



Central Valley Regional Water Quality Control Board

10 April 2018

Megan Silva Manager – Environmental and Regulatory Aera Energy LLC 10000 Ming Avenue Bakersfield, California 93311 CERTIFIED MAIL 7017 3040 0000 4339 1071

NOTICE OF APPLICABILITY (NOA), CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD, ORDER NUMBER R5-2017-0035, GENERAL ORDER TWO, WASTE DISCHARGE REQUIREMENTS FOR OIL FIELD DISCHARGES TO LAND, AERA ENERGY LLC, LOST HILLS TWO LEASE, LOST HILLS OIL FIELD, KERN COUNTY

Aera Energy LLC (Aera) operates the Lost Hills Two Lease (Lease) in the Lost Hills Oil Field, west of Interstate 5 and north of Highway 46. The Lease has two separate surface impoundments (ponds) that receive discharges of produced wastewater (discharge). Both ponds are in the southwest corner of section 19 of T26S, R21E MDB&M.

On 13 November 2017, Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff received a letter dated 8 November 2017 containing a Notice of Intent (NOI) for coverage under Waste Discharge Requirements General Order for Oil Field Discharges to Land, General Order Number Two, Order Number R5-2017-0035 (General Order Two). The NOI included an application fee and a completed Form 200, "Application/Report of Waste Discharge ...". A document, dated 21 August 2017, and titled "Technical Report For General Order Number Two, Lost Hills 2 Lease, Aera Energy LLC, Lost Hills Oil Field, Kern County, California" (Report) was also submitted. Another document, containing produced wastewater sampling data, and dated 2 November 2017 and titled "Addendum to Technical Report for General Order Two..." was submitted.

Information, including figures and cross-sections, provided by Aera, shows the ponds are constructed in Tulare Formation sediments. The Report describes the first pond as being ".,..constructed with an 8-inch-thick reinforced concrete floor over a 60-mil HPDE..." and with 10-inch reinforced concrete walls. Aera identifies it as the "LH2 Sand Basin," on the "Lost Hills 2 Dehydration Plant," and indicates it is used to separate solids from produced wastewater. The Report describes the second pond as being constructed with a "60mil-thick HDPE liner over an 8-ounce geotextile." Aera identifies it as the "Lost Hills 2 Emergency Holding Pond," and as being used to contain produced wastewater when an "upset" occurs in the wastewater treatment and disposal system. The second pond is "... 125 feet long, 100 feet wide, and 10 feet deep."

This letter serves as formal notice that General Order Two is applicable to the Lease. General Order Number **R5-2017-0035-002** is hereby assigned to all produced wastewater discharges into the pond. Aera should become familiar with all of the requirements, time schedules, prohibitions, and provisions of General Order Two, and Monitoring and Reporting Program R5-2017-0035 (MRP).

KARL E. LONGLEY SCD, P.E., CHAIR | PAMELA C. CREEDON P.E., BCEE, EXECUTIVE OFFICER



Notice of Applicability for General Order Two Lost Hills Two Lease Lost Hills Oil Field Kern County

This letter also serves as formal notice that Cleanup and Abatement Order R5-2015-0736 (CAO) is hereby rescinded. The CAO was issued for ponds at two separate leases in the Lost Hills Oil Field, the Lost Hills One Lease and the Lost Hills Two Lease. An NOA for the Lost Hills One Lease has been issued.

General Order Two regulates the discharge of produced wastewater into ponds. The "LH 2 Sand Basin" and the "Lost Hills 2 Emergency Holding Pond" are "ponds" based on the definition in General Order Two's Attachment A (Definition Of Terms). As stated in Water Code section 13263, all discharges of waste into waters of the state are privileges, not rights. General Order Two does not create a vested right for Aera to continue the discharges of waste to the ponds. Failure to prevent conditions that create or threaten to create pollution or nuisance or cause degradation will be sufficient reason to modify, revoke, or enforce the provisions of General Order Two, as well as prohibit further discharge. There is a need to maintain on an ongoing basis the integrity of each pond's liner.

In 2006, the Central Valley Water Board, the State Water Resources Control Board (State Water Board), and regional stakeholders began a joint effort to address salinity and nitrate problems in the region and adopt long-term solutions that will lead to enhanced water quality and economic sustainability. Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is a collaborative basin planning effort aimed at developing and implementing a comprehensive salinity and nitrate management program. The CV-SALTS effort might effect changes to the Basin Plan that would necessitate the re-opening of General Order Two.

