IDLE OIL WELLS IN SANTA BARBARA COUNTY

SUMMARY

Seepage from active oil wells is common in Santa Barbara County. Seepage may also occur from the 1,374 "idle" wells that are no longer in production in the County. Such idle wells pose special health and environmental hazards because their seepage can go undetected without monitoring by trained professionals. Some idle wells have been permanently capped, so they pose a smaller threat to health and the environment. Other idle wells have not yet been capped, posing a greater risk to health and the environment. A few idle wells have been abandoned and left unplugged by their owners and are now defined as "orphaned." Should there be seepage, causing toxic emissions or pollution from an idle well, the clean-up, remediation, and lost income costs could fall on Santa Barbara County.

The 2021 Santa Barbara County Grand Jury (Jury) investigated the regulatory roles of County agencies in managing and mitigating oil seepage as they pertain to onshore idle wells. The Jury's findings are: (1) the health and environmental risks of idle wells do not appear to be adequately addressed; (2) the County may have some fiscal liabilities resulting from inadequate monitoring of idle wells; (3) active County staff at present appear at times to be too few to adequately monitor idle wells in the County; and, (4) the Santa Barbara County Code provisions regarding removal of drilling equipment and derricks from idle wells are not fully enforced.

INTRODUCTION

A request was made to the 2021 Santa Barbara County Grand Jury (Jury) to investigate idle oil wells in the County, the mechanisms for clean-up of idle wells, and requirements for the decommissioning of idle production facilities. The Jury's report in response to this request covers:

- Risks from idle oil wells
- Extent of idle wells in the County
- State laws governing regulation of idle oil wells
- County responsibilities for regulation of idle oil wells

The Jury's investigation covers only onshore idle wells.

METHODOLOGY

The Jury interviewed County Planning and Development Department (P&D) staff whose job is to have knowledge and/or responsibility for oversight of wells. The Jury tried unsuccessfully to interview staff of the Petroleum Unit of P&D's Energy, Minerals and Compliance Division. The Jury also interviewed staff at California Geologic Energy Management Division (CalGEM) and in private environmental groups. CalGEM reports on oil wells were consulted, as were press articles about inactive wells.

OBSERVATIONS

Types of Idle Oil Wells

There are four types of idle wells:

- **Inactive:** wells which have been out of operation for at least two years but fewer than eight years
- **Long-term idle wells (LTIW):** wells which have been inactive for at least eight years
- **Abandoned:** wells which have been out of production for two years or more and whose owners or operators have applied for a permit and followed proper abandonment procedures, including sealing the wells permanently with a cement plug to isolate hydrocarbon-bearing formations from water sources and to prevent leakage of hydrocarbons and other contaminants into the surrounding land or to the surface.
- **Orphaned:** wells which have no direct owners to hold responsible for health and environmental liabilities.[1] When left idle by the operator without taking any of the legal or physical steps to seal them safely, the wells are at risk for leaking into water and soil. If an operator declares bankruptcy, becomes insolvent, or deserts a well, the responsibility for permanently sealing the well falls to the State. Since 1977, CalGEM has plugged about 1,400 orphaned wells throughout California at a cost of $29.5 million.

Risks from Idle Oil Wells

Seepage from active and idle wells can contaminate groundwater, and methane gas emitted from wells can pollute the air, while harming animal and plant biodiversity. Idle wells, because they are usually unattended, can generate substantial seepage before leaks are detected. Another risk is visual blight from oil rigs, which can have an adverse effect on housing prices.[2] State and county monitoring and regulation of idle wells is therefore justified and is a well-established part of California law (https://www.conservation.ca.gov/calgem/Pages/Oil,-Gas,-and-Geothermal-Rulemaking-and-Laws.aspx).

State Regulation of Idle Oil Wells

CalGEM is the state agency responsible for monitoring and regulating active and idle oil wells in California (https://www.conservation.ca.gov/calgem). CalGEM states that its staff checks all idle wells once a year for leakage or gas buildup. CalGEM must also protect water sources from oil seepage by checking the cement casings around plugged wells and is required to report any problems to the Regional Water Authority. If groundwater contamination is detected, the County is responsible for remediation.

