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MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

11 December 2017

Ms. Lauren Mancuso
Manager Environmental Site Remediation
Union Pacific Railroad Company
1408 Middle Harbor Road
Oakland, CA 94607

CERTIFIED MAIL
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NOTICE OF APPLICABILITY (NOA); LIMITED THREAT GENERAL WASTE DISCHARGE REQUIREMENTS ORDER R5-2016-0076; UNION PACIFIC RAILROAD COMPANY; DUNSMUIR RAILYARD PROJECT, SISKIYOU COUNTY

Our office received a Notice of Intent (application) on 19 October 2017 from Union Pacific Railroad Company (hereinafter Discharger), for discharge of treated groundwater to surface water. Based on the application packet and subsequent information submitted by the Discharger, staff has determined that the project meets the required conditions for approval under the General Order for Limited Threat Discharges to Surface Water (Limited Threat General Order), Tier 2. This project is hereby assigned Limited Threat General Order R5-2016-0076-030 and National Pollutant Discharge Elimination System (NPDES) Permit No. CAG995002. Please reference your Limited Threat General Order number, **R5-2016-0076-030**, in your correspondence and submitted documents.

The enclosed Limited Threat General Order may also be viewed at the following web address: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076_mod.pdf. You are urged to familiarize yourself with the contents of the entire document. The Limited Threat General Order prescribes mandatory discharge monitoring and reporting requirements. The project activities shall be operated in accordance with the requirements contained in this NOA and the Limited Threat General Order.

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 effluent water quality data in comparison to the screening values, showed reasonable potential for the discharge to cause or contribute to an exceedance of lead and zinc water quality objectives in the Sacramento River. However, the proposed treatment system addresses the water quality concern by reducing constituent(s) concentrations below water quality objectives; therefore, the Project qualifies for the Limited Threat General Order.

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

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PROJECT DESCRIPTION

The Union Pacific Railyard, Dunsmuir Railyard remediation site (Project) is located on Sacramento Avenue in Dunsmuir, Siskiyou County.

The Project is a groundwater remediation site for Bunker C fuel oil and diesel fuel that was released into the vadose zones and shallow groundwater through historic operations at the Project area. The remediation efforts consist of a groundwater extraction and treatment system (GETS). The GETS is comprised of two primary systems, an extraction system and a groundwater treatment system (GWTS). The original GETS incorporated a groundwater extraction system consisting of a subsurface interceptor trench system with a liner with eighteen extraction wells with a dual-phase pumping system installed within the trench. The GWTS includes a tank with approximate storage capacity of 200,000 gallons, a slant rib coalescing oil-water separator with surge tank, eight sand pressure filter beds, backwash containment beds, and two activated carbon filters.

The influent stream into the GWTS is composed of water from the collection wells, the turntable sump, the maintenance vehicle wash rack, and the purge water from the monitoring wells. Following treatment at the GWTS, treated effluent is discharged into an infiltration gallery. The infiltration gallery is located between the road and the former Engine House on the south side of the property, which shares a hydraulic connection with the Sacramento River directly to the east. The treated effluent is discharged directly to the subsurface soil through a 4-inch pipe.

As of the date of this NOA, the GETS is not in operation, and extracted groundwater from the collection wells is not being introduced into the treatment system; therefore the intermittent discharge for the GETS is estimated at a maximum daily discharge of 144,000 gallons per day (gpd), with an average daily discharge of 50,000 gpd.

The Discharger is currently conducting feasibility studies to determine a more effective method for treatment of the extracted groundwater. Following completion of the feasibility studies and the implementation of a new treatment system, this NOA may be revised to ensure that water quality objectives are being maintained in the receiving water and that no new constituents of concern are present in the discharge.

DISCHARGE PROHIBITIONS

1. A maximum daily discharge rate greater than 0.144 million gallons per day (144,000 gpd) is prohibited.

EFFLUENT LIMITATIONS

Effluent limitations are specified in Section V. Effluent Limitations and Discharge Specifications of the Limited Threat General Order. The following effluent limitations are applicable to this discharge and are contained in Section V. A and B of the Limited Threat General Order:

A. Water Quality-Based Effluent Limitations

1. Effluent Limitations – Applicable to All Limited Threat Discharges

a. pH.

