Board Attachment 1
Excelaron Board Issues/Questions (5/15/12) to Staff

Conditional Use Permit (Excelaron DRC2009-00002)

The following is a list of issues/questions raised by the Board of Supervisors at their 5/15/12 meeting. Each issue/question is followed by a response prepared by County Staff. Staff will be prepared at the August 21, 2012 hearing to verbally respond to the applicant's latest proposed alternative (submitted August 7, 2012).

1. Mineral Rights

***Board Questions**: Please discuss balance of property rights and mineral rights. What are the County's exact limits of authority? Is there any preemption of land use authority because this is mineral extraction, particularly petroleum extraction? Are we subject to preemptive statute law because we are dealing with state or federal government in the drilling operation or abandonment?*

Staff Response: In California, mineral rights, once severed from their overlying land, are generally treated as separate, divisible property interests. They may be held in fee, similar to that of the overlying land, and may be conveyed, encumbered, or transferred in a similar manner. They may also be assessed and taxed separately. Ownership of a subsurface mineral interest may or may not include the right to access the surface of the overlying property to extract the minerals, depending on the language of the instrument that created the interest. The interest may range from a mineral estate, which provides all of the rights required to develop the resource, to a royalty interest, which provides the right to a share of any extracted minerals, or an executive interest, which provides the right to execute leases to explore and develop the minerals. Here, it is unclear what type of mineral rights Excelaron holds within the Huasna field or within the project site specifically and it is unclear when those rights were acquired.

As with any other decision approving or denying a land use permit, two basic constitutional principles provide the outer boundaries of the Board's discretion in reviewing Excelaron's application. The first is that the government action may not take the applicant's property for public purposes without providing just compensation, as provided by the takings clauses of the United States and California Constitutions. The second is that government action may not deprive the applicant of his or her property interests without due process of law, as guaranteed by the Fifth Amendment to the United States Constitution and Article I, §7 of the California Constitution. In the context of mineral rights, courts have looked for whether the government action allows those rights to be exercised with profit or has altogether foreclosed the opportunity.

Here, the Board is not considering a ban, moratorium, or other complete and final prohibition on the development of Huasna Oil Field mineral rights. Any such proposal would require the Board to consider whether such an action would deprive mineral rights holders of all economically beneficial use of their mineral interests and the extent to which such action would interfere with distinct investment backed expectations. An action that has the effect of depriving mineral rights holders of any ability to develop those rights now or in the future could run the risk of doing so. In this case the Board is considering nothing more than Excelaron's application for a conditional use permit under the specific circumstances of its proposed project, the environmental impacts of that project, and the policy and ordinance provisions that apply to it. These circumstances allow the Board to implement its adopted policies and enforce its ordinances on a project-specific basis, even if this requires a CUP denial, without taking Excelaron's mineral rights or reaching an ultimate conclusion about the exercise of those rights.

The due process clauses require a different type of analysis. Substantive due process protects property owners from arbitrary and irrational governmental decisions. In determining whether a due process violation has occurred, courts have applied a variety of standards, including

whether the governmental action is rationally related to, or substantially advances, a legitimate governmental interest and whether the action is substantially related to the public health, safety, or general welfare. In effect, these provisions require the Board to make a rational and non-arbitrary decision on Excelaron's application. As with any other project, the ultimate decision on the application must be based on a legitimate reason related to public health, safety, or welfare and must be supported by findings and substantial evidence in the record.

In sum, the limits of the takings and due process clauses should guide the Board when it considers the appropriate balance of the interests of mineral rights holders with those public interests articulated in the County's General Plan and other regulations. While it is unclear exactly what mineral rights are at stake for Excelaron, the Board's ultimate decision on its application must conform to these constitutional requirements.

2. Revised Project Elements

***Board Question**: As the Applicant now proposes a revised project with reduced impacts, will this need to be an Alternative under CEQA detailing where they drill and don't drill and where they position wells?*

Staff Response. At the Board of Supervisors Hearing on May 15, 2012 the Applicant presented an alternative for the development of Pad 2. The original proposal for Pad 2 was to have two (2) to four (4) wells drilled during the Exploration and Testing Phase of the project with a total of six (6) to eight (8) during the Well Development Phase. The drilling operations for these wells would take about two to six days per well assuming drilling occurred on a 24-hour basis.

In summary, while the following evaluates the minor differences in the timing and location of well drilling, when compared to the previously proposed project in its entirety the proposed revision's impacts have already been evaluated in the EIR. Therefore, no alternative analysis would be considered necessary to further evaluate these changes.

To address noise and visual impacts associated with Pad 2, the Applicant proposes the following:

- Limit the number of wells at Pad 2 to one (1) during the Exploration and Testing Phase.
- Limit the total number of wells at Pad 2 to three (3).
- Limit the well drilling hours at Pad 2 to between 7 am and 9 pm on week days, and 8 am to 5 pm on weekends.
- Relocate the wells on Pad 2 to the southeast portion of the Pad.

The remaining three (3) wells that would be drilled during the Exploration and Testing Phase of the project would be drilled at the Shipping Site (two wells) and Pad 1 (one well). At the first post-hearing meeting with the applicant, Pad 1 well was proposed to be drilled for geological information only, and analyzed below as such. If expanded to full testing, there would be a small increase of emissions and noise during Phase I than was previously analyzed in the EIR for Phase I. These impacts were fully evaluated as part of Phase IV. This change would not result in any new significant impacts nor require any new mitigation measures for either Phase I or IV. No more than two additional wells would be drilled on Pad 1 during Phase IV.

The total number of well drilled for the project would still be capped at twelve (12).

Figure 1 shows the revised layout for Pad 2 based upon the Applicant's proposed alternative. The remainder of this response provides an analysis of the how the Applicant's proposed alternative would affect various environmental impacts identified in the Final EIR.

Noise

The Applicant has proposed a reduced level of drilling activity during the nighttime hours at Pad 2 in an attempt to reduce nighttime noise levels. The Applicant has proposed to limit drilling at Pad 2 to between the hours of 7 am and 9 pm (week days) and 8 am and 5 pm (weekends), which are the hours that are exempt from the County Land Use Ordinance (Section 22.10.120 (A)) for construction. Construction noise is exempt provided the activities do not take place before 7 AM or after 9 PM on any day except Saturday or Sunday, or before 8 AM or after 5 PM on Saturday or Sunday.

Typically drilling operations are conducted 24-hours per day. However, it is possible to limit the hours of drilling. In discussions with Kenai Drilling, there are two options that can be used for limiting the hours of drilling, which included: (1) shutting down the drilling operations at night with no mud circulation (minimal nighttime drilling operations), and (2) shutting down the drilling operations at night with continued mud circulation (reduced nighttime drilling operations).

Both of these options would involve the operation of noise generating equipment during the nighttime hours, and as such the noise standards specified in Section 22.10.120 (B) of the County Land Use Ordinance would still apply to the drilling operations.