CalGEM revised its idle well regulations in April 2019 to create more stringent testing requirements that better protect public safety and the environment from the potential threats posed by idle wells. The regulations require idle wells to be tested and, if necessary, repaired or

[1] The Santa Barbara County Code (Section 25-4) uses the term "Desertion" for "the cessation of petroleum operations at a drill site without compliance with the provisions of this chapter 25, relating to suspended operations or abandonment." (https://library.municode.com/ca/santa_barbara_county/codes/code_of_ordinances.)

[2] A study of Colorado found that visible shale oil wells had a negative effect on housing prices. https://wvutoday.wvu.edu/stories/2019/11/12/rocky-mountain-not-so-high-oil-gas-wells-drive-down-colorado-home-values-reveals-wvu-research

permanently sealed at the expense of the owner. A 2019 CalGEM report found 37,095 idle wells in California, of which 17,576 had been idle for eight or more years.[3] According to CalGEM, 1,927 idle wells were plugged and formally abandoned during 2019 in all of California, of which nine were in Santa Barbara County; another 690 idle wells were returned to active use in all of California during 2019, of which 29 were in Santa Barbara County.

The California Council on Science and Technology commissioned (2018) an independent review of scientific information (https://ccst.us/wp-content/uploads/CCST-Orphan-Wells-in-California-An-Initial-Assessment.pdf) on orphaned oil wells in California. Though the review found that the number of orphaned wells was unknown, it estimated that 5,540 idle wells were "likely" to be orphaned or were at "high risk of becoming orphaned" in a total of 228,648 wells. The map at page 20 of the review shows that some of the "likely to become orphaned" or at "high risk of becoming orphaned" wells are in Santa Barbara County.

To reduce the number of idle wells for which the State may become responsible, legislative and regulatory changes have been made to create incentives for operators to manage their idle wells by entering into Idle Well Management Plans (IWMPs) with CalGEM. If an operator does not have an IWMP, the annual idle well fees the operator must pay for each of the operator's idle wells have been increased to reflect the potential costs associated with those wells. The fees are deposited into the Hazardous and Idle-Deserted Well Abatement Fund to finance the permanent sealing and closure of deserted wells. For the year 2019, operators paid $4.2 million to CalGEM in idle well fees.

In September 2021, two bills, written by legislators from Santa Barbara and Ventura Counties to strengthen cost recovery by the State, passed in the California legislature. AB 896 authorizes CalGEM to file a lien with priority for repayment on an idle well, which would help to recover State costs after plugging the well. CalGEM can impose such a lien if the well is identified as unsafe, if the owner has not paid the idle well fees, or if the owner declares bankruptcy. This bill provides another mechanism to address the growing number of unpaid fees and would also establish a unit to collect unpaid idle well fees. Unpaid fees could indicate an orphaned well.

SB 47 provides for an increase in the spending cap for plugging and decommissioning abandoned wells from $1 million to $5 million. It also allows money to be spent on remediating hazardous or idle/deserted well sites.

These bills provide CalGEM with the tools to protect the environment, public health, and taxpayers by managing the decline in oil and gas and the associated decommissioning of wells. In addition, the California budget revision in May 2021 proposed $200 million to plug wells from the Abatement Fund.

Santa Barbara County Oversight of Idle Oil Wells

The most recent CalGEM inventory of wells in Santa Barbara County as of December 31, 2019 shows:

- Total Wells: 6,618
- Active Wells: 1,028

[3] https://www.conservation.ca.gov/calgem/idle_well/Documents/AB%202729%20Idle%20Well%20Program%20Report%202019.pdf is the most recent idle wells report for California.

- Idle Wells: 5,590 (plugged and abandoned: 4,215; LTIW: 926; inactive less than 8 years: 448)

During 2019, only a single well was moved from idle to orphaned status in Santa Barbara County.[4]

The Santa Barbara County Code provides for regulation of onshore oil wells in the County. Section 25-2 of that Code defines the purpose of the Petroleum Code to be "to protect the health, safety, public welfare, physical environment and natural resources of the county by the reasonable regulation of onshore petroleum facilities and operations…." A County official, known as the "petroleum administrator," is "authorized and directed to enforce the provisions of [Chapter 25]...." The petroleum administrator "shall inspect annually and at such other times as necessary each lease site, each tank site, producing well site, idle well site and lease tank site, (including headers and associated pipelines) …." (Santa Barbara County Code, § 25-7, subd. (a).)

