

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING ORDER NO. R5-2017-0836

CALIFORNIA WATER CODE SECTION 13267
FOR
SACRAMENTO-YOLO PORT DISTRICT AND THE CITY OF WEST SACRAMENTO
YOLO COUNTY

This Order is issued to the Sacramento-Yolo Port District and the City of West Sacramento (hereafter Discharger) pursuant to California Water Code section 13267, which authorizes the Executive Officer of the California Regional Water Quality Control Board, Central Valley Region (hereafter Central Valley Water Board) to issue a Monitoring and Reporting Order (Order).

The Executive Officer finds:

INTRODUCTION

1. The Sacramento-Yolo Port District owns the marine bulk shipping terminal (known as the Port of West Sacramento) at 2895 Industrial Boulevard in West Sacramento. Management of the Port of West Sacramento transferred to the City of West Sacramento in 2006. The Sacramento-Yolo Port District and the City of West Sacramento are named in this Order because it owns or manages the facility. The maritime facility operations are leased to a private terminal operator, SSA Marine.
2. Bulk granular fertilizer handling operations conducted between the 1970's and 2009 deposited ammonium and nitrate onto facility grounds, leading to nitrate and ammonium in soil and shallow groundwater. Groundwater is about 15 feet below ground surface. This pollution has impaired the beneficial use of groundwater resources at the Site.
3. In 2001, the Port of West Sacramento built a constructed wetlands to treat site groundwater and stormwater, and between 2002 and 2008, 13 groundwater extraction wells were installed. During the dry season, nitrate-polluted groundwater is extracted and discharged to the wetlands for treatment. During the wet season, stormwater is discharged to the wetlands for treatment. The Industrial Stormwater Permit enrollee is SSA Marine.
4. In 1997, soil containing nitrogen was removed to a depth of five feet below ground surface from the railcar loadout area between buildings E and C, and an engineered concrete asphaltic cap was constructed over the loadout area. In 2007, two groundwater extraction wells were installed at the south end of the cap.
5. This Monitoring and Reporting Order is issued by the Central Valley Water Board, pursuant to California Water Code (CWC) section 13267 and is necessary to determine if remediation efforts are effective.
6. Existing data and information about the Site show the presence of various chemicals, including nitrate and ammonium emanating from the property resulting from the Discharger's past operation. The Discharger is responsible for the

discharge because the Discharger operated the facility when the discharges took place.

7. The Discharger shall not implement any changes to this Order unless and until a revised Order is issued by the Executive Officer. This Monitoring and Reporting Order replaces the requirements listed in Order No. R5-2002-0811, which was issued on 19 April 2002.
8. Prior to construction of any new groundwater monitoring or extraction wells, and prior to destruction of any groundwater monitoring or extraction wells, the Discharger shall submit plans and specifications to the Central Valley Water Board for review and approval. Once installed, all new monitoring wells shall be added to the monitoring program and shall be sampled and analyzed according to the schedule provided under the 'Required Actions' section of this Order.

LEGAL PROVISIONS

9. CWC section 13267 states, in part:

(b)(1) In conducting an investigation, 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 . . . 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 reports required herein are necessary for the reasons described in this Order, to assure protection of waters of the state, and to protect public health and the environment.

10. CWC section 13268 states, in part:

(a)(1) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267 . . . or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b).

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.

Failure to submit the required reports to the Central Valley Water Board according to the schedule detailed herein may result in enforcement action(s) being taken against you, which may include the imposition of administrative civil liability pursuant to CWC section 13268. Administrative civil liability of up to \$1,000 per violation per day may be imposed for non-compliance with the directives contained herein.