Use of either of these alternative drilling techniques for Pad #2 will 1) increase the amount of time by 50% the drilling rig is in place for each well, and 2) will have an overall decrease in time when the reduced number of proposed wells at Pad #2 is considered for Phase I and IV.

	Phase 1 (# of wells)		**Phase IV (# of wells)**		**Totals (# of wells)****	
	Current	Previous	Current	Previous	Current	Previous
Pad 1	1 (geology testing only)	0	Up to 3 more	Up to 4	Up to 4	Up to 4
Pad 2	1 (21 days for drill rig for 1 well)	Up to 4 (up to 56 days for drill rigs for 4 wells)	Up to 2 more (42 days for drill rigs for 2 wells)	Up to 4 more (up to 56 days for drill rigs for 4 wells)	Up to 3 (63 days for drill rig for 3 wells)	Up to 8 (112 days for drill rig for 8 wells)
Shipping Site	2*	Up to 2*	At least 3*	Up to 3 more*	At least 5*	Up to 5*

* Does not include water disposal well proposed at Shipping Site

** In no circumstance would the total allowed number of oil wells exceed 12

Days for drill rig are total days the drill rig is present under the continuous operation scenario. Actual drilling operations at Pad 1 and the Shipping Site would be about 6 days per well. At Pad 2 the actual drilling time would be about 12 days per well.

These two options are discussed below.

Reduced Nighttime Drilling Operations

This option would involve not drilling between the hours of 9 pm and 7 am (5 pm and 8 am for weekends), but operating enough equipment so that the muds could continue to be circulated, thereby allowing for drilling to commence in the morning. The following items have been included in a revised noise assessment:

- Operation of the muds system during the night (two mud pump engines, the draw-works engine to rotate the drill pipe and the drill rig generator engine);
- The location of the drilling rig to the far south-eastern portion of Pad 2.

The noise from a reduced nighttime drilling operation (with mitigation from the FEIR) would exceed the acceptable property line County thresholds for the hourly nighttime noise levels. The maximum noise levels would be below the County thresholds. The property line between the closest residence and the closest noise source would be about 200-250 feet from the modified drilling activity due to the location of the equipment to the far south-east of the Pad 2 area. The anticipated noise levels at the closest property line during nighttime reduced drilling activities are provided in Table 1.

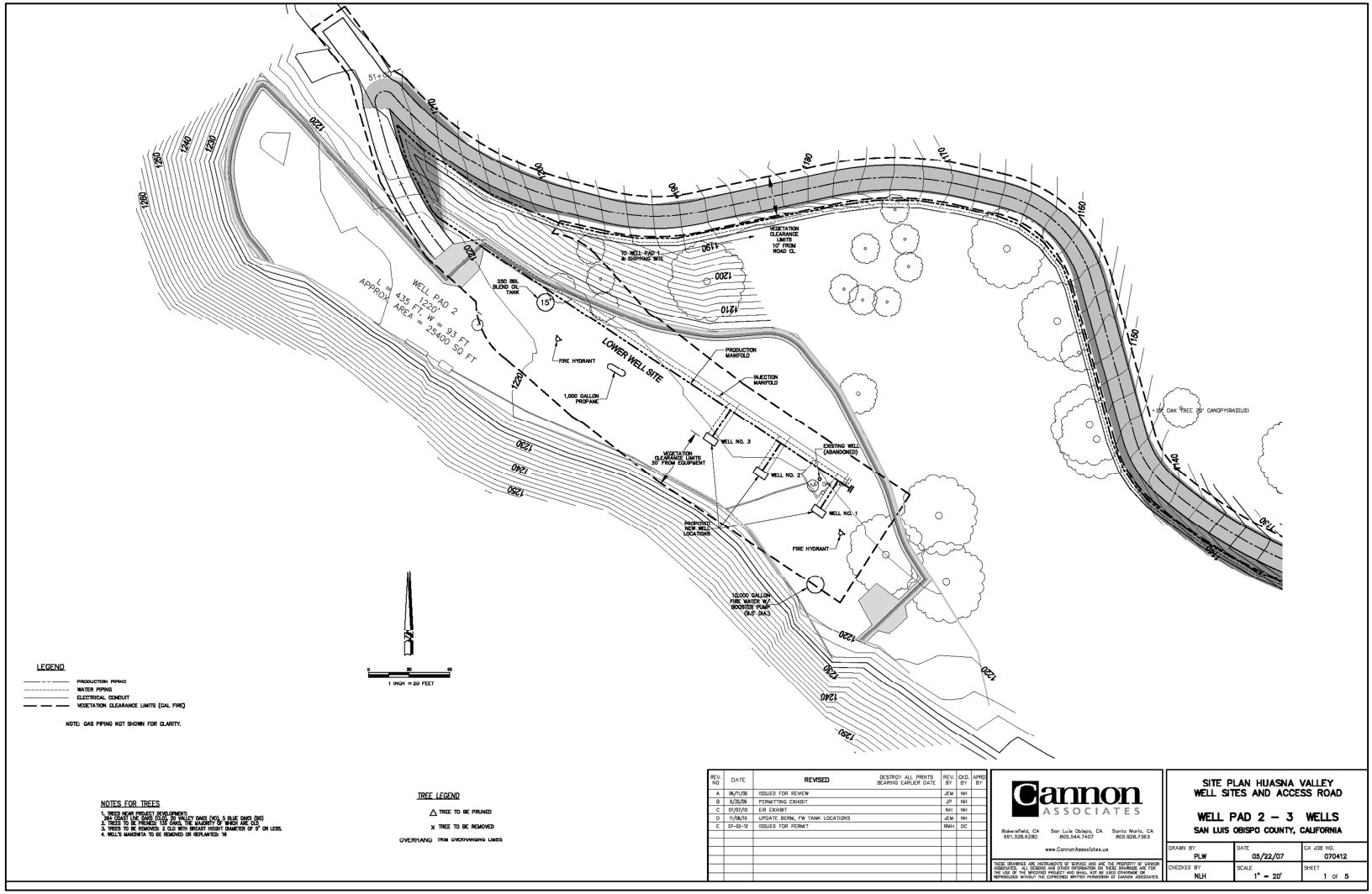
Note that during the nighttime with the reduced drilling operations, the maximum noise level would be the same as the hourly average because of the absence of any large variations in noise (due to differing loads, pipe clangs, etc.). In reality, there would be some variation in noise levels due to changes in meteorological conditions, such as wind variation, or some slight variation in engine loads, which may cause the maximum noise levels to vary.

