

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER R5-2013-XXXX

WASTE DISCHARGE REQUIREMENTS  
FOR  
THE BNSF RAILWAY COMPANY  
BNSF STOCKTON INTERMODAL FACILITY  
CLASS II SURFACE IMPOUNDMENT  
SAN JOAQUIN COUNTY

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

1. The BNSF Railway Company, formerly the Burlington Northern and Santa Fe Railway Company, (hereafter Discharger) owns and operates the Stockton Intermodal Facility. The facility was previously regulated by Waste Discharge Requirements (WDRs) Order No. 5-00-133 in conformance with Division 2 of Title 27 of the California Code of Regulations ("Title 27"). As part of the Discharger's 2012 Annual Monitoring Report the Discharger recommended changes to their groundwater monitoring system in order to eliminate the introduction of Total Petroleum Hydrocarbons as diesel (TPH-d) contaminants from ambient air, which historically may have created false positive results of TPH-d in groundwater monitoring wells. Regional Water Board staff in order to address those proposed changes and as part of its periodic review of WDRs has prepared these revised WDRs to reflect current conditions at the facility.
2. The facility is located approximately eight miles southeast of Stockton on the main BNSF rail track between Austin Road and Jack Tone Road at 6540 South Austin Road in Stockton, California. This property consists of approximately 470 acres and is described by Assessor's Parcel Number(s) 181-070-05, 181-090-07, 181-090-21, 181-090-22, 181-160-08, 181-170-01, and 181-170-05 in Section 26, T1N, R7E, MDB&M. The site is shown on Attachment A, which is incorporated herein and made a part of this Order by reference.
3. The Intermodal Facility transfers shipping containers and trailers between railcars transported by diesel powered locomotives and diesel powered semi-trailer trucks. Specialized diesel powered cranes are used to load and unload the containers and trailers to and from railcars. Diesel powered trucks are used to move the containers and trailers about the facility.
4. The facility is regulated under Title 27 due to industrial operations that produce wastewater that is a designated waste that must be contained in a Class II surface impoundment in order to protect beneficial uses of waters of the State. The wastewater is treated in an oil water separator (OWS) prior to discharge to a Waste

Management Unit (WMU) hereafter referred to as an "evaporation pond", a Class II surface impoundment (hereafter "surface impoundment"), as shown on Attachment B, which is incorporated herein and made a part of this Order by reference. Design specifications for the constructed Class II surface impoundment are given in Findings 43 through 50.

5. Storm water from nonindustrial process areas is also managed in three onsite percolation ponds that are not part of these WDRs. The Facility is currently not permitted to discharge any storm water to surface waters regulated under WDRs 97-03-DWQ Order, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities* (NPDES General Permit CAS000001).
6. The principal waste streams to the OWS is storm water and wash down water from two Crane Maintenance Pads, storm and wash down water from the Hostler Fueling Area, wash down water from the Hostler Maintenance Building, wash down water from the Crane and Trailer Maintenance Building, and condensate from two air compressors. A floor drain in the Fire Pump Building is connected to the OWS but is not normally expected to produce a discharge.
7. The OWS removes petroleum hydrocarbons from the influent wastewater. The separated petroleum hydrocarbons removed from the OWS is recycled at an offsite facility. Treated wastewater effluent from the OWS is directed to the evaporation pond.
8. The Class II surface impoundment has a total storage capacity of 135,593 gallons with an operational capacity of 75,251 gallons below the required minimum two feet of freeboard. The surface impoundment includes a spray evaporation system to improve the rate of evaporation. The evaporation system consists of a pump that pulls wastewater from the pond and directs it to ten spray nozzles. The nozzles are located within the lined area of the pond. The pond's existing spray nozzles are directed downward toward the liquid surface in the impoundment to prevent overspray outside of the lined area of the pond.
9. The wastewater storage system also includes Baker Tanks that are temporarily added to the system during the rainy season to hold excess storm water that would encroach into the evaporation pond's required minimum two feet freeboard requirement. The tanks are emptied into the evaporation pond and the empty tanks are removed after the rainy season ends.
10. The average annual discharge of wastewater to the surface impoundment between 1 January 2006 and 31 December 2011 was approximately 336,000 gallons per year. Data provided by the Discharger on wastewater inflow into the surface impoundment indicated that the impoundment cannot adequately store all the wastewater generated at the site. Furthermore, the data submitted does not provide an adequate water balance accounting of how much of the excessive flows were

stored in the Baker Tanks. Anomalies in the data submitted indicate that wastewater to and from the surface impoundment is not adequately accounted for. This Order requires the Discharger to submit a revised water balance analysis of the storage capacity of the surface impoundment including information on the use of the Baker Tanks.