FACILITY SPECIFIC REQUIREMENTS

- 1. Aera shall maintain exclusive control of the discharge and shall comply with all of the requirements and timelines of General Order Two, and the MRP.
- Aera shall operate and maintain the ponds sufficiently to protect the integrity of
 containment and berms and prevent overtopping and/or structural failure. Emergencies
 shall be reported to the California Governor's Office of Emergency Services (Cal OES).
 Discharge of wastes other than those described in the NOI is prohibited. If the method or
 nature of waste discharge to the ponds changes, Aera must submit a Report of Waste
 Discharge (Form 200).
- 3. The required annual fee specified in the annual billing from the State Water Board shall be paid until coverage under General Order Two is officially terminated. Aera must notify the Central Valley Water Board in writing to request termination.
- 4. Within **90 days** of receipt of this letter, Aera shall, pursuant to Provision E.3 of General Order Two, submit written certification that acceptable flow meters have been installed at a location or locations to ensure the accurate measurement of all discharge flows. The certification shall be accompanied by: (1) a description of the flow metering devices installed, (2) a diagram showing their locations, and (3) evidence demonstrating that the devices were properly calibrated. An engineered alternative may be used if approved in writing by the Central Valley Water Board's Executive Officer.

Notice of Applicability for General Order Two Lost Hills Two Lease Lost Hills Oil Field Kern County

- Aera shall not discharge outside of the ponds. Wastewater use for dust control is not permitted. If Aera intends to apply for use of produced wastewater for dust control, a proposed management plan as described in Provision E.5 of General Order Two must be submitted.
- 6. Within **60 days** of receipt of this letter, Aera shall, pursuant to Provision E.6 of General Order Two, submit a solids management plan for approval by the Executive Officer. This plan shall include the information required by Provision E.6. Aera shall, also include the information described in General Order Two, Attachment B, Information Needs Sheet, Item B.8. (a. c.).
- 7. Provision E.7 of General Order Two requires that within **90 days** of receipt of this letter, Aera shall submit either: 1) a work plan to conduct studies necessary to demonstrate that the discharges of produced wastewater from wells that have been stimulated do not contain well stimulation treatment fluids in concentrations that could adversely affect beneficial uses of waters; or, 2) a work plan for an alternate disposal method for wastewater discharges from wells with a history of, or are planned to receive a "well stimulation treatment." As part of its compliance with Provision E.7., Area needs to submit a work plan for a study that evaluates the integrity of each pond liner or the results of a study demonstrating the integrity of the pond liners.
- 8. The MRP for General Order Two requires the submittal of a Monitoring Well Installation and Sampling Plan (MWISP) in accordance with specified time frames after the NOA is issued. The MWISP for a "large operator" is due 90 days after the NOA is issued. The Executive Officer may rescind the groundwater investigation and groundwater monitoring portions of General Order Two if Aera demonstrates that wastes discharged to the ponds cannot affect the quality of underlying groundwater.

According to information provided with the NOI, the discharge is contained within the ponds. The NOI reports that, "No Aera facilities in the oil field that is the subject of this NOI have met the requirements for coverage under the Industrial Storm Water General Permit." Order Number 2014-0057-DWQ (NPDES General Permit CAS000001) specifies waste discharge requirements for discharges of storm water associated with industrial activities. If the conditions or regulatory policies change, the Lease may need coverage under NPDES General Permit CAS000001. There is not a need to obtain coverage under NPDES General Permit CAS000001 at this time.

The MRP requires extensive monitoring of the Lease and the discharge. Failure to comply with the requirements in General Order Two and the MRP could result in an enforcement action as authorized by provisions of the California Water Code. A copy of General Order Two and the MRP is included with the enclosures to this notice. A copy can also be found online at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2017-0035.pdf.

The MRP includes monitoring and reporting of chemicals and additives. Aera should become familiar with those requirements. The Central Valley Water Board will review the MRP periodically and revise requirements when necessary.

