

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2012-0009

WASTE DISCHARGE REQUIREMENTS  
FOR  
UNION PACIFIC RAILROAD COMPANY  
ROSEVILLE YARD  
CLASS II SURFACE IMPOUNDMENT  
PLACER COUNTY

The California Regional Water Quality Control Board, Central Valley Region (hereafter Central Valley Water Board), finds that:

1. Union Pacific Railroad Company (hereafter "Discharger") owns and operates a two million gallon lined surface impoundment at its Roseville Yard in Placer County. The surface impoundment holds industrial wastewater flows and storm water runoff from various maintenance areas, fueling areas, and parking lots that must be captured, treated, and discharged to the sanitary sewer under permit. On 3 August 2010, Central Valley Water Board staff requested an amended Report of Waste Discharge (ROWD) to update previous waste discharge requirements (WDRs) 92-197 so that the lined surface impoundment can be properly regulated under the requirements of Title 27, California Code of Regulations (CCR) Section 20005, et seq. (Title 27). The Discharger submitted an amended ROWD on 19 April 2011, but Central Valley Water Board staff requested additional information. The Discharger submitted an updated version of the ROWD on 1 August 2011, and submitted other requested information related to water balance and seismic analysis on 25 October 2011.
2. The lined surface impoundment is on the 720-acre Union Pacific Railroad Roseville Yard that consists of several different parcels including Assessor's Parcel Numbers 473-100-011, 473-070-005, and 473-070-009 at 9451 Atkinson Street in Roseville, Placer County (Section 10, T10N, R7E, MDB&M), as shown on Attachment A, which is attached hereto and made part of the Order by reference. The south end of the Roseville Yard extends into Sacramento County, but the portion containing the surface impoundment and all areas draining to it is in Placer County.
3. The Roseville Yard has been in operation since the early 1900s and consists of three major areas; the North Yard, the South Yard, and Area A. The lined surface impoundment, an adjacent 12 million gallon unlined pond, and an industrial pretreatment wastewater facility (IPWF) are located in Area A, as shown on Attachment B, which is attached hereto and made part of the Order by reference.
4. The North Yard includes a diesel shop area, diesel service area, and a subway fueling area. The South Yard includes numerous parallel railroad tracks. Drainage from several areas of the North Yard totaling about 12 acres flow to the IPWF and the lined surface impoundment. Drainage areas include 5.7 acres of tracks, a 3.2-acre wash area, 2.4 acres of parking lots, and a 0.5-acre subway fueling area, as shown on

Attachment C, which is attached hereto and made part of the Order by reference. According to the Discharger, the storm water from the 10-acre diesel shop area shown on Attachment C does not flow to the IPWF or surface impoundment. Constituents in the industrial wastewater include diesel fuel, lubricating oils, and metals in the industrial wastewater and runoff from the above-referenced drainage areas. Constituents of concern for the surface impoundment are petroleum hydrocarbons including oil/grease and diesel fuel, as well as metals including arsenic, lead, and nickel.

5. Previous WDRs Order No. 92-197, adopted by the Central Valley Water Board on 25 September 1992, prescribed requirements for capturing and storing storm water that has contacted active industrial areas, wastes, and locomotive wash water for discharge to the lined surface impoundment under the "Non15" program. The Discharger has made several improvements to reduce the volume of water that enters the surface impoundment; however, this revised Order requires that the discharge be regulated in accordance with Title 27 due to concentrations of petroleum hydrocarbons in the water that indicate it is a designated waste as defined in California Water Code (CWC) Section 13173(b).
6. This Order regulates the lined surface impoundment as a Class II waste management unit under Title 27, and includes prohibitions on the use of the adjacent unlined pond for discharge or storage of industrial wastewater. The surface impoundment was originally lined in 1989 with a 40-mil high-density poly ethylene (HDPE) geomembrane lower liner and a geosynthetic clay liner (GCL) primary liner with a 6-inch pea gravel leachate collection and removal system (LCRS) in between. In 1990, a 60-mil HDPE geomembrane top liner was installed over the GCL with an 8-inch compacted fill layer in between. The liner cross-section is shown on Attachment D, which is attached hereto and made part of the Order by reference. WDRs were first adopted by the Central Valley Water Board for this site to regulate the discharge of industrial wastewater and storm water to two "treatment basins" and a storm water basin in 1983. The current unlined pond and lined surface impoundment were constructed adjacent to the old ponds in 1989.

#### **WASTE AND WASTE MANAGEMENT UNIT CLASSIFICATION**

7. The State Water Resources Control Board (State Water Board) promulgated regulations under Title 27 consisting of requirements, waste classifications, and waste management unit classifications designed to protect the beneficial uses of waters of the state for projects involving the discharge of designated waste to land for treatment, storage, or disposal.
8. California Water Code (CWC) Section 13173(b) defines "designated waste" to include "[n]on hazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations that exceed applicable water quality objectives or that could reasonably be expected to affect beneficial uses of waters of the state as contained in the appropriate state water quality control plan."

9. The Discharger provided data in the ROWD for samples collected from the surface impoundment since 2007, which are shown in the table below. The table also includes the California primary maximum contaminant level (primary MCL) and the lowest applicable water quality goal (WQG) for groundwater for protection of drinking water beneficial use for domestic and municipal supply wells. All concentrations are in micrograms per liter (ug/L).

Date	Oil and Grease (ug/L)	Total Petroleum Hydrocarbons <sup>1</sup> (ug/L)	Dissolved Lead (ug/L)	Dissolved Arsenic <sup>2</sup> (ug/L)	Dissolved Nickel (ug/L)
1/18/2007	40,000	13,000	21	13	16
5/22/2007	31,500	9,200	25	28	11
7/25/2007	37,000	21,000	95	37	16
10/16/2007	89,300	42,000	43	23	13
1/8/2008	137,000	54,000	29	120	9.5
4/3/2008	54,200	49,000	22	<10	12
8/18/2008	134,000	67,000	18	150	14
10/21/2008	139,000	79,000	14	150	12
1/22/2009	86,800	68,000	14	14	14
7/6/2009	31,900	22,000	12	6.9	12
10/27/2009	58,700	16,000	41	120	14
1/20/2010	23,500	8,400	6	<10	8.3
4/26/2010	35,600	12,000	9.9	<10	11
7/22/2010	49,500	11,000	51	52	10
10/21/2010	32,400	30,000	33	71	6.7
1/19/2011	<5,000	<5,000	59	<10	11
Primary MCL	None	None	15	10	100
Lowest Applicable WQG	None	56 (USEPA IRIS reference dose for drinking water for diesel oil)	0.2 (California public health goal)	0.004 (California public health goal)	12 (California public health goal)

<sup>1</sup> Reported as "Unknown Hydrocarbon" in the diesel range.

<sup>2</sup> Arsenic data presented above are from LCRS sump, not directly from surface impoundment. Impoundment data for arsenic are generally <10 ug/L.

10. Concentrations of total petroleum hydrocarbons (TPH) in the diesel range in the water samples from the surface impoundment greatly exceed both the lowest applicable water quality goal for diesel oil of 56 ug/L which is the USEPA IRIS reference dose as a drinking water level. This is a toxicity objective for the protection of human health based on two liters per day drinking water consumption. The concentrations also greatly exceed the 100 ug/L taste and odor threshold for diesel oil for the protection of human welfare. Concentrations of dissolved lead and arsenic in the water samples from the surface impoundment or LCRS sump exceed the respective California primary MCLs and the California public health goal. Concentrations of dissolved nickel exceed the

California public health goal for some of the data. If surface impoundment was unlined, the water contained in it would be released in concentrations exceeding the applicable water quality objectives and could reasonably be expected to affect the drinking water beneficial uses of the underlying groundwater. Therefore, the water in the surface impoundment is a designated waste as defined in the CWC and is subject to regulation under Title 27.

11. The surface impoundment is a waste management unit (WMU) that has previously been regulated under "Non15" WDRs, and was not classified under Title 27. The impoundment is equipped with a liner system and leachate collection and removal system that meets the prescriptive requirements and performance standards of Title 27. This Order classifies the WMU as a Class II surface impoundment under Title 27 and the impoundment meets the applicable Title 27 construction requirements for a Class II surface impoundment. This Order includes requirements for periodic inspection, electronic leak testing, and repair of the liner system if needed. This Order also contains an Action Leakage Rate (ALR) for maximum leakage into the LCRS.

### **SITE DESCRIPTION**

12. Surrounding land use within one mile of the Roseville Yard is a mix of residential, industrial, commercial, parks and recreation, and public open space. Dry Creek flows through the middle of the Roseville Yard immediately to the southwest of the unlined pond in Area A. Groundwater flow direction in the North Yard and Area A is generally to the southwest. Groundwater flow direction in the South Yard is generally to the southwest except in the vicinity of Dry Creek where it is to the northeast toward the creek.
13. The average annual precipitation at the facility is 22.80 inches based on the nearest weather station in Rocklin. The 100-year wet season was calculated to be 41.05 inches based on data from the Western Regional Climate Center for Rocklin. The 1,000-year 24-hour storm event is 5.14 inches based on data from the Western Regional Climate Center for Rocklin.
14. The channel for Dry Creek runs adjacent to the berm of the unlined pond as shown on Attachment B. The unlined pond is between the creek and the lined surface impoundment. The area in the immediate vicinity of Dry Creek, including the unlined pond and the lined surface impoundment are within the limits of the 100-year floodplain based on the flood insurance rate map number 06061C0478F produced by the Federal Emergency Management Agency. Near Area A, the 100-year flood elevation ranges from 120 feet to 124 feet above mean sea level (msl) based on NGVD 1929. Using NAVD 1988 datum, the range of 100-year flood elevations are 122.5 feet to 126.5 feet. The top of the berm elevation of the lined surface impoundment is 128 feet above msl based on NAVD 1988. The ROWD states that the top of the berm around both the lined and unlined basins are higher than the 100-year flood elevation by two feet. Therefore, the lined surface impoundment would not be inundated by a 100-year flood on Dry

Creek and is in compliance with Title 27 Section 20250(c) regarding prevention of inundation from a 100-year flood.

15. Sediments beneath Area A include a shallow and deep soil zone. The shallow soil zone extends from the ground surface to the base of the shallow water-bearing zone and is composed of relatively continuous unconsolidated to semi-consolidated sand, silt, and clay channel fill deposits inter-bedded with discontinuous lenses of silty and clayey sand. The thickness of the shallow soil zone ranges from 20 to 30 feet below ground surface (bgs). Groundwater in the shallow water-bearing zone has historically flowed to the southwest with a hydraulic gradient of about 0.0023 to 0.0027 feet/foot.
16. The deep soil zone extends from the base of the shallow water-bearing zone to the top of the deep water-bearing zone. The depth to the top of the deep water-bearing zone ranges from approximately 130 to 140 feet bgs. The deep soil zone is predominantly composed of silts and clays inter-bedded with lesser amounts of gravel and sand. The thickness of the deep soil zone ranges from approximately 100 to 110 feet. Groundwater in the deep water-bearing zone has historically flowed to the southwest with a hydraulic gradient of about 0.0023 to 0.0033 feet/foot.
17. The surface impoundment is constructed to a depth of approximately 11 feet bgs and the first groundwater is in the shallow water-bearing zone approximately 20 feet bgs.
18. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basin, Fourth Edition* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin. Pursuant to CWC Section 13263(a), waste discharge requirements must implement the Basin Plan.
19. The designated beneficial uses of the underlying groundwater, as specified in the Basin Plan, are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.
20. Surface water at the Roseville Yard that is not routed to the IPWF and surface impoundment is discharged to Dry Creek under the statewide general storm water permit for industrial facilities, and was formerly regulated under an individual NPDES permit from 1974 until 2000. Therefore, these WDRs do not regulate discharges of storm water to Dry Creek.
21. Dry Creek is tributary to the Sacramento River approximately one mile upstream of the I Street Bridge in Sacramento. The designated beneficial uses of the Sacramento River from the Colusa Drain to the I Street Bridge are municipal and domestic supply; agricultural supply; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; wildlife habitat; and navigation.

