CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

December 18, 2015

Ms. Megan Graves
Aera Energy LLC
10000 Ming Avenue
Bakersfield, CA 93311

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED
CLAIM NO. 7015 0640 0006 6057 7365

CALIFORNIA WATER CODE DIRECTIVE PURSUANT TO SECTION 13267 – ORDER TO SUBMIT INFORMATION – THE DISPOSAL OF WELL DRILLING FLUIDS, WELL COMPLETION FLUIDS, AND PRODUCTION FLUIDS TO LAND FOR AERA ENERGY LLC OIL AND GAS OPERATIONS IN LOS ANGELES AND VENTURA COUNTY, CALIFORNIA

Dear Ms. Graves:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), is the public agency with primary responsibility for the protection of ground and surface water quality within the major portions of Los Angeles and Ventura Counties.

Recently, the California State Legislature has requested that the State Water Resources Control Board (State Water Board) obtain information from operators of oil and gas production facilities regarding the management of fluids associated with oil and gas production and the potential impacts on water quality. As you know, a common oil and gas industry practice is to discharge oil production fluids to land, typically into sumps or produced water ponds.

Operator contact Information available from the California Division of Oil, Gas, and Geothermal Resources (DOGGR) has identified Aera Energy LLC as an operator of oil and gas wells within either DOGGR District One or Two, or as an operator within multiple DOGGR Districts. The enclosed Order issued pursuant to section 13267 of the California Water Code requires the submittal of technical reports regarding information on how fluids associated with oil and gas production are managed within the fields you operate. The Regional Board will provide this information to the State Water Board. If you currently do not operate any oil and gas facility within Los Angeles or Ventura Counties, please respond to this Order with such information.

The Regional Board requires this information as set forth in the attached Order No. R4-2015-0271 (Order) no later than **30 days** from the issuance of the Order. If you have any questions regarding this matter, please contact Mr. Joshua Cwikla at (213) 576-6713, or by email at joshua.cwikla@waterboards.ca.gov, or Dr. Yue Rong at (213) 576-6710, or by email at yue.rong@waterboards.ca.gov

Sincerely,

for Paula Rasmussen
Samuel Unger, P.E.
Executive Officer

Enclosure: Order No. R4-2015-0271

cc: John Borkovich, State Water Resources Control Board
Christine York, State Water Resources Control Board
Janice Zinky, State Water Resources Control Board
Eric Gillman, Office of Chief Counsel, State Water Resources Control Board
Bruce Hesson, Department of Oil, Gas, and Geothermal Resources
Pat Abel, Department of Oil, Gas, and Geothermal Resources
Daniel Dudek, Department of Oil, Gas, and Geothermal Resources

INVESTIGATIVE ORDER NO. R4-2015-0271 TO PROVIDE A TECHNICAL OR MONITORING REPORT ON

THE DISPOSAL OF WELL DRILLING FLUIDS, WELL COMPLETION FLUIDS, AND PRODUCTION FLUIDS TO LAND FOR AERA ENERGY LLC OIL AND GAS OPERATIONS IN LOS ANGELES AND VENTURA COUNTY, CALIFORNIA

CALIFORNIA WATER CODE SECTION 13267

DIRECTED TO AERA ENERGY LLC
10000 MING AVENUE
BAKERSFIELD, CA 93311

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) is authorized pursuant to Section 13267 of the California Water Code to require the submittal of technical and monitoring reports. The purpose of this Order is to obtain information regarding the management of the discharges of wastes to land during drilling and completion of oil and gas wells and the discharge of fluids associated with oil and gas production and to assess the threat to water quality from such discharges.

California Water Code section 13267 specifies, in part, that:

> *(a) A regional board...in connection with any action relating to any plan or requirement authorized by this division, may investigate the quality of any waters of the state within its region.*
>
> *(b)(1) In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region...that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.*

The Regional Board has determined that you discharge waste or are suspected of discharging waste that could affect the quality of the waters of the state. Operator

contact Information provided by the California Division of Oil, Gas, and Geothermal Resources (DOGGR) has identified Aera Energy LLC as an operator of oil and gas wells within either DOGGR District One or Two, or as an operator within multiple DOGGR Districts. A common oil and gas industry practice is to discharge well drilling fluids, well completion fluids, and oil production fluids to land, typically into sumps or ponds.