Table 1. Comparison of County Noise Element Nighttime Thresholds and Reduced Nighttime Drilling Noise Levels at closest property line of nearest residence (Residence 1)

Location/Threshold	**County Noise Element/Ordinance**	**Reduced Project – Nighttime Drilling at Pad 2 and Operations**
	Nighttime	**Nighttime**
No Mitigation		
Nearest Property Boundary		
Hourly Noise Level (dBA)	45	**64.9**
Maximum Noise Level (dBA)	65	64.9
Mitigated		
Nearest Property Boundary		
Hourly Noise Level (dBA)	45	**47.3**
Maximum Noise Level (dBA)	65	47.3

Notes: Includes 8 dBA noise reduction from installation of a 30 foot high sound wall along the west and north sides of the drilling site

Figure 1 Applicant Proposed Pad 2 Layout



Minimal Nighttime Drilling Operations

This option would involve not drilling during the night, withdrawing the drill pipe up to the "shoe" (the bottom of the last previously installed casing) and leaving the hole full of mud. This would require that only minimal mud circulation, or topping off, be provided, with no operation of the mud pumps, mud handling equipment, pipe handling equipment or drill rig generator engines. Noise levels assume only the operation of a small generator and a small pump. Mitigation would include noise blankets and the use of a noise wall as discussed in the FEIR. The anticipated noise levels at the closest property line during nighttime reduced drilling activities are provided in Table 2.

The noise levels associated with minimal nighttime drilling activities would be below the acceptable property line thresholds for the hourly and maximum nighttime noise levels with the mitigation identified in the FEIR.

Table 2. Comparison of County Noise Element Nighttime Thresholds & Minimal Nighttime Drilling Activity Noise Levels at closest property line of nearest residence (Residence 1)

Location/Threshold	**County Noise Element/Ordinance**	**Reduced Project – Nighttime Drilling at Pad 2 and Operations**
	Nighttime	**Nighttime**
No Mitigation		
Nearest Property Boundary		
Hourly Noise Level (dBA)	45	**51.1**
Maximum Noise Level (dBA)	65	51.1
Mitigated		
Nearest Property Boundary		
Hourly Noise Level (dBA)	45	34.5
Maximum Noise Level (dBA)	65	34.5

Notes: Includes 8 dBA noise reduction from installation of a 30 foot high sound wall along the west and north sides of the drilling site

Visual

The FEIR found that the grading of Pad 2 (including the 30-foot clearance and 100-foot fuel modification zone required by CalFire) and the presence of equipment and the drill rig was a significant (Class I) impact. With the Applicant proposed alternative, the equipment and wells would be moved to the southeast portion of Pad 2. However, the footprint of Pad 2 would

remain the same. CalFire has stated that the 30-foot clearance and the 100-foot fuel modification zone apply from the edge of the pad and not the equipment. The pads are surrounded by berms to contain any oil that might spill. In the event of an oil spill, oil could cover the pad to the edge of the berms. This is the reason that the 30-foot clearance and 100-foot fuel modification zone apply from the edge of the pad.

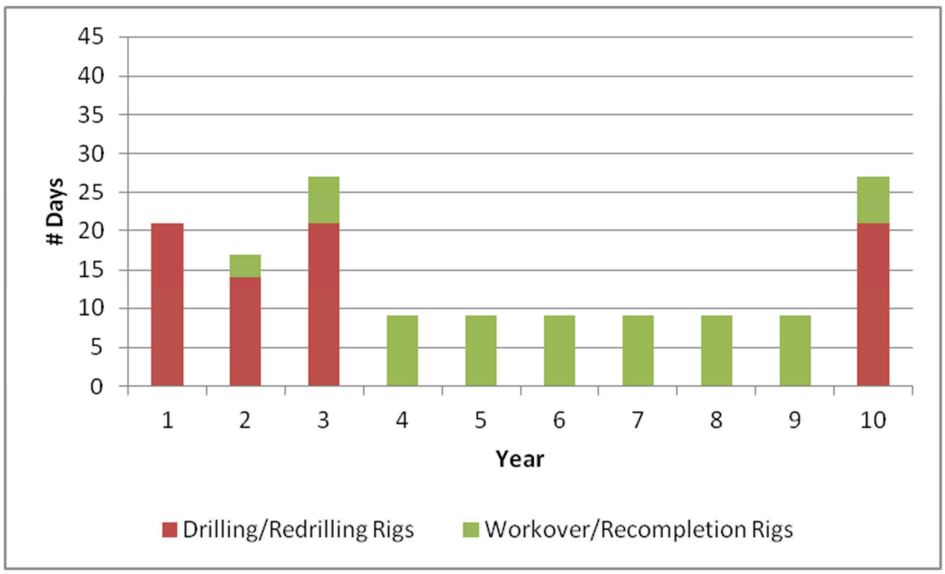
Since the size of Pad 2 has not changed the visual impacts associated with the grading, the 30-foot clearance and the 100-foot fuel modification zone would remain significant (Class I). By moving the equipment to the southeast potion of Pad 2, most of the equipment would not be visible. During drilling, the top of the drill rig would still be visible. This would still be considered a significant impact (Class I).

The Applicant has proposed to limit the number of wells at Pad 2 to three (3), and to not drill during the hours of 9 pm to 7 am (and between 5 pm and 8 am for weekends). These changes may serve to reduce the amount of time a drill rig would be present at Pad 2 if the previous maximum of eight wells were considered. Figure 2 provides an update on the days that a drill rig and workover rig would be present at Pad 2 based upon the Applicant's proposed alternative.

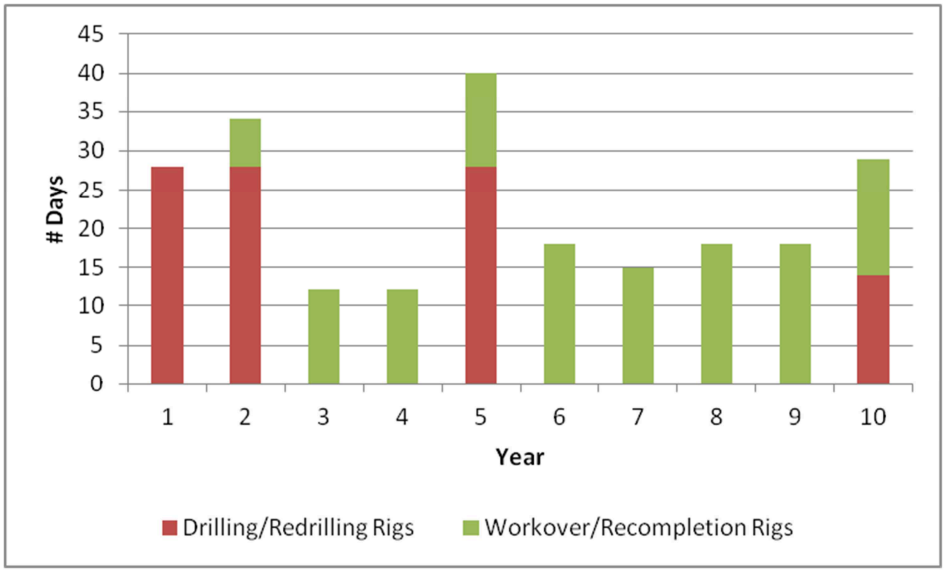
Air Quality

By not drilling between the hours of 9 pm and 7 am the peak daily air emissions would be reduced. For the reduced nighttime drilling operation scenario, the peak daily emissions would be reduced by about 20 percent. With the minimal nighttime drilling operation scenario, the peak daily emissions would be reduced by about 40 percent. However, it would take about twice as long to drill each well on Pad 2, so the total emissions per well at Pad 2 would increase over what was evaluated in the FEIR. Even with this increase in air emissions, the impact would remain less than significant with mitigation (Class II).

