los Angeles Basin (2014) ("Dirty Dozen").*

without analysis of the remainder of the project's impacts. Given that the County is in the midst of its ordinance update, however, and that oil and gas operators have previously fracked this very well with no notice to or permission from the County, it is not assured that the County would in fact issue a later discretionary approval.

Once the permit is approved, the project applicant may very well argue that no further permits are required under the current Monterey County code, and thus no additional analysis should be required. The review is urgently needed now, when the County is providing the initial consideration of Trio's operations at the well. In fact, review should have been performed when Venoco originally applied for a use permit covering the well, but the County found the project was covered by a categorical exemption; or when Venoco decided to frack and acidize the wells, but apparently no CEQA review was performed at that time either. In light of this repeated refusal to consider activities at the well under CEQA, and both Venoco's and Trio's failure to respect the law or permit conditions, the LUAC's assurance that enhanced recovery will be considered before the treatment happens rings hollow.

CEQA review is also imperative because Venoco's fracking and acidizing of the well in the past resulted in production casing failure at a depth either within a freshwater aquifer, or close a freshwater aquifer, that is part of a groundwater basin that provides scarce and valuable water resources. To the extent the Conditions of Approval are prohibiting the use of enhanced recovery techniques at any point in the future, this must be clarified. If well stimulation has not been permanently, effectively, and enforceably prohibited, then the risks and impacts of well stimulation must be analyzed now.

Acidization in particular has been used with increasing regularity around California. The technique involves the injection of large amounts of acid – commonly hydrochloric acid – into the well. This acid can spill or leak into the environment. Exposure to hydrochloric acid is extremely harmful. It is corrosive to the eyes, skin, and mucous membranes, and exposure to hydrochloric acid fumes can cause irritation of the respiratory system and pulmonary edema in humans. Hydrofluoric acid is also used, and is also extremely dangerous. These serious effects must be considered because the record shows that Trio may to treat the well with acid. The LUAC appears to contend that this is unimportant because the acid will be used for so-called well maintenance, not well stimulation. However, these activities use largely the same toxic chemicals that are used in well stimulation operators, including hydrochloric acid, and hydrofluoric acid. Thus, even if the use of acid is truly for "well maintenance," many of the

¹⁰ Report to PC at 24, 27; Monterey County Water Resource Agency, http://www.mcwra.co.monterey.ca.us/SVWP/DEIR EIS 2001/5 3.htm

¹¹ U.S. Environmental Protection Agency, Hydrochloric Acid (Hydrogen Chloride) (Jan. 2000),

http://www.epa.gov/ttnatw01/hlthef/hydrochl.html ("EPA Hydrochloric Acid"). ¹² Collier, Robert, Part 1: Distracted by Fracking?, August 8, 2013, available at

http://www.thenextgeneration.org/blog/post/monterey-shale-series-distracted-by-fracking;* Collier, Robert, Part 2: The Most Dangerous Chemical You've Never Heard Of, August 15, 2013, available at http://thenextgeneration.org/blog/post/monterey-shale-series-the-most-dangerous-chemical.*

¹³ Report to PC at 5.

¹⁴ See, e.g., Center for Biological Diversity & Communities for a Better Environment, SB 4 Well Stimulation Treatment Regulations, First Revised Text of Proposed Regulations, Comments submitted to Department of Conservation Division of Oil, Gas, and Geothermal Resources (July 28, 2014).*

same dangers to public health and safety associated with using acid in enhanced recovery operations are present when a well operator conducts a well maintenance or well cleanout procedure. 15 Further, it appears that oil and gas operators are in many instances simply relabeling acidization for production purposes as "well maintenance," and thereby evading state law disclosure requirements. Moreover, the County's reliance on DOGGR's definition of what qualifies as well stimulation is unwarranted because DOGGR's interim regulations and proposed regulations, which would take effect July 1, 2015, violate applicable law, including SB 4, as they do not adequately "prevent, as far as possible, damage to life, health, property, and natural resources." For all these reasons, the County must conduct a full review of the risks of the use of hydrochloric and hydrofluoric acid in the well.

The project's potential use of fracking could also result in serious environmental and human health consequences. The evidence is overwhelming that fracking degrades air quality in ways that threaten human health, for instance, by emitting carcinogenic and hazardous pollutants. ¹⁶ Also, the exploration, development, and production of oil and gas from fracked wells releases large amounts of greenhouse gases, such as methane, which operations vent and leak to the atmosphere. 17 Fracking also negatively affects water resources. The fracking of a single well can require millions of gallons of water, and as a result, fracking can deprive communities and farmers of water. 18 Moreover, fracking generates huge amounts of dangerous fluids, such as fracking fluid and wastewater, that can leak or be spilled into the environment, contaminating surface or groundwater with pollutants that, among other things, can affect the cardiovascular, endocrine, and nervous systems and cause cancer. 19 Activities associated with fracking, particularly the underground injection of wastewater from fracking operations, can even result in large earthquakes.²⁰ Shale oil produced by fracking also appears to be more explosive and flammable than traditional crude oil.²¹ It is reasonably foreseeable that Trio will employ fracking as part of the project because the well has been fracked before and because fracking is such a common practice.