REQUIRED ACTIONS

IT IS HEREBY ORDERED that Monitoring and Reporting Order No. R5-2002-0811 is rescinded and, pursuant to California Water Code section 13267, the City of West Sacramento shall conduct monitoring and reporting in compliance with new Monitoring and Reporting Order No. R5-2017-0836 according to the following:

Monitoring Specifications

1. The Port of West Sacramento is influenced by tidal changes, therefore groundwater monitoring shall be conducted during neap tides, when minimal elevation change occurs between high tide and low tide.
2. The Discharger shall implement groundwater monitoring according to the schedule shown in Table 1. There are 17 monitoring wells, including two piezometers, (PZ-6, PZ-7, MW-6, MW-6A, MW-7, through MW-18, and MW-18A), as shown on Figure 1. There are 13 groundwater extraction wells, (GWE1A, -1B, -2A, -3A, -3B, -4A, -4B, -5A, -5B, -6A, -6B, -7A and -7B), as shown on Figure 2. This Monitoring Order applies to these 17 monitoring wells, 13 extraction wells, the constructed wetlands influent and effluent points, and any monitoring or extraction wells installed subsequent to the issuance of this Order. The Discharger shall collect samples using standard Environmental Protection Agency (EPA) protocol.

Table 1. Monitoring Frequency of Monitoring Wells

	Semi-annually ²
Monitoring Wells¹	PZ-6, PZ-7, MW-6, MW-6A, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, MW-17, MW-18, MW-18A, any new monitoring wells

¹ All wells shall be monitored semi-annually for Depth to Groundwater.

² Wells that must be sampled semi-annually shall be sampled during the first (January-March) and third (July-September) quarters.

3. The Discharger shall monitor the groundwater extraction wells, as shown in Figure 2, and the constructed wetlands treatment system according to the schedule shown in Table 2. The constructed wetlands monitoring points include the detention basin, and influent and effluent sampling points, as shown in Figure 3.

Table 2. Monitoring Frequency of Groundwater Extraction Wells and Constructed Wetlands Treatment System

	Monthly During Treatment Season ³
Extraction Wells	GWE-1A, GW-1B, GWE-2A, GWE-3A, GWE-3B, GWE-4A, GWE-4B, GWE-5A, GWE-5B, GWE-6A, GWE-6B, GWE-7A, GWE-7B, and any new groundwater extraction wells
Treatment System	Detention Basin, Wetlands Influent, Wetlands Effluent

³ Treatment Season is June, July, August and September.

4. The Discharger shall analyze samples according to standard Environmental Protection Agency (EPA) protocol using the methods shown in Table 3.

Table 3. Analytical Methods

Constituents	Analytical Method ⁴	Maximum Practical Quantitation Limit ⁵
Depth to Groundwater (monitoring wells only)	---	---
pH, temperature, electrical conductivity	Field Meter	Varies
Nitrate plus Nitrite (as N)	EPA Method 353.2	0.5 mg/L
Ammonium	EPA Method 350.1	0.01 mg/L

⁴ Or an equivalent method achieving a comparable practical quantitation limit.

⁵ If the maximum practical quantitation limit is exceeded for a non-detectable result, the Discharger shall provide an explanation in the report text. All concentrations between the Method Detection Limit and the Practical Quantitation Limit shall be reported as trace.

5. The asphaltic cap at the railcar loadout area, as shown on Figure 1, shall be inspected annually in the 3rd quarter. Inspection shall include drainage control systems, identification of cracks, vegetation, or other damage to the surface. If damage is identified, a plan and schedule for repairs shall be submitted.

Cap inspections may be waived if Central Valley Water Board staff concur that the area is unlikely to degrade groundwater.

Reporting Specifications

When reporting data, the Discharger shall arrange the information in tabular form so that the date, the constituents, and the concentrations are readily discernible and shall summarize the data in such a manner as to illustrate clearly the compliance with this Order.

1. As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, all reports shall be prepared by a registered professional Civil Engineer or Geologist or their subordinate and shall be signed by the registered professional.
2. A report of cap inspection, recommendations and schedule for implementation, shall be provided **by 30 September**. The report may be submitted by email and shall be uploaded to the State Water Resources Control Board Geotracker database system.