11. The treated wastewater effluent from the OWS is discharged to the surface impoundment. Water volumes in the surface impoundment change due to evaporation, irregular discharge from the OWS, and periodic rainfall. The concentrations of Constituents of Concern (COCs) in the surface impoundment have increased over time due to evaporation. Based on monitoring of the surface impoundment from 19 June 2001 through 26 September 2012 the surface impoundment wastewater contains the following concentrations of COCs:

<b>Constituent of Concern</b>	<b>Median Value</b>	
Specific Conductance	1,190	µmhos/cm
Total Dissolved Solids	920	mg/L
Total Suspended Solids	105	mg/L
Chemical Oxygen Demand	448	mg/L
TPH -Diesel	6,800	µg/L
TPH- Oil and Grease	6.8	mg/L
Acetone	13.6	µg/L
2-Butanone	2.6	µg/L
Total Xylenes	1.0	µg/L
Carbon Disulfide	0.2	µg/L
4-Methyl-2-Pentanone	1.1	µg/L
Chloride	46	mg/L
Sulfate	10	mg/L
Nitrate	0.01	mg/L
Barium	100	µg/L
Copper	12	µg/L
Lead	5	µg/L
Zinc	105	µg/L

### **WASTE AND SITE CLASSIFICATION**

12. Median concentrations of TPH-Diesel in the surface impoundment exceeds the USEPA Health Advisory of 100 µg/L and the secondary drinking water Maximum Contaminant Levels (MCLs) of 100 µg/L for taste and odor. Median concentrations of Specific Conductance (SC) and Total Dissolved Solids (TDS) exceeds the California Department of Public Health secondary MCL of 900 µmhos/cm and 500 mg/L respectively.

13. 'Designated waste' is defined in Water Code section 13173, as a nonhazardous waste which consists of, or contains pollutants which, under ambient environmental conditions at the waste management unit, could be released at concentrations in excess of applicable water quality standards, or which could cause degradation of waters of the state.
14. The discharge of waste from the OWS to surface and groundwater would exceed applicable water quality standards and thus poses a significant threat to water quality. Therefore, the discharge is a 'designated waste' and as such is discharged to the existing Class II surface impoundment or other appropriate containment structure as required by Title 27.

### **SITE DESCRIPTION**

15. The estimated hydraulic conductivity of the native soils underlying the surface impoundment identified in the boring logs of point of compliance groundwater monitoring wells ranges between  $10^{-3}$  and  $10^{-6}$  cm/sec based on empirical relationships between soil classification of sandy silt (ML), silty sand (SM), and sand (SP and SW), and hydraulic conductivity published in geotechnical engineering literature.
16. The closest Holocene fault is the Foothills fault system approximately 28 miles to the east. This fault system was considered inactive until a Richter magnitude 5.7 earthquake occur near Oroville in 1975. Subsequently the Foothills fault system was reevaluated and seismic events along this fault system can be expected to range between 5.0 and 6.5 on the Richter scale. The maximum peak acceleration used for design criteria at the site was 0.20 g.
17. Land uses within 1,000 feet of the facility are industrial and open space/agriculture.
18. The facility receives an average of 13.95 inches of precipitation per year as measured at the Desert Research Institute's (DRI) Stockton Station. The mean pan evaporation is 51.15 inches per year as measured at the California Irrigation Management Information System (CIMIS) Manteca Station# 70.
19. The average 100-year, 24-hour precipitation event for the Facility is estimated to be 3.58 inches, based on the National Oceanic and Atmospheric Administration (NOAA 2012) Atlas 14, Volume 6, Version 2.
20. The waste management facility is not within a 100-year flood plain based on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map, Community-Panel Number 06077C0495F dated 16 October 2009.
21. WDRs Order No. 5-00-133, adopted in June 2000, found that there were approximately 209 domestic and agricultural groundwater supply wells within one

mile of the site. The results of this well survey may have changed. This Order in Section F.2.b requires the Discharger to provide a revised well survey to identify any changes to the previous well survey and also identify any residences within 1,000 ft. of the Class II surface impoundment that has a water supply well.