¹⁶ See, e.g., Colborn, Theo et al., Natural Gas Operations from a Public Health Perspective, 17 Human and Ecological Risk Assessment 1047 (2011);* McKenzie, Lisa et al., Human Health Risk Assessment of Air Emissions form Development of Unconventional Natural Gas Resources, Sci Total Environ (2012) ("McKenzie 2012"), doi:10.1016/j.scitotenv.2012.02.018.*

⁷ See, e.g., Howarth, Robert, A bridge to nowhere: methane emissions and the greenhouse gas footprint of natural

gas (2014).

18 See, e.g., U.S. Government Accountability Office, Information on Shale Resources, Development, and
18 See, e.g., U.S. Government Accountability Office, Information on Shale Resources, Development, and
18 See, e.g., U.S. Government Accountability Office, Information on Shale Resources, Development, and Environmental and Public Health Risks GAO-12-732 (Sep. 2012); Freyman, Monika, Hydraulic Fracturing and Water Stress: Water Demand by the Numbers (2014).

¹⁹ See, e.g., Christopher D. Kassotis, et al. Estrogen and Androgen Receptor Activities of Hydraulic Fracturing Chemicals and Surface and Ground Water in a Drilling-Dense Region, Endocrinology Early Release doi: 10.1210/3n.2013-1697 (Dec. 16, 2013); U.S. Environmental Protection Agency, Draft Investigation of Ground Water Contamination near Pavillion, Wyoming (2011); Myers, Tom, Potential Contamination Pathways from Hydraulically Fractured Shale to Aguifers (2012).

²⁰ See, e.g., BC Oil and Gas Commission, Investigation of Observed Seismicity in the Horn River Basin (Aug. 2012) ("BC Oil 2012"); Keranen, Katie, Sharp increase in central Oklahoma seismicity since 2008 induced by massive wastewater injection (2014) ("Keranen Sharp Increase").*

²¹ Ayers, Christin, Explosive Fracked Oil Destined For Bay Area-Neighbors Rail Against Chemical Trains. CBS SF Bay Area. (Jan. 11, 2014), http://sanfrancisco.cbslocal.com/2014/01/11/trains-carrying-fracked-oil-may-posedangers-to-bay-area/ ("Ayers, Explosive Fracked Oil Destined for Bay Area")

Steam injection is also a dangerous class of techniques companies regularly use in California, with use of such techniques associated with the creation of "large temperature variations and formation movements," putting extreme pressure on the ground and well, and sometimes resulting in well failure or the migration of fluids and steam.²² It is also energy and water intensive and results in large amounts of air pollution emissions.²³ The use of steam injection here is reasonably foreseeable because the technique is used extensively in the nearby San Ardo Oil Field.

Thus, the project's potential use of enhanced recovery techniques creates a reasonable possibility of significant impacts. Further, CEQA requires that the County consider, either as indirect impacts or as cumulative effects, all reasonably foreseeable future projects that this initial project may induce. Because it is reasonably foreseeable that the discovery of economically producible quantities would likely lead to additional operations that are likely to involve enhanced recovery, the County must consider the effects of those additional operations.

b. The Project May Result in Significant Impacts to Water

There is a reasonable possibility that the project will have significant impacts on water. Oil activities in general are significant threats to water in large part because the wastes these operations produce are highly hazardous. As explained, these wastes are physically hazardous, even if oil and gas waste has been granted an exemption from some hazardous waste laws. Further, they regularly escape containment and contaminate the environment despite the existence of laws that are supposed to prevent these discharges. Indeed, the existence of laws attempting to limit the harms of oil activities tends to show that the activities are inherently dangerous.

The produced water, drilling fluids and cuttings, and associated wastes these operations create can contain harmful substances like benzene, arsenic, lead, hexavalent chromium, barium, chloride, sulfate, and boron.²⁴ Produced water in particular is a great concern because of the large

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²² See, e.g., Xie, Jueren, Analysis of Casing Deformations in Thermal Wells (2008) ("Xie 2008"); Kulakofsky, David, Achieving Long-Term Zonal Isolation in Heavy-Oil Steam Injection Wells, a Case History, IADC/sPE Asia Pacific Drilling Technology Conference and Exhibition (2008) ("Kulakofsky"); DOGGR, Example Thermal Wells from DOGGR's Online Production and Injection Data for Los Angeles County, data available at http://opi.consrv.ca.gov/opi/opi.dll (limit data by clicking the "County" tab and selecting "Los Angeles"); California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, Report of Occurrences, The Chevron Fatality Accident, June 21, 2011, and Area Surface Expression Activity, Pre and Post Accident, Sections 21 & 22 T.32S./R.23E., Midway-Sunset Oil Field, Kern County (May 2012) ("Accident Report")

²³ California Air Resources Board, Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Low Carbon Fuel Standard, Appendix C – Calculation of Baseline Crude Average Carbon Intensity Value (2011); Mark, Jason, Oil drilling could be new nadir for Pinnacles National Park, Earth Island Journal (2013), available at

http://www.salon.com/2013/03/03/oil_drilling_could_be_new_nadir_for_pinnacles_national_park_partner/; Gordon, Deborah, Understanding Unconventional Oil (2012).