Figure 2 Total Number of Rig Days per Year



Applicant Proposed Alternative



FEIR Analysis

Notes:

1. FEIR assumed a drill rig was present for 14 days per well and that a total of six wells were drilled at Pad 2.

2. Applicant's proposed alternative would have a drill rig present for 21 days per well due to no nighttime drilling, and a total of three wells at Pad 2.

3. Project-Related Elements

3A. Crude Oil/Blend Oil Truck Spill Frequency Estimates

Board Question: *Please discuss the applicant's analysis and assertions regarding spills (such as truck miles traveled per spill event).*

Staff Response. The transportation of crude oil or blend oil along area roadways could give rise to an accident with a resulting spill of the cargo contents along area roadways. This issue was discussed in the FEIR in terms of the volume of crude oil/blend oil that could be spilled. The frequency that this could occur was estimated by the Applicant based on information in the FEIR, Appendix E (Risk Assessment Information).

In general, the Applicant estimated the spill frequency correctly. However, there are a number of different variables in estimating frequency including the accident rate and the conditional probability (i.e., given an accident has occurred, that a spill results). Appendix E of the FEIR presents a range of these variables based on data presented by the DOT, Caltrans/CHP and the FHWSA (Federal Motor Carrier Safety Administration), as well as others. Estimates of spill rates vary considerably based on a number of different factors, including the road type, the geographic region that the data is compiled from, the varying definitions of an "accident" or a "spill", etc. Therefore, a range of frequency values was generated along with a best estimate.

A spill could occur along the roadways from the site to Highway 166. This would include Mankins Ranch, Huasna Townsite Road, Porter Ranch and Alamo Creek Road. Table 3 summarizes the range of possible spill frequencies. Utilizing the most conservative DOT accident rate of 2.5 accidents per million miles and the FMCSA spill probability of 35% for non-pressurized liquid tankers (see Appendix E of the FEIR), a spill could occur along the roadways at a rate of once every 46 years. On the low end, using the FMCSA accident rate of 0.32 accidents per million miles for hazmat trucks and the CHP derived spill probability of 2.6% for all tanker trucks produces an estimate of a spill about every 4,800 years.

The most reasonable case uses the accident rate that has been estimated for a similar 2-lane highway from 10 years of CHP data for Highway 1 (2 accidents per million miles) along with the CHP spill probability (2.6 %) for all tanker trucks over 10 years within California. This produces a spill estimate of one spill every 774 years.

The Applicant estimated a spill every 1,376 years using, in part, the lower accident rate associated with traffic along Highway 166.

Table 3 Comparison of Truck Spill Frequencies along Porter Route

Item	High Case[1]	Low Case[2]	Best Case[3]	Applicants Calculations[4]
Accident rate	2.5	0.32	2.0	1.33
Probability of release	0.35	0.026	0.026	0.026
Total Miles	11.1[5]	11.1[5]	11.1[5]	10
Trucks per day, average crude	6	6	6	6
Trucks per day, average blend oil	0.4	0.4	0.4	0
Days per year	350	350	350	350
Rate per year	2.17E-02	2.07E-04	1.29E-03	7.26E-04
Years between Spills	46	4,838	774	1,376

1. Based on DOT accident rate for all bulk liquid trucks nationwide and the FMCSA spill probability
2. Based on FMCSA accident rate for hazmat trucks nationwide and the SWITRS (CHP) spill probability for all tanker trucks in California.
3. Based on CHP accident rate along relevant sections of Highway 101 and the SWITRS (CHP) spill probability for all tanker trucks in California.
4. Based on CHP accident rate along relevant sections of Highway 101 and 166 and the SWITRS (CHP) spill probability for all tanker trucks in California.
5. Based on 1.8 miles along Mankins Road, 1.4 miles along HTR, 6.0 miles within Porter Ranch and 1.9 miles along Alamo Rd.

3B. Odors

***Board question**: Please discuss applicant's analysis/assertions regarding odors at the Shipping Site.*

Staff Response. The Applicant has indicated that an odor scenario as described in the FEIR could not occur due to the use of a vapor recovery system. This is correct when the vapor recovery system is operating normally. Normal operations allow for the vapors above the crude oil within the crude oil tank to be captured and directed to compressors, which then direct the crude oil vapors into the gas stream for combustion. The crude oil tanks are not designed to sustain pressure, so they are equipped with pressure relief devices which allow the tank vapors to relieve to the atmosphere in the event that they become pressurized. This prevents the tanks from failing and releasing their contents and is a standard safety measure required by codes and standards for all atmospheric tanks. Normal operations, as indicated in the FEIR, would not produce offsite odor impacts with the level of H2S indicated by the Applicant and limited by mitigation measures in the FEIR (100 ppm maximum).

However, during an upset scenario, associated with the loss of electrical power, misbalancing of the vapor recovery system, sudden large flows of crude oil into the tanks, etc., vapor from the crude oil tanks could be released to the atmosphere through the pressure relief devices and potentially cause offsite odor issues if the meteorological conditions are favorable.
These scenarios have occurred at other oil and gas facilities. The Gaviota Processing Plant in Santa Barbara County, for example, experienced a similar scenario, which caused H2S gas to be released, impacting areas along Highway 101.

3C. Number of Wells Needed to Get to 1,000 Barrels of Oil

Board Question: *Staff needs to look at information provided by Huasna Foundation on how many wells it would take to extract 1,000 barrel/day; after reading the Foundation's analysis and Gaffney report, staff should review this information, discuss further with the applicant and then report back with its own analysis.*

Staff Response: The Applicant's proposed project is limited to a total of 12 wells, a peak oil production rate of 1,000 barrels per day, and a peak produced water production rate of 3,000 barrels per day. Until such time as exploration and testing wells are drilled and produced, it is not possible to know how much oil each well will produce, or how many wells it may take to get to 1,000 barrels per day. This is the reason that the Applicant has proposed an exploration and testing program as Phase I of the project.

