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June 11, 2015

Ronald Holcomb
Central Valley Region
Water Quality Control Board
1685 East E Street
Fresno, CA 93706

SUBJECT: INFORMATION REQUESTED BY SECTION 13267 ORDER
CYMRIC OIL FIELD

Dear Mr. Holcomb:

In a letter dated April 1, 2015, the Regional Water Quality Control Board (RWQCB) requested laboratory analyses of locations previously identified by RWQCB staff and an inventory of other potential discharge locations not previously identified. The attached report prepared by Amec Foster Wheeler Environment & Infrastructure, Inc. includes the requested information covering Aera Energy LLC's (Aera) operations within the Cymric Oil Field.

Aera has provided as much information as possible within the short timeframe specified by the RWQCB. Existing equipment databases were queried and experienced personnel were engaged to prepare the inventory. Even taking into account these measures, it is possible that some minor discharge locations were overlooked.

In addition, Aera continues to install new or modify existing equipment that could be classified as a potential discharge point. Pressure relief valves are needed to protect personnel and equipment from catastrophic failures or a new steam injection well, approved by the Division of Oil, Gas and Geothermal Resources, may be drilled to support existing operations. Aera understands that the RWQCB is re-evaluating the regulatory framework that encompasses this type of equipment. When the evaluation is complete, the attached report may need to be supplemented to include added discharge locations or delete locations that have been abandoned.

The sampling of the fluids has been proceeding expeditiously. However, many of the locations do not contain fluids or sufficient fluids to collect the required samples. Where fluids are available, extensive safety planning must be implemented in order to ensure

Aera Energy LLC • 10000 Ming Avenue • P.O. Box 11164 • Bakersfield, CA 93389-1164 • (661) 665-5000 • Fax (661) 665-5065

the well-being of the personnel performing the work. Further, some of the laboratory methods requested by the RQWCB take several weeks to complete. Accordingly, laboratory analytical results will be submitted as they are received by Aera.

If you have any questions or require additional information, please contact Ron Chambers at (661) 665-5641 or John Haley at (661) 665-5279.

CERTIFICATION:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

W. D. Anderson
Vice President
Belridge Asset

cc: Ron Chambers, Aera
John Haley, Aera
William Pipes, Amec
Alex Olsen, Amec

June 11, 2015

Project FR15160780

Mr. John Haley
Aera Energy LLC
10000 Ming Avenue
Bakersfield, California 93311

Subject: **Technical Report – Potential Discharges to Land, Cymric Oil Field**
Aera Energy LLC, Kern County, California

Dear Mr. Haley:

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), is pleased to provide this technical report to Aera Energy LLC (Aera), presenting the results for the recent review of potential discharges to land conducted at the Cymric Oil Field in Kern County, California. The review was conducted to comply with the Central Valley Regional Water Quality Control Board's (RWQCB) Section 13267 Order dated April 1, 2015 (Appendix A). The order requested that potential discharges of wastewater to land be identified and where possible analytical results of wastewater samples collected be submitted in a technical report to the RWQCB by June 15, 2015.

DISCHARGE LOCATIONS

Aera has identified 103 potential discharge points within the Cymric Oil Field. An Inventory List, provided by Aera, of potential discharge points with their intended use is included in Appendix B. The locations of each discharge point are shown on Figures 1 through 3 included in Appendix B.

WASTEWATER SAMPLING

Samples could not be collected from the potential discharge points identified due to: the locations being dry, the locations are only used during an emergency (i.e pressure relief valve), the discharge location was not in operation, or samples could not be collected safely (e.g. high temperatures associated with steam).

The RWQCB did not previously identify any potential discharges to land for the Cymric Oil Field in their Order. As previously mentioned, Aera has identified several potential discharge points and is in the process of collecting samples as conditions allow and evaluating the potential for collecting representative samples from the remaining locations with Amec Foster Wheeler.

Amec Foster Wheeler Environment & Infrastructure, Inc.
1281 East Alluvial Avenue, Suite 101
Fresno, California 93720-2659
USA
Tel (559) 264-2535
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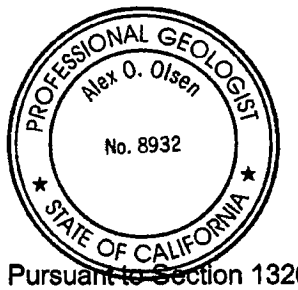
www.amecfw.com

CERTIFICATION

This letter was prepared by Amec Foster Wheeler staff under the supervision of the Professional Geologist whose seal and signature appear hereon. The findings, recommendations, specifications, or professional opinions presented in this letter were prepared in accordance with generally accepted professional geologic practices and within the scope of this project. No other warranty, express or implied, is provided.

Amec Foster Wheeler is pleased to be of service to Aera. Please call if you have any questions or require additional information.

Sincerely yours,
Amec Foster Wheeler Environment & Infrastructure, Inc.



Alex O. Olsen Jr., PG
Senior Geologist

Attachments:

Appendix A – April 1, 2015, California Water Code Directive Pursuant to Section 13267
Appenidx B – Inventory List and Cymric Potential Discharge Location Points

cc: Ron Chambers, Aera Energy LLC

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foster
wheeler

APPENDIX A

April 1, 2015, California Water Code Directive Pursuant to Section 13267

1 April 2015

Megan Graves
Aera Energy LLC
10000 Ming Avenue
Bakersfield, CA 93389

CERTIFIED MAIL
7014 3490 0001 7023 0025

CALIFORNIA WATER CODE DIRECTIVE PURSUANT TO SECTION 13267. You are legally obligated to respond to this Order. Please read this Order carefully.