3. Semi-annual electronic data reports, which conform to the requirements of the California Code of Regulations, Title 23, Division 3, Chapter 30, shall be submitted electronically over the internet to the State Water Resources Control Board Geotracker database system by **1 May and 1 December**, or as otherwise indicated by Central Valley Water Board staff, until such time as the Executive Officer determines that the reports are no longer necessary.
4. The semi-annual data reports shall include the following minimum information:
 - (a) Field point names
 - (b) Analytical method
 - (c) Method reporting limit
 - (d) Date Sample obtained
 - (e) Date Sample analyzed
 - (f) Results
5. An Annual Report shall be submitted to the Central Valley Water Board by **1 December** of each year. This report shall contain an evaluation of the effectiveness and progress of the investigation and remediation, shall include the 1st and 2nd semi-annual data, groundwater extraction and wetlands treatment systems, the rail car loadout area cap inspection, and discussion thereof. The Annual Report shall include the following minimum information:
 - (a) Both tabular and graphical summaries of all data obtained during the year.
 - (b) A discussion of the long-term trends in the concentrations of the pollutants in the groundwater monitoring wells.
 - (c) An analysis of whether the pollutant plume is being captured by an extraction system or is continuing to spread.
 - (d) A description of the wetland treatment system and remedial activities conducted during the year, an analysis of their effectiveness in removing the pollutants, and plans to improve remediation system effectiveness.
 - (e) A report of the asphaltic cap inspection, repair proposal, and schedule, if needed.
 - (f) Detail of any other investigative or remedial activities conducted during the year and actions planned next year.

- (g) A cumulative summary of pollutant mass removed from the subsurface, including elimination of pollutant mass through in-situ remedial methods or natural attenuation.
 - (h) An identification of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.
 - (i) If applicable, a proposal and rationale for any revisions to the groundwater sampling plan frequency and/or list of analytes.
 - (j) The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Order also shall be reported to the Central Valley Water Board.
6. The Discharger shall implement the above monitoring program as of the effective date of the Order.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board to review the action in accordance with CWC section 13320 and California Code of Regulations, Title 23, Sections 2050 and following. The State Water Resources Control Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, 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.

This Order is effective upon the date of signature.

