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## Central Valley Regional Water Quality Control Board

6 June 2023

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### **NOTICE OF APPLICABILITY (NOA); GENERAL WASTE DISCHARGE REQUIREMENTS FOR LIMITED THREAT DISCHARGES TO SURFACE WATER, ORDER R5-2022-0006-01 (NPDES PERMIT NO. CAG995002); THE BOEING COMPANY, MATHER GROUNDWATER EXTRACTION AND TREATMENT HB AND SOUTHERN GROUNDWATER STUDY AREA GET, SACRAMENTO COUNTY**

Our office received a Report of Waste Discharge (ROWD) on 15 April 2022 from the Boeing Company (hereinafter Discharger), for discharge of treated groundwater from the Mather Groundwater Extraction and Treatment (GET) HB and Southern Groundwater Study Area (SGSA) GET (Facilities) to Morrison Creek. The Discharger submitted the ROWD in accordance with its existing individual National Pollutant Discharge Elimination System (NPDES) permit. The ROWD meets the requirements of a Notice of Intent (NOI) for enrollment under the General Order for Limited Threat Discharges to Surface Water, Order R5-2022-0006-01, (Limited Threat General Order). Based on the ROWD and subsequent information submitted by the Discharger, staff has determined that the NOI requirements have been fulfilled and the Facilities are eligible for coverage under the Limited Threat General Order. The Facilities are hereby assigned Limited Threat General Order Notice of Applicability (NOA) number R5-2022-0006-017. The effective date of NOA number R5-2022-0006-017 is **1 July 2023**. Please reference your NOA number, **R5-2022-0006-017**, in your correspondence and submitted documents.

The project activities shall be operated in accordance with the requirements contained in the Limited Threat General Order and as specified in this NOA. You are urged to familiarize yourself with the entire contents of the enclosed Limited Threat General Order ([https://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/general\\_orders/r5-2022-0006-01.pdf](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2022-0006-01.pdf)).

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MARK BRADFORD, CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

## **CALIFORNIA TOXICS RULE / STATE IMPLEMENTATION POLICY MONITORING**

The Limited Threat General Order incorporates the requirements of the California Toxics Rule (CTR) and the State Water Resources Control Board's (State Water Board), *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, 2005, also known as the State Implementation Policy (SIP). Screening levels for CTR constituents and other constituents of concern are found in Attachment I of the Limited Threat General Order. Review of your water quality data in comparison to the screening values, showed reasonable potential for trichloroethylene and perchlorate, but showed no reasonable potential for other parameters in the discharge to cause or contribute to an exceedance of water quality objectives in Morrison Creek, a water of the United States.

## **PROJECT DESCRIPTION**

The Discharger is the owner and operator of the Facilities on the 4,000-acre Inactive Rancho Cordova Test Site (IRCTS) in eastern Sacramento County. The Facilities discharge treated groundwater directly to Morrison Creek and a drainage ditch tributary to Morrison Creek, both tributaries to the Sacramento River and waters of the United States.

Past rocket testing operations by the Discharger and the Aerojet-General Corporation (now Aerojet Rocketdyne, Inc. [Aerojet]) at the IRCTS in Rancho Cordova led to the pollution of groundwater primarily by perchlorate and volatile organic compounds (VOCs), especially trichloroethylene.

Initial environmental remediation activities at the IRCTS began around 1983, prior to the issuance of any regulatory mandate. In 1994, the California Department of Toxic Substances Control (DTSC) issued an Imminent and/or Substantial Endangerment Determination and Consent Order to McDonnell Douglas Corporation (now owned by the Discharger) and Aerojet requiring investigation activities and remedial actions at the IRCTS. In 1997, the Central Valley Water Board adopted Cleanup and Abatement Order No. 97-093 directing the Discharger and Aerojet to investigate and develop remedial measures to contain perchlorate in groundwater. The Discharger responded with the construction of interim and final groundwater extraction and treatment facilities. The final versions of these systems are the current Mather GET HB and SGSA GET.