Aera Energy LLC (hereafter Discharger) has been identified as the owner or operator of petroleum production wastewater disposal ponds (ponds). A list of the ponds (and the leases and oil fields where they are located) that the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) identifies as under your control is presented in Attachment A. Ponds for the disposal of wastewater generated during the course of petroleum production have the potential to affect the quality of groundwater (a water of the State). Groundwater underlying the areas where your ponds are located have beneficial uses as identified in the Water Quality Control Plan for the Tulare Lake Basin (Basin Plan).

This order requires the collection and analysis of wastewater samples collected from each of the ponds listed in Attachment A to characterize the discharge. Each sample is to be analyzed for each of the constituents listed in Attachment B. These data are needed to comprehensively characterize wastewater in each pond and provide data needed to evaluate the threat to the quality of waters of the State. If more than one pond is connected in series (i.e., one pond drains directly to the next with no other source of inflow) then only the upstream pond must be sampled. This order is not intended to require the collection of duplicative data. If during the 12 months (one year) prior to the date of this order, samples required by this order have been analyzed from one or more of the ponds for the required constituents, that data can be submitted for the appropriate order requirements.

This order also requires Discharger to identify any discharge(s) of oil field wastewater to land that is not identified in Attachment A. Discharger must also collect and analyze wastewater samples in accordance with Attachment B from any additionally identified discharge to characterize the discharge.

The Central Valley Water Board's authority to require technical reports derives from Section 13267 of the California Water Code, which specifies, in part, that:

(b) 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, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of 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 benefit 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 Central Valley Water Board is concerned about the potential impacts to water quality posed by the discharge of oil field produced waters in surface ponds. The technical information and reports required by this order are necessary to assess the potential threat to water quality. The need to understand the potential impacts to water quality justify the need for the information and reports required by this order. Based on the nature and possible consequences of the discharges of waste, the burden of providing the required information, including the reporting costs, bears a reasonable relationship to the need for the report, and the benefits to be obtained. Discharger is required to submit this information and reports because it is the operator of the ponds listed in Attachment A of this order.

The unauthorized discharge of waste containing oil field waste constituents to land, including unlined ponds, may result in the degradation of water quality and creates or threatens to create, a condition of pollution in groundwater. Significant concentrations of salinity (measured as TDS and EC), significant contributors to salinity such as chloride and sulfate, and boron are present in oil field wastewater. Other potential constituents such as, but not limited to, metals, radionuclides, and organic compounds pose a threat to water quality. The concentrations of these waste constituents in wastewater being discharged needs to be known to evaluate the threat. In addition, all locations where these discharges are occurring needs to be known.

Underlying groundwater can be degraded if mixed with oil field wastewater. Elevated concentrations of oil field waste constituents could impair the groundwater for municipal and domestic supply and agricultural supply uses.

Under the prescribed authority of California Water Code section 13267, the Central Valley Water Board directs Discharger to:

1. **By 15 June 2015**, submit a technical report containing the following information:

   A. Identification of any discharges of oil field produced waters to land, including but not limited to ponds, since April of 2014 that are not listed in Attachment A;

   B. Collect representative samples of wastewater within each of the ponds. Samples must be analyzed in accordance with the water quality analysis and reporting requirements contained in Attachment B to this Order;[1]

      If a representative sample cannot feasibly be collected from one or more of the sources discharging to a surface impoundment(s), then a comment will need to be added to the technical report required by this Order demonstrating that collection of a representative sample from a specific source is not feasible within the required timeframe, and propose an alternative sampling procedure and expeditious time schedule for obtaining a representative sample for each source. Alternative sampling procedures and time schedules are subject to approval by the Assistant Executive Officer of the Central Valley Regional Water Quality Control Board.

   C. All available information for each of the surface impoundment(s), including dimensions (i.e., length, width, and depth), latitude and longitude, Assessor's Parcel Numbers of the lease, duration of the discharge (in months), and the volume of wastewater discharged per year.

   D. A location map that includes the following information:

      i. All surface impoundment(s) at the Facility,
      ii. Include the boundary lines for all leases at the Facility, and
      iii. Legend with the name of the surface impoundment(s).

2. **By 15 April 2015**, Discharger needs to contact Dane S. Johnson of this office at (559) 445-5525 if you have received this Order and cannot collect the required samples.

[1] All previously obtained analytical data for oil field produced wastewater samples collected at the Facility, if any, with a description of the source and location for each analysis may be submitted in the alternative for re-running tests if the sample(s) was collected and analyzed within 12 months (one year) of the date of this order.

The technical report required by this Order must be submitted to the attention of:

Ronald Holcomb
Central Valley Water Board
1685 E Street
Fresno, CA 93706

Based on the information submitted in the technical report, additional information or action may be required.

With the report required by this Order, Discharger shall provide under penalty of perjury under the laws of California a "Certification" statement to the Central Valley Water Board. The "Certification" shall include the following signed statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

The Central Valley Water Board reserves the right to issue a Notice of Violation or pursue enforcement for Discharger's activities after reviewing the documentation provided in response to this Order.

The Technical Report is to be signed and stamped by a California Professional Engineer (Registered as a Civil Engineer) or a registered California Professional Geologist. Any laboratory analyses shall be performed by an analytical laboratory certified by the State of California for the analyses performed. Submissions pursuant to this Order shall include a statement by Discharger, or an authorized representative of Discharger, certifying (as described above) that the information submitted is true, complete, and accurate.