Accordingly, you are required to submit a technical report by **January 18, 2016,** including the information described below. For the purposes of this Order, a "sump" is any open pit, pond, excavation, natural depression, or any other area serving as a receptacle for collecting and/or storing fluids or solid waste material from an oil and gas well or group of oil and gas wells. This includes all sumps (i.e., historic, active, temporary, and long-term). Historical sumps may no longer be in use or may not be readily visible due to grading or other changes over time, but are nevertheless included in our definition. Also, for the purposes of this Order, discharges to sumps include any fluids associated with oil/gas drilling and production operations in the oil fields you operate. Regarding historical sumps and fluid discharges for which you have no records, you may estimate the number and location of sumps, and the amount and types of fluids discharged to the sumps, based on oil well locations and operations.

The technical report must include the following information, in the form of written descriptions, a template spreadsheet (Attachment B), and maps:

1) The locations of all current and historic sumps in your area of operations used in the discharge of fluids to land. Provide all information regarding liner material used with each sump, if any. Provide the status of all sumps, including active, inactive, closed with cleanup, closed without cleanup, or unknown. For sumps closed with cleanup, describe the cleanup activities and cleanup level.

2) The procedures you use to close or abandon sumps, or otherwise cease their operation.

3) The estimated total annual amount of fluid previously discharged into each historic and active sump, and estimated annual amount of fluid to be discharged to active sumps going forward.

4) The physical and chemical composition of any fluids discharged into each sump.

5) The physical and chemical composition of any solidified waste in each sump.

6) The location of any domestic, municipal, and commercial water wells within a half-mile radius of any current or historic sump.

7) Historic water quality data available for any wells within a half-mile radius of any current or historic sump. Attachment A lists the constituents we are most interested in for historical data (as well as current data).

8) Current sampling results for any wells within a half-mile radius of any current or historic sump. You are required to sample these wells for the constituents listed in Attachment A and submit the results in your technical report.

9) Locations, well construction, and survey data for any monitoring wells in the vicinity of any current or historic sumps, and water quality data associated with these wells.

The technical report required above must include information submitted in the format of the example Excel spreadsheet (see Attachment B). A tab entitled *Instructions* is located at the bottom of the opened Excel file. The *Instructions* tab lists detailed directions regarding what is required in each column of the spreadsheet. Each sump reported should be presented in a separate spreadsheet row.

The technical report must describe the procedures used to close drilling sumps at new wells, smaller temporary operational sumps next to existing wells and sumps used in oil/gas production, and historical sumps. If solid waste was present during the life of a sump, then describe the origin and composition of that waste in the report. General comments about any information in the spreadsheet must be described in detail in the technical report.

In addition, a map and/or satellite image with scale, direction, legend, and point of reference must be included for each sump listed on the spreadsheet, along with domestic, municipal, and commercial wells, clearly designated within a half mile radius of the sump. Multiple sumps may be included on the map/image so long as the individual sumps and features on the map are clearly discernable.

If no discharges occurred during the period in which Aera Energy LLC or any subsidiary has owned and/or operated within the oilfield or fields you operate in, please submit a statement by **January 18, 2016,** certifying that no such discharges occurred, and include a description of disposal methods, destinations, and volumes for fluids associated with drilling practices and oil/gas operations.

The Regional Board, under authority given by the California Water Code section 13267, subdivision (b)(1), requires submissions pursuant to this Order include the following statement signed by an authorized representative:

> *I, [NAME] certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of the those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*

The Regional Board needs the required information to characterize the volume and type of fluids discharged to land and to evaluate the potential impacts or threatened impacts

to water quality posed by the discharge. These discharges may pose a significant threat to water quality, especially considering the magnitude and areal extent of oil production activities in the Los Angeles Region and the Region's reliance on groundwater as a source of drinking water. The Regional Board also needs this information to determine if additional requirements are necessary, such as Waste Discharge Requirements issued pursuant to section 13263 of the California Water Code, to protect beneficial uses of groundwater and surface water as described in the Los Angeles Region Basin Plan. The burden, including costs, of these reports is reasonable given the significant public concern evidenced in the California Legislature's request to the State Water Resources Control Board (State Water Board) and the potentially significant impacts on water quality that may occur as a result of the discharges of waste associated with your activities.

The failure to furnish the required report, or the submission of a substantially incomplete report or false information, is a misdemeanor, and may result in additional enforcement actions, including issuance of an Administrative Civil Liability Complaint pursuant to California Water Code section 13268. Liability may be imposed pursuant to California Water Code section 13268 in an amount not to exceed one thousand dollars ($1,000) for each day in which the violation occurs.

