

OIL AND WATER DON'T MIX | GROUNDWATER CONTAMINATION FOCUS OF STATE WATER BOARD INVESTIGATIONS

Kimberly Rivers, Ventura County Reporter, 11-16-16

Ventura County is ranked third among counties in California for oil production, behind Kern and Los Angeles. Our region is in a severe drought, some say at risk of a mega-

drought. Some point to reports of the oil and gas industry using large amounts of water for things such as fracking or steam flooding, and water use is now being monitored and reported. Due to new regulations aimed at ensuring that our groundwater is protected, we are starting to learn more about potential risks to our aquifers from the disposal of oil field waste fluids.

Local county and city governments have considerable influence through the land-use permitting process. When the permits come up for renewal or when an operator applies to modify a conditional use permit (C.U.P.), the local lead agency — usually the city or county planning department — has an opportunity to review potential impacts to public health and the environment if the project is approved.

With the drought, the public is demanding that more and more attention be focused on protecting sources of drinking water. This means using all sources of information regarding potential risks — and it puts our local elected officials front and center as our water protectors.

“There are two responsibilities that we have. One, is to make the right decision; and two, is to make the right decision in a way that continues to build public confidence,” said Supervisor Steve Bennett during the Board discussion on Nov. 1 regarding an oil and gas project that has aspects of the land-use permit under review by the regional water board.

DISPOSAL OF PRODUCED WATER

In the geologic formations where oil and gas are trapped, ancient water is trapped too and it comes up when the oil and gas are produced. This produced water is heavy with salt and other compounds used in the oil and gas production process. Wherever there is oil and gas production, there is also the need to dispose of the produced water and other waste fluids from production activities. The more oil produced, the more produced water that needs to be disposed of. Some operators are able to recycle and reuse a lot of the water that comes up with the oil and gas but much of it gets reinjected underground in water disposal injection wells.

In the past, up until the early '80s, sumps were also used to dispose of fluid. A sump was a lined or unlined pit or depression in the earth. Waste fluid was put in the pit and it either percolated into the earth or evaporated.

Today there is one operational commercial disposal well in Ventura County, and there are 630 injection wells used for disposal or enhanced production practices.

A Public Records Act request made by the Center for Biological Diversity revealed that the Ventura County Air Pollution Control District provided records of 410 sumps throughout Ventura County. The district, however,

only reviews the sumps in regard to air emissions. No agency is responsible for inspecting the integrity of the lining of the sumps.

POTENTIAL RISKS TO GROUNDWATER

In the past few months, pieces of information have become available that show the importance of our local agencies and elected officials in ensuring that our local groundwater is protected.

First, the State Water Resources Control Board is embarking on a statewide comprehensive investigation into potential impacts to groundwater from oil field waste disposal practices. Second, well records and water quality tests provide information showing that sump linings do sometimes crack and leak, and water wells in some locations are showing evidence of groundwater contamination in Ventura County. And third, one operator applied to reactivate wells, including an injection well under investigation by the state water board.

WATER BOARD INVESTIGATIONS AND FINDINGS SO FAR

Ventura County is under the jurisdiction of the Los Angeles Regional Water Quality Control Board. Due to Senate Bill 1281, authored by state Sen. Fran Pavley, D-Agoura Hills, the Public Resources Code was amended to give the regional water boards (all of them divisions of the State Water Resources Control Board) authority to gather information and order water well testing by oil and gas operators in order to ascertain the potential for groundwater contamination related to disposal of oil field waste fluids.

The statewide investigation of the state water board is gathering information on two oil field waste fluid disposal methods — injection wells and sumps. In many cases, injection wells are regular oil and gas wells that have been converted to waste injection wells. Waste is disposed of by injecting it down the well, where it is absorbed by the earth at an approved depth. Sumps are a relatively low-tech disposal method — essentially pits in the ground. A sump can also be a closed-loop system using a tank for storage. Sumps in the past could be either unlined or lined with concrete or metal.