Very limited data is available for wells that have been previously drilled in the area of the project site. The data show that very little production has occurred in this area, and that most of the production had high water levels. The limited amount of data from this area makes it very difficult to use the data to generate any estimates of oil or water production from the proposed project. The production numbers provided in the FEIR are just estimates based upon data from other similar fields and a range of production assumptions.

Historical production from vertical wells drilled into the western part of the Zaca Oil Field had initial production rates of about 200 barrels of oil per day. The Orcutt and Lompoc Oil Field had initial production from wells in the Monterey formation of about 150 and 225 barrels of oil per day respectively.

Occidental Petroleum has estimated based upon past production that vertical wells drilled into the Monterey formation can initially produce about 200 barrels of oil per day. This level of production decreased over time to about 100 barrels of oil per day after about 2-years.

These numbers are all within the range of the oil production estimates used in the FEIR.

With the high end estimate, the twelve proposed wells would be capable of producing 1,000 barrels of oil per day. With the low end estimate, the twelve wells would only produce a peak of

about 650 barrels of oil, with 3,000 barrel per day of produced water, which is the design limit of the proposed facility.

If economically viable quantities of oil are found during the exploratory phase, it is likely that the oil and water production levels would fall somewhere within the ranges provided in the FEIR.

The Gaffney-Cline Associates (GCA) report is an independent third party report that was required by the Toronto Security Exchange based upon United Hunter Oil & Gas (UHO) expenditure of investor's money on the Huasna project. UHO engaged GCA to provide an estimate of UHO's Resources in the Huasna Field.

GCA used a simple thermal balance analytical model to estimate the potential recovery from the Huasna Field based upon the proposed use of hot water flooding. Given that very little data is available on the Huasna Oil Field, and the uncertainties involved in estimating the total amount of oil in the ground and the potential recovery rates, GCA adopted an industry standard probabilistic approach for estimating oil recovery based upon an assumed size of the oil pool. The analysis done by GCA was based upon theoretical models, and is not based upon any Huasna oil field specific data.

What GCA found based upon these models was that it could take up to 60 wells to develop the entire Huasna Oil Field assuming the oil field is 600 acres in size. However, there is no real world data to support the position the Huasna Oil Field is 600 acres in size. This can only be determined based upon long-term production and testing.

3D. Cumulative Effect of Large Oil Development if Project is Approved

***Board Question**: Staff should look at the development of additional mineral rights in the area – is there a cumulative effect where if this project got approved, then these other mineral right owners would propose the same? How would this additional oil development transport their product out of the area? Is proposed haul route capable of more or are there other impacts that need to be analyzed on a cumulative basis?*

Staff Response. Please also refer to item #1 above on Mineral Rights. The FEIR analyzes the whole of the project proposed by the Applicant 1) drilling 12 oil wells and one water reinjection well on one of the properties that makes up the Mankins Ranch, 2) transporting that oil offsite to a refinery, and 3) support facilities and improvements related to those activities. The Applicant has stated that it has no current plans to expand the proposed project or to pursue another project in the vicinity.

The Applicant has stated that the additional mineral rights acreage immediately adjacent to the project parcel has been leased by Excelaron to prevent directional drilling into the targeted resource by competitors from neighboring parcels. Furthermore, county staff asked the following question, "…are there any documents (e.g., shareholder's reports, business plans, etc.) that would provide additional information concerning Excelaron's view of the field's potential?". The applicant provided the following response:

> "Unfortunately, there is nothing additional that we can provide you in response to your request, below. Uncertainties about the field's potential is precisely why Excelaron started with a small-scale project and why the current full-scale project proposal (prepared at the behest of the Huasna community) hinges on a Phase I exploratory phase. Until some exploration occurs, it is really a futile exercise to talk about the field's "potential." Even when reviewing documents like the Gaffney Cline report and other information in the public

sphere, it is important to distinguish between the amount of oil that may be present in the field, versus what can practically and feasibly be recovered."

To the extent that additional acreage in the Huasna Valley has been leased by other oil companies, including shareholders in Excelaron, that alone is not indicative of another "probable future project" (14 CCR § 15130(b)(1)(A)), or improper segmentation of the proposed project.

In the future, if an application is filed for other oil development projects within Huasna Valley or Porter Ranch then the County would have to review and process the application just like it is doing for the proposed project. If such an application was submitted to the County it would have to undergo its own environmental review pursuant to CEQA, and the County decision makers would have to determine if a permit should be issued for the project. This is the same process that is being followed for the proposed Excelaron Project.

Given that no application has been filed for other oil development projects in the Huasna Valley or Porter Ranch, assessing any potential impacts of such projects would be speculative at best since no information is available on where future developments might be proposed and what type of development would occur.

While CEQA requirements do not allow segmenting or chopping the proposed project into pieces to render its impacts insignificant, the FEIR need not engage in a speculative analysis of environmental consequences for future and unspecified development. (*Atherton v. Board of Supervisors of Orange County*, (1983) 146 Cal. 3d 346.)

If the applicant or some other entity wishes to drill additional wells on this or another property in the future, an additional CUP will need to be applied for and further environmental review, complete with all required public notices and opportunity for public input, will be necessary. At this time the County has no application for additional oil development, and therefore any future development would be speculative. Deferral of analysis of the other projects does not violate CEQA where there is no meaningful information about a speculative future project.

In Laurel Heights Improvement Association v. Regents of the University of California (1988) 47 Cal. 3d 376, the court noted that where future development is unspecified and uncertain, no purpose can be served by requiring an EIR to engage in sheer speculation as to future environmental consequences.

3E. Analysis of Greenhouse Gas Emissions

***Board Questions**: Because this is the production of petroleum products do we have to have an SB97 greenhouse gas emissions analysis? While this was done for direct impacts (e.g., drilling, trucking), what does CEQA say about emissions from the material it will produce, such as the petroleum coming out of the ground and then being burned for energy? Is that something that should be analyzed under CEQA?*

Staff Response: The Final EIR contains a detailed greenhouse gas (GHG) emission analysis (see Section 4.3, that complies with all of the requirements of SB 97. The analysis in the Final EIR for greenhouse gas (GHG) emissions followed the guidelines adopted by the San Luis Obispo County Air Pollution Control District, as outlined in their CEQA Air Quality Handbook. In estimating a stationary source's GHG emissions the APCD requires that both direct and indirect emissions associated with the project be included. The indirect emissions include items such as mobile sources servicing the facility and electrical generation emissions. The APCD

does not require that the GHG analysis address the GHG emissions associated with the refining and end use of the proposed project's crude oil.