²⁴ Mall, Amy, Petition for Rulemaking Pursuant to Section 6974(a) of the Resource Conservation and Recovery Act Concerning the Regulation of Wastes Associated with the Exploration, Development, or Production of Crude Oil or Natural Gas or Geothermal Energy at 7 (Sep. 8, 2010); Letter from West Virginia Department of Environmental Protection to William Goodwin, Superintendent Clarksburg Sanitary Board (Jul. 23, 2009); U.S. EPA Region 8, An Assessment of the Environmental Implications of Oil and Gas Production: A Regional Case Study, Working Draft at 3-11 (2008).

volume produced by California oil operations: a bit less than three billion barrels per year, meaning over 15 times as much as produced oil. The produced waters are most commonly disposed of in wastewater injection wells, and these injection wells have been known to cause the contamination of aquifers. Indeed, California recently had to shut down wastewater injection wells because "it appears . . . likely [that the wells were] pumping waste into fresh water aquifers protected by the law" Like produced water, the drilling fluids and drill cutting oil activities produce contain numerous harmful chemicals and these wastes often escape into the environment due to spills or containment breaches. Oil operations also regularly spill oil, which can have serious consequences for water resources and aquatic habitats. Another source of water contamination is well failure, which can allow pollutants to escape into an underground aquifer. Wells failure is very common. The failure of the Bradley Minerals 2-2 well at a depth within or very near a valuable groundwater aquifer illustrates this and demands the County's consideration.

Additionally, the project will consume water, although it is unclear how much water it will consume and where it will come from. Oil operations can consume very large amounts of water, and the withdrawal of this water from local aquifers, which are already overdrawn, may have a significant environmental effect. The LUAC appears to believe that the project will consume no water; however, freshwater likely will be required for the maintenance activities described in the Report to the Planning Commission because with the use of briny water, "salt buildup forms and restricts the flow of oil."

The project may result in all of these significant impacts,³³ and as a result cannot quality for a categorical exemption.

²⁵ California Division of Oil, Gas and Geothermal Resources, 2012 Preliminary Report of California Oil and Gas Production Statistics at 3 (Apr. 2013).

²⁶ U.S. General Accounting Office, Drinking Water: Safeguards are not Preventing Contamination from Injected Oil and Gas Wastes (Jul. 1989), available at http://www.gao.gov/assets/150/147952.pdf; Walker, James, California Class II Underground Injection Control Program Review, Final Report submitted to USEPA Region 9 (2011) at 119 (Jun. 2011) ("Walker 2011").

²⁷ Lustgarten, Abrahm, California Halts Injection of Fracking Waste, Warning it May Be Contaminating Aquifers (2014), http://www.propublica.org/article/ca-halts-injection-fracking-waste-warning-may-be-contaminating-aquifers.*

²⁸ U.S. Congress, Office of Technology Assessment, Managing Industrial Solid Wastes from Manufacturing, Mining, Oil and Gas Production, and Utility Coal Combustion – Background Paper at 67 (1992);* Sumi, Lisa, Oil & Gas Accountability Project, Pit Pollution – Backgrounder on the Issues, with a New Mexico Case Study at 6 (2004); Colborn 2011.

²⁹ California Dept. of Fish and Game, Environmental Incident Report: Vintage Production California LLC Tar Creek Crude Oil and Produced Water Spills, January 30, 2007 and February 6, 2007.*

³⁰ Walker 2011.

³¹ Brufatto, Claudio et al., From Mud to Cement – Building Gas Wells, Oilfield Review p. 62-76 (Autumn 2003).

³² Kiger, Partrick J., North Dakota's Salty Fracked Wells Drink More Water to Keep Oil Flowing, National Geographic Daily News (Nov. 11, 2013), http://news.nationalgeographic.com/news/energy/2013/11/131111-north-dakota-wells-maintenance-water/.

³³ See, e.g., Report to PC at 6 (the project will generate produced water and oil), 31 (the project site is only 0.15 miles from Hames Creek).

c. The Project May Result in Significant Impacts to Greenhouse Gas Emissions

Oil and gas operations are a major cause of climate change. Emissions result from oil and gas exploration, development, and production operations and the combustion of oil or gas for energy.

Methane emissions are of great concern. Natural gas emissions are generally about 95 percent methane, which is a potent greenhouse gas with a warming potential dozens of times higher than that of carbon dioxide. Oil operations result in large amounts of methane emissions due to leaks or venting during field production operations, oil storage tanks, and production-related equipment. For instance, a study of methane emissions in Los Angeles County found a striking 17 percent of total produced methane for the year had been leaked to the atmosphere and that much of this came from emissions of associated gas produced from oil wells.³⁴

Other pollutants that will be emitted by the project also warm the climate. In particular, oil and gas operations result in the emission of large amounts of nitrogen oxides (" NO_X "), volatile organic compounds ("VOCs"), and fine particulate matter, all of which contribute to climate change³⁵.

The processing, refining, and burning of the project's produced oil will generate additional greenhouse gas emissions. The processing and refining of crude oil is a polluting and energy intensive process that results in substantial greenhouse gas emissions. The combustion of the oil will also result in large amounts of carbon dioxide emissions; according to the U.S. Environmental Protection Agency, combusting a barrel of oil results in the emission of 0.43 metric tons of carbon dioxide equivalent.

Although the LUAC has failed to consider the potential significance of such emissions, it is clear that the project is very likely to result in all of these greenhouse gas emissions. These emissions show there is a reasonable possibility that the project could result in significant impacts. In fact, taken together these potential emissions are almost certain to be significant regardless of the significance threshold.

d. The Project May Result in Significant Impacts to Air Quality

Oil and gas operations emit large amounts of numerous air pollutants.