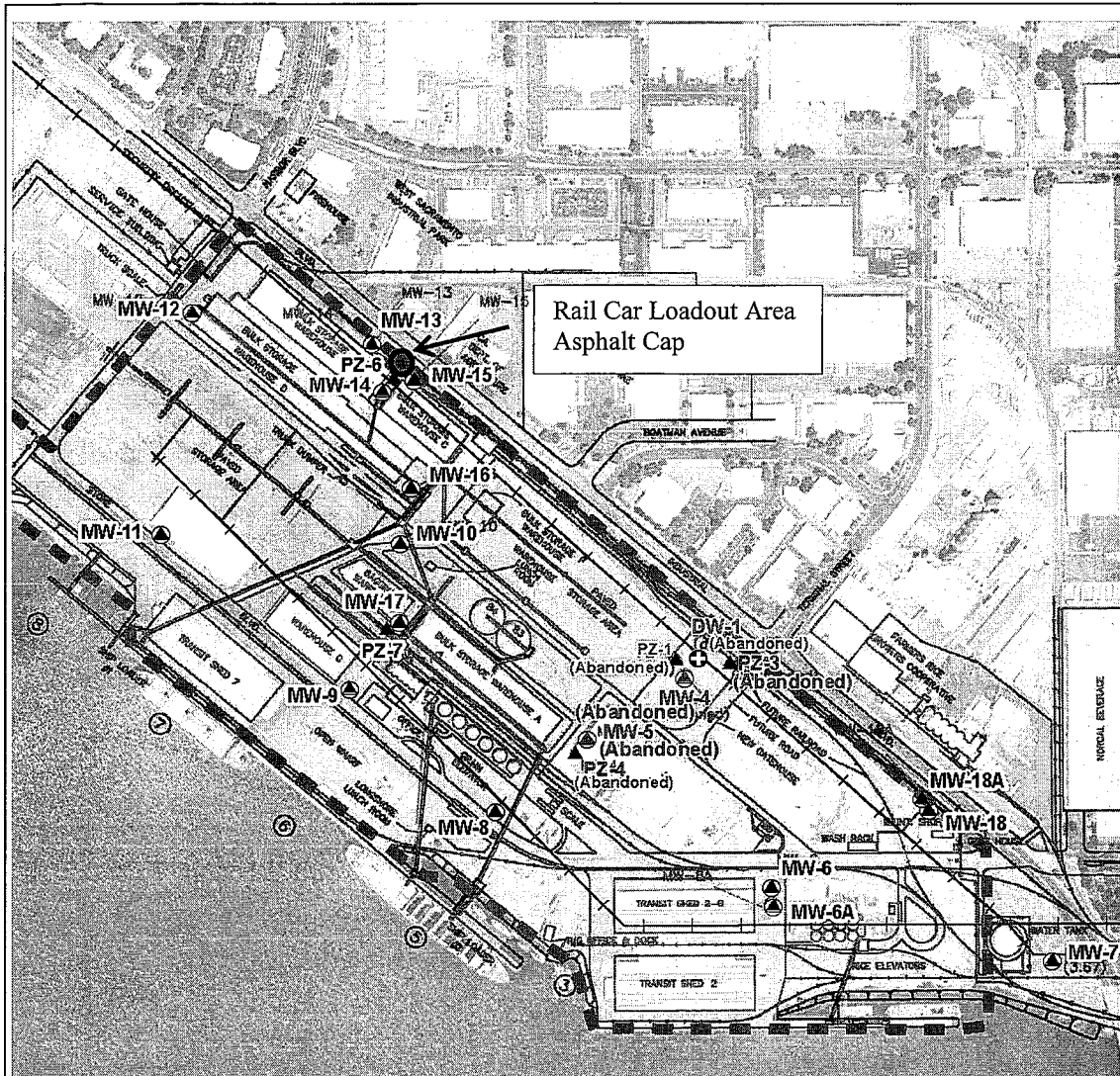
Ordered by:


For PAMELA C. CREEDON, Executive Officer

10/9/17

(Date)

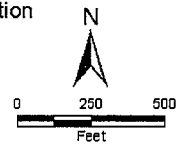
Figure 1. Monitoring Well Locations



Aerial provided by ESRI.
 Projection: NAD 83, California State Plane, Zone II

Legend

- Approximate Site Boundary
- Semi-Confined Aquifer Monitoring Well Location
- Perched Zone Monitoring Well Location
- Deep Semi-Confined Aquifer Monitoring Well Location