22. The ROWD states that according to the California Geological Survey (CGS), no known faults are in the immediate vicinity of the site. The closest fault is the Foothills Fault approximately 20 miles away with a Maximum Credible Earthquake (MCE) magnitude of 6.5. The other two closest faults are more than 50 miles away. The ROWD states that the ground motion values from the MCE based on a seismic event with a 10 percent probability of exceedance in 50 years, or return period of 475 years, would be 0.157 g in alluvium based on data compiled by CGS and U.S. Geological Survey.

### **SITE HISTORY**

23. The Central Valley Water Board's regulation of the Roseville Yard began in 1959 with the adoption of a resolution prescribing requirements for the discharge of industrial effluent to Dry Creek. In 1983, the Central Valley Water Board adopted WDRs 83-126 prescribing requirements for three then-existing retention basins that were used to pre-treat the industrial wastewater by sedimentation and skimming prior to discharge to Dry Creek. The WDRs found that the wastewater contained volatile organic compounds (VOCs) and metals and included a time schedule for segregation of storm water from industrial waste water, replacement of unlined ponds with lined ponds, and construction of an industrial wastewater pre-treatment facility for discharge to the sanitary sewer.
24. In 1984, the Central Valley Water Board adopted Cease and Desist Order 84-059 due to the Discharger's failure to comply with the time schedule in the WDRs. In 1989, the Executive Officer issued Cleanup and Abatement (CAO) Order 89-703 and Administrative Civil Liability Complaint 89-500 for discharges of storm water runoff containing diesel fuels and lubricating oils to Dry Creek during the winter of 1989. A new lined industrial wastewater surface impoundment was constructed in 1989 adjacent to a new unlined pond, and the IPWF was also constructed. The Central Valley Water Board adopted WDRs 90-052 and then WDRs 92-197 to regulate the ponds and the IPWF.
25. The Central Valley Water Board also adopted NPDES permits for discharges to Dry Creek beginning in 1974, but the Discharger applied for coverage under the statewide storm water permit for industrial facilities in 1999 and the latest NPDES permit, Order 94-333, was rescinded in 2000.
26. Site-wide investigation and cleanup of soil and groundwater at the Roseville Yard, including the area of the basins, are being addressed under the oversight of the Department of Toxic Substances Control (DTSC) in cooperation with the Central Valley Water Board's Site Cleanup Program. The Discharger entered into a Consent Order with DTSC in 1990 for investigation and cleanup for the entire rail yard site. For Area A, which includes the area in the vicinity of the lined and unlined basins, a Remedial Action Plan (RAP) was approved by DTSC on 23 August 2003. The remedy for this area included excavation and offsite disposal of impacted materials and the installation of a slurry wall and an asphalt surface cap. A summary of the implementation of the RAP was presented to DTSC in a 15 June 2005 Remedial Action Plan Completion Report

that was subsequently approved by DTSC. Per the requirements of the RAP, a land-use covenant for Area A was implemented on 27 June 2008 for the protection of present and future public health and the environment. Groundwater monitoring and sampling is being conducted within Area A in accordance with the approved RAP, an Operation and Maintenance Agreement entered into with DTSC in 2008, and a Monitoring and Reporting Program overseen by the Central Valley Water Board's Site Cleanup Program.

### **CLASS II SURFACE IMPOUNDMENT AND PRE-TREATMENT FACILITY**

27. Industrial wastewater and runoff from approximately 12 acres of the North Yard is directed to the IPWF for pre-treatment prior to discharge to the sanitary sewer under permit by the City of Roseville. The average flow of industrial wastewater is approximately 12 gallons per minute (gpm). The lined Class II surface impoundment is used for storage of excess water during and after rainfall events prior to treatment. The sewer permit allows a flow rate of up to 85,000 gallons per day (gpd) which is an average flow rate of approximately 59 gpm. The sewer permit requires pre-treatment of the wastewater and quarterly sampling of the effluent for various metals, oil & grease, total petroleum hydrocarbons, and total toxic organics with specific limits for each analyte. This sampling is conducted by the City of Roseville. The treatment system is capable of up to 500 gpm while the process pumps are capable of 380 gpm. Typically, the treatment system only operates during business hours on Monday through Friday, so the flow rate to the sanitary sewer during operation may be higher than 59 gpm as long as the flow does not exceed 85,000 gpd on average. The City of Roseville monitors the discharge meter monthly, and the Discharger submitted information from the City stating that the flow limitation is an annual average to allow for greater flows during the rainy season.
28. Industrial wastewater and storm water flows enter into an influent manhole and then flow into the headworks sump area where it is pumped to the IPWF. The IPWF treatment process includes grit removal, an oil-water separator, and flocculation/sludge removal. Oil that is skimmed off in the separator is pumped to two oil storage tanks. The wastewater is then injected with a coagulant then a flocculent and enters into a flocculation tank. The wastewater then enters a dissolved air floatation system from which the sludge is pumped out into two sludge tanks. The treated water is then discharged to the sanitary sewer. A process flow diagram of the IPWF is shown in Attachment E, which is attached hereto and made part of the Order by reference.
29. In order to provide excess hydraulic capacity, a 230,000-gallon above ground tank is connected to the headworks sump. The lined Class II surface impoundment is connected to the above ground tank. The lined impoundment is connected to the unlined pond by an inverted siphon that is 2.75 feet from the top of the lined impoundment. The Discharger reports that significant reductions to the area draining to the IPWF and surface impoundment were made during 2004; however, a significant drainage area of 12 acres remains. The Discharger also reports that no wastewater has

flowed to the unlined pond since the reductions in the drainage area were made. A water balance was included in the ROWD and is summarized in later Findings below.

30. Under current operations, wastewater is pumped out of the lined surface impoundment with a 150 gpm pump whenever the depth of water in the impoundment exceeds 4 feet. The pump discharges to a nearby manhole that is connected back to the headworks of the IPWF. During normal operations, the pump operates approximately six hours per day on every third day excluding weekends. Operations may need to be adjusted in order to maintain needed capacity in the surface impoundment for the design storm event and seasonal precipitation required by Title 27.
31. The lined surface impoundment was constructed in 1989 and an additional geomembrane and an 8-inch soil fill layer were added in 1990. The surface impoundment capacity is 2.07 million gallons if it were completely filled and is 1.64 million gallons at two feet of freeboard (two feet from the top of the impoundment). The impoundment has a maximum depth of 12 feet in the middle and a minimum depth of 9.5 feet along the edges. The areal extent of the impoundment is approximately 0.42 acres. The components of the liner system (also shown in Attachment D) are, from top to bottom:
  - a) 60-mil HDPE geomembrane
  - b) 8-inch compacted soil fill (cushion layer)
  - c) Geosynthetic clay liner (GCL)
  - d) 6-inch pea gravel LCRS layer
  - e) 40-mil HDPE geomembrane
  - f) Compacted fill subgrade
32. The 6-inch gravel LCRS layer is sloped at 3% along with the contours of the bottom of the impoundment and drains to a collection sump where water flows through a pipe to a manhole outside of the impoundment for pumping back to the surface impoundment. The system includes a flow totalizing meter to record flow from the LCRS manhole back to the surface impoundment.
33. The ROWD includes a proposed Action Leakage Rate (ALR) for the surface impoundment LCRS. The ALR is a maximum flow rate through the primary liner to the LCRS beyond which the Discharger is required to take actions to inspect and repair the primary liner system. The Discharger proposes an ALR based on the recommendations in the 1992 USEPA guidance document *Action Leakage Rate for Leak Detection Systems*. The guidance recommends that ALR for lined surface impoundments be set at no more than 1,000 gallons per acre per day. Using this recommendation, the Discharger calculated an ALR of 420 gallons per day for the 0.42-acre impoundment. This Order sets the ALR for the surface impoundment at 420 gallons per day. The ALR will be calculated based on monthly readings of the flow totalizer that records flow from the LCRS manhole back to the surface impoundment.



34. Title 27 Section 20370(a) requires Class II units to be designed to withstand the maximum credible earthquake (MCE) without damage to foundation or containment structures. The ROWD contains a stability analysis for the existing Class II surface impoundment. The stability analysis analyzes the impoundment under both static and dynamic conditions. The static stability analysis indicates a factor of safety of 2.05, which is greater than the factor of safety of 1.5 required by Title 27. The dynamic (seismic) stability analysis using the peak ground acceleration of 0.157 g for the MCE indicates a factor of safety of 1.64, which is greater than the required 1.5.
35. Title 27 Section 20375(a) requires Class II surface impoundments to have capacity for seasonal precipitation, a 1,000-year 24-hour design storm event, and to maintain at least two feet of freeboard. The 1,000-year, 24-hour storm event for the site is 5.14 inches. For Title 27-required seasonal precipitation, the Discharger has been required to use the 100-year wet season distributed monthly to account for reasonable worst-case scenario. Use of the average wet season has not been allowed since the surface impoundment would not have sufficient storage capacity during about 50% of the annual wet seasons. The 100-year wet season for the site is 41.05 inches based on rainfall data from the Rocklin gauge. The ROWD includes a table showing how this rainfall would be distributed monthly by distributing the total amount among the months using the percentage of monthly precipitation that occurs on average. This results in the following for the 100-year wet season as shown in the ROWD:

Month	100-Year Wet Season (Inches)
January	8.81
February	6.95
March	5.89
April	3.22
May	1.37
June	0.50
July	0.05
August	0.05
September	0.58
October	2.25
November	4.63
December	6.75
<b>Total</b>	<b>41.05</b>

36. A detailed water balance for the surface impoundment is included in the ROWD. The water balance takes the following factors into account:
- a) The average daily base wastewater flow is 17,572 gpd or about 12 gpm based on historical records.
  - b) A surface area of 514,831 square feet (12 acres) from the North Yard drains to the IPWF during precipitation events.