For instance, they emit large amounts of VOCs, NO_X, and non-methane hydrocarbons ("NMHCs"). VOC emissions are particularly harmful and include the BTEX compounds – benzene, toluene, ethyl benzene, and xylene – which are associated with a range of very serious human health effects, including cancer. ³⁶ Both VOCs and NO_X are ozone precursors, and thus,

³⁶ McKenzie 2012.

³⁴ Peischl, J. *et al.*, Quantifying sources of methane using light alkanes in the Los Angeles basin, California, 118 Journ. Geophys. Res.: Atmospheres 1-17 (2013);* *see also* Jeong, Seongeun, A multitower measurement network estimate of California's methane emissions, 118 Journ. Geophys. Res.: Atmospheres 11, 339–11,351, doi:10.1002/jgrd.50854 (2014).

³⁵ Shindell, Drew et al., Improved Attribution of Climate Forcing to Emissions, 326 Science 716 (2009);

due to emissions of these pollutants, many regions around the country with substantial oil and gas operations are now suffering from extreme ozone levels.³⁷ NMHCs are also known ozone precursors.³⁸ The primary sources of NO_X are engines used in drilling and flaring.³⁹ Another harmful pollution that has been found in high concentrations at many wells is methylene chloride, and while the source of these emissions is not totally clear, the chemical is stored at well pads for cleaning purposes.⁴⁰

Other harmful air pollutants that oil operations produce in substantial amounts include particulate matter, which can cause premature mortality;⁴¹ hydrogen sulfide; and methane, which in addition to contributing to climate change also is an ozone precursor.

The project here is likely to create all of these emissions. Of particular concern is the project's use of a flare that may be in "constant" use during testing. Temporary or not, the flare would be a substantial new source of air pollution emissions. ⁴² Thus, there is a reasonable possibility that project's air pollution emissions will have a significant impact on air quality.

e. The Project May Result in Significant Impacts to Sensitive Species

There is a reasonable possibility that the project will have a significant impact on wildlife. The project site and surrounding area serves as important wildlife habitat. The Biological Assessment states:

Based on habitats present and the environmental conditions observed during biological surveys, RAB Consulting determined that 46 special-status plant species and 12 wildlife species have the potential to occur in the proposed project site and buffer area. . . . [T]wo (2) special-status species have been historically recorded in proximity to the proposed project site and buffer area" These species include the San Joaquin kit fox and prairie falcon"

Additionally, the Biological Assessment states that there is the potential for critically endangered California condors to be present at the project site, 44 and to the degree that special status species were not found on the project site itself, this was probably due to the fact that Venoco violated the terms of its permit by failing to restore the site to its predevelopment state. For all the species the project may harm, the County has not mitigated potential effects; and to the extent any

⁴¹ U.S. Environmental Protection Agency, National Ambient Air Quality Standards for Particulate Matter Proposed Rule, 77 Fed. Reg. 38,890, 38,893 (June 29, 2012).

³⁷ Armendariz, Al, Emissions for Natural Gas Production in the Barnett Shale Area and Opportunities for Cost-Effective Improvements (2009) ("Armendariz") at 1, 3, 25-26.

³⁸ Colborn, Theo, *et al.*, An Exploratory Study of Air Quality near Natural Gas Operations (2012) ("Colborn 2012"). ³⁹ See, e.g., Armendariz at 24.

⁴⁰ Colborn 2012.

⁴² Argo, James, A Report Prepared for Save Our Seas and Shores (SOSS) for Presentation Before the Public Review Commission into Effects of Potential Oil and Gas Exploration, Drilling Activities within Licenses 2364, 2365, 2368 (2002).*

⁴³ Report to PC at 67.

⁴⁴ Report to PC at 42.

condition of approval was intended to provide mitigation, this cannot get the County out of its CEQA obligations.

The project's threat to the San Joaquin kit fox is particularly alarming. Despite years of conservation efforts, kit fox populations and habitat continue to decline. ⁴⁵ The loss of kit fox habitat due to oil and gas development remains a threat to the species. ⁴⁶ U.S. Fish and Wildlife Service's recent 5-year review highlighted this, stating that the most significant effect of oil-field development appears to be lowered carrying capacity for populations of both kit fox and their prey species due to loss or fragmentation of habitat. ⁴⁷ Another danger to kit fox from oil operations is the potential for vehicles serving the project to hit and kill or injure a kit fox. Due to the potential presence of the kit fox, there is a fair argument that the project could cause significant impacts to the kit fox.

The project also threatens harm to the South Central Coast Steelhead. The Salinas River has been designated as critical habitat for the species by the National Marine Fisheries Service. Hames Creek lies only 0.15 miles south of the proposed project site, and flows into the Salinas River. For the reasons described above, the project may pollute Hames Creek and thus the Salinas River, harming steelhead critical habitat. This would undoubtedly be a significant effect, yet the LUAC makes no mention of the steelhead in its Report to the Planning Commission.

As a result, there is a reasonable possibility that project's air pollution emissions will have a significant impact on air quality.

f. The Project May Result in Significant Seismic Impacts

Here, if approved, the project could induce seismic events. The LUAC's report to the planning commission indicates that the project's produced fluid might be disposed of in a wastewater injection well. Such wastewater injection is associated with earthquakes. Recently, wastewater injection has increased around the country, and this increase has been accompanied by a startling rise in earthquake activity. For instance, wastewater injection is likely to have caused seismic events in Ohio, 2 Oklahoma, 3 and Texas. Recent evidence also indicates that

⁵⁰ Keranen, Sharp Increase 2014.