Mather GET HB consists of a groundwater extraction, collection, and treatment system. The groundwater extraction and collection network includes eight extraction wells (EX-1, EX-2, EX-3, EX-5 [offline], EX-6, EX-7, EX-9, and EX-14 [to be brought online in 2023]) and pipelines to convey extracted groundwater to the treatment plant. Mather GET HB has a hydraulic capacity of up to 4,000 gallons per minute (gpm) and includes:

- five bag filtration units to remove suspended solids;
- four ion exchange resin vessels to remove perchlorate; and

- eight granular activated carbon (GAC) vessels to remove VOCs.

Treated effluent is conveyed through a discharge pipeline and drainage channel to Morrison Creek at discharge location M-001.

SGSA GET consists of a groundwater extraction, collection, and treatment system. The groundwater extraction and collection network includes eight extraction wells (EX-20, EX-21, EX-22, EX-23, EX-25, EX-27, EX-28, and EX-29) and pipelines to convey extracted groundwater to the groundwater treatment plant. The groundwater treatment plant has a hydraulic capacity of up to 1,000 gpm and includes:

- five bag filtration units to remove suspended solids;
- six ion exchange resin vessels to remove perchlorate; and
- two GAC vessels to remove VOCs.

Treated effluent is conveyed through a discharge pipeline to Morrison Creek at discharge location M-002.

## **EFFLUENT LIMITATIONS**

Effluent limitations are specified in Section V. Effluent Limitations and Discharge Specifications of the Limited Threat General Order. Based on the information provided in the NOI, effluent limitations are only required for the parameters identified in items 1-5, below:

- 1. Flow (Section V.A.1.a).** The flow rate shall not exceed a combined 7.34 MGD.
  - i. Mather GET HB – 5.76 MGD
  - ii. SGSA GET – 1.58 MGD
- 2. pH (Section V.A.1.b.i).** The pH of all limited threat discharges within the Sacramento and San Joaquin River Basins (except Goose Lake in Modoc County) shall at all times be within the range of 6.5 and 8.5.
- 3. Whole Effluent Toxicity, Chronic (Section V.A.2.a).** There shall be no chronic toxicity in the discharge.
- 4. Whole Effluent Toxicity, Acute (Section V.A.3.a).** Survival of aquatic organisms in 96-hour bioassays of undiluted waste for all limited threat discharges shall be no less than:
  - i. 70%, minimum for any one bioassay; and
  - ii. 90%, median for any three consecutive bioassays.
- 5. Constituents and Parameters of Concern (Section V.A.1.e).** The following constituents and parameters in Table 1 below have been identified as having reasonable potential to cause or contribute to an in-stream excursion from water quality objectives and shall not exceed the effluent limitations as listed at Discharge Points 001 and 002.

**Table 1. Effluent Limitations for Constituents and Parameters of Concern**

<b>Parameter</b>	<b>Units</b>	<b>Maximum Daily Effluent Limitations</b>	<b>Section Reference</b>
Trichloroethylene	µg/L	0.5	V.B.2
cis-1,2-dichloroethylene	µg/L	1.0	V.B.2
Perchlorate	µg/L	4.0	V.B.2
Chloroform	µg/L	3.0	V.B.2
Bromodichloromethane	µg/L	0.5	V.B.2

The receiving water, Morrison Creek, is not listed under the Clean Water Act 303(d) List of impaired water bodies. Therefore, no additional 303(d) based effluent limitations or monitoring requirements will be added to this Notice of Applicability.

### **RECEIVING WATER LIMITATIONS**

The Limited Threat General Order includes receiving surface water limitations in Section VIII.A. Based on the information provided in the NOI, only the following receiving surface water limitations are applicable to this discharge:

- Bacteria (VIII.A.2);
- Biostimulatory substances (VIII.A.3);
- Chemical constituents (VIII.A.4);
- Color (VIII.A.5);
- Dissolved oxygen (VIII.A.6.b.i);
- Floating material (VIII.A.7);
- Oil and grease (VIII.A.8);
- pH (VIII.A.9.a);
- Pesticides ((VIII.A.10);
- Radioactivity (VIII.A.11);
- Suspended sediments (VIII.A.12);
- Settleable substances (VIII.A.13);
- Suspended material (VIII.A.14);
- Taste and odors (VIII.A.15);
- Temperature (VIII.A.16.b);
- Toxicity (VIII.A.17); and
- Turbidity (VIII.A.18.a).