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 being taken against Discharger, 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. All discharges to unpermitted ponds should cease pending review and submission of the technical information sought by this order.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with

California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. 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 on the Internet at: www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

If you have any questions regarding this matter, please contact Doug Patteson of this office at (559) 445-5577 or at doug.patteson@waterboards.ca.gov.

Clay L. Rodgers

Clay L. Rodgers
Assistant Executive Officer

cc: Julie Macedo, Office of Enforcement, State Water Resources Control Board, Sacramento
Mike Toland, California Division of Oil, Gas, and Geothermal Resources, Bakersfield

ATTACHMENT A

The following table contains the names of oil fields and lease(s) and the corresponding number of ponds that the Central Valley Water Board has identified as active and under your control:

OPERATOR	OIL FIELD	LEASE	NO. OF PONDS
Aera Energy LLC	Belridge, North		1
	Belridge, North	Belridge A	1
	Belridge, South	Aera Energy	20
		Belridge V	3
	Coalinga	CMS-Aztec	2
		Penn-Zier	7
		Sec26	9
	Lost Hills	Lost Hills One	1
		Lost Hills Two	2
	Midway-Sunset	Fulton	1
		Lockwood	1
		Moco 35	3
		National USL	2
		Section 8	1
		Shale 14	1
		Vedder	1
		W & S	1
		Wier	2

ATTACHMENT B

Water Quality Analysis

Wastewater samples collected from the ponds shall be analyzed by a laboratory certified by the Environmental Laboratory Accreditation Program using currently applicable United States Environmental Protection Agency-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 as crude oil;

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

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

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

H. Major and minor anions (including nitrate, chloride, sulfate, carbonate, bicarbonate, and bromide);

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

Reporting Requirements

Water Quality information shall be submitted in a technical report that includes at a minimum:

A. Site plan(s) with the location(s) of where the samples were collected;

B. A description of how the samples, representative of the pond contents, were collected;

Table(s) of analytical results organized by pond number with the data also submitted electronically as an Excel spreadsheet.

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APPENDIX B

Inventory List and Cymric Potential Discharge Location Points

Aera Energy LLC - Cymric Oil Field

Potential Discharge Locations

Short Identifier	Map Page Number	Field	Lease	Description/Name	Location	RWQCB Name	Sec.	T	R	BM	Latitude	Longitude	APN	Potential Fluid	L	W	D	Construction	Status	Number of Discharge Points	Additional Comments	Intended Use	Volume Discharged [bbl/yr]	Category
BL129	2	Cymric	ANDERSON-FITZ	SPDehy Secondary Containment	Sec Cont	N/A	26	29S	21E	MD	35.37401	-119.67979	098-150-11	Other	884	546		Earthen	Active			Secondary Containment		Secondary Containment
BL2200	2	Cymric	Anderson/Fitzgerald	2" Relief valve	HOTS 704	N/A	26S	29S	21E	MD	35.37070	-119.68108	098-150-11	Oil & Water	18 ft	16 ft	2 ft	Earthen	Active	1		Relief line diffuser pit		PRV
BL2201	2	Cymric	Anderson/Fitzgerald	2" Relief valve	HOTS 703	N/A	26S	29S	21E	MD	35.36940	-119.68440	098-150-11	Oil & Water	17 ft	20 ft	2 ft	Earthen	Active	1		Relief line diffuser pit		PRV
BL2202	2	Cymric	Anderson/Fitzgerald	2" Relief valve	HOTS 702	N/A	26S	29S	21E	MD	35.37370	-119.68542	098-150-11	Oil & Water	17 ft	13 ft	2 ft	Earthen	Active	1		Relief line diffuser pit		PRV
BL2203	2	Cymric	Anderson	2" Relief valve	HOTS 701	N/A	26S	29S	21E	MD	35.37796	-119.68204	098-150-10	Oil & Water	19 ft	12 ft	18 "	Earthen	Active	1		Relief line diffuser pit		PRV
BL2204	2	Cymric	Fitzgerald	2" Relief valve	HOTS 826T1/ 826T2	N/A	26S	29S	21E	MD	35.38099	-119.68518	098-150-08	Oil & Water	21 ft	11 ft	1 1/2"	Earthen	Active	2		Relief line diffuser pit		PRV
BL5259	1	Cymric	SAUER DOUGH	S2711S-23S	South Prop	N/A	23	29S	21E	MD	35.38538	-119.69247	098-130-12	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5262	1	Cymric	SAUER DOUGH	S3804-23S	South Prop	N/A	23	29S	21E	MD	35.38459	-119.69081	098-130-12	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5264	1	Cymric	SAUER DOUGH	S6703-23S	South Prop	N/A	23	29S	21E	MD	35.38634	-119.69276	098-130-12	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5266	1	Cymric	SAUER DOUGH	S6716-23S	South Prop	N/A	23	29S	21E	MD	35.38499	-119.69163	098-130-12	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5269	1	Cymric	SAUER DOUGH	S7807-23S	South Prop	N/A	23	29S	21E	MD	35.38436	-119.69014	098-130-12	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5273	3	Cymric	SUNBEAM 25	1805U-25S	South Prop	N/A	25	29S	21E	MD	35.36955	-119.67753	098-150-21	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5274	3	Cymric	SUNBEAM 25	1806S-25S	South Prop	N/A	25	29S	21E	MD	35.36929	-119.67702	098-150-21	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5275	3	Cymric	SUNBEAM 25	1810S-25S	South Prop	N/A	25	29S	21E	MD	35.36912	-119.67673	098-150-21	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5277	3	Cymric	SUNBEAM 25	1813U-25S	South Prop	N/A	25	29S	21E	MD	35.36896	-119.67734	098-150-21	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5282	2	Cymric	ANDERSON-FITZ	4515U-26S	South Prop	N/A	26	29S	21E	MD	35.37424	-119.68757	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5283	2	Cymric	ANDERSON-FITZ	5303S-26S	South Prop	N/A	26	29S	21E	MD	35.37925	-119.68591	098-150-10	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5284	2	Cymric	ANDERSON-FITZ	5304U-26S	South Prop	N/A	26	29S	21E	MD	35.37912	-119.68641	098-150-10	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5285	2	Cymric	ANDERSON-FITZ	5307S-26S	South Prop	N/A	26	29S	21E	MD	35.37836	-119.68598	098-150-10	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5287	2	Cymric	ANDERSON-FITZ	5309U-26S	South Prop	N/A	26	29S	21E	MD	35.37827	-119.68513	098-150-10	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5288	2	Cymric	ANDERSON-FITZ	5314S-26S	South Prop	N/A	26	29S	21E	MD	35.37813	-119.68559	098-150-10	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5289	2	Cymric	ANDERSON-FITZ	5314U-26S	South Prop	N/A	26	29S	21E	MD	35.37813	-119.68588	098-150-10	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5290	2	Cymric	ANDERSON-FITZ	5316U-26S	South Prop	N/A	26	29S	21E	MD	35.37807	-119.68497	098-150-10	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5291	2	Cymric	ANDERSON-FITZ	5507S-26S	South Prop	N/A	26	29S	21E	MD	35.37496	-119.68547	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5292	2	Cymric	ANDERSON-FITZ	5513U-26S	South Prop	N/A	26	29S	21E	MD	35.37408	-119.68660	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5293	2	Cymric	ANDERSON-FITZ	5516S-26S	South Prop	N/A	26	29S	21E	MD	35.37436	-119.68459	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5295	2	Cymric	ANDERSON-FITZ	5603S-26S	South Prop	N/A	26	29S	21E	MD	35.37374	-119.68619	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5296	2	Cymric	ANDERSON-FITZ	5604S-26S	South Prop	N/A	26	29S	21E	MD	35.37290	-119.68648	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5297	2	Cymric	ANDERSON-FITZ	5609U-26S	South Prop	N/A	26	29S	21E	MD	35.37284	-119.68506	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5299	2	Cymric	ANDERSON-FITZ	6302S-26S	South Prop	N/A	26	29S	21E	MD	35.37912	-119.68403	098-150-10	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5300	2	Cymric	ANDERSON-FITZ	6308U-26S	South Prop	N/A	26	29S	21E	MD	35.37913	-119.68257	098-150-10	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5301	2	Cymric	ANDERSON-FITZ	6406S-26S	South Prop	N/A	26	29S	21E	MD	35.37694	-119.68384	098-150-10	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5302	2	Cymric	ANDERSON-FITZ	6409U-26S	South Prop	N/A	26	29S	21E	MD	35.37648	-119.68301	098-150-10	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5304	2	Cymric	ANDERSON-FITZ	6704U-26S	South Prop	N/A	26	29S	21E	MD	35.37216	-119.68418	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5305	2	Cymric	ANDERSON-FITZ	6806UR-26S	South Prop	N/A	26	29S	21E	MD	35.36964	-119.68413	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector

Aera Energy LLC - Cymric Oil Field

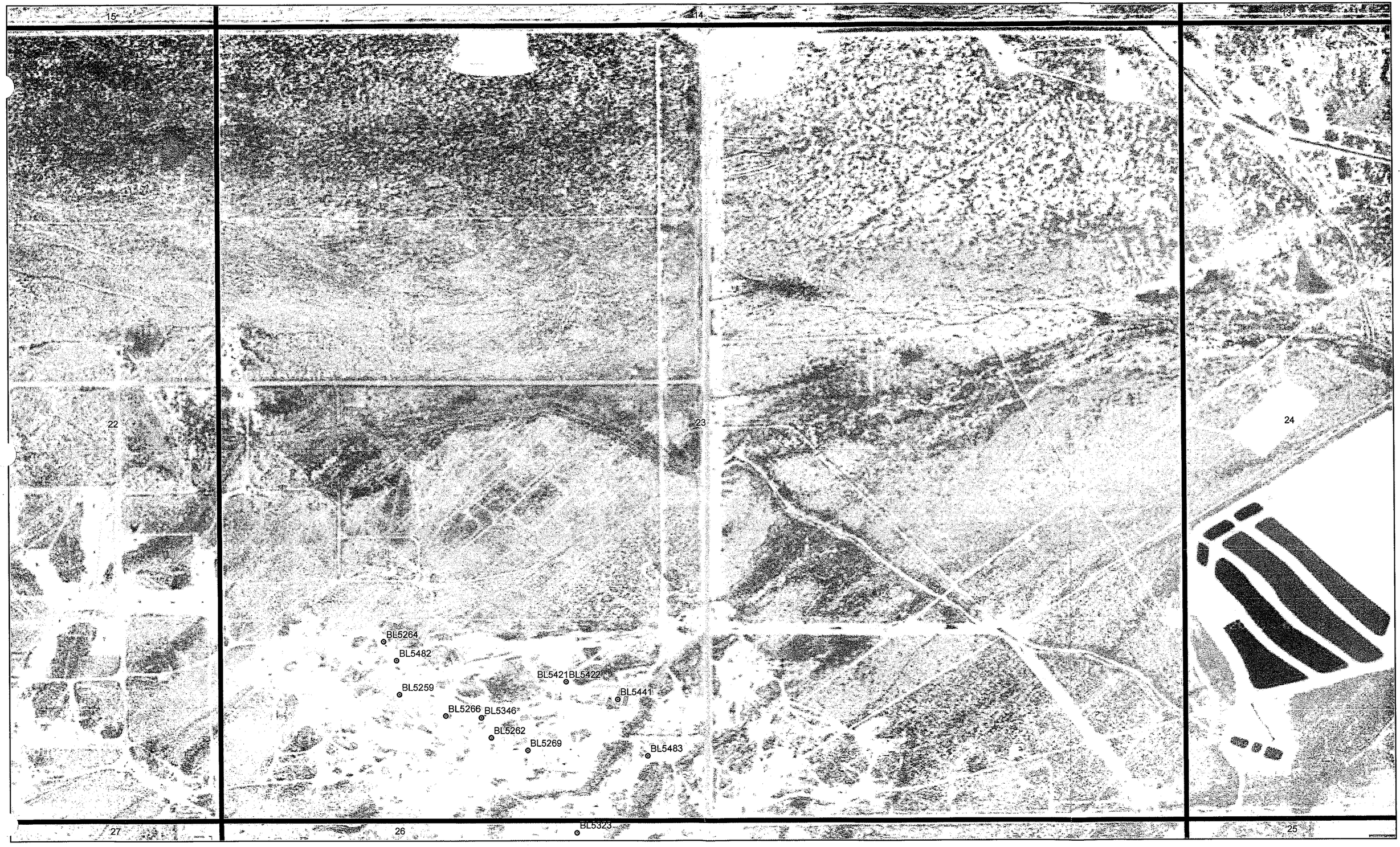
Potential Discharge Locations

Short Identifier	Map Page Number	Field	Lease	Description/Name	Location	RWQCB Name	Sec.	T	R	BM	Latitude	Longitude	APN	Potential Fluid	L	W	D	Construction	Status	Number of Discharge Points	Additional Comments	Intended Use	Volume Discharged [bbl/yr]	Category
BL5308	2	Cymric	ANDERSON-FITZ	7316S-26S	South Prop	N/A	26	29S	21E	MD	35.37753	-119.68073	098-150-10	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5310	2	Cymric	ANDERSON-FITZ	7611S-26S	South Prop	N/A	26	29S	21E	MD	35.37291	-119.68242	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5311	2	Cymric	ANDERSON-FITZ	7612U-26S	South Prop	N/A	26	29S	21E	MD	35.37286	-119.68193	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5312	2	Cymric	ANDERSON-FITZ	7712S-26S	South Prop	N/A	26	29S	21E	MD	35.37096	-119.68217	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5313	2	Cymric	ANDERSON-FITZ	7715S-26S	South Prop	N/A	26	29S	21E	MD	35.37083	-119.68139	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5315	2	Cymric	ANDERSON-FITZ	7801S-26S	South Prop	N/A	26	29S	21E	MD	35.37011	-119.68044	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5316	2	Cymric	ANDERSON-FITZ	8406S-26S	South Prop	N/A	26	29S	21E	MD	35.37696	-119.67939	098-150-10	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5317	2	Cymric	ANDERSON-FITZ	8508S-26S	South Prop	N/A	26	29S	21E	MD	35.37530	-119.67840	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5318	2	Cymric	ANDERSON-FITZ	8508SL-26S	South Prop	N/A	26	29S	21E	MD	35.37534	-119.67843	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5320	2	Cymric	ANDERSON-FITZ	8802U-26S	South Prop	N/A	26	29S	21E	MD	35.36984	-119.67871	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5321	2	Cymric	ANDERSON-FITZ	8803U-26S	South Prop	N/A	26	29S	21E	MD	35.37020	-119.67929	098-150-11	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5322	2	Cymric	ANDERSON-FITZ	F2108S-26S	South Prop	N/A	26	29S	21E	MD	35.38236	-119.69137	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5323	2	Cymric	ANDERSON-FITZ	F3102T-26S	South Prop	N/A	26	29S	21E	MD	35.38286	-119.68924	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5326	2	Cymric	ANDERSON-FITZ	F3115S-26S	South Prop	N/A	26	29S	21E	MD	35.38141	-119.68972	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5327	