County Regulatory Capacity

The County Planning and Development Department, Energy, Minerals and Compliance Division, Petroleum Unit has two employees who do inspections and one supervisor. One of the two inspectors has recently been on leave, leaving only one inspector to cover the County's oil wells. It is a challenge to inspect all oil wells in the field,[5] and the Jury believes that the number of staff is currently insufficient to complete inspections of all idle wells. The budget of the County Petroleum Unit is in large part funded by fees from the oil operators, shown as service charges in Table 1.

Operators are required to declare any incident - such as a leak, fire, work accident, or structure collapse - at a well to County, State, and Federal authorities. Part of this declaration is submission of a form to the California State Governor's Office of Emergency Services, which acts as a clearing house for emergency reporting. Reponses to such incidents are coordinated among County, State, and Federal agencies. County inspectors only make reports if there has been a reported incident, and they are not posted on the P&D website. Though incidents are rare – there was an average of six annual incidents – the potential for leaks from idle wells, especially the 926 LTIW, can be serious.

Leaks of gas can occur around active and idle wells. Four different agencies (the County Petroleum Unit, the Air Pollution Control District [APCD], County Fire, and CalGEM) are in charge of gas leaks. The County has no capacity to detect gas leaks from oil wells, though operators must report such leaks immediately to the petroleum administrator. The APCD checks for vapors, and it has found some fugitive emissions from idle wells, which CalGEM could not verify. County Fire takes care of confirmed leaks.

[4] https://newspress.com/oil-well-getting-capped/?utm_source=rss&utm_medium=rss&utm_campaign=oil-well-getting-capped reports as many as 200 orphaned oil and gas wells on and off-shore in Santa Barbara County.

[5] The County does not use consultants for such inspections.

Table 1[6]

County of Santa Barbara – Petroleum Fund Budget (thousands of US$)

	2019/2020 Actual	2020/2021 Actual	2021/2022 Adopted
Sources of funds			
Licenses & permits	4.2	5.5	10.6
Fines & penalties	43.8	18.3	10.0
Service charges	712.4	596.2	603.0
Increase restricted	3.2	3.7	51.0
Other	8.9	(0.7)	1.5
Total of sources	*772.4*	*622.9*	*676.1*
Use of funds			
Salaries & benefits	417.7	355.2	475.8
Services & supplies	50.4	43.8	171.1
Decrease restricted	277.9	199.6	-
Other	26.4	24.3	29.2
Total of uses	*772.4*	*622.9*	*676.1*

Increases or decreases to restricted funds are transactions occurring at the end of each fiscal year. Such transactions balance accounts and reflect the net effect of revenues and expenditures that have been restricted for use by the Petroleum Fund, pursuant to Chapter 25 – "the Petroleum Code" – of the Santa Barbara County Code. Petroleum Fund revenues exceeded costs in County fiscal years 2019-20 and 2020-21, as shown in Table 1. The small decrease in restricted funds from all sources from 2019-20 to 2020-21 is attributed to a decline in inspection revenue associated with the HVI Cat Canyon bankruptcy filing.

Effects of Oil Leaks in Santa Barbara County

An example of the effects of seepage can be seen in the Santa Maria Valley, where there were thousands of active oil wells in the past. Some homes in Santa Maria had to be demolished because the area's soil had been contaminated by seepage from old wells that had not been properly abandoned and plugged. There appears to have been no County remedial action on a number of the old wells around Orcutt, and no action by the owner to abandon them. Abandonment under the required legal procedures would have led to capping (permanently sealing). In the absence of capping, the health and safety of the area are not secure.

[6] Information in Table 1 provided by County of Santa Barbara, Department of Planning and Development.

The frequency of seepage and other spills is currently low, as can be seen in a County P&D "Petroleum Spills Report" for the period September 15, 2018, through September 15, 2021.[7] County officials observed 28 incidents, of which 8 involved oil spilled outside the containment, 19 involved oil spilled inside the containment, and 4 involved spills of water, but not oil. The volumes of spills were relatively small, with only 264 barrels (a barrel equals 42 U.S. gallons) of oil spilled inside containments and 25 barrels spilled outside containments.