Notice of Applicability for General Order Two Lost Hills Two Lease Lost Hills Oil Field Kern County

The MRP can be modified if Aera provides sufficient data to support the proposed changes. If monitoring consistently shows no significant variation in magnitude of a constituent concentration or parameter after a statistically significant number of sampling events, AERA may request the MRP be revised by the Executive Officer to reduce monitoring frequency or minimize the list of constituents. The proposal must include adequate technical justification for reduction in monitoring frequency.

Aera must comply with the Central Valley Water Board's Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991 (Standard Provisions). A copy of the Standard Provisions is included with the enclosures to this notice. A copy can also be found online at:

https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/std_provisions/wdr-mar1991.pdf.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review this action in accordance with Water Code section 13320 and CCR, title 23, division 3, chapter 6, section 2050 and those that follow. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Notice of Applicability, except that if the thirtieth day following the date falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day.

SUBMISSIONS

The Central Valley Water Board has gone to a paperless office system. All regulatory documents, submissions, materials, data, monitoring reports, and correspondence should be converted to a searchable Portable Document Format (PDF) and submitted electronically to the GeoTracker database http://geotracker.waterboards.ca.gov/.

GeoTracker Site Global ID: T10000006760 for the Lost Hills Two Lease

Documents that are less than 50 MB should also be emailed to: centralvalleyfresno@waterboards.ca.gov.

Documents that are 50 MB or larger should be transferred to a disk and mailed to the Central Valley Water Board office at 1685 E Street, Fresno, CA 93706.

10 April 2018

Please review the attached memorandum for more information. If you have any questions regarding this matter, please contact Zachary Jarvie of this office at (559) 445-5455 or at zachary.jarvie@waterboards.ca.gov.

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Pamela Creedon **Executive Officer**

Enclosures:

10 April 2018 Memorandum

1 March 1991 Standard Provisions

General Order Two

CC:

Howard D. Barlow, Senior Engineer, Amec Foster Wheeler Environment &

Infrastructure, Inc., Fresno



Central Valley Regional Water Quality Control Board

TO:

Clay Rodgers

Assistant Executive Officer

W. Dale Harvey

Supervising Engineer

RCE No. 55628

FROM:

Michael L. Pfister

MLP

Senior Engineering Geologist

PG No. 5946

Zachary J. Jarvie

Engineering Geologist

DATE:

10 April 2018

SUBJECT:

NOTICE OF APPLICABILITY, CENTRAL VALLEY REGIONAL WATER QUALITY

CONTROL BOARD, ORDER NUMBER R5-2017-0035, GENERAL ORDER NUMBER TWO, WASTE DISCHARGE REQUIREMENTS FOR OIL FIELD DISCHARGES TO LAND, AERA ENERGY LLC, LOST HILLS TWO LEASE.

LOST HILLS OIL FIELD, KERN COUNTY

Aera Energy LLC (Aera) operates the Lost Hills Two Lease (Lease) in the Lost Hills Oil Field, west of Interstate 5 and north of Highway 46. Two lined surface impoundments (ponds) used for temporarily holding produced wastewater (discharge) are present in the Lease. Both ponds are in the SE corner of section 19 of T26S, R21E, MDB&M. Aera identifies these ponds as the "Lost Hills 2 Emergency Holding Pond (S-111)", and the "Lost Hills 2 Sand Basin (SB-101)." On 13 November 2017, Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff received a Notice of Intent (NOI) for coverage under Waste Discharge Requirements General Order for Oil Field Discharges to Land, General Order Number Two, Order Number R5-2017-0035 (General Order Two). The NOI included an application fee and a copy of Form 200, "Application/Report of Waste Discharge ...". A Technical Report, dated 21 August 2017, and titled "Technical Report For General Order Number Two, Lost Hills 2 Lease, Aera Energy LLC, Lost Hills Oil Field, Kern County, California" (Report) as well as an addendum, dated 2 November 2017 were also submitted. The addendum contained produced wastewater sampling data. This memorandum provides a summary of the information provided.

BACKGROUND INFORMATION

General Order Two regulates oil field wastewater discharges that exceed the maximum oil field discharge limits for electrical conductivity, chloride, and boron contained in the Water Quality Control Plan for the Tulare Lake Basin, Second Edition, Revised July 2016 (Basin Plan).