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⁴⁵ McDonald-Madden, Eve, et al., Subpopulation triage: How to allocate conservation effort among populations. Conservation Biology 22(3): 656-665 (2008).

⁴⁶ U.S. Fish and Wildlife Service, Recovery Plan for the Upland Species of the San Joaquin Valley, California.130 (1998) ("USFWS Recovery Plan").

⁴⁷ U.S. Fish and Wildlife Service, San Joaquin Kit Fox – 5 year review (2010).

⁴⁸ University of California, Division of Agriculture and Natural Resources, California Fish Website, Steelhead Distribution and Habitat Use in the Salinas River Watershed, http://calfish.ucdavis.edu/Research Projects/?uid=5&ds=557.

⁴⁹ Report to PC at 6.

⁵¹ Arbelaez, Jhon, Shaye Wolf, Ph.D., and Andrew Grinberg, On Shaky Ground (2014), available at http://www.shakyground.org/; Sumy, Danielle F. *et al.*, Observations of static Coulomb stress triggering of the November 2011 M5.7 Oklahoma earthquake sequence (2014).

⁵² Ohio Department of Natural Resources, Executive Summary: Preliminary Report on the Northstar 1 Class II Injection Well and the Seismic Events in the Youngstown, Ohio, Area (2012) ("Ohio DNR Northstar"). ⁵³ Keranen, Sharp Increase 2014.

earthquakes can be triggered far away from the disposal site, with one study concluding that disposal wells in Oklahoma likely caused earthquakes 9 miles away.⁵⁵

While it remains unclear where Trio may have the fluid waste injected, the potential for wastewater injection wells to cause earthquakes shows that there is a reasonably possibility that the project will have a significant effect on seismicity. These issues must be discussed in the CEQA document.

III. The Project Is Not Covered by the Existing Facilities Categorical Exemption Because the Project Presents Unusual Circumstances, Creating a Reasonable Possibility of Numerous Significant Adverse Effects on the Environment

None of the categorical exemptions apply if there is a "reasonable possibility" that significant environmental impacts will result due to "unusual circumstances." CEQA Guidelines § 15300.2(c). Thus, even though a category of projects will, under normal circumstances, pose no environmental threat, if there are unusual circumstances associated with a particular project that could present such a threat, that project will fall outside the usual categorical exemption. Courts employ a two-part test for determining whether the "unusual circumstance" exception applies to a project. Under the test, an agency (and ultimately a court) must determine whether "the circumstances of a particular project:

- (i) Differ from the general circumstances of the projects covered by a particular categorical exemption, and
- (ii) Those circumstances create an environmental risk that does not exist for the general class of exempt projects."

Azusa Land Reclamation Company v. Main San Gabriel Basin Watermaster (1997) 52 Cal.App. 4th 1165, 1207; see also Communities for a Better Environment v. California Resources Agency (2002) 103 Cal.App.4th 98, 129.

Even if the project could otherwise be shoehorned into the existing facilities exemption (which it cannot), both of these factors would be met here because, as shown above, the project poses serious risks to water, air, the climate, human health, wildlife, and seismicity that "[d]iffer from the general circumstances of the projects covered" by the existing facilities exemption. For instance, the exceptional risk created by the project's proximity to the San Antonio Reservoir and Hames Creek, as wells as the presence of an important freshwater aquifer at the project site, is the type of threat that constitutes an unusual circumstance that may result in a significant impact. This is a far cry from the minor impacts that could result from the types of projects covered by the existing facilities exemption, such as, for example, "[i]nterior or exterior alterations involving such things as interior partitions, plumbing, and electrical conveyances," "[n]ew copy on existing on and off-premise signs" or "[m]aintenance of existing landscaping,

Frohlich, Cliff, Two-year survey comparing earthquake activity and injection-well locations in the Barnett Shale, Texas, Proceedings of the National Academy of Sciences Early Edition doi/10.1073/pnas.1207728109 (2012).
 Keranen, K.M. *et al.*, Abstract, Triggered Earthquakes Far From the Wellbore: Fluid Pressure Migration and the 2008-2014 Jones Swarm, Central Oklahoma, presentation at SSA 2014 (May 1, 2014 10:45 a.m.

native growth, and water supply reservoirs." CEQA Guidelines § 15301(a), (g), (h). Thus, the existing facility exemption cannot apply.

IV. The Project Is Not Covered by the Existing Facilities Categorical Exemption Because the Cumulative Impact of Successive Projects of the Same Type in the Same Place, Over Time Would Be Significant

None of the categorical exemptions apply if the "cumulative impact of successive projects of the same type in the same place, over time is significant." CEQA Guidelines § 15300.2(b). Here, there would be cumulative significant impacts from Trio's proposed operation, past operations at the well, and future operations at the well that may foreseeably result from Trio's proposed operations. The potential for cumulative impacts with Venoco's past project and future activities at the well is obvious because Trio will be using the same well and infrastructure. Further, there will be cumulative impacts from the pollution these operations have emitted or will emit. For instance, the greenhouse gas emissions associated with these projects will have a significant impact on the climate.

A consideration of these potential impacts is particularly important because no CEQA review has been performed for the Bradley Minerals 2-2 well, meaning there has been no analysis of the impacts of the facility that the County now claims is an "existing facility." Rather, the County approved of Venoco's operation on the basis of the categorical exemption for "Minor Alterations to Land" under CEQA Guideline Section 15304.