An example of potential fiscal costs to County taxpayers is from some former holdings of the Greka oil services company around Santa Maria, in Cat Canyon, and on Rincon Island in northern Ventura County. Greka orphaned some of its wells by declaring bankruptcy before incurring clean-up costs. It first declared bankruptcy for the Rincon Island site in 2018. Of the $47 million to pay for the clean-up of Rincon Island alone, $27 million was paid by taxpayers.[8] In 2019, Greka also filed for bankruptcy for its operations in HVI Cat Canyon. Among the initially unpaid creditors from the HVI Cat Canyon bankruptcy were the Santa Barbara County Treasurer-Tax Collector; Santa Barbara County Air Pollution Control District; and Santa Barbara County Planning & Development Department.

Another example of fiscal costs to the County and State is related to the recent leaks from two abandoned oil pipelines. The two companies responsible did not have the money to shut the pipelines down in a proper way, and the County was then liable for the costs of repair. Fortunately, the State eventually funded the $1 million clean-up operation.

Visual Blight and Idle Oil Structures

The Santa Barbara County Code (Section 25-32) states, "All drilling equipment and the derrick [and service equipment] shall be removed [by the operator] from the drill site and leased premises within sixty days following the completion or abandonment of any well …" unless the petroleum administrator allows temporary storage on the drill site. Based on inspection of the CalGEM maps showing land south of Orcutt-Garey Road and west of Foxen Canyon Road and areas southeast and northwest of the City of Lompoc, there are many LTIW whose derricks and equipment remain, causing substantial visual blight for local residents.

CONCLUSION

In Santa Barbara County many idle wells await completion of the legal and engineering procedures to be defined as safely "abandoned." The 2021 Santa Barbara County Grand Jury found limited County government oversight of idle wells. Failure to enforce Santa Barbara County Code provisions requiring removal of drilling equipment after well abandonment continues to cause visual blight in some parts of the County. Lack of regular inspections of idle wells could eventually endanger human health and the environment, and potentially cost millions of dollars in capping, remediation, and legal expenses.

[7] Information provided by County of Santa Barbara, Department of Planning and Development.
[8] Scully, Janene. "Santa Maria Oil Company Files for Bankruptcy As Attorneys Urge the Judge to Rule in Federal Cases." *Noozhawk*. August 11, 2019.

FINDINGS AND RECOMMENDATIONS

Finding 1

Petroleum regulatory agencies within the County of Santa Barbara do not adequately identify and monitor idle oil wells in Santa Barbara County, leaving residents exposed to health and environmental risks.

Recommendation 1

That the Santa Barbara County Board of Supervisors instruct the Santa Barbara County Planning and Development Department to identify the health and environmental risks of idle oil wells in the County through an annual report to the Santa Barbara County Board of Supervisors.

Finding 2

The potential fiscal liabilities associated with idle oil wells in Santa Barbara County are not adequately quantified.

Recommendation 2

That the Santa Barbara County Board of Supervisors instruct the Santa Barbara County Planning and Development Department to determine all actual and potential fiscal liabilities related to idle oil wells through an annual report to the Santa Barbara County Board of Supervisors.

Finding 3

Active Santa Barbara County Planning and Development Department, Energy, Minerals and Compliance Division, Petroleum Unit staff are currently too few in number to monitor idle oil wells in the County.

Recommendation 3

That the Santa Barbara County Board of Supervisors instruct the Santa Barbara County Planning and Development Department to maintain an adequate number of trained personnel to staff the Petroleum Unit of its Energy, Minerals and Compliance Division.

Finding 4

Santa Barbara County Code provisions regarding removal of drilling equipment and derricks from idle wells within a specified time are not always followed, causing visual blight to some local residents.

Recommendation 4

That the Santa Barbara County Board of Supervisors instruct the Santa Barbara County Planning and Development Department to enforce compliance with the Santa Barbara County Code Chapter 25 (the “Petroleum Code”) provisions governing removal of oil equipment from idle wells.

REQUEST FOR RESPONSE

Pursuant to *California Penal Code Section 933 and 933.05*, the Santa Barbara County Grand Jury requests each entity or individual named below to respond to the enumerated findings and recommendations within the specified statutory time limit:

Responses to Findings shall be either:

- Agree
- Disagree wholly
- Disagree partially with an explanation

Responses to Recommendations shall be one of the following:

- Has been implemented, with brief summary of implementation actions taken
- Will be implemented, with an implementation schedule
- Requires further analysis, with analysis completion date of no more than six months after the issuance of the report
- Will not be implemented, with an explanation of why

Santa Barbara County Board of Supervisors – 90 Days

- Findings 1, 2, 3, and 4
- Recommendations 1, 2, 3, and 4