Regarding the process by which wastewater is conveyed on site, the Report states that,

KARL E. LONGLEY SCD, P.E., CHAIR | PAMELA C. CREEDON P.E., BCEE, EXECUTIVE OFFICER

"Produced fluids from the Lost Hills 2 Lease come into the Lost Hills 2 Dehydration Plant. The oil and water are separated using free water knockouts, tanks, heater treaters, and Wemcos. The oil is put into tanks, through the Lease Automatic Custody Transfer, and pumped to the refineries. The water is further processed in the water plant, is distributed for softening, and then sent to steam generator settings or disposal. Scaled maps of the facility showing wells, topography, and containment structures are provided in Appendix A. A process flow schematic for Lost Hills 2 is shown on the Produced Water Flow Diagram provided in Appendix A.

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The heavy solids that drop out in the free water knockout are flushed to the Lost Hills 2 Sand Basin. The Sand Basin contains a weir which allows one last chance to separate the solids from the fluids. The fluids float over the weir in the Sand Basin and are pumped back into the dehydration process using a float level on the pump. The solids are cleaned out using vacuum trucks. The Lost Hills 2 Dehydration Facility is shown on the Dehydration Plant Flow Diagram provided in Appendix A.

For fluids sent to disposal, Lost Hills 2 has disposal wells as shown on the Lost Hills 2 Disposal Well Map provided in Appendix A. Water that is not sent to the disposal wells is distributed to the Lost Hills 1 Facility and then to Belridge Dehydration Plant 20 for disposal.

When an upset occurs in the disposal system, the fluids are diverted to the S-111 Lost Hills 2 Emergency Holding Pond until the system is depressurized. Once the issue causing the upset is fixed, the water in the pond is pumped back into the process."

Submitted Information and Recent Regulatory History

On 29 January 2015, Central Valley Water Board staff (Staff) inspected the ponds. As a result of the inspection, Staff issued a Notice of Violation (NOV), dated 1 April 2015, for unregulated wastewater discharges at the Lost Hills Two Lease.

On 1 April 2015, Staff issued "California Water Code Directive Pursuant to Section 13267" (13267 Order), which required that Aera "Collect representative samples of wastewater within each of the ponds." In response a report, dated 3 February 2016, was provided that contained analytical results from samples collected on 5 June 2015 from the "Sand Basin," and on 11 June 2015 from the "Emergency Pond."

On 20 November 2015, Cleanup and Abatement Order (CAO) R5-2015-0736 was issued to Aera for the Lost Hills One Lease and the Lost Hills Two Lease. In response to the CAO, Aera conveyed a letter dated 18 January 2016, and a one page work plan (Work Plan).

Aera submitted on 8 May 2017, via email, a document dated 6 May 2017, and titled, "Technical Report for General Order Number Three." The stated purpose of the technical report was to "...fulfill the partial requirement of the Notice of Intent as stated in Attachment B of General Order Number Three." The technical report included information for the pond at the Lost Hills One Lease and for two ponds at the Lost Hills Two Lease. Central Valley Water Board staff comments regarding the review of the technical report and the Work Plan were conveyed in a

letter dated 6 June 2017. The 6 June 2017 letter stated that there was a need to obtain separate permits for the ponds at the two Leases, and that the available information did not indicate that General Order Three was appropriate for regulating Aera's ponds in the Lost Hills Oil Field.

POND CHARACTERISTICS

The Report states that the "Sand Basin" is "...comprised of two cells, each 50 feet, 10 inches long, and 21 feet wide, separated by a 10-inch thick concrete wall." and "...slopes downward from one end to a maximum depth of 7.5 feet...," and "...is constructed with an 8-inch-thick reinforced concrete floor over a 60-mil HPDE Liner," with 2 inches of sand separating the concrete and HDPE. The Report states that the outer walls "...are constructed with 10-inch-thick reinforced concrete." and that "the concrete is reinforced with #6 (3/4-inch diameter) steel rebar on 10-inch centers in an orthogonal pattern."

The Report states that the "Emergency Holding Pond" is "... 125 feet long, 100 feet wide, and 10 feet deep." It is "...constructed with a 60-mil thick HDPE liner over an 8-ounce geotextile." The volumetric capacity at 2-foot of freeboard is reported as being "...approximately 2.6 acrefeet."

Appendix A of the report contains a schematic of each pond.

