



Central Valley Regional Water Quality Control Board

1 September 2020

Ms. Julie Glavin, Environmental Advisor
Aera Energy, LLC
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Bakersfield, CA 93311

CERTIFIED MAIL
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NOTICE OF APPLICABILITY

CENTRAL VALLEY WATER BOARD VALLEY REGIONAL WATER QUALITY CONTROL BOARD, ORDER NUMBER R5-2017-0036, WASTE DISCHARGE REQUIREMENTS FOR OIL FIELD DISCHARGES TO LAND, GENERAL ORDER THREE, AERA ENERGY, LLC, PENN-ZIER LEASE, COALINGA OIL FIELD, FRESNO COUNTY

On 14 November 2019, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) received a document titled, *Re: California Water Code Section 13260 Request, Waste Discharge Requirements Order No. 58-460, Aera Energy LLC, Penn-Zier Lease, Coalinga Oil Field, Fresno County (Request)*. The Request references an additional document, which was submitted to the Central Valley Water Board on 2 January 2014, titled *Revised Report of Waste Discharge and Technical Report, Aera Coalinga Surface Impoundments, Fresno County, California (RWD)*. Both the Request and RWD are collectively referred to as the "NOI". The NOI requests coverage under Waste Discharge Requirements for Oil Field Discharges to Land, General Order Three, Order No. R5 2017-0036 (General Order Three) for discharges from the Penn-Zier Lease. Central Valley Water Board staff's review of the NOI is in the enclosed memorandum.

Aera operates the Penn-Zier Lease in the Coalinga Oil Field (Lease or Facility), which utilizes seven unlined surface impoundments (ponds) for the disposal of oil field produced water (produced water or discharge). Discharges to the ponds are regulated by Waste Discharge Requirements No. 58-460 (WDRs), which regulate discharges of oil field produced wastewater (produced water) to land. The WDRs are outdated and do not reflect the Central Valley Water Board's current plans and policies.

According to information submitted in the NOI and supporting documents, the ponds are situated in the Etchegoin Formation. The Etchegoin Formation is a marine sedimentary formation which includes alternating layers of sandstones, siltstones, and mudstones.

KARL E. LONGLEY ScD, P.E., CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

According to the NOI, discharges of produced water to the ponds percolate directly into Etchegoin Formation sandstones, follow a flow path along strike, and mound on top of connate marine water. Produced water reportedly cannot migrate from the Etchegoin Formation because thick siltstones impede the flow of water from the formation. The NOI indicates the discharges to the ponds cannot impact usable groundwater in the Quaternary Alluvium or Tulare Formation in the Pleasant Valley Aquifer. Based on this assessment, the ponds appear appropriate for coverage under General Order Three.

This letter serves as formal notice that General Order Three is applicable to discharges to the ponds (Notice of Applicability or NOA). General Order **Number R5-2017-0036-017** is hereby assigned to all produced water discharges into the following ponds:

Pond Name	Length (feet)	Width (feet)	Depth (feet)	Total Capacity with Two Feet of Freeboard (cubic feet)
1	107	52	20	100,152
2	166	114	20	340,632
3	161	70	20	202,860
4	180	134	20	434,160
5	132	59	20	140,184
6	245	85	20	374,850
7	73	52	20	68,328

Aera is regulated under Monitoring and Reporting Program No. R5-2016-0814 (also referred to as the "MRP"). The NOI includes a request from Aera to have revisions made to this monitoring and reporting program. A review of this request can be found in the enclosed memorandum. Monitoring and Reporting Program No. R5-2016-0814 is discussed under Facility Specific Requirements No. 14 below.

As stated in California Water Code section 13263, all discharges of waste into waters of the state are privileges, not rights. General Order Three does not create a vested right for Aera to continue the discharge. Failure to prevent conditions that create or threaten to create pollution or nuisance or cause degradation of groundwater, will be sufficient reason to modify, revoke, or enforce the provisions of General Order Three, as well as prohibit further discharge.