2	Cymric	ANDERSON-FITZ	F3201-26S	South Prop	N/A	26	29S	21E	MD	35.38106	-119.68963	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5328	2	Cymric	ANDERSON-FITZ	F3207S-26S	South Prop	N/A	26	29S	21E	MD	35.38096	-119.68952	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5329	2	Cymric	ANDERSON-FITZ	F4103S-26S	South Prop	N/A	26	29S	21E	MD	35.38248	-119.68849	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5331	2	Cymric	ANDERSON-FITZ	F4115-26S	South Prop	N/A	26	29S	21E	MD	35.38150	-119.68786	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5333	2	Cymric	ANDERSON-FITZ	F4211S-26S	South Prop	N/A	26	29S	21E	MD	35.37976	-119.68844	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5335	2	Cymric	ANDERSON-FITZ	F4216S-26S	South Prop	N/A	26	29S	21E	MD	35.37952	-119.68729	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5336	2	Cymric	ANDERSON-FITZ	F5204S-26S	South Prop	N/A	26	29S	21E	MD	35.38104	-119.68650	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5337	2	Cymric	ANDERSON-FITZ	F5207S-26S	South Prop	N/A	26	29S	21E	MD	35.38048	-119.68598	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5338	2	Cymric	ANDERSON-FITZ	F5209S-26S	South Prop	N/A	26	29S	21E	MD	35.38020	-119.68463	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5339	2	Cymric	ANDERSON-FITZ	F5311S-26S	South Prop	N/A	26	29S	21E	MD	35.38158	-119.68634	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5340	2	Cymric	ANDERSON-FITZ	F6204-26S	South Prop	N/A	26	29S	21E	MD	35.38094	-119.68462	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5341	2	Cymric	ANDERSON-FITZ	F6206E-26S	South Prop	N/A	26	29S	21E	MD	35.38027	-119.68356	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5342	2	Cymric	ANDERSON-FITZ	F6214S-26S	South Prop	N/A	26	29S	21E	MD	35.37962	-119.68403	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5343	2	Cymric	ANDERSON-FITZ	F6216B-26S	South Prop	N/A	26	29S	21E	MD	35.38028	-119.68256	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5344	2	Cymric	ANDERSON-FITZ	F6216E-26S	South Prop	N/A	26	29S	21E	MD	35.37997	-119.68304	098-150-08	Steam					Active	6		2" Energy Control Bleed point x3 and 3/4" Energy Control Bleed point x3	< 1	Steam Injector
BL5345	2	Cymric	ANDERSON-FITZ	Trunkline Blowdown	HOTS 702	N/A	26	29S	21E	MD	35.37348	-119.68523	098-150-11	Steam					Active	1		Blow Down Stack to Atmoshere	< 1	Blowdown