Conclusion

For these reasons, we request that the County deny the permit. If County wishes to approve the permit, it must review the proposed approval under CEQA, and to the degree the County continues to consider the approval of the project on the basis of a categorical exemption, we request that the County provide additional time for the public to comment on the project and its numerous significant potential effects.

Thank you for your consideration of these comments. Please contact me if you have any questions.

Respectfully submitted,

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

ATTACHMENT B



CENTER for BIOLOGICAL DIVERSITY

ërcause lile is good.

working through science, law and creative media to secure a future for all species, great or small, hovering on the brink of extinction.

April 29, 2015

Via Email and First Class Mail CD of Attachments Provided with Hard Copy

Grace Bogdan, Project Planner
Monterey County Resource Management Agency
Planning Department
168 West Alisal Street, 2nd Floor
Salinas, CA 93901
bogdang@co.monterey.ca.us

Re: PLN140395 – Mitigation Negative Declaration for Temporary Use Permit for Trio Petroleum (d.b.a. Porter Estates) Covering Oil Activities at Bradley Mineral Well 2-2

Dear Ms. Bogdan:

On behalf of the Center for Biological Diversity (the Center) and its members, I am writing to urge the Monterey County Planning Commission (the Commission) to reject the finding of no significant impact, Mitigated Negative Declaration, and the proposed Temporary Use Permit for Porter Estates' oil and gas test well. We request that these written comments be submitted to the record of the April 29, 2015 Commission meeting.

We also request that the Commission give the public additional time to comment on the proposed project to offer a full opportunity to comment on the environmental effects of the project as well as the Mitigated Negative Declaration (MND). Insufficient time has been granted to allow the public full consideration of the harms resulting from the proposed project.

As described in our previous comments to this Commission¹, and as detailed below, it is reasonably foreseeable that the proposed project will result in significant environmental harm. The project is incompatible with safeguarding our water, air, climate, wildlife, and health. To the degree the County wishes to approve the permit, it cannot lawfully do so absent full and adequate California Environmental Quality Act ("CEQA") review.

We ask that the Commission deny the project application and use permit at issue. However, if the Commission wishes to move forward with approval, a full Environmental Impact Report (EIR) should be prepared pursuant to the California Environmental Quality Act (CEQA), Public Resources Code §§ 21000 et seq., and the CEQA Guidelines, title 14, California

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¹ Center for Biological Diversity letter to Grace Bogdan, Project Planner, Monterey County Planning Department, re: Categorical Exemption for Bradley Mineral Well 2-2, dated July 29. 2014. Comments and concerns submitted in the July 19, 2014 letter have not been adequately addressed and are incorporated herein.

Code of Regulations, §§ 15000 et seq. The project could result in myriad significant environmental impacts. In particular, the MND fails to fully and adequately disclose, analyze, or propose measures to avoid or mitigate impacts to, *inter alia*, water, the climate, air quality, threatened and endangered species, and seismicity. Because it is clear that the Project not only "may" have a significant impacts on the environment, but would certainly do so, the Commission cannot lawfully approve the Project without preparing an EIR addressing all of the Project's potentially significant environmental impacts.

Introduction

The assessment of the Mitigated Negative Declaration (MND) is inaccurate, incomplete, and inadequate, and does not allow the public or officials to reach a full understanding of the adverse environmental consequences of approving this project. The MND finds that the test well will not have a significant effect on the environment because the project

- 1) Will not have the potential to significantly degrade the quality of the environment;
- 2) Will have no significant impact on long-term environmental goals;
- 3) Will have no significant cumulative effect upon the environment; and
- 4) Will not cause substantial adverse effects on human beings, either directly or indirectly.²

Each of these conclusory statements is false. In fact, the project is likely to have significant harms in each of these areas. As such, the MND as well as the Initial Study are deficient, fail to meet the requirements of CEQA and CEQA Guidelines, and should be rejected.

Discussion

I. Legal Background

The Legislature enacted CEQA to "[e]nsure that the long-term protection of the environment shall be the guiding criterion in public decisions." No Oil, Inc. v. City of Los Angeles, 13 Cal. 3d 68, 74 (1974). The Supreme Court has repeatedly held that CEQA must be interpreted to "afford the fullest possible protection to the environment." Wildlife Alive v. Chickering, 18 Cal. 3d 190, 206 (1976) (quotation omitted). CEQA also serves "to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action." Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal., 47 Cal. 3d 376, 392 (1988) ("Laurel Heights I"). If CEQA is "scrupulously followed," the public will know the basis for the agency's action and "being duly informed, can respond accordingly to action with which it disagrees." Id. Accordingly, CEQA "protects not only the environment but also informed self-government." Id.

CEQA applies to all "discretionary projects proposed to be carried out or approved by public agencies." Pub. Res. Code § 21080(a). Before taking any action, a public agency must conduct a "preliminary review" to determine whether the action is a "project" subject to CEQA. See Muzzy Ranch Co. v. Solano County Airport Land Use Comm'n, 41 Cal. 4th 372, 380 (2007). A "project" is "the whole of an action" directly undertaken, supported, or authorized by a public

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² MND, cover page.

agency "which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." Pub. Res. Code § 21065; CEQA Guidelines § 15378(a). Under CEQA, "the term 'project' refers to the underlying activity and not the governmental approval process." California Unions for Reliable Energy v. Mojave Desert Air Quality Mgmt. Dist., 178 Cal. App. 4th 1225, 1241 (2009) (quoting Orinda Ass'n v. Bd. of Supervisors, 182 Cal. App. 3d 1145, 1171-72 (1986)). The definition of "project" is "given a broad interpretation in order to maximize protection of the environment." Lighthouse Field Beach Rescue v. City of Santa Cruz, 131 Cal. App. 4th 1170, 1180 (2005) (internal quotation omitted).