The purpose of CEQA is to identify and, to the extent feasible, mitigate the significant effects of a project on the environment. To that end, the CEQA Guidelines require that an EIR analyze the potential greenhouse gas emissions generated by a project, and, where those impacts are significant, propose mitigation measures aimed at reducing the impacts. (PRC 21100; 14 CCR 15126.4(c); CEQA Guidelines Appendix F, G(VII).) However, like all analyses under CEQA, the analysis of greenhouse gas emissions must consider only the direct or reasonably foreseeable indirect physical changes in the environment that will be caused by greenhouse gas emissions of a project. (14 CCR 15064(c).) GHG emissions related to the refining and consumption of the crude oil is not an impact attributable to the project, since the project is not creating any new demand for, or consumption of, fossil fuels. The small amount of additional crude oil supply (1,000 barrels per day) from the project represents only about 0.06 percent of the total crude oil supplied to California refineries in 2011. California refineries were supplied with about 1.65 million barrels of crude oil per day in 2011, of which about 50 percent was from foreign sources (California Energy Commission).

3F. Water Availability

***Board Questions**: What is the status of the water source from Santa Maria? Staff continues to question this source and that there is no clear source of water. The Applicant has said they have submitted a letter from the City of Santa Maria that indicates everything is in place to accommodate the project, but no such letter was included in the staff report. Also, what if that water supply is interrupted - what happens then?*

Staff Response: Staff contacted the City of Santa Maria regarding their water allocation program for outside water users. They explained that they have an existing program to serve outside users and have had this program in place for many years. They further explained that they could provide water quantities of the amounts projected for the proposed project into the foreseeable future. Water trucks would fill up at one of their designated locations and then would be trucked via the proposed haul route. Project-related water requirements will occur during construction/initial drilling and then during operations (primarily to provide for employee needs). Initial construction phases would use up to 8,000 gallons per day plus about 30,000 per well drilled. During operations about 300 gpd are expected. In addition, there will be fire water storage requirements (360,000 gallons), which would be a one-time event, unless additional filling is needed due to a fire event.

As there are several City of Santa Maria locations in which to fill water trucks, as long as the City is able to serve, there would be no interruption of service. While speculative, should the City not be able to provide service once operations occur and drilling is done, either an alternate off-site source could be found (potable operation needs would be about one water truck coming to the site every two weeks), an on-site water well could be drilled, or 'shut down' procedures (see item 3H discussion) could be initiated. If City water becomes unavailable during construction/drilling, such activities could be either modified to reduce water needs or suspended until such time water became available.

3G. Fire Safety - Fire Suppression Abilities & EIR Analysis of CalFire Fuel Modification

Fire Suppression Abilities

***Board Questions**: There needs to be further discussion or analysis of the fire suppression abilities of 360,000 gallons relating the narrow ranch access road and its location (canyon bottom). What is this tank's ability or limitation to pump water uphill to drilling sites, or if it could be used elsewhere, such as other properties within the Huasna Valley – how would that work? Will the tank need a pump or would it be gravity fed? How is it that it would be considered a fire suppressant given the particular topographic and geographic setting?*

Staff Response: The Applicant proposed to have a 10,000 gallon tank for fire water located at each of the pads (Shipping Site, Pad 1 and Pad 2). These tanks would have be gravity feed to the fire monitors. The EIR reviewed this design and determined that the Applicant proposal would not have provided adequate fire water to meet the California Fire Code (CFC) or Industrial Risk Insurers (IRI) requirements.

IRI Guideline 17 indicates that fire water supplies should be capable of supplying at least 500 gpm for 4 hours for pumping stations and 3,000 gpm for 4 hours to all areas of an oil storage terminal. The Center for Chemical Process Safety (CCPS) requires a water supply of 4 hours with a minimum demand of 3,000 gpm for chemical plants. The CFC requires 1,500 gpm for 2 hours as a minimum. The Applicant proposed firewater would supply only 40 minutes of firewater at 1,500 gpm as required by the CFC and 20 minutes if the IRI Guidelines are followed. This is less than the 2 or 4 hours required by the codes and standards above and would be a potentially significant impact.

The mitigation in the EIR would require 360,000 gallons of fire water, which would be capable of provide 1,500 gpm for four hours. The represents twice the CFC requirement, but would meet the IRI and CCSP guideline requirements. The firewater tanks would be equipped with electric firewater pumps that would be capable of delivering 1,500 gpm to all of the sites (Shipping Site, Pad 1, and Pad 2). The electric propane generators at the site would provide the electrical power to the firewater pumps. The EIR also required the installation of a backup diesel firewater pumps in the event that electrical power is lost. The backup diesel firewater pumps would have adequate fuel supplies for four hours of service.

Firewater mitigation in the EIR was designed for use at the proposed facilities only and it was not assumed that firewater would be made available to other people in the Huasna Valley.

Although the facility would be located within a very high fire hazard area, CalFire does not preclude development in these areas, only that additional precautions be implemented. Although the facility would be located at least 30 minutes from the nearest Fire Department fire station, mitigation measures requiring that at least 4 hours of firewater be stored onsite, in combination with operator training in wildfire response, would ensure that response activities could be started immediately given a fire emergency. Additional training funded by the Applicant for CalFire personnel in hazardous materials response would ensure that, once the Fire Department arrived and assisted the ongoing response activities, there would be capable Fire Department response as well.

The propane tanks were required to comply with API requirements, which would include the use of deluge or equivalent systems, and all oil tanks were required to have automatic foam fire suppression systems. By applying the mitigation measures required in the FEIR, the project would meet all applicable fire prevention and suppression code and standards, as well as the requirements specified by CalFire.

However, proper design of the facility along with adequate fire detection and suppression systems would serve to reduce the potential of a major fire resulting from the proposed project, but would not eliminate the risk. One of the reasons for denial of the project by the Planning Commission was due to the fire risk.

EIR Analysis of CalFire Fuel Modification

***Board Questions**: Did the EIR analyze how CalFire fuel modification requirements (30 feet and 100 feet buffers) apply around roads and facilities, and was that fully considered in the visual analysis?*

Staff Response: The FEIR has adequately analyzed the fuel modification requires for the three pads (Shipping Site, Pad 1, and Pad 2) that would be developed as part of the proposed project. CalFire has stated that these pads would need a 30-foot clearance around the pads with no vegetation, and a 100-foot fuel modification zone with reduce fuel load. The 30-foot clearance is discussed on page 2-15 of the project description and is detailed in Table 2.3 (page 2-16). These fuel modification requirements would have direct impacts in agricultural resources, biological resources, visual resources, and fire protection and emergency response.

Page 4.2-19 discusses the agricultural resource impacts of these fuel modification zones. This section states that with the fuel modification requirements, 4.38 acres would be converted to nonagricultural uses and would not be available for future grazing use.

In the biology section of the FEIR impacts BIO.1 (page 4.4-22) and BIO.2 (page 4.4-23) discusses the impacts associated with "proposed road and pad improvements and ***fire safety clearance***". In evaluating the biological impacts, the analysis assumed a 30-foot total clearance around each of the pads and a 100-foot reduced vegetation area. Some of the removal of oak trees is a direct result of the fuel modification requirements.