- i. The pH of all limited threat discharges within the Sacramento and San Joaquin River Basins (except Goose Creek) shall at all times be within the range of 6.5 and 8.5.

b. Priority Pollutants

Parameter	Units	Effluent Limitations ¹	
		Average Monthly	Maximum Daily
Lead, Total Recoverable	µg/L	0.88	1.8
Zinc, Total Recoverable	µg/L	29	58

¹ Based on an observed receiving water hardness of 41.9 mg/L

2. Toxicity

- a. **Whole Effluent Toxicity, Chronic.** There shall be no chronic toxicity in the discharge.
- b. **Whole Effluent Toxicity, Acute.** 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.

The Receiving Water 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 Limited Threat General Order.

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:

- A. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.
- B. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.
- C. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
- D. **pH.** The pH to be depressed below 6.5 or raised above 8.5.

E. Toxicity. Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

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 effluent and receiving water in accordance with Attachment C of the Limited Threat General Order.

Monitoring Locations – The Discharger shall monitor the effluent and receiving water at the specified location as follows:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Last connection before waste enters the treatment process.
001	EFF-001	A location where a representative sample of the effluent can be collected prior to discharging to the subsurface infiltration gallery and the Sacramento River.
--	RSW-001	The Sacramento River approximately 700 feet upstream of the discharge point, adjacent to the northernmost module of the train crew quarters.
--	RSW-002	The Sacramento River approximately 500 feet downstream of the discharge point, at Butterfly Bridge.

Influent Monitoring – When operating the treatment system, the Discharger shall monitor the influent at INF-001 as follows:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Hardness, Total (as CaCO ₃)	mg/L	Grab	Monthly	1,2
Total Semivolatile Petroleum Hydrocarbons (TPH-d and TPH-mo)	µg/L	Grab	Monthly	1
Lead, Total Recoverable	µg/L	Grab	Monthly	1
Zinc, Total Recoverable	µg/L	Grab	Monthly	1

¹ Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.

² Monitoring for hardness shall be performed concurrently with sampling for lead, and zinc.

Effluent Monitoring – When discharging to the Sacramento River, the Discharger shall monitor the effluent at EFF-001 as follows:

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Flow	MGD	Calculated	Daily	1,2
Electrical Conductivity @ 25 °C	µmhos/cm	Grab	Monthly	1,2
pH	standard units	Grab	Monthly	1,2
Hardness, Total (as CaCO ₃)	mg/L	Grab	Monthly	2,3
Total Semivolatile Petroleum Hydrocarbons (TPH-d and TPH-mo)	µg/L	Grab	Monthly	2
Lead, Total Recoverable	µg/L	Grab	Monthly	2
Zinc, Total Recoverable	µg/L	Grab	Monthly	2
Acute Toxicity	% survival	Grab	Annually ⁵	2,4
Chronic Toxicity	--	Grab	Annually ⁵	2,4

- 1 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 Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
- 3 Monitoring for hardness shall be performed concurrently with effluent sampling for lead and zinc.
- 4 For acute toxicity testing, the test species shall be rainbow trout (*Oncorhynchus mykiss*). See the Monitoring and Reporting Program (Attachment C) for toxicity monitoring requirements.
- 5 Annual monitoring shall be conducted in December each year.