### **MONITORING AND REPORTING**

Monitoring and reporting requirements are contained in Attachment C of the Limited Threat General Order. The Discharger is required to comply with the following specific monitoring and reporting requirements for the influent, effluent, and receiving water in accordance with Attachment C of the Limited Threat General Order.

**Monitoring Locations** – The Discharger shall monitor the influent, effluent, and receiving water at the specified location as follows in Table 2:

**Table 2. Monitoring Station Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	M-001	A location where a representative sample of the effluent from Mather GET HB can be collected prior to discharging to Morrison Creek.
002	M-002	A location where a representative sample of the effluent from SGSA GET can be collected prior to discharging to Morrison Creek.
	MINFA	Influent to Mather GET HB
	MINFB	Influent to SGSA GET
	R-001 and R-002	R-001 (upstream) and R-002 (downstream) on Morrison Creek for discharge from SGSA GET at Latitude 38°, 33', 54" N, Longitude 121°, 14', 07" W.
	R-003, R-004 and R-005	R-003 (upstream), R-004 or R-005 (downstream) on Morrison Creek for discharge from GET HB at Latitude 38°, 32', 18" N, Longitude 121°, 18', 59" W.

**Influent Monitoring** – The Discharger shall monitor the influent at MINFA and MINFB in accordance with this NOA. Pollutants shall be analyzed using U.S. EPA-approved analytical methods described in 40 CFR part 136, and with sufficiently sensitive reporting levels consistent with the SSM Rule specified in 40 CFR 122.21(e)(3) and 122.44(i)(1)(iv). The applicable monitoring requirements are as follows in Table 3,

**Table 3. Influent Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency
Volatile Organic Compounds	µg/L	Grab	1/Quarter
Perchlorate	µg/L	Grab	1/Quarter

**Effluent Monitoring** – When discharging to surface water, the Discharger shall monitor the effluent at M-001 and M-002 in accordance with Table C-3 of the Limited Threat General Order and this NOA. Pollutants shall be analyzed using U.S. EPA-approved analytical methods described in 40 CFR part 136, and with sufficiently sensitive reporting levels consistent with the SSM Rule specified in 40 CFR 122.21(e)(3) and 122.44(i)(1)(iv). The applicable monitoring requirements are as follows in Table 4 and subsequent Table 4 Notes:

**Table 4. Effluent Monitoring Requirements –  
Monitoring Locations M-001 and M-002**

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Flow	MGD	Calculated	Continuous
Volatile Organic Compounds	µg/L	Grab	1/Quarter
Perchlorate	µg/L	Grab	1/Quarter
Trichloroethylene	µg/L	Grab	1/Quarter
cis-1,2-dichloroethylene	µg/L	Grab	1/Quarter
Chloroform	µg/L	Grab	1/Quarter
Bromodichloromethane	µg/L	Grab	1/Quarter
Electrical Conductivity @ 25 °C	µmhos/cm	Grab	1/Quarter
pH	standard units	Grab	1/Quarter
Turbidity	NTU	Grab	1/Quarter
Temperature	°F	Grab	1/Quarter
Dissolved Oxygen (DO)	mg/L	Grab	1/Quarter
Hardness, Total (as CaCO <sub>3</sub> )	mg/L	Grab	1/Quarter
Chlorine, Total Residual	mg/L	Grab	1/Quarter
Acute Toxicity	% survival	Grab	1/Year
Chronic Toxicity	--	Grab	1/Year

**Table 4 Notes**

- 1. Electrical conductivity, pH, turbidity, temperature, and DO.** A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.
- 2. Chlorine total residual.** Chlorine residual shall only be collected when chlorine is being added to the system.
- 3. Acute and chronic toxicity.** Chronic and acute toxicity testing shall be conducted within 3 months of adoption of this NOA. For acute toxicity testing, the test species shall be fathead minnows (*Pimephales promelas*). See the Limited Threat General Order Monitoring and Reporting Program (Attachment C) for toxicity monitoring requirements.
- 4. Constituents shall be collected and analyzed using sufficiently sensitive analytical methods and Reporting Levels (RLs) per the SSM Rule specified in 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv).** The "Reporting Level" is synonymous with the "Method Minimum Level" described in the SSM Rule.