- c) The runoff coefficient for estimating runoff volume using the Rational Method is 0.54 based on land uses in the runoff area. The Discharger also estimated runoff using the Natural Resources Conservation Service Method using a curve number of 89 based on local soils information.
  - d) The maximum flow rate out of the surface impoundment is 150 gpm based on the pump capacity. The maximum flow rate to the sanitary sewer is 380 gpm, but cannot exceed 85,000 gpd (59 gpm) for an annual average.
  - e) Evaporation losses from the impoundment total 69,472 cubic feet per year or 519,634 gallons per year, and are distributed monthly.
  - f) The 100-year wet season (41.05 inches) is distributed monthly in accordance with average monthly rainfall patterns.
  - g) The capacity of the lined impoundment at the two-foot freeboard level is 219,114 cubic feet or 1,638,973 gallons.
37. Based on the water balance in the ROWD, the Discharger reports that the surface impoundment has sufficient capacity to maintain more two feet of freeboard during the height of the 100-year wet season. The highest volume would be seen during March at 214,438 cubic feet or 1,604,000 gallons stored in the impoundment which is less than the volume of 219,114 cubic feet at the two-foot freeboard level.
38. The water balance indicates that the lined surface impoundment does not have sufficient capacity to contain the runoff from the 12 acre drainage area during the required 1,000-year, 24-hour storm event. The ROWD states that if a new lined overflow basin is required for the 1,000-year, 24-hour storm flow, it shall handle a minimum of 166,188 cubic feet of runoff. The ROWD proposes an impoundment that with a volume of 202,500 cubic feet (approximately 1.5 million gallons) including the required two feet of freeboard. The initially proposed dimensions of the impoundment are 200 feet by 75 feet by 13.5 feet deep which would be an area of approximately 0.34 acres. These dimensions may change during design so long as the overall needed volume is maintained.
39. The Discharger proposes a single-composite liner system for the overflow basin to be constructed within the confines of the existing 12 million gallon unlined basin. The proposed liner system would consist of an HDPE geomembrane overlaying a geosynthetic clay liner (GCL). The overflow impoundment is not being required to meet full Class II surface impoundment standards since it would be used very infrequently and for very limited duration during and after very large storm events that approach the 1,000-year, 24-hour storm event. This Order requires that the overflow impoundment be constructed and be pumped out as soon as capacity in the Class II surface impoundment is available.
40. This Order and the attached monitoring and reporting program also requires the Discharger to record onsite rainfall and freeboard levels daily and report them in the required monitoring reports. This Order also requires a flow totalizing meter to record

flow from the impoundment back to the IPWF so that the volume of wastewater being handled by the impoundment can be calculated.

### GROUNDWATER CONDITIONS

41. There are numerous monitoring wells at the site associated with site investigation and cleanup including several associated with the surface impoundment in Area A. The Discharger has selected eight monitoring wells to be used for the detection monitoring program for the surface impoundment. Proposed background wells located upgradient from the impoundment are W91-04 and W91-07. Detection monitoring wells include cross-gradient well W95-02, and downgradient wells EW-5, W91-01, OSMW32, DI-58, and W-02. Locations of monitoring wells are included on Attachment B of this Order.
42. The constituents of concern (COCs) for the surface impoundment proposed in the ROWD are arsenic, lead, nickel, and TPH. The proposed COCs are based on data from the surface impoundment and LCRS. TPH will include separate analyses for TPH as diesel and TPH as oil & grease. Other potential COCs that could be present in the wastewater such as other VOCs and are required to be sampled in the attached monitoring and reporting program.
43. Groundwater in Area A has been impacted by previous waste disposal practices and is being address by DTSC and the Site Cleanup Program as discussed in Finding 26. Non-naturally occurring compounds that have been detected in groundwater include acetone, 2-butanone, chloroethane, chloromethane, methyl-tertiary butyl ether (MTBE), and TPH as diesel. The following table includes information presented in the ROWD for groundwater data in Area A from January 2009 to January 2010.

Constituent	Samples Taken	Samples above detection limit	Average Detected Concentration
Arsenic	17	1	20 ug/L
Acetone	68	2	28.5 ug/L
2-butanone	68	5	1.9 ug/L
Chloroethane	77	1	1.1 ug/L
Chloromethane	77	1	0.58 ug/L
MTBE	68	1	1.1 ug/L
TPH as diesel	77	69	261 ug/L

44. In the past, much of the groundwater and surface impoundment monitoring data has been reported with laboratory reporting limits that were set at or sometimes above the Maximum Contaminant Level (MCL). For instance, the reporting limit for arsenic has been set at either 10 ug/L or 20 ug/L for most of the samples collected from monitoring wells and the surface impoundment. The primary MCL for arsenic is 10 ug/L. The lowest applicable water quality goal for arsenic is the California Public Health Goal which is 0.004 ug/L. The previously used reporting limits for arsenic are too high to properly regulate the discharge to the surface impoundment or to properly assess

conditions for groundwater investigation and cleanup. The attached monitoring and reporting program requires the Discharger to use USEPA test methods with the lowest achievable detection limits and to set the reporting limit no higher than the practical quantitation limit.

45. As required by Title 27, the ROWD includes a proposed detection monitoring program and includes proposed methods for calculating concentration limits for the COCs to be used for detecting a release to groundwater from the surface impoundment. The objective of the detection monitoring program is to detect a new release from the lined surface impoundment. Since groundwater is already impacted with constituents listed in Finding 43, the concentration limits generated by the proposed methods include limits for non-naturally occurring constituents that are well above laboratory reporting limits and may also exceed applicable water quality goals. This is because the limits are statistically derived and their purpose is to detect a new release based on the existing "background" conditions of groundwater impacted from previous practices at the site. Once again, site-wide cleanup including the cleanup objectives for each constituent that is impacting groundwater is being overseen by DTSC and the Site Cleanup Program. This Order does not include requirements for addressing the impacts caused by the past practices and treats current groundwater conditions as the background for purposes of detection monitoring. The methods for calculating concentration limits are included in the attached monitoring and reporting program.

### **SURFACE IMPOUNDMENT CLEAN-CLOSURE**

46. A Preliminary Closure Plan (PCP) for the surface impoundment is included in Section 9 of the ROWD. Pursuant to Title 27 Section 21400(a)(1), the PCP proposes clean-closure of the surface impoundment. The PCP proposes to prepare a final closure plan prior to commencing closure activities. The liner system, LCRS, and any sludges will be removed and taken to an off-site appropriately-permitted landfill. The PCP plan assumes that 1,100 tons of sludge will require disposal. The soil underlying the impoundment will be sampled for the presence of contaminants, and the PCP assumes limited overexcavation of the top two feet of soil will be conducted. The site will then be graded for future use.
47. The PCP includes an itemized cost estimate for third party costs to clean-close the surface impoundment. The total of the estimate is \$3,223,000 in 2011 dollars. This cost estimate is approved by the adoption of these WDRs. Pursuant to Title 27 Section 22207(a), this Order requires the Discharger to establish financial assurances for closure of the Class II surface impoundment in accordance with the approved cost estimate naming the Central Valley Water Board as the beneficiary.

### **FINANCIAL ASSURANCES FOR CORRECTIVE ACTION**

48. Title 27 Section 22222 requires the Discharger to establish financial assurances for corrective action of a known or reasonably foreseeable release. A cost estimate for

corrective action is included in Section 10 of the ROWD. The total of the cost estimate for corrective action is \$2,099,000 in 2011 dollars. This cost estimate is approved by the adoption of these WDRs. This Order requires the Discharger to establish financial assurances for corrective action in accordance with the approved cost estimate naming the Central Valley Water Board as the beneficiary.

### CEQA AND OTHER CONSIDERATIONS

49. This action to revise WDRs for this facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resources Code, Section 21000 et seq., in accordance with Title 14 CCR, Section 15301. The reissuance and amendment of the WDRs is exempt from CEQA under Section 15301 for the existing facility. The requirement for the Discharger to line a portion of the existing unlined wastewater pond to protect groundwater is also exempt under Section 15301 since there is no expansion of the existing permitted facility.
50. This Order implements:
- a. *The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition; and*
  - b. The prescriptive standards and performance goals of Title 27 of the California Code of Regulations, effective 18 July 1997, and subsequent revisions.
51. Section 13267 of the California Water Code states, in part, “(a) *A regional board, in establishing...waste discharge requirements... may investigate the quality of any waters of the state within its region*” and “(b) (1) *In conducting an investigation..., the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste outside of its region that could affect the quality of waters of the state 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 reports and the benefits to be obtained from the reports. In requiring these reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify evidence that supports requiring the person to provide the reports.*”
52. The technical reports required by this Order and the attached Monitoring and Reporting Program are necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates the facility, and is responsible for the discharges of waste at the facility subject to this Order and is, therefore, subject to CWC Section 13267(b).

## PROCEDURAL REQUIREMENTS

53. All local agencies with jurisdiction to regulate land use, solid waste disposal, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.
54. The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
55. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.
56. 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 Section 13320 of the California Water Code and Title 23, California Code of Regulations Sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of the 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](http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

or will be provided upon request.

**IT IS HEREBY ORDERED** pursuant to Sections 13263 and 13267 of the California Water Code, that Order No. 92-197 is rescinded and Union Pacific Railroad Company, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following.

### A. PROHIBITIONS

1. The discharge of 'hazardous waste' into the ponds regulated by this Order is prohibited. For the purposes of this Order, the terms 'hazardous waste' and 'designated waste' are as defined in Title 27.
2. Discharge of wastes to surface waters or surface water drainage courses is prohibited, other than as allowed by discharges regulated by the statewide general storm water permit for industrial facilities.

3. The discharge of wastewater and/or contaminated runoff to the ground surface in unlined areas after it enters the IPWF or Class II surface impoundment is prohibited.

## **B. DISCHARGE SPECIFICATIONS**

1. The discharge shall not cause a nuisance or condition or pollution as defined by the California Water Code, Section 13050.
2. Precipitation and drainage control systems shall be designed, constructed, and maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 1,000-year, 24-hour precipitation conditions.
3. Annually, prior to the anticipated rainy season but no later than **1 November**, any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed.
4. The Class II surface impoundment shall have capacity to contain precipitation and site runoff from a 100-year wet season of 41.05 inches distributed at least monthly. The Discharger shall provide the required additional capacity for containment of a 1,000-year 24-hour storm event of 5.14 inches in accordance with the schedule in the provisions of this Order below.
5. The Class II surface impoundment and any lined overflow basin shall maintain at least two feet of freeboard at all times (measured from the top of the basin at the point where it would overflow to the surface of the wastewater in the basin).
6. The Discharger shall record onsite rainfall and lined surface impoundment freeboard levels in accordance with the attached monitoring and reporting program.
7. Wastewater and runoff that overflows from the Class II surface impoundment into any lined overflow basin shall be pumped back into the Class II surface impoundment as capacity becomes available.
8. The Discharger shall operate the treatment system at its maximum flow rate within City permit limitations to regain as much surface impoundment capacity as possible following any precipitation event.
9. Prior to the wet season and by **1 November**, the surface impoundment shall have its full capacity available (be as empty as possible) to accommodate rainfall during the wet season. Minor amounts of water may be present in the impoundment at this time but no more than the minimum amount of water needed to operate the pump to the treatment system.