Aera Energy LLC - Cymric Oil Field

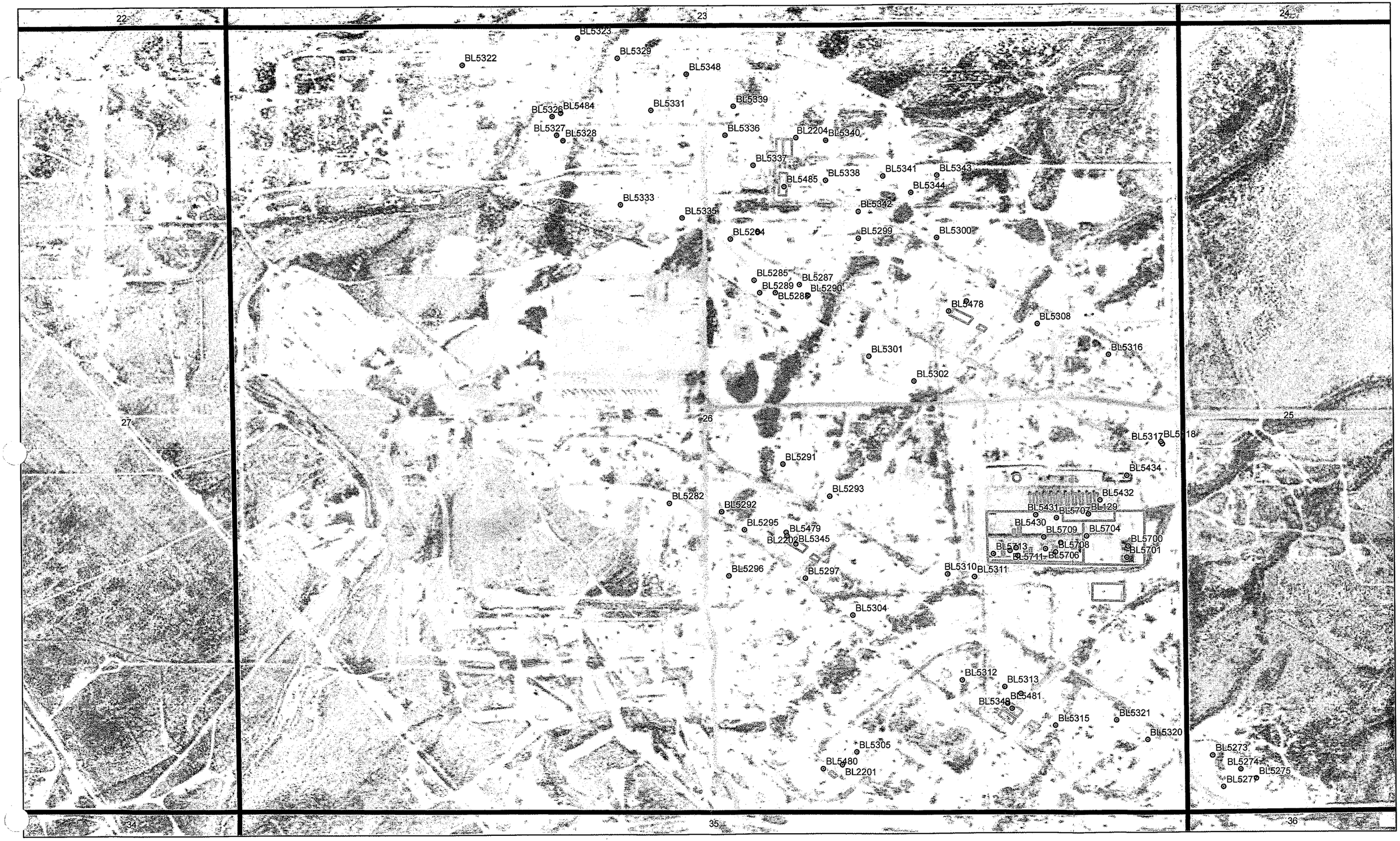
Potential Discharge Locations

Short Identifier	Map Page Number	Field	Lease	Description/Name	Location	RWQCB Name	Sec.	T	R	BM	Latitude	Longitude	APN	Potential Fluid	L	W	D	Construction	Status	Number of Discharge Points	Additional Comments	Intended Use	Volume Discharged [bbl/yr]	Category
BL5346	1	Cymric	ANDERSON-FITZ	Trunkline Blowdown	7804-23	N/A	26	29S	21E	MD	35.38495	-119.69098	098-130-12	Steam					Active	1		Blow Down Stack to Atmoshere	< 1	Blowdown
BL5348	2	Cymric	ANDERSON-FITZ	Trunkline Blowdown	F4102-26S	N/A	26	29S	21E	MD	35.38218	-119.68721	098-150-08	Steam					Active	1		Blow Down Stack to Atmoshere	< 1	Blowdown
BL5349	2	Cymric	ANDERSON-FITZ	Trunkline Blowdown	HOTS 704	N/A	26	29S	21E	MD	35.37043	-119.68125	098-150-11	Steam					Active	1		Blow Down Stack to Atmoshere	< 1	Blowdown
BL5421	1	Cymric	SAUER DOUGH	Trunkline Blowdown	Sauer Dough W.	N/A	26	29S	21E	MD	35.38561	-119.68942	098-130-12	Steam					Active	1		Blow Down Stack to Atmoshere	< 1	Blowdown
BL5422	1	Cymric	SAUER DOUGH	Trunkline Blowdown	Sauer Dough E.	N/A	26	29S	21E	MD	35.38561	-119.68942	098-130-12	Steam					Active	1		Blow Down Stack to Atmoshere	< 1	Blowdown
BL5423	2	Cymric	ANDERSON-FITZ	Steam Generator 26	AF	N/A	26	29S	21E	MD	35.37400	-119.68078	098-150-11	Steam					Active	10		3 Pressure Relief Valves, 6 1" ball valves for energy control.	< 1	PRV
BL5424	2	Cymric	ANDERSON-FITZ	Steam Generator 126	AF	N/A	26	29S	21E	MD	35.37400	-119.68078	098-150-11	Steam					Active	10		3 Pressure Relief Valves, 6 1" ball valves for energy control.	< 1	PRV
BL5425	2	Cymric	ANDERSON-FITZ	Steam Generator 127	AF	N/A	26	29S	21E	MD	35.37400	-119.68078	098-150-11	Steam					Active	10		3 Pressure Relief Valves, 6 1" ball valves for energy control.	< 1	PRV
BL5426	2	Cymric	ANDERSON-FITZ	Steam Generator 128	AF	N/A	26	29S	21E	MD	35.37400	-119.68078	098-150-11	Steam					Active	10		3 Pressure Relief Valves, 6 1" ball valves for energy control.	< 1	PRV
BL5427	2	Cymric	ANDERSON-FITZ	Steam Generator 129	AF	N/A	26	29S	21E	MD	35.37400	-119.68078	098-150-11	Steam					Active	10		3 Pressure Relief Valves, 6 1" ball valves for energy control.	< 1	PRV
BL5428	2	Cymric	ANDERSON-FITZ	Steam Generator 167	AF	N/A	26	29S	21E	MD	35.37400	-119.68078	098-150-11	Steam					Active	10		3 Pressure Relief Valves, 6 1" ball valves for energy control.	< 1	PRV
BL5429	2	Cymric	ANDERSON-FITZ	ANDERSON-FITZ Generators Blow Down Pit	AF	N/A	26	29S	21E	MD	35.37400	-119.68078	098-150-11	Steam	35	10	4	Concrete Block	Active	10		Blow down pit	< 1	Blowdown pit