**Effluent Characterization Monitoring** – Section II.B.2 of the Limitations and Discharge Requirements section of the Limited Threat General Order requires that dischargers submit new analytical results every 5 years for pollutants specified in Table I-1 of Attachment I. Therefore, the Discharger shall submit results from effluent monitoring at Monitoring Locations M-001 and M-002 by **1 July 2028** for the following constituents shown in Table 5 and subsequent Table 5 Notes, below:

**Table 5. Effluent Characterization Monitoring**

Parameter	Units	Sample Type
Biochemical Oxygen Demand (BOD)	mg/L	Grab
Total Suspended Solids (TSS)	mg/L	Grab
Dissolved Oxygen (DO)	mg/L	Grab
Hardness	mg/L	Grab
pH	standard units	Grab
Temperature	°F	Grab
Electrical Conductivity @ 25 °C	µmhos/cm	Grab
Total Dissolved Solids (TDS)	mg/L	Grab
Turbidity	NTU	Grab
Unionized Ammonia Nitrogen, Total (as N)	mg/L	Grab
Chlorine, Total Residual	mg/L	Grab
CTR Priority Pollutants	See Attachment I, Table I-3 of the Limited Threat General Order	See Attachment I, Table I-3 of the Limited Threat General Order

**Table 5 Notes**

- For all parameters.** The Discharger is not required to conduct effluent monitoring for constituents that have already been sampled in a given month, as required in Table 4, except for hardness, pH, and temperature, which shall be conducted concurrently with the effluent sampling.
- For all parameters.** Parameters shall be analyzed using U.S. EPA-approved analytical methods described in 40 CFR part 136, and with sufficiently sensitive reporting levels consistent with the SSM Rule specified in 40 CFR 122.21(e)(3) and 122.44(i)(1)(iv).
- For DO, pH, temperature, electrical conductivity, and turbidity.** A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.
- For CTR Priority Pollutants.** See Attachment I, Table I-3 of the Limited Threat General Order.

**Receiving Water Monitoring** - When discharging to surface water, the Discharger shall monitor the receiving water at R-001, R-002, R-003, and R-004 or R-005 when accessibility to R-004 is infeasible and unsafe, in accordance with Table C-5 of the Limited Threat General Order and this NOA. If there is no upstream receiving water flow, monitoring at R-001 and R-003 is not required and the self-monitoring report shall state that monitoring was not conducted due to no upstream receiving water flow. The applicable monitoring requirements are as follows in Table 6 and subsequent Table 6 Notes:

**Table 6. Receiving Water Monitoring Requirements**

Parameter	Units	Sample Type	Monitoring Frequency
Dissolved Oxygen	mg/L	Grab	1/Quarter
Electrical Conductivity @ 25 °C	µmhos/cm	Grab	1/Quarter
Hardness, Total (as CaCO <sub>3</sub> )	mg/L	Grab	1/Quarter
pH	standard units	Grab	1/Quarter
Temperature	°F	Grab	1/Quarter
Turbidity	NTU	Grab	1/Quarter
Volatile Organic Compounds	µg/L	Grab	1/Quarter

**Table 6 Notes**

1. **All parameters.** Parameters shall be analyzed using U.S. EPA-approved analytical methods described in 40 CFR part 136, and with sufficiently sensitive reporting levels consistent with the SSM Rule specified in 40 CFR 122.21(e)(3) and 122.44(i)(1)(iv).
2. **All parameters except for flow, hardness, and VOCs.** A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained by the Discharger.
3. There may be times when access to downstream Monitoring Location R-004 is infeasible and unsafe. When these conditions are present, the Discharger shall collect samples at Monitoring Location R-005 rather than Monitoring Location R-004.

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reaches from R-001 to R-002 and R-003 to R-004 or R-005. Attention shall be given to the presence or absence of:

- a. Floating or suspended matter
- b. Discoloration
- c. Bottom deposits
- d. Aquatic life
- e. Visible films, sheens, or coatings
- f. Fungi, slimes, or objectionable growths
- g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the Monitoring Report.

**Monitoring Report Submittals** - Monitoring in accordance with this NOA shall begin upon the date of this NOA. Monitoring Reports shall be submitted to the Central Valley Water Board on a quarterly basis, beginning with the **Second Quarter 2023**. This report shall be submitted on **1 August 2023**. All Monitoring Reports shall specify the dates during the monitoring period the discharge did or did not occur. If monitoring samples were not obtained due to lack of discharge, the Discharger must document the reasons in the corresponding Monitoring Report. If discharge has not begun there is no need to monitor. However, a certified Monitoring Report must be submitted stating that there has been no discharge. Table 7, below, summarizes the Monitoring Report due dates required under the Limited Threat General Order. Quarterly Monitoring Reports must be submitted until your coverage is formally terminated in accordance with the Limited Threat General Order, even if there is no discharge during the reporting quarter.