10. The surface impoundment and lined overflow basin shall be maintained to prevent scouring and/or erosion of the liner and other containment features at points of discharge to the impoundment and by wind-caused wave action at the waterline.
11. Leachate removed from the surface impoundment LCRSs shall be placed back into the surface impoundment after any required sampling. Any leachate holding tank or manhole shall be large enough to accommodate anticipated flows from the LCRS without overflowing, and shall be able to automatically discharge back to the surface impoundment in the event of overflowing.
12. The **Action Leakage Rate (ALR)** for the Class II surface impoundment is **420 gpd** or 12,600 gallons over a 30-day period. If leachate generation in the LCRS of the Class II surface impoundment exceeds the ALR, the Discharger shall immediately take steps to locate and repair leak(s) in the liner system and immediately notify the Central Valley Water Board. If repairs do not result in a leakage rate less than the required ALR, the Discharger shall immediately notify the Central Valley Water Board. The notification shall include a timetable for remedial action to repair the upper liner of the surface impoundment or action necessary to reduce leachate production.
13. The Discharger shall maintain a flow totalizing meter to record flow from the LCRS manhole sump back to the Class II surface impoundment so that the ALR can be calculated.
14. The Discharger shall install and maintain a flow totalizing meter to record flow from the impoundment back to the IPWF so that the volume of wastewater being handled by the Class II surface impoundment can be calculated.
15. The LCRS shall be operated and maintained to collect twice the anticipated daily volume of leachate generated by the Class II surface impoundment and to prevent the buildup of hydraulic head on the underlying liner at any time. The depth of fluid in the LCRS shall be kept at the minimum needed to ensure efficient pump operation given the pump intake height and cycle frequency.
16. The LCRS shall be designed and operated to function without clogging through the scheduled closure of the surface impoundment. The surface impoundment shall be equipped to facilitate annual testing to demonstrate proper operation as required by Title 27 Section 20340(d).
17. Sediment or solids that accumulate in the Class II surface impoundment shall be removed when necessary to maintain the designed storage capacity. Sludge and solids removal shall be accomplished in a manner that ensures the continued integrity of liners and leachate collection systems in accordance with the facility's operations plan. Prior to disposal of these solids, sufficient samples shall be taken for their characterization and classification pursuant to Title 27. Sediment or solids shall be dried to less than 50% moisture prior to disposal of at a permitted disposal



facility with containment classification appropriate for the classification of the waste.

18. Following sediment/solids removal from the Class II surface impoundment, the Discharger shall conduct an electronic leak location survey of the upper liner of the surface impoundment and shall repair any leaks or damage to the upper liner prior to discharging waste to the impoundment.

### **C. DESIGN AND CONSTRUCTION SPECIFICATIONS**

1. The Class II surface impoundment shall be equipped with a double liner system and LCRS as described in the ROWD and in Finding 31 of this Order.
2. Any overflow basin for temporary storage of wastewater and runoff shall be equipped with at least a composite liner system consisting of an HDPE geomembrane overlaying a geosynthetic clay liner as proposed in the ROWD.
3. The Discharger shall submit a design report including plans, specifications, and a construction quality assurance plan for review and approval prior to constructing any new lined impoundments or overflow basins.
4. The Discharger shall submit a final report documenting construction of any new lined impoundments or overflow basins for review and approval prior to discharging wastes to the impoundment.
5. The Class II surface impoundment and any overflow basin shall have permanent markings on the liner, or a permanent freeboard gauge so that the freeboard can be observed and recorded at any time. The markings or gauge shall have increments no greater than 6-inches.
6. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating period of the surface impoundment.
7. Materials used to construct an LCRS shall have appropriate physical and chemical properties to ensure the required transmission of leachate over the life of the surface impoundment.

### **D. CLOSURE SPECIFICATIONS**

1. At closure of the Class II surface impoundment and overflow basin, the Discharger shall clean-close the units pursuant to Title 27 Section 21400(a)(1). All precipitates, settled solids, liner materials, and adjacent natural geologic materials contaminated by wastes, shall be completely removed and discharged to an appropriately permitted landfill facility. If after reasonable attempts to remove contaminated natural geologic materials, the Discharger demonstrates that

removal of all remaining contamination is infeasible, the impoundment and/or overflow basins shall be closed as a landfill pursuant to Title 27 Section 21400(b)(2)(a).

2. Prior to closure, the Discharger shall submit a Final Closure Plan prepared by a California-registered civil engineer or certified engineering geologist, and that contains all applicable information required in Title 27 Section 21769. The plan shall include elements proposed in the ROWD, and shall meet the requirements of this Order.

## **E. FINANCIAL ASSURANCES**

1. By **1 June 2012**, pursuant to Title 27 Section 22207, the Discharger shall submit a report showing that it has established an irrevocable \$3,223,000 **closure fund** with the Central Valley Water Board named as beneficiary to ensure closure of the Class II surface impoundment in accordance with the cost estimate in the ROWD. The financial assurances mechanism shall be one listed in Title 27 Section 22228 that the Discharger is eligible for. For financial assurance mechanisms requiring funding, the Discharger shall either fully fund the mechanism by 1 June 2012 or may propose a payment schedule. If the Discharger proposes a payment schedule to fund the mechanism, it shall submit a report by **1 June 2013** showing that the mechanism is fully funded. For financial assurance mechanisms not requiring funding, such as a Guarantee, the Discharger shall submit a report showing the mechanism is in place by **1 June 2012**.
2. By **1 June 2012**, pursuant to Title 27 Section 22222, the Discharger shall submit a report showing that it has established an irrevocable \$2,099,000 **corrective action fund** with the Central Valley Water Board named as beneficiary to ensure funds are available to address a known or reasonably foreseeable release from the Class II surface impoundment. The financial assurances mechanism shall be one listed in Title 27 Section 22228 that the Discharger is eligible for. For financial assurance mechanisms requiring funding, the Discharger shall either fully fund the mechanism by 1 June 2012 or may propose a payment schedule. If the Discharger proposes a payment schedule to fund the mechanism, it shall submit a report by **1 June 2013** showing that the mechanism is fully funded. For financial assurance mechanisms not requiring funding, the Discharger shall submit a report showing the mechanism is in place by **1 June 2012**.
3. By **1 June** of each year, the Discharger shall submit a report to the Central Valley Water Board that reports the balance of both the closure and corrective action funds or the amounts of the Guarantees and the adjustments to account for inflation in accordance with Title 27 Section 22236.

## F. PROVISIONS

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements for Discharges Regulated by Title 27, dated September 2003, which are hereby incorporated into this Order. The Standard Provisions and Reporting Requirements contain important provisions and requirements with which the Discharger must comply. A violation of any of the Standard Provisions and Reporting Requirements is a violation of these waste discharge requirements.
2. Pursuant to CWC Section 13267, the Discharger shall comply with Monitoring and Reporting Program No. R5-2012-0009, which is attached to and made part of this Order. A violation of Monitoring and Reporting Program No. R5-2012-0009 is a violation of these waste discharge requirements.
3. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
4. The following reports shall be submitted pursuant to Section 13267 of the California Water Code and shall be prepared by a California-registered civil engineer or certified engineering geologist:
  - a. By **1 May 2012**, the Discharger shall submit a report showing that a flow totalizing meter has been installed to measure flow from the Class II surface impoundment to the IPWF.
  - b. By **1 June 2012**, the Discharger shall submit a plan to collect any additional groundwater samples necessary that may provide at least four data points for each Monitoring Parameter required in the groundwater monitoring program in Monitoring and Reporting Program No. R5-2012-0009 such that concentration limits can be calculated in the 2012 Annual Monitoring Report that is due by 31 January 2013.
  - c. By **29 June 2012**, the Discharger shall submit a design report, plans, specifications, and a construction quality assurance plan for a composite-lined overflow basin designed to capture and store runoff from a 1,000-year, 24-hour storm event as described in Findings 38 and 39. The liner system shall consist of an HDPE geomembrane and a geosynthetic clay liner as proposed in the ROWD.

- d. By **28 February 2013**, the Discharger shall submit the final report documenting the construction of the overflow basin, results of the construction quality assurance testing, and certifying that the basin meets the requirements of this Order.
5. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel. All other site operating records required by this Order may be maintained offsite, but must be available to Central Valley Water Board staff within 48 hours of being requested.
6. The Discharger shall maintain legible records of the volume and type of waste discharged to and from the surface impoundment and the manner of the discharge. Such records shall be maintained at the facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Central Valley Water Board and of the State Water Resources Control Board.
7. The Discharger shall comply with all applicable provisions Title 27 that are not specifically referred to in this Order.
8. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order and of the California Water Code.
9. The Discharger shall immediately notify the Central Valley Water Board of any flooding, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.
10. In the event of any change in control or ownership of the facility or disposal areas, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision VIII.A.5 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved by the Executive Officer.

11. The Central Valley Water Board will review this Order periodically and may revise requirements when necessary.
12. This Order shall take effect upon the date of adoption.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 2 February 2012.

Original signed by

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PAMELA C. CREEDON, Executive Officer

WLB

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2012-0009  
FOR  
UNION PACIFIC RAILROAD COMPANY  
ROSEVILLE YARD  
CLASS II SURFACE IMPOUNDMENT  
PLACER COUNTY

This Monitoring and Reporting Program (MRP) is issued to Union Pacific Railroad Company (Discharger). Compliance with this Monitoring and Reporting Program, and with the companion Standard Provisions and Reporting Requirements dated September 2003 (hereafter "Standard Provisions"), is ordered by Waste Discharge Requirements Order No. R5-2012-0009 (WDRs). Failure to comply with this MRP, or with the Standard Provisions, constitutes noncompliance with the WDRs and with California Water Code Section 13267, which can result in the imposition of civil monetary liability.

**A. MONITORING**

The Discharger shall comply with the monitoring program provisions of Title 27 for groundwater and leachate in accordance with this MRP and the Monitoring Specifications in Standard Provisions.

All detection monitoring wells established for the detection monitoring program shall constitute the monitoring points for the groundwater Water Quality Protection Standard. All detection monitoring program groundwater monitoring wells and leachate monitoring points shall be sampled and analyzed for monitoring parameters and constituents of concern as indicated and listed in the tables of this MRP.

The Discharger shall use USEPA test methods with a detection limit that is lower than the Maximum Concentration Limit for that constituent or that is the lowest achievable detection limit for that constituent taking any matrix interferences into account. The reporting limit shall be no higher than the practical quantitation limit. The Discharger shall report all trace concentrations that are between the detection limit and the practical quantitation limit. All metals analyses shall be for dissolved metals. The Discharger shall conduct monitoring and inspections as described in the summary table below. Detailed monitoring and inspection requirements are provided in the following sections of this MRP.

<b>Facility Monitoring and Inspection Summary</b>		
<b>Activity</b>	<b>Inspection/Monitoring Frequency</b>	<b>Notes</b>
<b><u>Monitoring</u></b>		
Surface Impoundment Monitoring	Weekly, Monthly, Quarterly	See Section A.1
Groundwater Monitoring	Quarterly, Semiannually	See Section A.2
LCRS Monitoring	Monthly, Quarterly	See Section A.3
<b><u>Inspections</u></b>		
Annual Facility Inspection	Annual	See Section A.4.a
Storm Events	Following Major Storm Event	See Section A.4.b
Other Facility Inspections	Per Summary Table in A.4.c	See Section A.4.c

## 1. Surface Impoundment

Samples shall be collected from the surface impoundment in accordance with the table below:

<b>Surface Impoundment Monitoring</b>			
<u>Parameters</u>	<u>Units</u>	<u>Monitoring Frequency</u>	<u>Reporting Frequency</u>
<u>Field Parameter</u>			
Freeboard	feet and tenths	Weekly <sup>1</sup>	Semiannually
Remaining Capacity	gallons	Monthly	Semiannually
Flow <sup>2</sup>	gallons	Monthly	Semiannually
pH	pH units	Semiannually	Semiannually
Electrical Conductivity	umhos/cm	Semiannually	Semiannually
<u>Monitoring Parameters</u>			
Dissolved Arsenic	ug/L <sup>3</sup>	Semiannually	Semiannually
Dissolved Lead	ug/L	Semiannually	Semiannually
Dissolved Nickel	ug/L	Semiannually	Semiannually
Volatile Organic Compounds	ug/L	Semiannually	Semiannually
TPH as oil and grease	ug/L	Semiannually	Semiannually
TPH as diesel	ug/L	Semiannually	Semiannually

<sup>1</sup> Freeboard shall be measured weekly and within 24 hours after onsite rainfall of greater than two inches in a 24 hour period. Freeboard shall be measured from the top of the surface impoundment down to the water level in the impoundment and can be measured using markings on the primary geomembrane liner or a free-standing gauge.