BL5430	2	Cymric	ANDERSON-FITZ	ANDERSON-FITZ Generators Wheatley pump drains	AF	N/A	26	29S	21E	MD	35.37400	-119.68078	098-150-11	Steam				Metal	Active	6		Wheatley Pump drain	2	Drain Pad
BL5431	2	Cymric	ANDERSON-FITZ	ANDERSON-FITZ Generators Wheatley pump drains	AF	N/A	26	29S	21E	MD	35.37400	-119.68078	098-150-11	Steam				Concrete	Active	6		Wheatley Pump drain	3	Drain Pad
BL5432	2	Cymric	ANDERSON-FITZ	ANDERSON-FITZ Generators Wheatley pump drain tank (buried)	AF	N/A	26	29S	21E	MD	35.37426	-119.67957	098-150-11	Steam				Other	Active	6		Wheatley Pump drain Tank	< 1	Other
BL5434	2	Cymric	ANDERSON-FITZ	ANDERSON-FITZ Generator Blowdown Tank containment	AF	N/A	26	29S	21E	MD	35.37472	-119.67906	098-150-11	Steam	10	10	14	Other	Active	2		Wheatley Pump drain Tank	< 1	Secondary Containment
BL5441	1	Cymric	SAUER DOUGH	Generator Bank 153,156 (Inactive)	Sauer Dough	N/A	23	29S	21E	MD	35.38529	-119.68847	098-130-12	Steam					Inactive	30		3 Pressure Relief Valves, 6 1" ball valves for energy control. Each Gen	< 1	Blowdown
BL5478	2	Cymric	ANDERSON-FITZ	Steam Splitter 701	AF	N/A	26	29S	21E	MD	35.37777	-119.68236	098-150-10	Steam					Active	12		12 blow down points used for energy control	< 1	Blowdown
BL5479	2	Cymric	ANDERSON-FITZ	Steam Splitter 702	AF	N/A	26	29S	21E	MD	35.37363	-119.68540	098-150-11	Steam					Active	12		12 blow down points used for energy control	< 1	Blowdown
BL5480	2	Cymric	ANDERSON-FITZ	Steam Splitter 703	AF	N/A	26	29S	21E	MD	35.36933	-119.68475	098-150-11	Steam					Active	12		12 blow down points used for energy control	< 1	Blowdown
BL5481	2	Cymric	ANDERSON-FITZ	Steam Splitter 704	AF	N/A	26	29S	21E	MD	35.37052	-119.68133	098-150-11	Steam					Active	12		12 blow down points used for energy control	< 1	Blowdown
BL5482	1	Cymric	ANDERSON-FITZ	Steam Splitter 705	AF	N/A	26	29S	21E	MD	35.38600	-119.69252	098-130-12	Steam					Active	12		12 blow down points used for energy control	< 1	Blowdown
BL5483	1	Cymric	ANDERSON-FITZ	Steam Splitter 706	AF	N/A	26	29S	21E	MD	35.38426	-119.68792	098-130-12	Steam					Active	12		12 blow down points used for energy control	< 1	Blowdown
BL5484	2	Cymric	ANDERSON-FITZ	Steam Splitter 707	AF	N/A	26	29S	21E	MD	35.38147	-119.68956	098-150-08	Steam					Active	12		12 blow down points used for energy control	< 1	Blowdown
BL5485	2	Cymric	ANDERSON-FITZ	Steam Splitter 708	AF	N/A	26	29S	21E	MD	35.38009	-119.68541	098-150-08	Steam					Active	12		12 blow down points used for energy control	< 1	Blowdown