In 2006, the Central Valley Water Board and the State Water Resources Control Board (State Water Board), and regional stakeholders began the joint effort to address nitrates and salinity 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 Three.

FACILITY SPECIFIC REQUIREMENTS

1. The required annual fee specified in the annual billing from the State Water Board shall be paid until coverage for the Lease under General Order Three is officially terminated. Aera shall notify the Central Valley Water Board in writing to request termination.
2. Aera shall maintain exclusive control of the discharge and shall comply with all the requirements and timelines of General Order Three and the applicable MRP.
3. Aera must submit information on additives used at all facilities that contribute produced water to the ponds in self- monitoring reports, as required by the MRP once finalized (See Facility Specific Requirement 14).
4. The WDRs provide coverage for the Penn-Zier Lease and the CMS-Aztec Lease. R5-2017-0036-017 is not assigned to the CMS-Aztec Lease. For the Penn-Zier Lease only, the requirements of General Order Three supersedes the requirements of the WDRs. Aera has stated that the discharge at the CMS-Aztec Lease have ceased and the ponds there will be closed. When the ponds at the CMS-Aztec Lease are closed, Central Valley Water Board staff will make a request to the Board that the WDRs be rescinded.
5. Aera shall operate and maintain the ponds sufficiently to protect the integrity of containment and prevent overtopping and/ or structural failure. Discharges not authorized by General Order Three and not described in the NOI should be reported to the Central Valley Water Board. The discharge of wastes other than those described in the NOI is prohibited. If the method of waste disposal changes, Aera shall submit a Report of Waste Discharge.
6. Under Discharge Specifications, Item B.2. of General Order Three states, "The discharge flow shall not exceed actual maximum monthly average produced wastewater flow to the 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." The NOI indicates the maximum monthly average discharge to the ponds was 1,869,563 barrels (one barrel is equivalent to approximately 42 gallons).

The maximum monthly average discharge into the ponds shall not exceed 1,869,563 barrels. Any increase in discharge volume that would exceed the monthly average flow constitutes an expansion of the Facility and would require an evaluation under the California Environmental Quality Act (CEQA). Additionally, the discharge to the ponds shall not exceed their design capacity with two feet of freeboard.
7. By **4 November 2020**, Aera shall submit a water balance capacity analysis demonstrating that the as-built hydraulic capacity of the facility is consistent with the flow limits while taking into account a total annual precipitation using a return period

of 100 years, distributed monthly in accordance with historical rainfall patterns. The water balance analysis needs to consider the following: 1) a required minimum of two feet freeboard in each pond at all times, 2) historical pan evaporation rates, and 3) projected long term percolations rates.

8. By **4 December 2020** Aera shall, pursuant to Provision E.3 of General Order Three, 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.
9. By **4 November 2020**, Aera shall submit information regarding the discharge including: 1) a list of all oil production leases that contribute produced water to the ponds, and 2) recovery methods used on those leases, including enhanced oil recovery methods.
10. Aera has not indicated whether the wells on the Lease have received any well stimulation treatment as defined by California Code of Regulations (CCR) title 14, section 1761.

By **4 November 2020**, Aera shall inform the Central Valley Water Board, in writing as to whether the ponds accept produced water from any wells which have undergone a well stimulation treatment (e.g., hydraulic fracturing, acid fracturing, and acid matrix stimulation). If the ponds accept produced water from a well that has undergone a well stimulation treatment, then Aera shall comply with the compliance schedule provided in Provision E.8 of General Order Three.

11. Aera needs to satisfy Provision 4 of General Order Three (Provision 4). Aera shall, pursuant to Provision E.4.b of General Order Three, comply with the time schedule on pages 23 through 26 of General Order Three. This time schedule establishes a five year process, during which Aera must demonstrate that the natural background quality for the facility meets the Sources of Drinking Water Policy exception criteria and/or parallel exception criteria outlined in this General Order and thus the current beneficial uses, as designated in the Water Quality Control Plan for the Tulare Lake Basin, Third Edition, Revised May 2018 (Basin Plan) are eligible for de-designation.