Receiving Water Monitoring - When discharging to the Sacramento River, the Discharger shall monitor, or provide monitoring data, for the receiving water at RSW-001 and RSW-002 as follows:

Table E-4. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Monitoring Frequency	Required Analytical Test Method
Electrical Conductivity @ 25 °C	µmhos/cm	Grab	Monthly	1,2
Hardness, Total (as CaCO ₃)	mg/L	Grab	Monthly	1,3
pH	standard units	Grab	Monthly	1,2
Lead, Total Recoverable	µg/L	Grab	Monthly	1
Lead, Dissolved	µg/L	Grab	Monthly ⁴	1
Zinc, Total Recoverable	µg/L	Grab	Monthly	1
Zinc, Dissolved	µg/L	Grab	Monthly ⁴	1
Total Semivolatile Petroleum Hydrocarbons (TPH-d and TPH-mo)	µg/L	Grab	Monthly	1

- 1 Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.
- 2 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 Monitoring for hardness shall be performed concurrently with effluent sampling for lead and zinc.
- 4 RSW-002 only.

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001 and RSW-002. 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 the Limited Threat General Order shall begin upon initiation of discharge. Monitoring reports shall be submitted to the Central Valley Water Board on a quarterly basis, beginning with the Fourth Quarter 2017. This report shall be submitted on 1 February 2018. If monitoring samples were not obtained within 24 hours of initiation of the discharge, the Discharger must document the reasons in the corresponding monitoring report. If the discharge has not begun there is no need to monitor. However, a monitoring report must be submitted stating that there has been no discharge. Table E-4, 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 E-5. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Quarterly Report Due Date
1/Day, 1/Week, 1/Month, 1/Quarter	11 December 2017	1 May (1 Jan – 31 Mar) 1 Aug (1 Apr – 30 Jun) 1 Nov (1 Jul – 30 Sep) 1 Feb, of following year (1 Oct – 31 Dec)

GENERAL INFORMATION AND REQUIREMENTS

The Discharger must notify Central Valley Water Board staff within 24 hours of having knowledge of 1) the start of each new discharge, 2) noncompliance, and 3) when the discharge ceases. 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 billing 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. 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

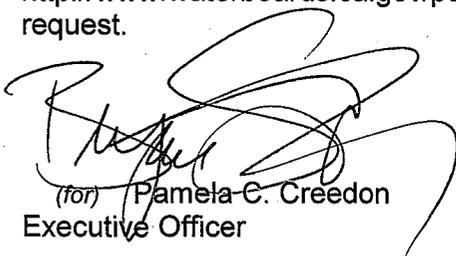
Failure to comply with the Limited Threat General Order may result in enforcement actions, which could include civil liability. Effluent limitation violations are subject to a Mandatory Minimum Penalty (MMP) of \$3,000 per violation. In addition, late monitoring reports may be subject to MMPs or discretionary penalties of up to \$1,000 per day late. When discharges do not occur during a quarterly report monitoring period, the Discharger must still submit a quarterly monitoring report indicating that no discharge occurred to avoid being subject to enforcement actions.

COMMUNICATION

The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website http://www.waterboards.ca.gov/water_issues/programs/ciwqs/. The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.

All other documents, including response to inspections, written notifications, and documents submitted to comply with this NOA and the Limited Threat General Order, should be submitted to the NPDES Unit. We have transitioned to a paperless office, therefore, please convert all documents to a searchable Portable Document Format (pdf) and email them to centralvalleyredding@waterboards.ca.gov. **Please include the following information in the email:** Attention: NPDES Unit; Discharger: Union Pacific Railroad Company; Facility: Dunsmuir Railyard Project; County: Siskiyou; and the CIWQS place ID 220849 in the body of the email. Documents that are 50 megabytes or larger must be transferred to a DVD or flash drive and mailed to our office, attention "NPDES Unit".

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. Copies of the law and regulations applicable to filing petitions may be found on the internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.



(for) Pamela C. Creedon
Executive Officer

KH: db

Enclosures: General Order R5-2016-0076 (Discharger only)

Lauran Mancuso
Manager Environmental Site Remediation
Dunsmuir Railyard Project

- 8 -

11 December 2017

cc: Rod Doerr, Union Pacific Railroad Company, Omaha
Jeff Repass, Dunsmuir Railyard, Dunsmuir
Donna Laudermilch, CH2M, Sacramento

David Smith, U.S. EPA, Region IX, San Francisco (email only)
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Juliana Harris, CH2M (email only)