<sup>2</sup> Flow measured and recorded at totalizing meter from Class II surface impoundment to IPWF.

<sup>3</sup> Micrograms per liter

## 2. Groundwater

The Discharger shall operate and maintain a groundwater monitoring system that complies with the applicable provisions of Section 20415 of Title 27. **Quarterly** water level measurements shall be taken in all monitoring wells pursuant to Section 20415(e)(15) of Title 27.

Groundwater samples shall be collected **semiannually** from the compliance wells (EW-5, W91-01, OSMW32, DI-58, W02, and W95-02), the background wells (W91-04 and W91-07), as shown on Attachment B, and any additional wells added as part of the approved groundwater monitoring system. The Discharger shall also monitor these and other monitoring wells at the site as required by the Site Cleanup Program. Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged of at least three well volumes until temperature, pH, and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected and analyzed for the monitoring parameters in

accordance with the methods and frequency specified in the following table:

<b>Groundwater Monitoring</b>			
<u>Parameters</u>	<u>Units</u>	<u>Monitoring Frequency</u>	<u>Reporting Frequency</u>
<u>Field Parameter</u>			
Groundwater Elevation	feet & hundredths, MSL	Quarterly <sup>1</sup>	Semiannually
Temperature	°F	Semiannually	Semiannually
Electrical Conductivity	umhos/cm	Semiannually	Semiannually
pH	pH units	Semiannually	Semiannually
Turbidity	NTU	Semiannually	Semiannually
<u>Monitoring Parameters</u>			
Dissolved Arsenic	ug/L	Semiannually	Semiannually
Dissolved Lead	ug/L	Semiannually	Semiannually
Dissolved Nickel	ug/L	Semiannually	Semiannually
Volatile Organic Compounds	ug/L	Semiannually	Semiannually
TPH as oil and grease	ug/L	Semiannually	Semiannually
TPH as diesel	ug/L	Semiannually	Semiannually

<sup>1</sup> Quarterly groundwater elevation monitoring is required by Section 20415(e)(15) of Title 27.

### 3. LCRS Monitoring

The LCRS manhole shall be inspected monthly for leachate. If leachate is present, then the LCRS manhole shall be sampled and analyzed for the following:

<b>LCRS Monitoring</b>			
<u>Parameters</u>	<u>Units</u>	<u>Monitoring Frequency</u>	<u>Reporting Frequency</u>
<u>Field Parameter</u>			
Presence of leachate	observation	Monthly	Semiannually
Flow Rate <sup>1</sup>	gallons/day	Monthly	Semiannually
Electrical Conductivity	umhos/cm	Semiannually	Semiannually
pH	pH units	Semiannually	Semiannually
<u>Monitoring Parameters</u>			
Dissolved Arsenic	ug/L	Semiannually	Semiannually
Dissolved Lead	ug/L	Semiannually	Semiannually
Dissolved Nickel	ug/L	Semiannually	Semiannually
Volatile Organic Compounds	ug/L	Semiannually	Semiannually
TPH as oil and grease	ug/L	Semiannually	Semiannually
TPH as diesel	ug/L	Semiannually	Semiannually

<sup>1</sup> Flow in gallons per day from LCRS manhole back to surface impoundment.



All LCRSs shall be tested **annually** as required by Title 27 Section 20340(d) to demonstrate operation in conformance with waste discharge requirements. The results of these tests shall be reported in the Annual Monitoring Report and shall include comparison with earlier tests made under comparable conditions.

**4. Facility Monitoring**

**a. Annual Facility Inspection**

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility. The inspection shall assess any damage to the surface impoundment, drainage control system, and groundwater monitoring equipment (including wells, etc.). Any necessary construction, maintenance, or repairs shall be completed by **1 November**. Reporting shall be conducted as required in Section B.1 of this MRP.

**b. Storm Events**

The Discharger shall inspect all precipitation, diversion, and drainage facilities for damage **within 7 days** following major storm events (greater than two inches of precipitation in 24 hours), and shall conduct applicable Standard Observations contained in Section XII.S of the Standard Provisions. Necessary repairs shall be completed **within 30 days** of the inspection. The Discharger shall also check for discharge from the Class II surface impoundment invert siphon, and return any discharged water back to the Class II surface impoundment when capacity is regained. Reporting shall be conducted as required in Section B.1 of this MRP.

**c. Other Facility Inspection Requirements**

The Discharger shall conduct other facility inspections as summarized in the following table. Reporting shall be conducted as required in Section B.1 of this MRP.

<b>Facility Inspection Requirements Summary</b>		
<b>Activity</b>	<b>Inspection/Monitoring Frequency</b>	<b>Notes</b>
Record freeboard in the surface impoundment and any overflow basin	Weekly and within 24 hours after onsite rainfall of greater than two inches in a 24 hour period.	
Record meter readings from the LCRS manhole to the surface impoundment, the discharge from the surface impoundment, and the discharge to the sanitary sewer	Monthly	
Record onsite rainfall	Daily (automated rainfall gauge)	

Facility Inspection Requirements Summary		
Activity	Inspection/Monitoring Frequency	Notes
Visually inspect the integrity of the surface impoundment liner and make repairs as necessary	Quarterly	
Facility Inspection and Repairs	Annual inspection by 30 September, complete repairs by 1 November, report by 31 January	
Test the LCRS	Annually, prior to the wet season.	See Section VII.O of the Standard Provisions

**B. REPORTING**

The Discharger shall report all required monitoring data and information, and results of all required facility inspections **semiannually** as required in this Monitoring and Reporting Program and as required in the Standard Provisions. In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements or the lack thereof. Historical and current monitoring data shall be graphed at least once annually. Graphs for the same constituent shall be plotted at the same scale to facilitate visual comparison of monitoring data. A short discussion of the monitoring results, including notations of any water quality violations shall precede the tabular summaries. Data shall also be submitted in an acceptable digital format.

Method detection limits and practical quantitation limits shall be reported. All peaks shall be reported, including those which cannot be quantified and/or specifically identified. Field and laboratory tests shall be reported in the semiannual monitoring reports. The results of any monitoring done more frequently than required at the locations specified herein shall be reported to the Central Valley Water Board.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or Professional Geologist and signed/stamped by the registered professional.

**REQUIRED MONITORING REPORTS AND SUBMITTAL DATES:**

**1. Semiannual Monitoring Reports**

The semiannual monitoring reports shall include all water quality data and observations collected during the reporting period and submitted as follows. Semiannual reports shall be submitted by **31 July** for the first semester (1 January to 30 June) and **31 January** for the second semester (1 July to 31 December). The second semiannual report shall be combined with the Annual Monitoring Report, below, and shall include in its title that it is for the report for the second semiannual and the annual report. At a minimum the sampling and data collection required in the

tables of this Monitoring and Reporting Program, Standard Provisions, and Waste Discharge Requirements shall be reported. Groundwater concentrations for each constituent shall be compared with the current concentration limits for each constituent from the latest Annual Monitoring Report, and information about any necessary resampling required in Section C.5 of this MRP. The semiannual report due on 31 January shall also report on the annual facility inspection from Section A.4.a of this MRP and shall include documentation of the inspection and any maintenance or repairs that were completed. The semiannual reports shall also include information from inspections performed after major storm events required in Section A.4.b of this MRP including Standard Observations and discharges from the Class II surface impoundment invert siphon. The semiannual reports shall also include documentation of all inspections, monitoring, and repairs required in Section A.4.c of this MRP, and shall include a calculation of the leakage rate to the LCRS on a monthly basis with comparison to the Action Leakage Rate of 420 gallons per day.

## 2. Annual Monitoring Report

The Discharger shall submit an Annual Monitoring Report covering the previous monitoring year. The report is due by **31 January** of each year. The Annual Monitoring Report shall be combined with the second semiannual monitoring report, but in addition shall include the following: The annual report shall contain the information specified in Standard Provisions, Section VIII.B of the "*Reports to be Filed with the Board.*" The Annual Monitoring Report shall include the results of the annual LCRS testing. The Annual Monitoring Report shall include the updated concentration limits for each required Monitoring Parameter using the methods in Section C.4 of this MRP, below.

## 3. Response to a Release

If the Discharger determines that there is either significant statistical evidence of a release (*i.e.* the initial statistical comparison or non-statistical comparison indicates, for any Constituent of Concern or Monitoring Parameter, that a release is tentatively identified) or physical evidence of a release, the Discharger shall **immediately** notify the Central Valley Water Board verbally as to the Monitoring Point(s) and constituent(s) or parameter(s) involved, shall provide written notification by certified mail within **seven days** of such determination and implement the resampling procedure in Section C.5 of this MRP and the requirements in Sections X.C and/or X.D of the Standard Provisions if a release is confirmed.

## 4. Water Quality Protection Standard Report

The Discharger submitted a Water Quality Protection Standard as part of the Report of Waste Discharge (ROWD) with the proposed method for calculating concentration limits and protocol for actions required if concentration limits are exceeded. Requirements based on these proposals are provided in the next section of this MRP.

## **C. WATER QUALITY PROTECTION STANDARD**

### **1. Water Quality Protection Standard**

For each waste management unit (Unit), the Water Quality Protection Standard shall consist of all constituents of concern, the concentration limit for each constituent of concern, the point of compliance, and all water quality monitoring points.

The Water Quality Protection Standard for naturally occurring waste constituents consists of the constituents of concern, the concentration limits, and the point of compliance and all monitoring points. The Discharger submitted a Water Quality Protection Standard as part of the ROWD. Elements of the Water Quality Protection Standard are given in sections below.

If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the Discharger may request modification of the Water Quality Protection Standard.

### **2. Constituents of Concern**

The constituents of concern include all the waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the Unit. The constituents of concern for the facility are pH, electrical conductivity, arsenic, lead, nickel, volatile organic compounds, TPH as diesel, and TPH as oil & grease.

### **3. Monitoring Points**

#### Groundwater:

Detection Monitoring Wells: EW-5, W91-01, OSMW32, DI-58, W-02, and W95-02

Background Wells: W91-04 and W91-07

Well locations are shown on Attachment B. Groundwater monitoring points shall also include any well or wells constructed after adoption of this MRP for purposes of monitoring groundwater for the Class II surface impoundment.

### **4. Concentration Limits**

For a naturally occurring constituent of concern, the concentration limit for each constituent of concern shall be determined as follows:

- a. By calculation in accordance with a statistical method pursuant to Section 20415 of Title 27; or

- b.** By an acceptable alternate statistical method in accordance with Section 20415 of Title 27.