Tasks that Aera must complete include, but are not limited to the following: 1) On an ongoing basis, Aera must participate in the CV-SALTS Group to facilitate the Basin Plan Amendment (BPA) process under the Salt and Nutrient Management Plan; 2) by 15 January 2020 from the date of this NOA, Aera must submit an outline of the BPA work plan to the Central Valley Water Board for review; 3) by 9 July 2021 Aera submit a completed BPA Work Plan to the Central Valley Water Board

for review; and 4) by 8 September 2023, Aera must submit a final technical report to the Central Valley Water Board for review.

Aera may work with other pond operators to obtain a BPA covering the region of their respective ponds.

Aera should note that subsequent tasks require review of the proposed BPA by stakeholders, the public, the State Water Resources Control Board, and the Office of Administrative Law.

12. If Aera intends to apply for use of produced water for dust control, a proposed management plan, as described in Provision E.G of General Order Three must be submitted at least 90 days prior to the anticipated discharges.
13. If Aera decides to reuse Lease solids for road mix on the Lease, Aera shall submit a solids management plan, as described in Provision E.7 of General Order Three. Aera must submit a solids management plan for review at least 180 days prior to any solids reuse. The solids management plan must be approved by the Central Valley Water Board's Executive Officer.
14. Order No. 2014-0057-DWQ (NPDES General Permit CAS000001) specifies requirements for discharges of storm water associated with industrial activities. By 4 November 2020, Aera shall provide information regarding stormwater on the Lease.
15. The NOI includes a request by Aera to have revisions made to Monitoring and Reporting Program (MRP) No. R5-2016-0814.

An administrative draft of revised Monitoring and Reporting Program R5-2017-0036 (Revised Monitoring and Reporting Program No. R5-2017-0036 or Revised MRP) is enclosed with this letter. By **18 September 2020**, Aera should review the Revised MRP and provide comments. Thereafter, the Executive Officer will issue the Revised MRP and rescind MRP No. R5-2016-0814.

Failure to comply with the requirements of General Order Three and the MRP could result in an enforcement action authorized by provisions of the California Water Code. [A copy of General Order Three is included in the enclosure of this letter. A copy can also be found online here.](#)

Aera shall comply with the Central Valley Water Board's Standard Provision and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991 (Standard Provisions). [A copy of the Standard Provisions is included with the enclosures of this letter. A copy can also be found online here.](#)

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 the California 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 PM, 30 days after the

date of this NOA, 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 PM on the next business day.

SUBMISSIONS

Documents associated with the Lease, including monitoring reports, investigation results, and other documents, that are less than 50 MB can be sent via electronic mail to: centralvalleyfresno@waterboards.ca.gov. Documents that are 50 MB or larger can be mailed to the Central Valley Water Board office at 1685 E Street, Fresno, CA 93706.

Aera shall submit electronic PDF copies of all work plans, reports, analytical results, and groundwater elevation data over the internet to the State Water Board Geographic Environmental Information Management System database (GeoTracker). When applicable, Aera shall submit analytical data in both PDF and EDF (electronic data files) of the discharge to GeoTracker. Electronic submittals shall comply with GeoTracker standards and procedures. Uploads to GeoTracker shall be completed on or prior to the due date. The GeoTracker site Global I.D. number that is associated with this NOA is: **L1000585542**.

Please review the enclosed documents. If you have any questions regarding this matter, you may contact Rebecca. T. Asami at (559) 445-5548 or by email at: rebecca.asami@waterboards.ca.gov.

Original Signed by W. Dale Harvey for:
Patrick Pulupa,
Executive Officer

Enclosures: 2 September 2020 Memorandum
Administrative draft Monitoring and Reporting Program
General Order Three
1991 Standard Provisions

cc: Chris Jones, Acting District Deputy for the Inland District, CalGEM, Bakersfield
(without enclosures via email)
Tom Snowden, Water Compliance Assurance Specialist, Aera, Bakersfield