With regard to visual resources, only Pad 2 would be visible to the surrounding area. Impact AE.1 (page 4.1-13) discusses the impacts associated with the grading and clearing that would have to occur at Pad 2. Specifically, the impacts of the CalFire vegetation requirements are discussed on page 4.1-18, and how this could impact the "key screening vegetation" for Pad 2. It was the grading Pad 2 and the adjacent access road, along with the fuel modification impacts to the key screening vegetation that resulted in a significant Class I impact for visual resources.

As discussed in the written responses to comments at the Planning Commission hearing, the fuel modification zone (clearance and reduced vegetation) would affect the entire area between the eastern edge of Pad 2, and the access road which wraps around in front of it. This potentially impacted vegetation currently provides some of the most effective visual screening of the site. The slope drops downward steeply on the east side of Pad 2 and the access roadway, allowing for minimal ability to screen the required clearance areas.

Fire Protection and Emergency Response Impact FP.2 (page 4.7-20) discusses the importance of the fuel modification requirements for controlling the risk of wildfire. This section specifically states that maintaining this type of fuel modification zone the likelihood of a fire migrating offsite is substantially reduced.

3H. Use of Huasna Road by Trucks if Porter Ranch Road is Flooded

***Board Questions**: If Porter Ranch Road closed, what is the potential for Huasna Road to be used by (project) trucks? Agent says they will add a condition to not use Huasna Road. Staff is directed to work with applicant to answer: how feasible is it to shut down production? What happens if Porter Ranch Road closed for extended periods?*

Staff Response: The access road to the proposed project site for construction and operational trucks would be through the existing ranch road on the Porter Ranch, which is about six miles long. Approximately four miles of this ranch road is within the 100-year flood zone designation. Portions of this section of road (about 1.4 miles) would also periodically flood when the Twitchell reservoir starts filling up (Porter Ranch Road inundation occurs at the 599-foot level. The reservoir spillway height is 640 feet). As with many reservoir dams, Twitchell continues to fill with sediment, which reduces its capacity thereby increasing the frequency and duration of the reservoir filling to the 599-foot level and above. Historic records show Twitchell reservoir hitting the 599-foot level, on average, about every six years. During these times, sections of the Porter Ranch Road have been submerged between 8 and 343 continuous days per occurrence (the 343 day submersion occurred in 1983).

The Applicant included as part of their project description that trucks servicing the facility would not use Huasna Road. When Porter Ranch Road is closed due to flooding, the Applicant has stated that the facilities would be shutdown until such time as Porter Ranch Road was re-opened.

Oil production facilities are shutdown for a number of reasons including facility maintenance, power loss, economics, permitting issues, etc. In the early 1990s when crude oil prices dropped below $15.00 per barrel, a number of small oil fields in California were shut-in since it did not make economic sense to operate. Some of these smaller fields were shut-in for a number of years. In 1988 the Point Arguello Field, offshore Santa Barbara County, was shut-in for two years due to additional permitting requirements.

The shutdown of the proposed facility would involve the following basic steps:

- Shut-in each of the producing oil wells,
- Shutting down all non-essential fire equipment such as the heaters,
- Shutting down all non-essential engines such as pumps,
- Pigging of the oil pipelines from the well pads to the Shipping Site,
- Shutdown the vapor recovery system and flare,
- Secure the facility and perform safety and environmental checks, and
- Ongoing facility monitoring.

Any oil or produced water in the tanks would remain. If the shutdown was for an extended period of time the oil in the tanks would cool and become very viscous (i.e., very thick). During the shutdown the propane electrical generator would remain operational to provide power to the control and safety systems as well as the lights. The facility could remain in this state for an indefinite period of time.

In a long-term shutdown of the facility, propane would be needed to provide electrical power for the necessary lighting and safety systems. As shown in Appendix A of the FEIR this electrical load would be about 8 kW, which would consume approximately 17 gallons of propane per day. With a full propane tank at the shipping site this would provide enough fuel for approximately 290 days of shutdown operation. If Porter Ranch road was shut down for longer than this period, a propane truck delivery would have to use Huasna Road to allow for continued operation of the lighting and safety systems. One propane truck delivery would provide enough fuel for about 160 days of shutdown operations. It is also likely that during a long-term shutdown of the facility that maintenance trucks would have to use Huasna Road to access the facility.

3l. Porter Ranch Road Design Standards

***Board Questions**: Please explain the improvement and maintenance issues of Porter Ranch Road being a private road and it being built to County standards. How will the County insure that this is done throughout life of project? Should it be improved to full County standards being on private lands?*

Staff Response: The Applicant has proposed to use the existing private ranch road on the Porter Ranch for trucks to access the proposed facility site. The Applicant has signed an agreement with Porter Ranch for use of this private road. Since the road would remain a private road, it would be subject to roadway design standards in the 2011 Public Improvement Standards issued by SLO County Department of Public Works. This document states the following:

"Public improvements are those which will be accepted for operation and maintenance by the County of San Luis Obispo, any County-operated Special District, any independent Special District which does not have its own requirements in these areas, or for any subdivision or land use permit where the improvement is determined to be of sufficient public benefit that compliance with these standards is required by the conditions of approval."

Since the Porter Ranch road would remain a private road and would not be accepted for operation and maintenance by the County or any County-operated Special District, the standards in this document would not apply to the proposed project. Also, the improvements would not provide a public benefit since the road would not be available for public use.

CalFire San Luis Obispo also has design standards for access roads (Standard 4), which they use a guideline for access road design to assure adequate access to residential and commercial parcels for emergency evacuation of occupants and for emergency vehicles to safely approach a building/parcel as closely as practical in order to deploy hoses, ladders and other equipment necessary for fire control and rescue operations.

On August 29, 2008, CalFire conducted a site visit of the Porter Ranch access road to analyze the viability of using the existing gravel road as a travel route for trucks. The review was conducted with the understanding that this was a secondary road for access to the proposed facility for emergency vehicles. The main access for fire and emergency vehicles to the proposed project site would be Huasna Road.

On September 2, 2008, CalFire issued a letter that stated that CalFire/San Luis Obispo County Fire Department mandates the following requirements for utilizing the Porter Ranch gravel road as a travel route.

- It is understood that Porter Ranch road would be a secondary access route for emergency vehicles and may, at times, be inaccessible during winter months when the Twitchell Reservoir is filled to capacity.
- The bridge on the north end leading into the ranch must be maintained to support 20-ton fire vehicles. Weight limit shall be posted on both ends of the bridge.
- Culverts underneath the road shall be maintained to support 20-tons.
- Soft, sandy portions of the road shall be reinforced with additional road base to maintain a solid surface. CalFire does not require paving for this project.
- Grass and weeds shall be mowed or grazed off within 10-feet of either side of the road.
- Turnouts are required every one-half mile, and shall be wide enough to accommodate an oil truck. Ideally, turnouts should be located on flat terrain with no slope.