### **SURFACE AND GROUND WATER CONDITIONS**

22. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basin, Fourth Edition* revised October 2011 (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
23. Surface drainage is toward the west. The site is drained by South Littlejohns Creek in the south and Weber Slough in the north. These water courses drain into Lone Tree Creek which drains into the San Joaquin River in the Sacramento-San Joaquin Delta Hydrologic Area (544) of the San Joaquin Basin.
24. The designated beneficial uses of San Joaquin River, as specified in the Basin Plan, are municipal and domestic supply, irrigation, stock watering, industrial service and process supply, water contact and non-contact water recreation, warm and cold fresh water habitat, warm and cold migration, wildlife habitat and navigation.
25. The first encountered groundwater is about 81 to 84 feet below the native ground surface based on the bore logs of the point of compliance groundwater monitoring wells MW-1 through MW-4. Groundwater elevations range from -21.5 feet MSL to -29.9 feet MSL. The groundwater is generally unconfined. The depth to groundwater fluctuates seasonally as much as 4.9 feet.
26. Monitoring data collected between 7 December 2001 and 2 November 2012 indicates background groundwater quality at MW-1 has an electrical conductivity (EC) ranging between 660 and 2160  $\mu\text{mhos/cm}$ , with total dissolved solids (TDS) ranging between 441 and 1400 mg/l.
27. The direction of groundwater flow is toward the north. The average groundwater gradient is approximately 0.002 feet per foot. The average groundwater velocity is approximately 6 feet per year based on the permeability of poorly graded sand of  $10^{-3}$  cm/sec and porosity of 0.35.
28. The designated beneficial uses of the groundwater, as specified in the Basin Plan, are domestic and municipal, agricultural, industrial service, and industrial process supply.

## **GROUNDWATER, UNSATURATED ZONE, AND SURFACE WATER MONITORING**

29. A groundwater monitoring network was installed in association with the OWS and surface impoundment as shown on Attachment B. The monitoring well network consists of one upgradient well (MW-1) and three downgradient (MW-2, MW-3, and MW-4) groundwater monitoring wells. The background monitoring well, MW-1, is located outside of the intermodal facility, across Burnham Road. Monitoring well MW-2 is located downgradient of the OWS. Monitoring wells MW-3 and MW-4 are located downgradient of the surface impoundment.
30. The Discharger's detection monitoring program for groundwater at the surface impoundment and OWS satisfies the requirements contained in Title 27. However, the Discharger believes the current detection monitoring system is susceptible to airborne contamination from diesel sources such as trains, cranes, and trucks operating during groundwater sampling events. The Discharger has indicated that field blanks taken during sampling events when analyzed indicate quantifiable values of TPH-diesel and/or TPH-oil and grease that appear to be equivalent to TPH-diesel and/or TPH-oil and grease values measured in samples collected concurrently from the four groundwater monitoring wells. The Discharger has proposed modifications to the groundwater detection monitoring program. This Order in Section F.2.a and Section F.2.c requires the Discharger to reevaluate the Groundwater Monitoring Network and the Sample Collection and Analysis Plan and propose and implement approved changes needed to eliminate contamination of groundwater samples and/or identify the source of TPH in groundwater in order to ensure accurate detection of a release from the Class II surface impoundment as required by Title 27 specifications for a Detection Monitoring Program.
31. The Discharger's detection monitoring program for the unsaturated zone at the Class II surface impoundment satisfies the requirements contained in Title 27. The unsaturated (vadose) monitoring system (VZMS) utilizes a pan lysimeter (geonet blanket) under the entire area of the surface impoundment as an engineered alternative to the prescriptive unsaturated zone monitoring system requirements of Title 27 Section 20415(d). The VZMS sump is a gravel collection area with the capacity to store 449 gallons. Any liquid detected in the VZMS sump is removed and returned to the surface impoundment.

## **GROUNDWATER AND/OR SURFACE WATER DEGRADATION**

32. In March 2001, prior to operation of the BNSF Intermodal Facility, the Discharger submitted a Water Quality Protection Standards Report (WQPS Report) with the results of background samples taken from MW-1 through MW-4. Total Petroleum Hydrocarbons as diesel (TEPH or TPH-d) was measured in two of four groundwater samples taken on 13 December 2000 from upgradient background well MW-1. The Discharger reported that *"it is believed that the concentrations of TEPH detected in two of the four samples collected on December 13, 2000, resulted from field or*

*laboratory handling procedures.*” No VOCs were detected in groundwater samples analyzed from MW-1. No TPH-d or oil and grease were detected in downgradient compliance wells MW-2 through MW-4. Benzene was the only VOC detected in downgradient wells at a concentration of 5.9 µg/L in MW-2.