Any person aggrieved by this action of the Regional Board may petition the State Water Board to review the action in accordance with California Water Code section 13320. The State Water Board must receive the petition by 5:00 p.m., within 30 days after the date of this directive, except that if the thirtieth day following the date of this directive 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. Copies of the law and regulations applicable to filing petitions may be found at: www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

Each of the above items shall be submitted in a CD-ROM or flash drive with an electronic copy of the report in Adobe Acrobat (PDF) format and the spreadsheet in Excel (XLS) format to:

Los Angeles Regional Water Quality Control Board
320 W. Fourth Street, Suite 200
Los Angeles, CA 90013
Attn: Joshua Cwikla
(213) 576-6713
joshua.cwikla@waterboards.ca.gov

The technical report is required to be submitted under the California Water Code section 13267 Order No. R4-2015-0271. Pursuant to California Water Code section 13267(a), any person who fails to submit reports or submits a falsified report in accordance with the Order is guilty of a misdemeanor. Pursuant to section 13268(b)(1) of the California Water Code, failure to submit the required technical report described above by the

specified due date(s) may result in the imposition of administrative civil liability by the Regional Board in an amount up to one thousand dollars ($1,000) per day for each day the technical report is not received after the above due date. These civil liabilities may be assessed by the Regional Board for failure to comply, beginning with the date that the violations first occurred, and without further warning.

SO ORDERED

for Paula Rasmussen
Samuel Unger, P.E.
Executive Officer

12-18-2015
DATE

Enclosures:
Attachment A: Water Quality Analysis and Reporting
Attachment B: Spreadsheet sample and Instructions

ATTACHMENT A

Water Quality Analysis

Groundwater samples collected from wells and injection zones shall be analyzed by a laboratory certified by the Environmental Laboratory Accreditation Program, using current applicable EPA-approved analytical methods for water for the following:

A. Total dissolved solids

B. Metals listed in California Code of Regulations, Title 22, Section 66261.24, Subdivision (a)(2)(A)

C. Benzene, toluene, ethylbenzene, and xylenes

D. Total petroleum hydrocarbons for crude oil

E. Polynuclear aromatic hydrocarbons (including acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorene, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, and pyrene)

F. Radionuclides listed under California Code of Regulations, Title 22, Table 64442

G. Methane

H. Major and minor cations (including sodium, potassium, magnesium, and calcium)

I. Major and minor anions (including nitrate, chloride, sulfate, alkalinity, and bromide)

J. Trace elements (including lithium, strontium, boron, iron, and manganese)

Water Quality Reporting

Water quality information shall include, at a minimum:

A. Site plan with locations of well(s) sampled.

B. Description of field sampling procedures.

C. Table(s) of analytical results organized by well number (including API number).

D. Copies of analytical laboratory reports, including quality assurance/quality control procedures and analytical test methods.

ATTACHMENT B
EXAMPLE FOR EACH SUMP

A.	B.	C.	D.	E.		F.	G.	H.	I.	J.	K.	L.	M.	N.	O.
Owner and/or Operator	Field Name	County	Sump Name/Description	Sump Location Latitude	Longitude	(LxWxD) Sump Volume in $ft.^3$	When Was the Sump First Excavated?	How Many Years Was the Sump Active?	Total Annual Amount of Fluid Discharged in bbls.	Composition of Fluid(s)	Was Sump filled with Soil or Other Material? (Yes/No)	When Was the Sump Filled?	What Material Was Used to Fill the Sump?	Was There Solidified Waste? (Yes/No)	If Yes, What Was the Composition of those Solids?

INSTRUCTIONS TO COMPLETE THE SPREEDSHEET ARE ON PAGE 2

INSTRUCTIONS TO COMPLETE SPREADSHEET

Please use the following guidelines when entering data into the spreadsheet.

Spreadsheet Column

A. The name of the Owner and/or Operator.
B. Oil Field the sump is located in.
C. County the sump is located in.
D. The name of the sump or a description that identifies the sump.
E. Latitude and Longitude, use decimal degrees to the fifth decimal place. Use North American Datum of 1983 (NAD83).
F. Give the apporximate volume of the sump in cubic feet (L x W x D).
G. Give the year the sump was initially excavated - if not known use: UNK.
H. Indicate how many years the sump was actively used. Do not count years in which there was no active discharge into the sump.
I. Give the average annual amount of fluid discharged into the sump in barrels.
J. Descripe the physical and chemical composition of any fluids discharged into the sump.
K. Indicate if the sump was filled in with soil or any other type of material.
L. Give the year the sump was filled in
M. If yes for column X, then give a brief description of material used to cover sump e.g. on site soil, trucked in clay/sand fill.
N. Indicate if any solid fluids were discharged into or percipitated in the sump.
O. If Yes for column P, then list the physical and chemical composition of those solids.

NOTE: Spreadsheet cells should be adjusted in such a way that all inputed data is clearly visible.