

INFORMATION SHEET

ORDER NO. R5-2012-_____
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.

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