33. Soil samples taken during construction of upgradient background well MW-1 on 25 September 2000 contained TPH-d at concentrations of 1.0 and 1.2 mg/kg at 9.5' and 79.5' below ground surface (bgs) respectively.
34. On 9 April 2001, Central Valley Water Board staff accepted the proposed WQPS Report with the condition that *“the Water Quality Protection Standard for any organic compounds which are not naturally occurring and not detected in background groundwater samples shall be taken as the detection limit of the analytical method used.”*
35. In 2001, 2002, 2003, and 2007 the Detection Monitoring Reports (DMR) reported sporadic TPH-d in one or more groundwater monitoring wells. In a letter dated 26 March 2002 Regional Water Board staff directed the Discharger to resample MW-3 for TPH-d.
36. On 23 August 2007, Central Valley Water Board staff notified the Discharger that it must include method detection limits (MDLs) and practical quantitation limits (PQLs) on laboratory reports and verify their testing laboratory's quality assurance/quality control procedures for eliminating trace concentrations of COCs in trip and method blanks as required by their WDRs and MRP program.
37. In 2010 through 2012 DMRs, TPH-d was reported at or above trace levels in one or more groundwater monitoring wells.
38. On 28 August 2012, Central Valley Water Board staff notified the Discharger that it had not reported MDLs for TPH-d, oil and grease, and naturally occurring COCs for the period of 2008 through 2011 as required by their WDRs and MRP program.
39. On 25 September 2012, the Discharger performed a leak test of the surface impoundment's primary liner. Six leaks were detected by the electrostatic testing process. The repairs to the primary liner were completed on 25 October 2012.
40. In the 4<sup>th</sup> Quarter and annual 2012 DMR, the Discharger reported that eight field blanks were collected during two sampling events and TPH-d was detected in all eight field blanks indicating that site ambient air (and particulate) may be the source of TPH-d that has been historically reported in MW-1 through MW-4. The Discharger proposed in the annual 2012 DMR to install dedicated low flow pumps in all four groundwater monitoring wells in order to minimize the influence of ambient diesel particulates in samples collected. The Discharger also proposed to revise the Field Sampling Plan. This Order in Section F.2.a requires the Discharger to reevaluate the

Groundwater Monitoring Network and the Sample Collection and Analysis Plan in order to propose and implement approved changes needed to eliminate contamination of groundwater samples in order to give an accurate detection of a release as required by Title 27 Detection Monitoring Program.

41. In the 3<sup>rd</sup> Quarter 2012 DMR, the Discharger reported Total Suspended Solids (TSS) of 260 mg/L, 390 mg/L, 1,940 mg/L, and 1,260 mg/L in MW-1 through MW-4 respectively. The Discharger has repeatedly reported high TSS, an indication of high turbidity in groundwater monitoring wells which could indicate improper design and/or failure of the monitoring well's filter pack. This Order in Section F.2.c requires the Discharger to evaluate the cause of high TSS reported in groundwater monitoring wells and provide a report describing what actions if necessary will be taken to correct the problem.
42. The unsaturated zone has been monitored quarterly since 2002 and the Discharger has reported that the unsaturated zone has remained dry as liquids have not been detected by the unsaturated zone monitoring system.

#### **DESIGN OF WASTE MANAGEMENT UNIT**

43. The Discharger constructed an engineered alternative to the prescriptive liner requirements of Title 27 for a Class II surface impoundment. The engineered alternative consisted of from the top down:
  - a. A primary 60-mil-thick High Density Polyethylene (HDPE) geomembrane
  - b. A geonet drainage layer, as a Leachate Collection and Removal System (LCRS)
  - c. A secondary 60-mil-thick HDPE geomembrane in lieu of the clay liner
  - d. A pan lysimeter (vadose zone monitoring system) composed of a geonet drainage layer underlain by a tertiary 60-mil-thick HDPE geomembrane in lieu of a prescriptive unsaturated zone monitoring system.
44. The surface impoundment utilizes a geonet LCRS blanket across the entire area of the Class II surface impoundment. The LCRS sump is a gravel collection area with the capacity to store a minimum of 1,481 gallons, more than twice the maximum anticipated daily volume of leachate. Liquids removed from the LCRS are returned to the surface impoundment. The sump includes a high level alarm, such that if liquids trigger the level alarm the sump will be pumped out.
45. The Discharger constructed a unsaturated (vadose) zone monitoring system (VZMS) utilizing a pan lysimeter (geonet blanket with a HDPE liner) under the entire area of the surface impoundment as an engineered alternative to the prescriptive unsaturated zone monitoring system requirements of Title 27 Section 20415(d). The