General Order Two Discharge Specifications, Item B.10 states: "Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow)." The Report in response states: "Lost Hills 2 Sand Basin has a weir that is 4 feet below surface. Fluid is pumped out of weir before fluid level is near 2 feet freeboard. The Lost Hills Emergency Holding Pond is used when power failures or process failures require process fluids to be temporarily diverted to the pond. The reason is to protect Aera personnel, equipment, and the environment. Volumes required at these times should allow for 2 feet of freeboard."

DISCHARGE CHARACTERISTICS

Flow Volumes

The Report states: "The Lost Hills 2 Sand Basin operates a pump with a float in the weir of the Sand Basin. The float turns the pump on at 3.8 feet fluid depth. The estimated fluid volume in the Sand Basin at 3.8 feet is 1,456 bbls. Fluids are pumped from the weir back into the process. Sands are taken to Belridge during regularly scheduled maintenance."

With regards to the "Lost Hills 2 Emergency Holding Pond" the Reports states: "The data shows in 2015/2016, Aera averaged 7,857 bbls per month over 2.86 upsets. By adjusting the volume based on 2006 volumes, when production was highest, Aera estimates the maximum monthly discharge volume to the pit at 12,571 bbls. The estimated capacity of the pond with 2 feet of freeboard is 17,000 bbls."

Under Discharge Specifications, Item B.1., General Order Two states: "The discharge flow shall not exceed actual maximum monthly average produced wastewater flow to pond between 26 November 2004 and 26 November 2014. The discharge flow also shall not exceed the maximum design flow of the Facility's limiting unit as described by the technical data in the NOI."

Produced wastewater must not be allowed to over top and flow outside of the ponds. General Order Two prohibits produced wastewater discharges outside of the ponds.

Dust Control and Solid Reuse

With regards to the use of wastewater for dust control, the Report states: "Consistent with Provision E.5 of the General Order, Aera proposes to utilize produced water for dust suppression in the oil field covered by this NOI. Analytical data, along with a detailed management plan will be supplied for this use and no application of produced water to land will occur until the Executive Officer approves the management plan."

With regards to the reuse of solids the Report states: "Consistent with Provision E.6 of the General Order, Aera proposes to continue to beneficially utilize solids generated from the oil field covered by this NOI along with other Aera properties consistent with the current practices. Analytical data, along with a detailed management plan, consistent with Provision E.6 and items B-8 (a-c) will be supplied to describe both the centralized road mix processing facility in South Belridge and the regional use of that product for the construction of roads and well pads throughout Aera's operating properties."

Central Valley Water Board staff have not yet evaluated Aera's current "regional use" of solids generated from production activities, or the potential implications this may have for water quality. A detailed management plan, as descried above, needs to be provided to determine if Aera's current and planned uses of produced solids are appropriate for coverage under General Order Two.

Waste Constituents

The Report states: on 24 July 2017 "waste water samples were collected downstream of the Lost Hills 2 Sand Basin...". The analytical results from this sampling event are provided in the 2 November 2017 addendum to the Report. The sample results are summarized in **Table 1**, below.

Table 1 Selected constituent data from wastewater sample collected on 24 July 2017.

	Concentrations		
Constituents of Salinity	LH2 Sand Basin	LH2 EHP	Units
Total Dissolved Solids (TDS)	14,000	15,000	milligrams per Liter (mg/L)
Chloride	7,600	8,300	mg/L
Dissolved Boron	61	74	mg/L
Volatile Organic Compounds (VOC), and Polynuclear Aromatic Hydrocarbons (PAH)			
Benzene	1.3	2.0	micrograms per Liter (µg/L)
sec-Butylbenzene	0.15	<0.15	μg/L
Ethylbenzene	1.6	1.6	μg/L
Isopropylbenzene	0.37	0.22	μg/L
n-Propylbenzene	0.50	0.20	μg/L
Toluene	1.6	3.3	μg/L
1,2,4-Trimethylbenzene	2.3	0.99	μg/L
1,3,5-Trimethylbenzene	0.50	0.17	μg/L
Total Xylenes	1.8	2.0	μg/L
Benzo[b]fluoranthene	39	<0.29	μg/L
Benzo[a]pyrene	23	< 0.43	μg/L
Benzo[g,h,i]perylene	23	<0.48	μg/L
Indeno[1,2,3-cd]pyrene	20	<0.43	μg/L
Naphthalene *	1.1 / 14	1.4 / 0.97	μg/L
Phenanthrene	160	<0.27	μg/L
Radioactivity			
Gross Alpha	-6.31 ± 85.2	21.5 ± 57.5	picoCuries per Liter (pCi/L)
Radium-226	2.39 ± 0.679	6.17 ± 3.73	pCi/L
Radium-228	4.23 ± 9.82	5.38 ± 7.55	pCi/L
Total Uranium	0.64	<0.34	pCi/L