- Vertical clearance directly above the road shall not be less than 13.6 feet. Tree branches shall be trimmed to meet this requirement.
- The "oak forest canopy" at the south end of the ranch may be maintained as is provided that grass and weeds underneath are grazed off or mechanically removed, so that annual vegetation does not grow taller than three inches.

As part of the Applicant's proposed project they included the following improvements to Porter Ranch road.

- Widening and grading of approximately 1.4 miles of the road.
- Installation of 12 turnout areas.
- Trimming of trees (include oak trees) to meet 13.6 feet height clearance.
- Upgrading of the Huasna River Bridge to support 20-ton load limits.
- Installation of about 1-inch of gravel on the dirt portions of the road.

The FEIR assessed the impacts of the modifications to Porter Ranch road proposed by the Applicant, and proposed a number of mitigation measures that would improve the safety of the road and would likely be required to meet the CalFire mandates discussed above. Some of these measures included the following:

- Assure that the entire Porter Ranch road has four inches of gravel aggregate base (T.2-1).
- Verify that culverts crossings meet the CalFire 20-ton limit, and upgrade any that do not meet this requirement and upgrade all at grade stream crossings (BIO.3-6).
- Limit traffic on the roads to daylight hours only (T.2-9).
- Limit speed of travel on the road to 15-mph (AG.6-1).
- Provide for communication between trucks and facility when traveling on Porter Ranch Road (FP.1-11).

3J. Well closure and restoration

Board Questions*: If further drilling is done on this parcel, and then wells are abandoned, what are the provisions for restoration of the habitat and vegetation restoration in the EIR?*

Staff Response: Should drilling be allowed on this parcel, a project condition would be included that would require that prior to the start of Phase I, a County-approved cost estimate be provided and bond be established to determine and provide for the costs of well/facility closure and clean-up, as well as vegetation restoration. Should the wells/facility be abandoned, the County would then exercise its right to use the bond to complete the necessary site restoration.

3K. Economic Impacts

Board Questions*: Among issues brought forward, one of the beneficial ones is the claim that it is economically beneficial –where does that come from (how are the mineral rights valued, what would happen to the value of the property if oil production were to move forward; how would that effect the flow to both the economy of the County and to the county's general fund in particular)?*

Staff Response: The questions on economic forecasting posed include many variables, of which there are many speculative or subjective assumptions used when forecasting the economic future. Furthermore, some of the important variables, such as how much crude oil is available, is not yet known. The County does not have the expertise to conduct such economic forecasting.

On mineral rights, one might consider it a 'dormant' property right. It has value at the point that revenues or royalties are generated from a mineral being extracted. At this time, there is not

enough information to know if the Huasna oil formation is commercially viable. If it is, the County will assess the value of the facility, wells and potential oil reserves, based in part on information to be defined from the exploration and testing phase. To further complicate this effort and answers to this question, this type of assessment includes many continually changing variables, such as the price per barrel of oil. Such revenues assessed, as has been done for other producing oil reserves in the County, would be collected and placed into the County's General Fund should this become a producing oil field.

For some projects, applicants will fund an economic study to show to the decision makers the economic value of their project. Such an economic study has not been performed by the applicant.

Immediately prior to the Planning Commission hearing, the applicant proposed a 'Solar for Schools' program which may benefit the Lucia Mar School District. This program would pay $1 per barrel of oil produced towards renewable energy projects proposed for school district facilities.

With regards to surrounding property values, the EIR discusses the best available example on the potential to diminish property values. It suggests that such an oil project may contribute to a small overall decrease in surrounding property values; however, there are many other continually changing variables that may substantially influence property values, making it difficult to reach any reliable conclusion on how much such a project will influence the overall property values.

4. Potential Preemption by State Laws

***Board Questions**: Once the project receives County approval, does the County lose the ability to continue to regulate the land use regarding any future expansion? How does this compare with the state and federal regulations as it relates to mineral rights? How does the County fit in and what is within county jurisdiction? Will any other state/federal agency permit/regulations supersede the County's permit?*

Staff Response: Several concerns have been raised that the County may be preempted by state law from regulating an oil exploration and production facility. The California Public Resources Code provides authority to the Department of Conservation, Division of Oil, Gas, and Geothermal Resources ("DOGGR") to supervise the drilling, operation, maintenance and abandonment of oil and gas wells within the state. The Public Resources Code and Title 14 of the California Code of Regulations provide a regulatory scheme for the DOGGR to implement this mandate.

Because of the potential overlap between the DOGGR's regulatory scheme and local land use controls, it is possible that state law may preempt local regulation in this area. Unfortunately, the issue has not been definitively addressed, or really even considered, by the courts in California, leaving us with an Attorney General Opinion from 1976 as our best resource. While non-binding in a court setting, an Attorney General Opinion may provide a good summary and analysis of existing law and typically holds some amount of persuasion in court.

In his 1976 opinion, the Attorney General concludes that "where the state regulation approves of or specifies plans of operation, methods, materials, procedures, or equipment to be used by the well operator or where activities are to be carried out under the direction of the Supervisor, there is no room for local regulation." For the most part, such activities are limited to "down-hole or subsurface operations." The state has not occupied the field, however, with respect to regulations of surface activities that are imposed for other purposes, such as land use controls, environmental protection, aesthetics, public safety, and fire and noise prevention. In these areas, "more stringent, supplemental regulation by cities and counties is valid to the extent that

it does not conflict with, interfere with, or frustrate the state's regulation for purposes of conservation and protection of the resources." Thus, in the opinion of the Attorney General, the state statutes and regulations provide a fair amount room for local jurisdictions to impose their own regulations on oil and gas development, particularly as to regulations of surface activities.

If a use permit is issued to Excelaron for its oil exploration and production facility, it will be required to comply with the conditions and limitations of that permit, so long as those conditions do not stray into areas that are preempted by state law. If the permit limits the number of wells, any expansion of that number would require a new or amended use permit from the County. There is no authority for the DOGGR to override those County limits.

Excelaron's proposed project is within the boundaries the Huasna oil field, which was established by the DOGGR. For our purposes, the fact that the project would be located within a state designated oil field is important because our land use ordinance relies on such designations to determine the permit level for production wells. Pursuant to Section 22.34.030.B, production wells within existing DOGGR designated oil fields require only a Minor Use Permit; a Conditional Use Permit is required for production wells within a new oil field or a DOGGR designated oil field that has been unused for 12 or more months. If Excelaron's project is approved, additional production wells could potentially be allowed with a Minor Use Permit (absent elevation of the MUP to a CUP by the Director of Planning and Building). In addition, there are currently no regulations in place covering how, why, or when the DOGGR designates or expands an oil field. It is, therefore, also possible that the Huasna field boundaries could be expanded, potentially allowing more wells to be drilled in the area with a Minor Use Permit.