**Table 7. Monitoring Periods and Reporting Schedule**

Monitoring Period for All Sampling Frequencies	Quarterly Report Due Date
First Quarter (1 January through 31 March)	1 May
Second Quarter (1 April through 30 June)	1 August
Third Quarter (1 July through 30 September)	1 November
Fourth Quarter (1 October through 31 December)	1 February of the following year

**Technical Report Submittal** - The Limited Threat General Order, section IX.A.2.i, includes requirements to submit technical reports as required by the Executive Officer. The Discharger shall submit the technical reports in Table 8 below. All technical reports shall be submitted electronically via CIWQS submittal. Technical reports should be uploaded as a PDF, Microsoft Word, or Microsoft Excel file attachment.

**Table 8. Technical Reports**

Technical Report	Description	Due Date	CIWQS Report Name
cis-1,2-dichloroethylene	Evaluate source(s) of cis-1,2-dichloroethylene and proposed mitigation measures	1 June 2028	TechReport1

Technical Report	Description	Due Date	CIWQS Report Name
Chloroform	Evaluate source(s) of chloroform and proposed mitigation measures	1 June 2028	TechReport2

### **GENERAL INFORMATION AND REQUIREMENTS**

The Discharger must notify Central Valley Water Board staff within 24 hours of having knowledge of 1) the start of an unauthorized discharge, 2) noncompliance, and 3) when the discharge ceased. The Central Valley Water Board shall be notified immediately if any effluent limit violation is observed during implementation of the project.

Discharge of material other than what is described in the application is prohibited. The required annual fee (as specified in the annual invoice you will receive from the State Water Resources Control Board) shall be submitted until this NOA is officially terminated. You must notify this office in writing when the discharge regulated by the Limited Threat General Order is no longer necessary by submitting the Request for Termination of Coverage (Attachment E). If a timely written request is not received, the Discharger will be required to pay additional annual fees as determined by the State Water Resources Control Board.

### **ENFORCEMENT**

Failure to comply with the Limited Threat General Order may result in enforcement actions, which could include civil liability. Effluent limitation violations are subject to a Mandatory Minimum Penalty (MMP) of \$3,000 and discretionary penalties pursuant to California Water Code section 13385. In addition, late Monitoring Reports may be subject to MMPs of \$3,000 per 30-day period and daily discretionary penalties pursuant to California Water Code section 13385. When discharges do not occur during a quarterly monitoring period, the Discharger must still submit a quarterly certified Monitoring Report indicating that no discharge occurred to avoid being subject to enforcement actions.

### **COMMUNICATION**

We have transitioned to a paperless office; therefore, please convert all documents to a searchable Portable Document Format (pdf). All documents, including Monitoring Reports, written notifications, and documents submitted to comply with this NOA and the Limited Threat General Order, should be submitted to the NPDES Compliance and Enforcement Unit, Attention: NPDES Compliance and Enforcement Unit by email to [centralvalleysacramento@waterboards.ca.gov](mailto:centralvalleysacramento@waterboards.ca.gov) and to Geoff Rader at [geoff.rader@waterboards.ca.gov](mailto:geoff.rader@waterboards.ca.gov). Mr. Rader may also be reached by phone at (916) 464-4707.

**Please include the following information in the body of the email:**

- Attention: NPDES Compliance Unit

- Discharger: The Boeing Company
- Facility: Mather GET HB, SGSA GET
- County: Sacramento County
- CIWQS place ID: 754242

Documents that are 50 megabytes or larger must be transferred to a DVD, or flash drive and mailed to our office, attention "ECM Mailroom-NPDES".

Any person aggrieved by this action of the Central Valley Water Board may petition the 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., 30 days after the date of this NOA, except that if the thirtieth day following the date of this Order 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. Links to the law and regulations applicable to filing petitions may be found on the [Petitions Home Page](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) ([http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality)) or will be provided upon request.