Subject to certain exceptions, if an action is a "project" subject to CEQA, "the agency must 'conduct an initial study to determine if the project may have a significant effect on the environment." Muzzy Ranch Co. v. Solano County Airport Land Use Comm'n (2007) 41 Cal.4th 372, 380. If the initial study indicates that there is no substantial evidence of any significant environmental impact, the agency may adopt a negative declaration. Nelson v. County of Kern (2010) 190 Cal.App.4th 252, 267. However, where there is substantial evidence in the record supporting a fair argument that a project may have a significant effect on the environment, the agency must prepare an environmental impact report. Cal. Pub. Res. Code §§ 21100; 21151; CEQA Guidelines § 15064(a)(1) (f)(1).

Where, as here, there is substantial evidence in the record to support a fair argument that the proposed project may have a significant effect on the environment, preparation of an EIR is required. Pub. Res. Code §§ 21100, 21151; CEQA Guidelines § 15064(a)(1), (f)(1); Communities for a Better Env't v. South Coast Air Quality Mgmt. Dist., 48 Cal. 4th 310, 319 (2010); No Oil, Inc., 13 Cal. 3d at 82. This "fair argument" test "establishes a low threshold for initial preparation of an EIR, which reflects a preference for resolving doubts in favor of environmental review." Architectural Heritage Assn. v. County of Monterey, 122 Cal. App. 4th 1095 (2004).

By contrast, a negative declaration is appropriate only when there is no substantial evidence in light of the whole record before the public agency that the project may have a significant effect on the environment. Pub. Res. Code §§ 21064.5, 21080(c); CEQA Guidelines §§ 15006(h), 15064(f)(2), 15070(b), 15369.5. If evidence demonstrating a significant impact exists, an EIR must be prepared, even if the lead agency also can point to substantial evidence in the record supporting its determination that no significant effect will occur. *Architectural Heritage*, 122 Cal. App. 4th at 1109-10. The lead agency may not dismiss evidence because it believes that there is contrary evidence that is more credible. *Pocket Protectors v. City of Sacramento*, 124 Cal. App. 4th 903, 935 (2005).

II. The MND Fails to Consider Reasonably Foreseeable Impacts from the Project

In general, an agency must consider "[a]ll phases of project planning, implementation, and operation." CEQA Guidelines § 15063. This includes future development that will foreseeably occur if the agency approves the project. City of Antioch v. City Council (1st Dist. 1986) 187 Cal.App.3d 1325, 1333-1336. Oil and gas production leads inevitably to refining and combustion of those fossil fuels. Each step in the process creates a new and potentially

significant set of environmental harms, whether to water, air, biological resources, or greenhouse gas emissions. These and other impacts must be accounted for in any comprehensive analysis of extraction projects. The project will also directly result in substantial amounts of wastewater, which contains benzene and other harmful chemicals.³ As discussed further below, the potential harm from wastewater should also be evaluated.

III. The MND Fails to Consider the Harm from Well Stimulation or Enhanced Oil Recovery Techniques

The MND states that no well stimulation is proposed as part of the project. MND at 2. However, both hydraulic fracturing ("fracking") and acidization were both previously used on the Bradley Minerals 2-2 wells, and further, oil and gas companies commonly employ such techniques and other enhanced recovery methods in California, including fracking, cyclic steam injection, steam flooding, fracture acidizing, matrix acidizing, gravel packing, frac packing, enzyme enhanced recovery, and gas lifting. These enhanced recovery techniques involve the use or handling of highly hazardous substances and are major threats to public health and the environment. The MND admits that one form of well stimulation, acidizing, will be employed to clean the well. These acidizing compounds contains dozens of toxic chemicals with known serious adverse health effects. Not only are the hydrochloric acid and hydrofluoric acid dangerous, but acidizing fluids can also contain methanol, formaldehyde, naphthalene, 2-butoxyethanol, and xylenes. Such chemicals can contaminate air or water and put nearby communities at risk. Acidizing and other forms of well stimulation are reasonably foreseeable and should receive a full analysis.

The MND's air quality analysis does not include potential effects from acidizing or other well stimulation techniques. The South Coast Air Quality Management District has collected data on various types of well stimulation, including acidizing used for the purpose of well maintenance. The data show that even well maintenance techniques uses dozens of harmful chemicals that are volatile and can escape into the air.

Steam injection is also a dangerous class of techniques companies regularly use in California, putting extreme pressure on the ground and well, and sometimes resulting in well failure or the migration of fluids and steam. It is also energy and water intensive and results in large amounts of air pollution emissions. The use of steam injection here is reasonably foreseeable because the technique is used extensively in the nearby San Ardo Oil Field. The MND readily compares oil production levels to estimate the production of the Bradley Minerals Wells, (MND at 6) but fails to explain why the same harmful techniques used in the San Ardo Field would not be used at the nearby Bradley Minerals Wells.

³ See, e.g., Division of Oil, Gas, and Geothermal Resources, *Benzene in Water Produced from Kern County Oil Fields Containing Fresh Water* (1993).