Starting in December 2015, all oil and gas operators of record with the state received a letter from the state water board asking for information regarding injection wells, fluid disposal, historic sumps and current sumps. The information is still coming in; some operators have already provided complete and accurate information in a timely manner. In some cases, when warranted, the state water board issued requests for more information and/or water quality testing.

WELLS NEAR ANTERRA

Anterra Energy is a commercial Class II oil field waste disposal facility located just outside the Oxnard city limits on Wooley Road. After the state water board sent out letters in December 2015, the L.A. regional water board ordered the company to provide information on two nearby water wells, including water quality test results. Anterra had done testing in March 2014 and sent those tests to the L.A. regional water board. In addition Anterra tested its own waste disposal injection well in January 2016. The two water wells are within a half-mile of the injection well. Professional hydrogeologist Brad Newton, Ph.D., was hired by Ojai-based Citizens for Responsible Oil and Gas to analyze the water test results.

“Inorganic compounds were reported in the groundwater samples and the concentrations of a few constituents are in exceedance of the MCL (maximum contaminant levels) for drinking water,” stated Newton, of Santa Barbara-based Newton Geo-Hydrology Consulting Services in an Oct. 5, 2016, technical memorandum.

Phone calls were made to the Anterra in Oxnard to learn whether it knew of other analysis or planned to obtain any. The calls were not answered.

The L.A. regional water board is continuing its investigation to determine whether there is a correlation between using injection wells and sumps to dispose of oil field waste and groundwater contamination. The state water board has not analyzed the water test results or reached any conclusion about contamination to date.

WELLS IN THE OJAI OIL FIELDS

Ojai Oil Company operates wells in the Upper Ojai Valley. The oil company provided full and complete information regarding a historic sump that was located in the oil field. The records of that sump indicate that in the past it was used to store oil field waste and that at one point the concrete sump liner cracked and fluid leaked into the soil. The sump has since been cleaned up and is no longer used. Earlier this year, the L.A. regional water board had Ojai Oil Company test four water wells near the location of that sump. Two of the wells were at a higher elevation than the sump location and showed no indication of contamination, but the other two wells called the Smith Well and the Mexican Well, both had testing samples that contained compounds at levels not allowed in drinking water.

“Ojai Oil Company discharged these fluids to a sump and the presence of toluene and high concentrations of inorganic compounds in exceedance of the MCL for drinking water are present in adjacent water wells,” stated Newton in the Oct. 5 technical memo.

A representative at the Ojai Oil Company said it did not know if there were any other analyses.

The L.A. regional water board investigation in Ventura County is ongoing.

THE NESBITT REACTIVATION PROJECT

During the state water board investigations, another operator submitted an application to the Ventura County Planning Department to modify the Conditional Use Permit that allows oil and gas extraction. The request asked permission to reactivate two oil and gas wells and one injection well in an active oil field in the Upper Ojai Valley. That operator, Mirada Petroleum/South Mountain Resources, received a letter dated Sept. 15 from the L.A. regional water board stating that an injection well, called Nesbitt 2, operated by Mirada had been reported by California Department of Conservation (DOC), Division of Oil, Gas, and Geothermal Resources (DOGGR) as “injecting class II fluids produced by oil and gas extraction activities into in to an aquifer that may not have been properly designated as an exempt aquifer under the federal Safe Drinking Water Act,” and that the L.A. regional water board was looking at this due to the potential impacts to groundwater.

After a lengthy appeals process, where local environmental groups CFROG, Los Padres Forest Watch and the Center for Biological Diversity challenged the analysis and subsequent approval of the application by county staff and the Planning Commission, Ventura County Supervisors Steve Bennett, Linda Parks and John Zaragoza all expressed concerns over the

L.A. regional board’s findings and agreed to continue deliberations on the application to Nov. 15.