Naphthalene was analyzed for twice, and detected at concentrations of 1.1 μg/L and 1.4 μg/L with U.S. EPA method 8260 (VOCs), and detected at concentrations of 14 μg/L and 0.97 μ/gL with U.S. EPA method 8270 (PAHs).

The Report states: "Hazardous wastes are not typically generated in these fields. However, any generated wastes will be disposed of in accordance with both State and Federal laws and not commingled with wastewater." Discharge Specification B.15 of General Order Two requires that the discharger monitor the accumulations of solids within the ponds and as necessary, remove them. Additional General Order Two requirements for solids are in Section D, titled "Solids Disposal Specifications."

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REGIONAL CHARACTERISTICS AND GROUNDWATER

With regards to underlying soils, the Report states: "The Lost Hills 2 Sand Basin and Emergency Holding Pond are located in the Tulare outcrop. Soil samples collected from boring STK4234-19-B, located approximately 1,975 feet northwest of the Lost Hills 2 Facility, indicate that air sands with diatomaceous silts and clays are present to a depth of 50 feet bgs. Additionally, well log analysis from adjacent well STK4234-19 indicates that the soil is unsaturated to a depth of approximately 120 feet bgs, where oil is encountered. Location and analysis of the boring in Lost Hills Oil Field near discharge locations is in attachment <u>E.11.B</u> LH2 Bore Study Locations and Cross Sections provided in Appendix C."

The Report also states: "The Tulare Formation is composed of alternating layers of permeable sands, tight silts, and impermeable clays that were deposited in non-marine environments, including delta, floodplain, lacustrine, and alluvial deposits. This depositional sequence of sands and clays is observed across the Project Area, where steam is injected into the Tulare oil sands to help recover the heavy oil. The clay layers act as impermeable seals to confine the steam to the oil sands."

The ponds are located on the east side of the Lost Hills anticline. Figures included in the 15 August 2016, "Phase 1 UIC Aquifer Exemption Package, Tulare Formation, Lost Hills Oil Field, Kern County,..." indicate that the ponds are positioned on Tulare Formation sediments.

Regarding the depth and quality of groundwater underlying the pond, the Report states: "Groundwater is not present underneath the Lost Hills 2 Facility. Based on data from the State Water Resources Control Board (SWRCB) online GeoTracker GAMA system, shown in attachment E.12.a GAMA Source Water Well Map, and the Lost Hills Water Storage District, no domestic or agricultural groundwater source wells exist within 12 miles downgradient of Lost Hills 2 Facility. On the west side of the Lost Hills Anticline there is a source well 7 miles west of the facility.

The Report also states: "The first encountered fluid under the facility is oil. A summary of groundwater quality downgradient of the facility is shown in attachment E.12.f Ground Water Maps and Tables provided in Appendix C."

SUMMARY

The "Lost Hills 2 Sand Basin" is lined with reinforced concrete over an HPDE Liner. The "Lost Hills 2 Emergency Holding Pond" is lined with an HDPE liner over a geotextile. General Order Two requires groundwater monitoring as described in Monitoring and Reporting Program R5-2017-0035 (MRP) that accompanies General Order Two.

The MRP requires that a "Monitoring Well Installation and Sampling Plan" (MWISP) be submitted within specified time frames. However, the MRP states that, "If the Discharger demonstrates that the wastes discharged to the ponds cannot affect the quality of underlying groundwater, the Executive Officer may rescind by signed letter all or part of the requirements to complete the groundwater investigation and groundwater monitoring portions of this Order." Any proposal to rescind this requirement will need to demonstrate that the ponds has and will contain produced waste water.

Based on the conditions described in the Report, coverage under General Order Two appears to be appropriate for the ponds. As per Title 23, CCR, section 2200, the discharge shall be given a TTWQ (threat to water quality) and CPLX (complexity rating) of 3C. Aera is responsible for annual fees associated with this rating, unless conditions or regulatory policies change.