⁴ See, e.g., Center for Biological Diversity, Dirty Dozen: The 12 Most Commonly Used Air Toxics in Unconventional Oil Development in the Los Angeles Basin (2014) ("Dirty Dozen").

⁶ Id.

Thus, the project's potential use of enhanced recovery techniques creates a reasonable possibility of significant impacts. Because it is reasonably foreseeable that the discovery of economically producible quantities would likely lead to additional operations that are likely to involve enhanced recovery, the Commission must consider the effects of those additional operations.

IV. The MND Fails to Consider the Harm from Produced Water

Wastewater can contain high concentrations of benzene, a known carcinogen, and other harmful chemicals. Wastewater may also contain flowback fluid resulting from well stimulation or well maintenance activity. The oil industry's own tests show that high levels of benzene and other harmful chemicals are almost always found in flowback water. 8

The MND states that wastewater from the test wells will be delivered to a wastewater disposal facility, but fails to adequately describe the full harm that may result from wastewater disposal. California's Underground Injection Control (UIC) program is managed by the Department of Conservation, Division of Oil, Gas, and Geothermal Resources, which has admitted to widespread groundwater contamination resulting from wastewater injection. The true extent of damage to protected aquifers is still unknown. To dispose of wastewater via an injection well is to risk further contamination of groundwater resources.

In addition, new studies show that wastewater injection is the likely cause of increased seismic activity in other states. ¹⁰ The MND fails to analyze the effect of disposing of wastewater in injection wells located near faults. In fact, the MND fails to state *any* facts about where the wastewater would go. Given the dangers of increased seismicity in California, the MND is inadequate because it fails to consider the effect of wastewater disposal.

V. The Project May Result in Significant Impacts to Greenhouse Gas Emissions

Oil and gas operations are a major cause of climate change. Emissions result from oil and gas exploration, development, and production operations and the combustion of oil or gas for energy. The processing, refining, and burning of the project's produced oil will generate additional greenhouse gas emissions. The processing and refining of crude oil is a polluting and energy-intensive process that results in substantial greenhouse gas emissions. The combustion of the oil will also result in large amounts of carbon dioxide emissions; according to the U.S. Environmental Protection Agency, combusting a barrel of oil results in the emission of 0.43 metric tons of carbon dioxide equivalent. Despite the foreseeable greenhouse gas emissions from this project, which would allow one year of unrestricted many of the emissions are missing

⁷ DOGGR, 1993 Benzene Study.

⁸ Julie Cart, *High levels of benzene found in fracking waste water*, Feb. 11, 2015 available at http://www.latimes.com/local/california/la-me-fracking-20150211-story.html#page=1

⁹ See DOGGR Letter to EPA Region IX, dated February 6, 2015, at Enclosure B, disclosing 490 illegal disposal wells and 1,987 enhanced oil recovery wells injecting into protected aquifers.

¹⁰ See, e.g., Peterson et al., *Incorporating Induced Seismicity in the 2014 United States National Seismic Hazard Model—Results of 2014 Workshop and Sensitivity Studies*, April 2015, US Geological Society, available at http://pubs.usgs.gov/of/2015/1070/

¹¹ US EPA, Calculations and Calculations, available at http://www.epa.gov/cleanenergy/energy-resources/refs.html

from the analysis. These amounts undercut the state's goals to reduce greenhouse gas emissions. The MND's attempt to shrug off the majority of the project's emissions from the transmission, refining, and combustion of the oil as subject to separate review is incorrect and unlawful. Those impacts must be disclosed to the public, analyzed, and avoided or mitigated now, not at some unspecified future time.

VI. The Environmental Documentation Is Deficient in Many Additional Ways

The MND is deficient in numerous additional regards that frustrate CEQA's disclosure and protection mandates. The finding of no significant impact with regard to biological resources is not supported. Numerous special status animals use the vicinity of the project site, and the mitigation measures incorporated do not reduce the impact to these species and their habitat to "less than significant." The project site admittedly serves as habitat for the San Joaquin kit fox, which is known to inhabit the area. The project will directly destroy habitat, increase habitat fragmentation, and increase the risk that kit foxes will be hit by vehicles and otherwise harmed by project activity. The critically imperiled California condor also inhabits the area and can be harmed or killed by ingesting toxic substances such as spilled oil and other chemicals or by ingesting microtrash. The mitigation measures that are incorporated may somewhat lessen the chances of individual kit foxes or condors, but they cannot be said to reduce the impacts to "less than significant." The harms and risks remain even after mitigation. There are additional feasible mitigation measures, such as compensatory habitat restoration or preservation, that have not even been addressed.

A mitigation and monitoring plan must be included for all mitigation measures that have been adopted, but no adequate plan has been included. Important pieces of the project and/or its mitigation, such as a spill response plan, have been unlawfully deferred.

The cumulative impacts analysis is particularly important because our health, environment, and wildlife so often suffer the death of a thousand cuts. Yet the MND contains no real or adequate cumulative impacts analysis.

Conclusion

For these reasons, as well as those included in the Center's July 29, 2014 comments on the Categorical Exemption attached and incorporated herein, we request that the County deny the permit. If County wishes to approve the permit, it must review the proposed approval under CEQA. We further request that the County provide additional time for the public to comment on the project and its numerous significant potential effects.

Thank you for your consideration of these comments. Please contact me if you have any questions.

Respectfully submitted,

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