The Discharger submitted a proposed method for calculating concentration limits in the ROWD. The proposed method used by the Discharger is to use intrawell comparisons based on background conditions in each of the monitoring wells and to use Shewart-CUSUM control limits and upper prediction limits. In addition, the Discharger proposes to use distributional analysis to test for normality and outlying data. The Discharger will also use Mann-Kendall trend analysis to detect more subtle trends than with CUSUM control limits. The Discharger shall report the concentration limits in each semiannual and annual monitoring report for comparison with the most recent sampling data, and shall update the concentration limits annually to take the new semiannual background data into account.

Groundwater in Area A has been impacted by previous waste disposal practices and is being address by DTSC and the Central Valley Water Board’s Site Cleanup Program. The concentration limits generated by the proposed methods include limits for non-naturally occurring constituents that are well above laboratory reporting limits and may also exceed applicable water quality goals. This is because the limits are statistically derived and their purpose is to detect a new release based on the existing “background” conditions of groundwater impacted from previous practices at the site. Intrawell comparisons are appropriate due to the different background data sets for each well that represent impacts from past practices and since the goal of the monitoring program is to detect a new release from the lined impoundment.

The Discharger has proposed methods for calculating concentration limits as described above, and has calculated limits for total petroleum hydrocarbons (TPH) in each well. Concentration limits for other constituents are required to be proposed in the Annual Monitoring Report using the methods proposed in the ROWD and described in this MRP, and to be updated annually as required in Section B.2 of this MRP. The concentration limits for TPH presented in the ROWD based on available data at the time the ROWD was prepared are as follows:

Well	Compound	Upper Prediction Limit (ug/L)	CUSUM Limit (ug/L)	Shewart Control Limit (ug/L)
DI-58	TPH	642.87	1,422.35	1,281.95
EW-5	TPH	955.71	2,024.03	1,825.58
W91-01	TPH	118.80	221.97	204.33
W91-04	TPH	180.00	190.29	175.49
W91-07	TPH	1,383.58	3,115.93	2,804.85
W95-02	TPH	214.90	470.99	427.20
OSM32	TPH	140.00	220.82	204.82
W-02	TPH	289.20	611.10	553.82

The Discharger shall prepare control charts for each required Monitoring Parameter required for groundwater monitoring. An exceedance of any of the three calculated

limits from the most recent Annual Monitoring Report is tentative indication of a release.

## 5. Resampling Procedure

The Discharger shall **immediately** notify Central Valley Water Board staff of any tentative indication of a release followed by written notification by certified mail within **seven days**. The Discharger shall initiate verification sampling to verify whether there is measurably significant evidence of a release. Verification sampling shall consist of collection of one or more additional samples to verify the exceedance. If verification sampling indicates that results are measurably significant above the concentration limit, then a release is confirmed and the Discharger shall follow procedures for response to a release in Sections X.C and/or X.D of the Standard Provisions.

## 6. Point of Compliance

The point of compliance for the Concentration Limits given in C.4 is a vertical surface located at the hydraulically downgradient limit of the Class II surface impoundment that extends through the uppermost aquifer underlying the Unit.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate, and complete.

The Discharger shall implement the above monitoring program on the effective date of this Order.

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PAMELA C. CREEDON, Executive Officer

2 February 2012

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(Date)

WLB

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Figure 1-1  
GENERAL LOCATION MAP

UNION PACIFIC RAILROAD COMPANY  
ACTIVE SP YARD, ROSEVILLE,  
CALIFORNIA

**Legend**

- Railway Boundary
- North Yard
- Area 'A'
- South Yard

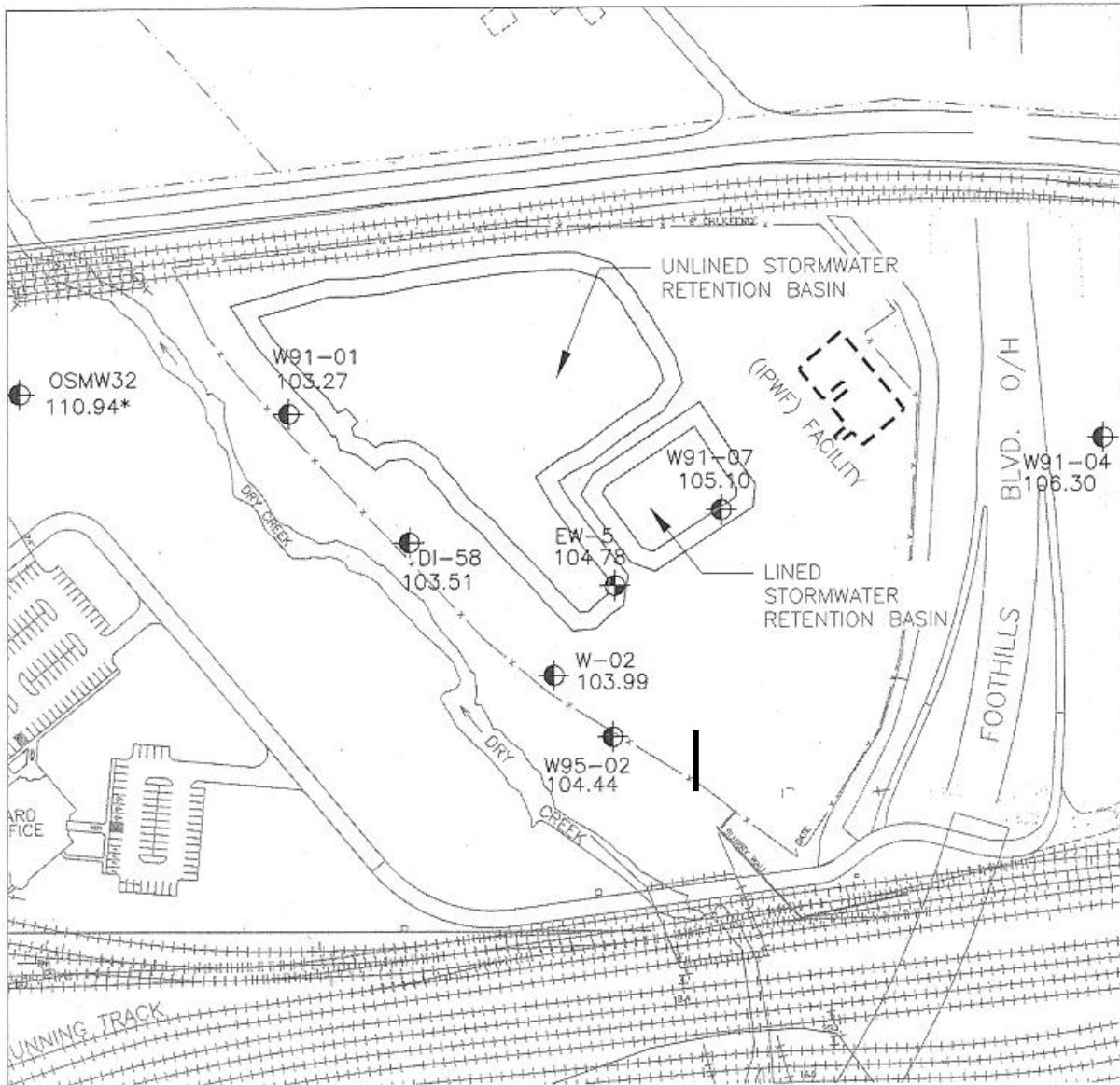
**DCWWTP:** Dry Creek  
Wastewater Treatment Plant



Drawing Reference:  
Camp, Dresser & McKee  
Report of Waste Discharge  
Figure 1-1

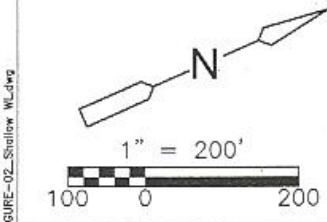
**SITE LOCATION MAP** Location Map  
UNION PACIFIC RAILROAD COMPANY  
ROSEVILLE YARD  
PLACER COUNTY





NOTES:  
 1. GROUNDWATER ELEVATIONS AND CONTOURS BASED ON DATA COLLECTED ON MAY 3, 2010.  
 2. HYDRAULIC GRADIENT OF SHALLOW WATER - BEARING ZONE WITHIN THE NORTH YARD IS  $6.78 \times 10^{-3}$   
 \* ANOMALOUS READING, WELL LOCATION NOT CONTOURED

OSMW32  
 110.94\*  
 PROPOSED GROUNDWATER DETECTION MONITORING PLAN (DMP)

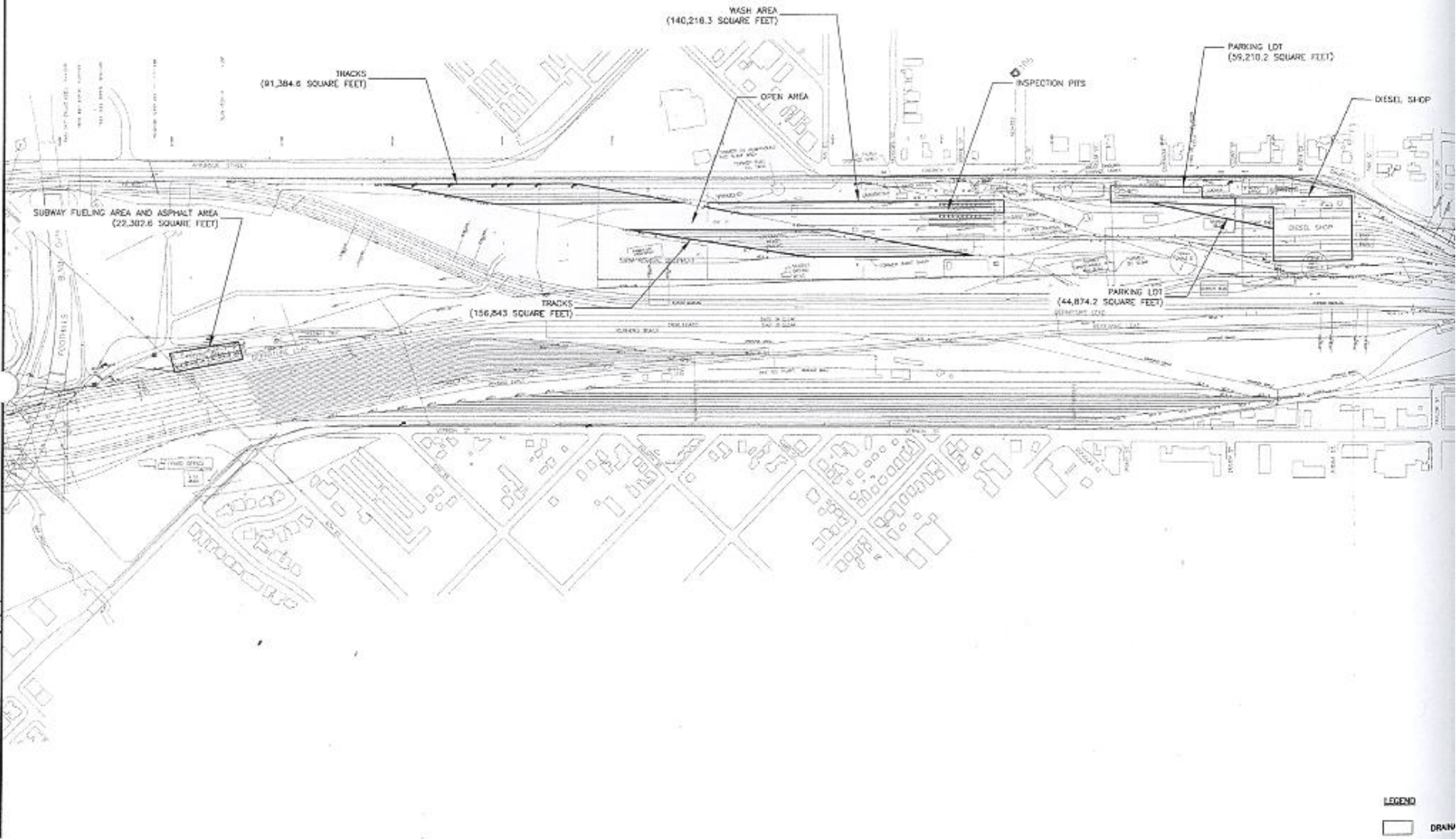


ATTACHMENT B  
 SHALLOW WATER BEARING ZONE CONTOUR MAP  
 AREA A  
 UNION PACIFIC RAILROAD COMPANY ACTIVE SP YARD - ROSEVILLE, CALIFORNIA