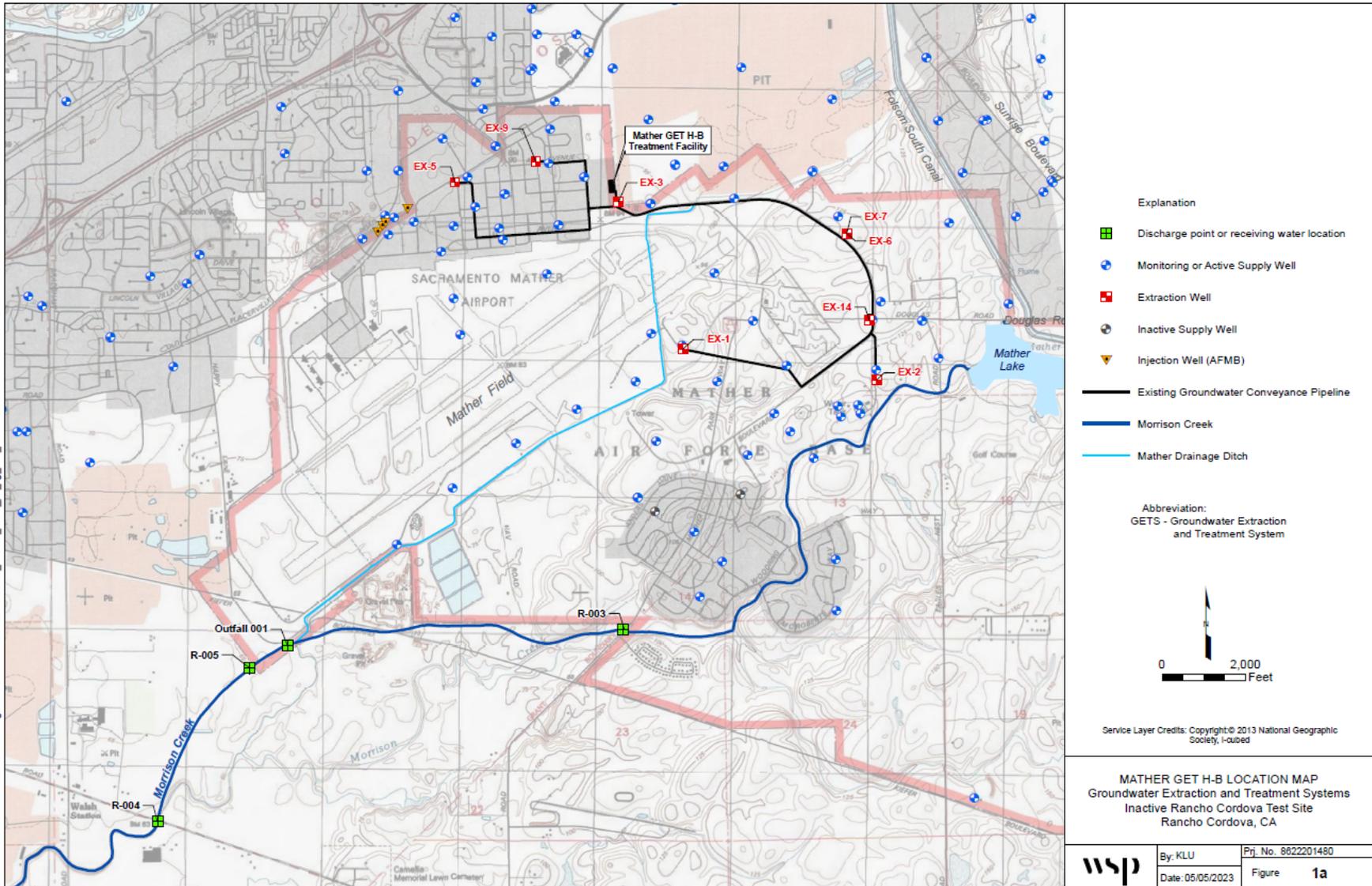
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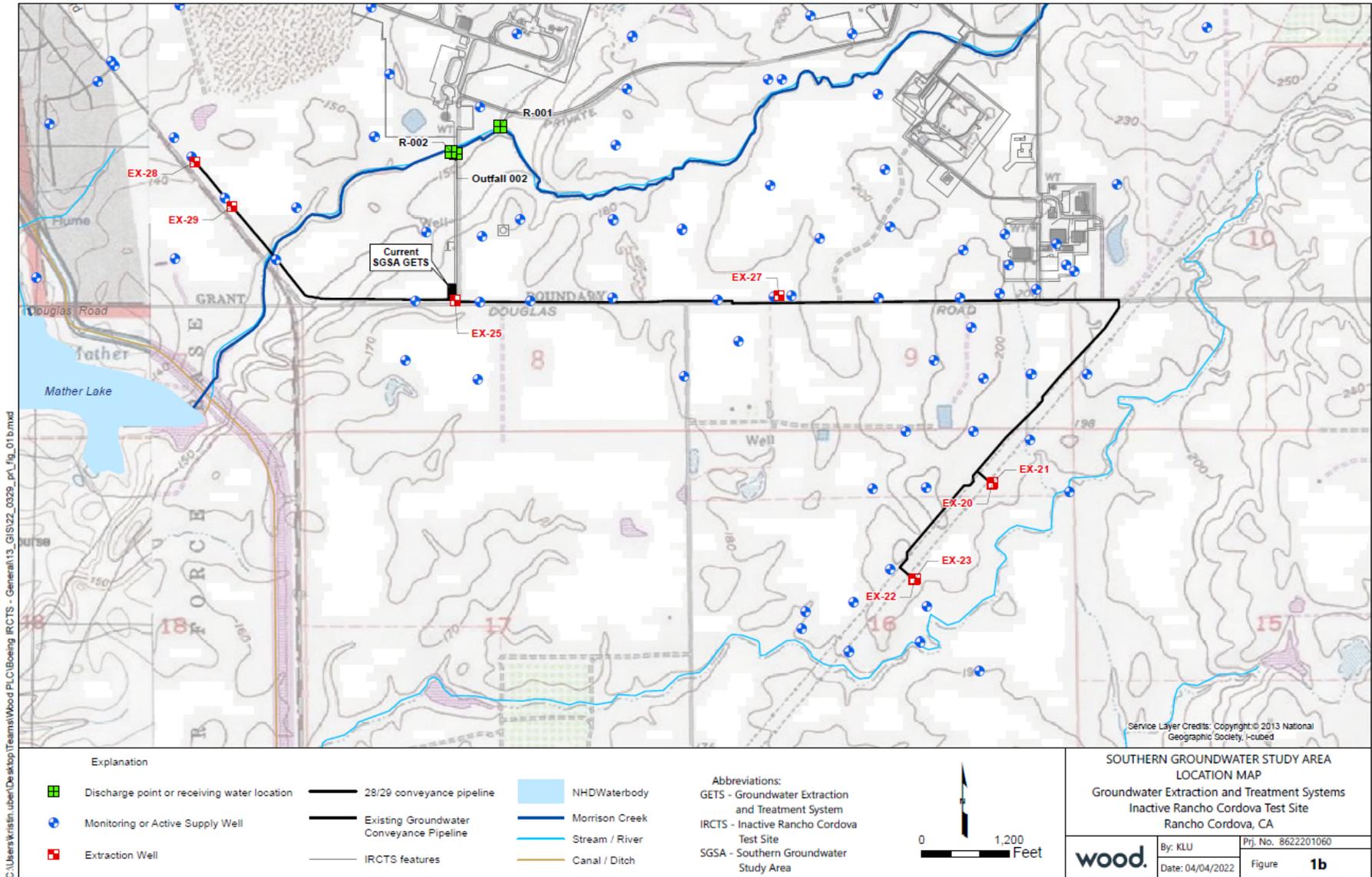
Patrick Pulupa  
Executive Officer

Enclosures (2): Attachment A - Project Location Map  
Monitoring Report Transmittal Form (Discharger only)

cc: Elizabeth Sablad, U.S. EPA, Region IX, San Francisco (email only)  
Peter Kozelka, U.S. EPA, Region IX, San Francisco (email only)  
Prasad Gullapalli, U.S. EPA Region IX, San Francisco (email only)  
Division of Water Quality, State Water Board, Sacramento (email only)  
Sarah Torres, PG Environmental, Chantilly, Virginia (via email)

ATTACHMENT A – PROJECT LOCATION





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