GROUNDWATER MONITORING WELL LOCATION

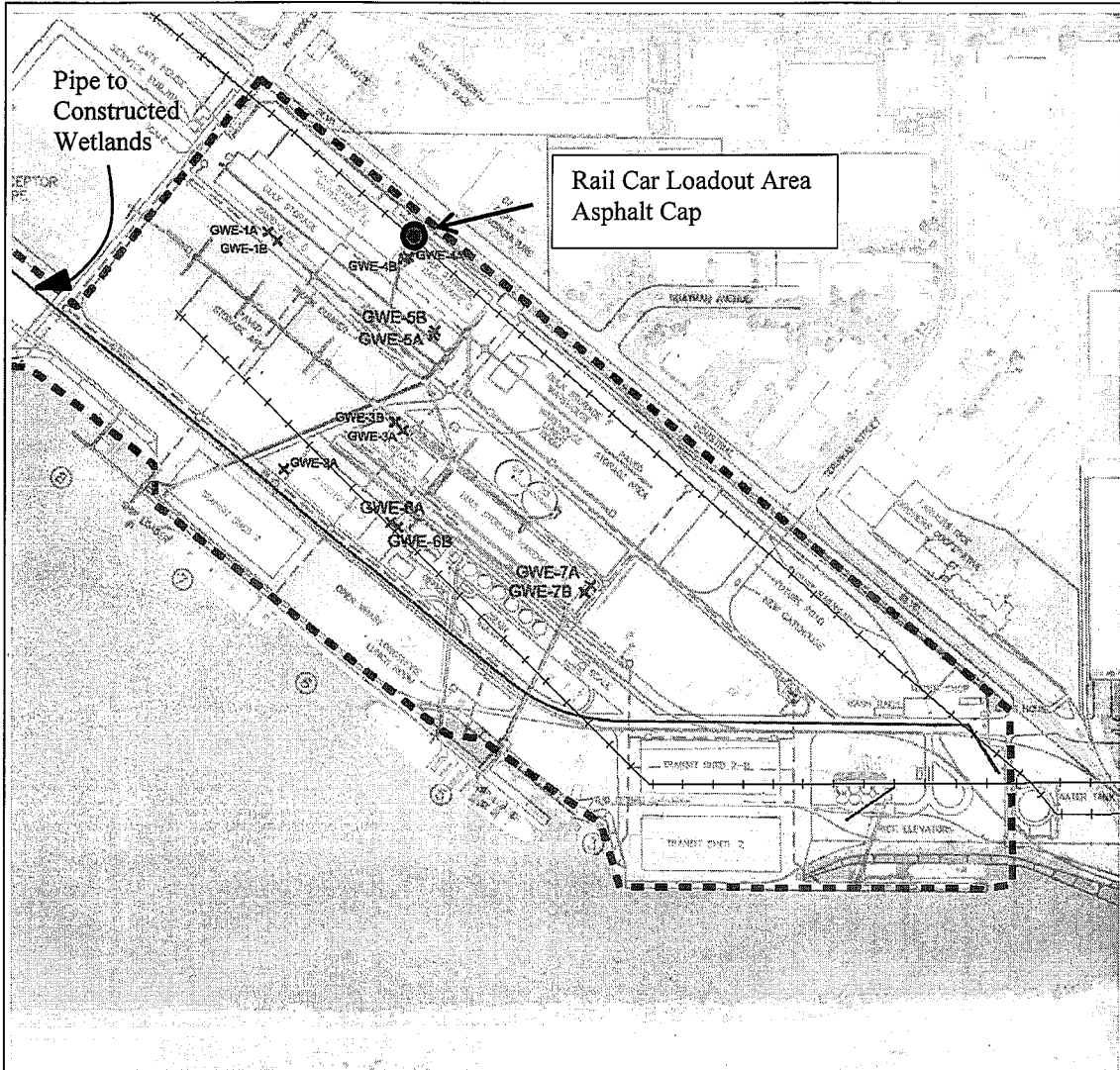
PORT OF WEST SACRAMENTO

West Sacramento, California

DRAWN BY	RWO
CHECKED BY	MMK
PROJECT MGR	KMB
DATE	11/16



WKA NO. 10637.02P

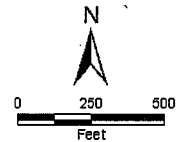
Figure 2. Location of Groundwater Extraction Wells and Pipe to Constructed Wetlands



Aerial provided by ESRI.
 Projection: NAD 83, California State Plane, Zone 11

Legend

-  Approximate Site Boundary
-  Groundwater Extraction Well



GROUNDWATER EXTRACTION WELL LOCATIONS
 PORT OF WEST SACRAMENTO
 West Sacramento, California

DRAWN BY	RWO
CHECKED BY	MMK
PROJECT MGR	KMB
DATE	11/16
WKA NO. 10637.02P	