Drawing Reference:  
 Camp, Dresser & McKee  
 Attachment B

**SITE MAP**  
 UNION PACIFIC RAILROAD COMPANY  
 ROSEVILLE YARD  
 CLASS II SURFACE IMPOUNDMENT  
 PLACER COUNTY



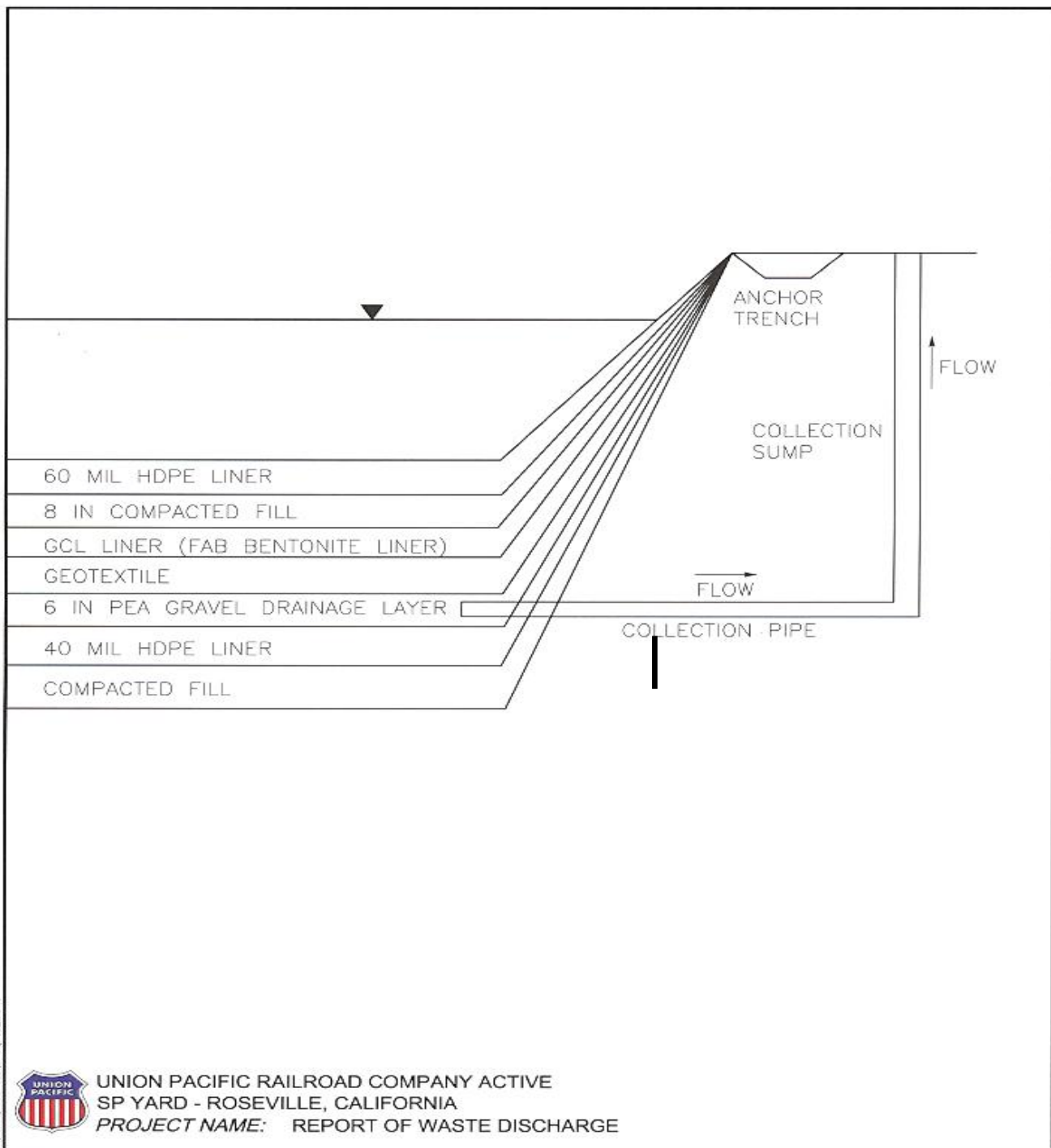


E:\WORK\FIGURE 2-4 EXISTING DRAINAGE DIED MAP.dwg 3/23/2011

Approximate Scale  
 1" = 700'  
  
**CDM**  
 consulting • engineering • construction • operations

Drawing Reference:  
 Camp, Dresser & McKee  
 Report of Waste Discharge  
 Figure 2-4

**DRAINAGE AREAS**  
 UNION PACIFIC RAILROAD COMPANY  
**ROSEVILLE YARD**  
 CLASS II SURFACE IMPOUNDMENT  
 PLACER COUNTY



P:\3\TUPH\ROSEVILLE\Yard\1165\_2.dwg



UNION PACIFIC RAILROAD COMPANY ACTIVE  
 SP YARD - ROSEVILLE, CALIFORNIA  
 PROJECT NAME: REPORT OF WASTE DISCHARGE

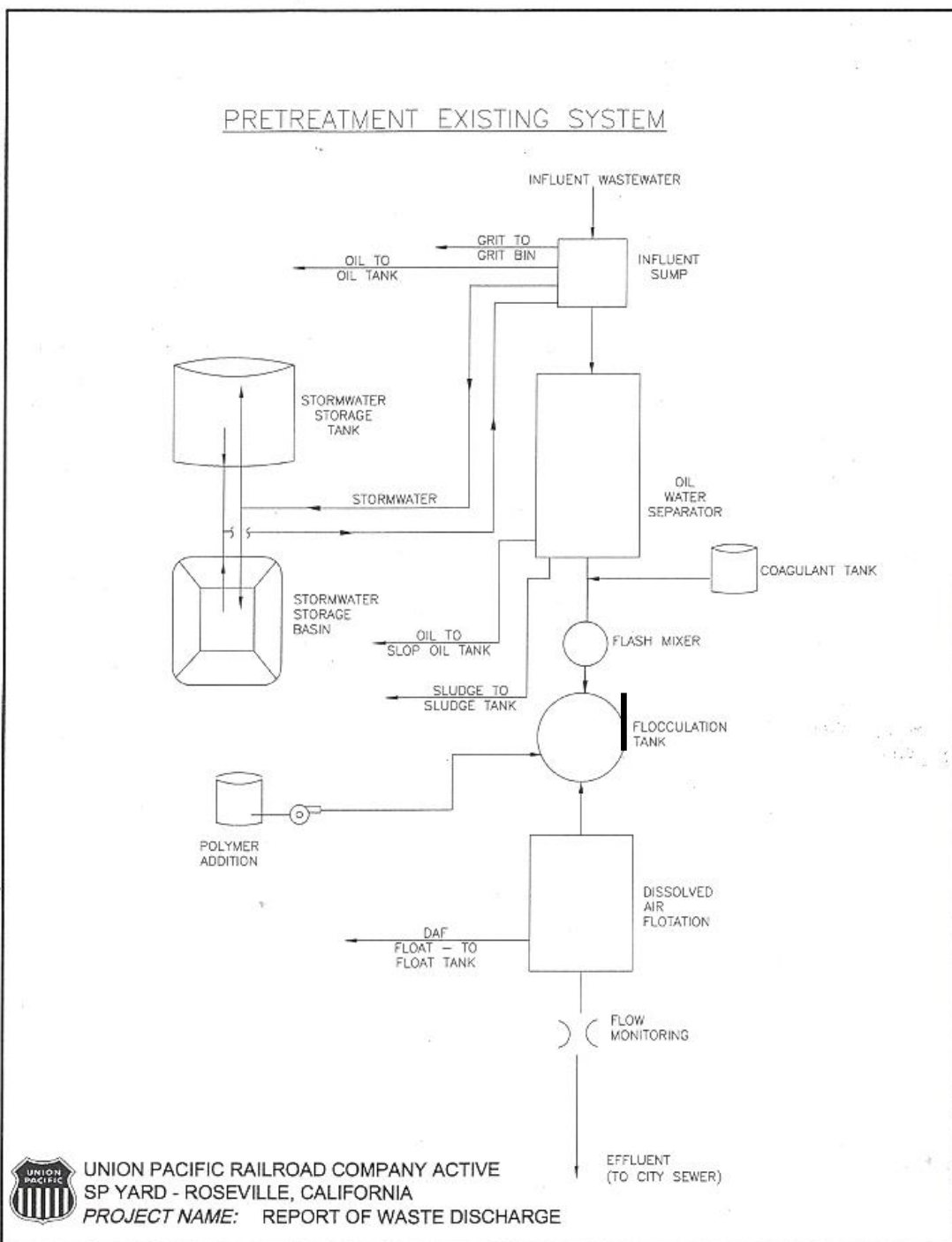


consulting • engineering • construction • operations

Figure No. 5-2  
 LINED BASIN SECTION

Drawing Reference:  
 Camp, Dresser & McKee  
 Report of Waste Discharge  
 Figure 5-2

**LINER SYSTEM CROSS-SECTION**  
 UNION PACIFIC RAILROAD COMPANY  
 ROSEVILLE YARD  
 CLASS II SURFACE IMPOUNDMENT  
 PLACER COUNTY



consulting • engineering • construction • operations

Figure No. 2-3  
IPWF UNIT PROCESS DIAGRAM

Drawing Reference:  
Camp, Dresser & McKee  
Report of Waste Discharge  
Figure 2-3

**INDUSTRIAL PRETREATMENT FACILITY**  
UNION PACIFIC RAILROAD COMPANY  
ROSEVILLE YARD  
CLASS II SURFACE IMPOUNDMENT  
PLACER COUNTY

## INFORMATION SHEET

ORDER NO. R5-2012-0009  
UNION PACIFIC RAILROAD COMPANY  
ROSEVILLE YARD  
CLASS II SURFACE IMPOUNDMENT  
PLACER COUNTY

Union Pacific Railroad Company (hereafter “Discharger”) owns and operates a lined surface impoundment at its Roseville Yard in Placer County. The surface impoundment holds industrial wastewater flows and storm water runoff from various maintenance areas, fueling areas, and parking lots that must be captured, treated, and discharged to the sanitary sewer under permit. On 3 August 2010, Central Valley Water Board staff requested an amended Report of Waste Discharge (ROWD) to update previous waste discharge requirements (WDRs) 92-197 so that the lined surface impoundment can be properly regulated under the requirements of Title 27, California Code of Regulations (CCR) Section 20005, et seq. (Title 27). The Discharger submitted an amended ROWD on 19 April 2011, but Central Valley Water Board staff requested additional information. The Discharger submitted an updated version of the ROWD on 1 August 2011, and submitted other requested information on 25 October 2011.