BL5700	2	Cymric	ANDERSON-FITZ	AF north drain pit	AF Dehy	N/A	26	29S	21E	MD	35.37341	-119.67905	098-150-11	Oil & Water	70'	70'	20'	HDPE	Active	4		Various dehy drains		Emer. Basin
BL5701	2	Cymric	ANDERSON-FITZ	AF south drain pit	AF Dehy	N/A	26	29S	21E	MD	35.37321	-119.67907	098-150-11	Oil & Water	70'	70'	20'	HDPE	Active	3		Various dehy drains		Emer. Basin
BL5703	2	Cymric	ANDERSON-FITZ	P242, P243	AF Dehy	N/A	26	29S	21E	MD	35.37360	-119.67983	098-150-11	Oil & Water	10'	8'	6"	Concrete	Active	1		Containment for pumps		Drain Pad
BL5704	2	Cymric	ANDERSON-FITZ	Abandoned pump skid	AF Dehy	N/A	26	29S	21E	MD	35.37360	-119.67983	098-150-11	Other	12'	8'	6"	Concrete	Inactive	1		Abandoned skid		Drain Pad
BL5705	2	Cymric	ANDERSON-FITZ	V-290 skid	AF Dehy	N/A	26	29S	21E	MD	35.37348	-119.68031	098-150-11	Oil & Water	10'	18'	8"	Concrete	Active	1		Scrubber and pump skid		Secondary Containment
BL5706	2	Cymric	ANDERSON-FITZ	Abandoned pump skid	AF Dehy	N/A	26	29S	21E	MD	35.37337	-119.68060	098-150-11	Other	5'	5'	6"	Concrete	Inactive	1		Abandoned pump skid		Drain Pad
BL5707	2	Cymric	ANDERSON-FITZ	Abandoned pump skid	AF Dehy	N/A	26	29S	21E	MD	35.37394	-119.68039	098-150-11	Other	25'	8'	12"	Metal	Inactive	1		Abandoned pump skid		Drain Pad
BL5708	2	Cymric	ANDERSON-FITZ	Abandoned pump skid	AF Dehy	N/A	26	29S	21E	MD	35.37331	-119.68041	098-150-11	Other	15'	8'	6"	Metal	Inactive	1		Abandoned pump skid		Drain Pad
BL5709	2	Cymric	ANDERSON-FITZ	VRU skid	AF Dehy	N/A	26	29S	21E	MD	35.37359	-119.68063	098-150-11	Oil & Water	28'	12'	6"	Concrete	Active	1		H2S compression skid		Drain Pad
BL5710	2	Cymric	ANDERSON-FITZ	P212A, P212 B	AF Dehy	N/A	26	29S	21E	MD	35.37325	-119.68112	098-150-11	Oil & Water	36'	15'	10"	Concrete	Active	2		Pump skid		Drain Pad
BL5711	2	Cymric	ANDERSON-FITZ	A200, A220, A230	AF Dehy	N/A	26	29S	21E	MD	35.37334	-119.68127	098-150-11	Oil & Water	20'	6"		Concrete	Active	12		Pipe rack with sample points		Other
BL5712	2	Cymric	ANDERSON-FITZ	LACT meter hookup	AF Dehy	N/A	26	29S	21E	MD	35.37339	-119.68115	098-150-11	Oil & Water	3'	4'	8"	Concrete	Active	1		LACT meter hookup		Drain Pad
BL5713	2	Cymric	ANDERSON-FITZ	FWKO inlet meter	AF Dehy	N/A	26	29S	21E	MD	35.37328	-119.68158	098-150-11	Oil & Water	15'	15'	10	Concrete	Active	2		F-230 flow meter secondary containment		Secondary Containment



CAERA Cymric Potential Discharge Location Points 23, T29S, R21E

MAP PAGE 1



AERA Cymric Potential Discharge Location Points 26, T29S, R21E

MAP PAGE 2

AERA Cymric Potential Discharge Location Points 25, T29S, R21E