In a letter dated Nov. 8, however, counsel for Mirada, Peter Goldenring, submitted a letter to the County Planning Department stating, “Mirada Petroleum Inc. and Mr. [Scott] Price wish to resolve this matter and allow the CUP to move forward without further conflict or dispute. Accordingly, please be advised that the

CUP application is amended to eliminate Nesbitt number two as a reinjection well. The CUP application is now for only the two existing producing wells to be permitted.”

On Tuesday, Nov. 15, the Ventura County Board of Supervisors voted four to one to approve the Nesbitt Reactivation project as amended – allowing the reactivation of two oil and gas wells. Two conditions to the permit: 1. Abandonment of the injection well within 180 days or prior to restarting the oil and gas wells. 2. Abandonment of the sumps on the C.U.P.

Kimberly Rivers is executive director of Citizens For Responsible Oil and Gas. Before working for CFROG in May 2016, she was a freelance journalist for four years covering news and the oil and gas industry in Ventura County.

OIL AND GAS UPDATES AROUND THE COUNTY

DELAY IN NOTIFICATION OF GAS LEAK

On the morning of Nov. 3, residents in a neighborhood along Ventura Avenue in Ventura were notified of a gas leak. “First responders started making calls to our phones [registered with VC Alert System] starting this morning (Nov. 3), though we knew something was going wrong late yesterday afternoon (Nov. 2),” said Ventura Avenue neighbor Jan Dietrick. Her home and business is located less than 2,000 feet from where the leak occurred. She said the Sheriff’s department evacuated residents who lived on the east side of Ventura Avenue that morning and blocked access to Ventura Avenue all day.

EXPLODING TANKS AND BANKRUPT OPERATORS

On Aug. 4 residents of Upper Ojai heard a loud explosion as an oil storage tank exploded and sent a plume of fire and smoke into the air. The emergency response was quick and skilled. The oil in the tank burned for a couple of hours and the fire dissipated. The Ventura County Fire Department deployed a fire retardant foam on the ground around the tank, and when the tank imploded, the remaining flaming oil hit the retardant and went out. Reports indicate that the tank was undergoing maintenance the day before the explosion. Homeowners in Simi Valley have now been working for over three years to get old oil wells plugged and storage tanks cleaned up in order to prevent toxic methane and crude-oil fumes from being emitted near their properties. There are active court cases now regarding their properties, but with the operator declaring bankruptcy, the old wells are now property of the state and, although on a list of wells that DOGGR plans to plug, there is not yet a date for that.

RINCON ISLAND

On July 19 the California State Lands Commission notified Rincon Island Limited Partnership (RILP) of 120 violations still outstanding on the man-made island visible from highway 101. That letter stated, “The violations that remain outstanding present the greatest threat to health and safety.” Old wells did not have the required parts to demonstrate proper down-hole pressure or blowout-prevention equipment. On Aug. 8 state Sen. Hannah Beth Jackson, D-Santa Barbara, wrote a letter to the California State Lands Commission that said, “Despite significant warnings and lead time, Rincon Island Limited Partnership has failed to get its act together and I urge the Commission to vote to terminate its leases.”

Also on Aug. 8 the operator released a statement that the company was going into bankruptcy proceedings: “RILP took this step to protect its key oil and gas leases from a wrongful attempted termination by the State of California. The partnership will be re-organized in order to ensure its long-term financial success.”

HALL CANYON SPILL

On June 23 a large pipeline carrying high-quality and highly flammable light crude oil began leaking oil into a dry barranca in Hall Canyon. The oil ran quickly through the dry wash behind houses. Early in the morning a resident smelled petroleum and went out to investigate. That man found and reported the leak. The crude oil was stopped about 500 feet from the cemented storm drain that leads to the beach. Initial reports showed that a valve was replaced on the pipeline the day before the spill. The cause of the spill is the subject of an ongoing investigation. The pipeline, however, was turned back on before residents were notified. Public hearings revealed there are no regulations about which local agencies must be notified when a pipeline that leaked is being turned back on, nor about notifying residents.