Industrial wastewater and runoff from approximately 12 acres of the North Yard is directed to an industrial pre-treatment wastewater facility prior to discharge to the sanitary sewer under permit by the City of Roseville. The lined Class II surface impoundment is used for storage of excess water prior to treatment. An additional unlined surface impoundment is located next to the lined impoundment and the Discharger reported that it has not been used to store wastewater since 2004 following reductions in the area of the rail yard that drains to the treatment plant.

Previous WDRs Order No. 92-197 prescribed requirements for capturing and storing storm water that has contacted active industrial areas, wastes, and locomotive wash water for discharge to the lined surface impoundment under the “Non15” program. The Discharger has made several improvements to reduce the volume of water that enters the surface impoundment; however, this revised Order requires that the discharge be regulated in accordance with Title 27 due to concentrations of petroleum hydrocarbons in the water that indicate it is a designated waste as defined in California Water Code (CWC) Section 13173(b).

The lined surface impoundment was constructed in 1989 and an additional geomembrane and an 8-inch soil fill layer were added in 1990. The surface impoundment capacity is 2.07 million gallons if it were completely filled and is 1.3 million gallons (173,810 cubic feet) at its current working depth where it currently reaches the inverted siphon (2.75 feet of freeboard). The impoundment has a maximum depth of 12 feet in the middle and a minimum depth of 9.5 feet along the edges. The areal extent of the impoundment is approximately 0.42 acres. The components of the liner system are, from top to bottom:

- a) 60-mil HDPE geomembrane
- b) 8-inch compacted soil fill (cushion layer)
- c) Geosynthetic clay liner (GCL)

- d) 6-inch pea gravel LCRS layer
- e) 40-mil HDPE geomembrane
- f) Compacted fill subgrade

The Discharger submitted a water balance for the impoundment in the ROWD. The design storm required by Title 27 is a 1,000-year 24-hour storm event which is 5.14 inches based on a nearby station in Rocklin. Title 27 also requires capacity for seasonal precipitation which has been based on a 100-year wet season distributed monthly. In addition to the industrial wastewater flows that average about 12 gpm, the impoundment needs capacity to store runoff from the 12 acre drainage area. Based on the water balance, the Discharger concluded that a portion of the unlined impoundment needs to be lined to store excess flows during heavy rainfall events.

The Discharger proposes to line approximately 0.34 acres of the unlined impoundment with a composite liner consisting of an HDPE geomembrane and a geosynthetic clay liner. The secondary lined impoundment will only be used to store wastewater and runoff during heavy rainfall events and must be emptied as soon as possible after storage capacity is regained in the Class II impoundment. This Order includes a time schedule for the Discharger to design and install a composite-lined overflow basin.

There are numerous monitoring wells at the site associated with site investigation and cleanup including several associated with the surface impoundment in Area A. The Discharger has selected eight monitoring wells to be used for the detection monitoring program for the surface impoundment. Proposed background wells located upgradient from the impoundment are W91-04 and W91-07. Detection monitoring wells include cross-gradient well W95-02, and downgradient wells EW-5, W91-01, OSMW32, DI-58, and W-02. Locations of monitoring wells are included on Attachment B of this Order.

Site-wide investigation and cleanup of soil and groundwater at the Roseville Yard, including the area of the basins, are being addressed under the oversight of the Department of Toxic Substances Control in cooperation with the Central Valley Water Board's Site Cleanup Program. Groundwater in Area A has been impacted by previous waste disposal practices. Non-naturally occurring compounds that have been detected in groundwater include acetone, 2-butanone, chloroethane, chloromethane, methyl-tertiary butyl ether, and TPH as diesel.

The constituents of concern (COCs) for the surface impoundment proposed in the ROWD are arsenic, lead, nickel, and TPH. The proposed COCs are based on data from the surface impoundment and LCRS. TPH will include separate analyses for TPH as diesel and TPH as oil & grease. Other potential COCs that could be present in the wastewater such as other volatile organic compounds and are required to be sampled in the attached monitoring and reporting program.

As required by Title 27, the ROWD includes a proposed detection monitoring program and includes proposed methods for calculating concentration limits for the COCs to be used for detecting a release to groundwater from the surface impoundment. The objective of the detection monitoring program is to detect a new release from the lined surface impoundment. Since groundwater is already impacted, the concentration limits generated by the proposed methods include limits for non-naturally occurring constituents that are well above laboratory reporting limits and may also exceed applicable water quality goals. This is because the limits are statistically derived and their purpose is to detect a new release based on the existing "background" conditions of groundwater impacted from previous practices at the site. This Order does not include requirements for addressing the impacts caused by the past practices and treats current groundwater conditions as the background for purposes of detection monitoring. The proposed methods for calculating concentration limits are included in the attached monitoring and reporting program.

As required by Title 27, the Discharger proposes clean-closure of the surface impoundment if and when it is no longer needed. The liner system, LCRS, and any sludges will be removed and taken to an off-site appropriately-permitted landfill. The soil underlying the impoundment will be sampled for the presence of contaminants and perform over-excavation as necessary. The site will then be graded for future use. The Discharger prepared an itemized cost estimate for third party costs to clean-close the surface impoundment of \$3,223,000 in 2011 dollars. This Order requires the Discharger to establish financial assurances for closure of the Class II surface impoundment in accordance with the approved cost estimate naming the Central Valley Water Board as the beneficiary.

Title 27 requires the Discharger to establish financial assurances for corrective action of a known or reasonably foreseeable release. The Discharger prepared a cost estimate for corrective action totaling \$2,099,000 in 2011 dollars. This Order requires the Discharger to establish financial assurances for corrective action in accordance with the approved cost estimate naming the Central Valley Water Board as the beneficiary.

Surface water at the Roseville Yard that is not routed to the treatment plant and surface impoundment is discharged to Dry Creek under the statewide general storm water permit for industrial facilities, and was formerly regulated under an individual NPDES permit from 1974 until 2000. Therefore, these WDRs do not regulate discharges of storm water to Dry Creek.

WLB



# California Regional Water Quality Control Board Central Valley Region

**Karl E. Longley, ScD, P.E., Chair**



11020 Sun Center Drive, #200, Rancho Cordova, California 95670-6114  
(916) 464-3291 • FAX (916) 464-4645  
<http://www.waterboards.ca.gov/centralvalley>

**Edmund G. Brown Jr.**  
*Governor*

**Matthew Rodriguez**  
*Secretary for  
Environmental Protection*

9 February 2012

John R. Thomas  
Union Pacific Railroad Company  
9451 Atkinson Street  
Roseville, CA 95747

CERTIFIED MAIL NO.  
7010 1670 0002 0652 2197

**NOTICE OF ADOPTION  
OF  
REVISED WASTE DISCHARGE REQUIREMENTS ORDER  
FOR  
UNION PACIFIC RAILROAD COMPANY  
ROSEVILLE YARD  
CLASS II SURFACE IMPOUNDMENT  
PLACER COUNTY**

***TO ALL CONCERNED PERSONS AND AGENCIES:***

Waste Discharge Requirements (WDRs) Order No. R5-2012-0009 for the Union Pacific Railroad Company, Roseville Yard, Class II surface impoundment was adopted by the California Regional Water Quality Control Board, Central Valley Region at its meeting on 2 February 2012.

Although the WDRs allow waste discharges to the Class II surface impoundment, the discharge is a privilege not a right and may be revoked at any time. A copy of the Order must be maintained at the facility and made available upon request. Please review your WDRs carefully to ensure you understand all aspects of the discharge requirements. Please note that the Provisions of the WDRs require the Discharger to submit certain technical reports by the dates provided in the Order. These submittals include the items listed in the following table:

<b><u>The Discharger shall submit:</u></b>	<b><u>Due Date</u></b>
A report showing that a flow totalizing meter has been installed to measure flow from the Class II surface impoundment to the IPWF.in accordance with Provision F.4.a.	<b>1 May 2012</b>
A plan to collect any additional groundwater samples necessary that may to provide at least four data points for each Monitoring Parameter required in the groundwater monitoring program such that concentration limits can be calculated in the 2012 Annual Monitoring Report in accordance with Provision F.4.b.	<b>1 June 2012</b>

***California Environmental Protection Agency***



<b>The Discharger shall submit:</b>	<b>Due Date</b>
A design report, plans, specifications, and a construction quality assurance plan for a composite-lined overflow basin designed to capture and store runoff from a 1,000-year, 24-hour storm event in accordance with Provision F.4.c.	<b>29 June 2012</b>
A final report documenting the construction of the overflow basin, results of the construction quality assurance testing, and certifying that the basin meets the requirements of the WDRs in accordance with Provision F.4.d.	<b>28 February 2013</b>
Documentation demonstrating establishment of an irrevocable closure fund in accordance with Provision E.1	<b>1 June 2012</b>
Documentation demonstrating establishment of an irrevocable corrective action fund in accordance with Provision E.2.	<b>1 June 2012</b>
A Financial Assurance Update Report in accordance with Provision E.3.	<b>1 June of each year</b>

In addition to technical reports required by the WDRs, the WDRs include a Monitoring and Reporting Program (MRP), which contains specified monitoring and reporting requirements for you to implement. Please review the MRP closely so that you may establish the appropriate sampling schedule.

To conserve paper and reduce mailing costs, a paper copy of the order has been sent only to the Discharger. The full text of this order is available on the Central Valley Water Board's web site at [www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/](http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/). Anyone without access to the Internet who needs a paper copy of the order can obtain one by calling Central Valley Water Board staff listed below.

If you have any questions about making changes to your permitted operations, please contact Bill Brattain at (916) 464-4622 or [bbrattain@waterboards.ca.gov](mailto:bbrattain@waterboards.ca.gov). All compliance and enforcement questions should be directed to Todd Del Frate with the Title 27 Compliance and Enforcement Section at (916) 464-4737 or [tdelfrate@waterboards.ca.gov](mailto:tdelfrate@waterboards.ca.gov). All technical reports and monitoring reports should be submitted to Mr. Del Frate by the compliance due date.

VICTOR J. IZZO  
Senior Engineering Geologist  
Title 27 Permitting and Mining

Enclosures- Adopted Order  
Standard Provisions (September 2003)

cc list: see next page



cc w/Encl.: Jim Diel, Union Pacific Railroad Company, Roseville  
Jigar D. Shad, P.E., Camp Dresser & McKee, Sacramento

cc w/o Encl.: Office of Drinking Water, Department of Health Services, Sacramento  
Environmental Management Branch, Department of Health Services,  
Sacramento  
Department of Fish and Game, Region 2, Rancho Cordova  
Leslie Graves, Division of Water Quality, SWRCB, Sacramento  
Patrick Pulupa, Office of Chief Counsel, SWRCB, Sacramento  
Placer County Planning Department, Auburn  
Placer County Environmental Health Services, Auburn  
Kristofer Zanardelli, City of Roseville, Roseville  
News Editor, Sacramento Bee, Sacramento