VZMS sump is a gravel collection area with the capacity to store 449 gallons. Any liquids that are detected in the VZMS sump is removed and returned to the surface impoundment. The sump includes a high-level alarm, such that if liquids trigger the level alarm the sump will be pumped out. The vadose zone monitoring system is capable of measuring both saturated and unsaturated flows that may occur as a result of a leak in the secondary liner.

46. Section 20080(b) of Title 27 allows the Board to consider the approval of an engineered alternative to the prescriptive standard. In order to approve an engineered alternative in accordance with Section 20080(c)(1) and (2), the Discharger must demonstrate that the prescriptive design is unreasonably and unnecessarily burdensome and will cost substantially more than an alternative which will meet the criteria contained in Section 20080(b), or would be impractical and would not promote attainment of applicable performance standards. The Discharger must also demonstrate that the proposed engineered alternative(s) provides protection against water quality impairment equivalent to the prescriptive standard in accordance with Section 20080(b)(2) of Title 27.
47. The Discharger must also demonstrate that any proposed engineered alternative is consistent with the performance goal in accordance with Sections 20240, 20250, and 20310 of Title 27.
48. The Board has routinely approved the substitution of geosynthetic clay liners for field constructed clay at other sites since March 1995. Therefore, the Discharger was not required to repeat the demonstration which had been made for other facilities because there are no significant differences in the characteristics of already approved liners and the liner that was proposed for the BNSF Intermodal facility.
49. Section 13360(a)(1) of the Water Code allows the Board to specify the design, type of construction, and/or particular manner in which compliance must be met in waste discharge requirements or orders for the discharge of waste at solid waste disposal facilities.
50. The Discharger constructed a liner system which will be operated to prevent migration of wastes from the surface impoundment to adjacent natural geologic materials, groundwater, or surface water during disposal operations, closure, and the postclosure maintenance period in accordance with the criteria set forth in Title 27 for a Class II waste management units (WMUs).

### **FINANCIAL ASSURANCES**

51. Title 27, sections 22207 and 22212, requires the Discharger to establish an irrevocable closure fund (or to provide other means of establishing financial assurances) with the Central Valley Water Board named as beneficiary, to ensure closure and postclosure of each surface impoundment in accordance with an

approved plan meeting all applicable State Water Board-promulgated requirements of Title 27. Title 27, sections 22225 et seq. describe the allowable mechanisms for providing financial assurances for closure costs. On 23 March 2012, the Discharger provided information complying with the Financial Means Test described in Section 22246. The Discharger estimated the closure cost at \$28,929.

52. Title 27, section 22222 requires the Discharger to establish an irrevocable corrective action fund (or to provide other means of establishing financial assurances) with the Central Valley Water Board named as beneficiary to ensure funds are available to address a known or reasonably foreseeable release from the Surface Impoundment, pursuant to Section 20380(b). Title 27, sections 22225 et seq. describe the allowable mechanisms for providing financial assurances for corrective action costs. On 23 March 2012, the Discharger provided information complying with the Financial Means Test described in Section 22246. The Discharger estimated the corrective action costs at \$94,594.

### **CEQA AND OTHER CONSIDERATIONS**

53. To fulfill requirements imposed by the California Environmental Quality Act ("CEQA")(Pub. Resources Code, § 21000 et seq.), the San Joaquin County Community Development Department certified a final environmental impact report for the facility on 23 September 1999. The Board, acting as a responsible agency, was consulted during the development of these documents.
54. The Central Valley Water Board considered the environmental impact report and incorporated mitigation measures as necessary into these waste discharge requirements to prevent potentially significant impacts to water quality.
55. This Order implements:
- a. *The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition;*
  - b. The prescriptive standards and performance goals of Division 2 of Title 27 of the California Code of Regulations.
56. Water Code section 13267(b) provides that: "In conducting an investigation specified in subdivision (a), the Regional Board may require that any person who has discharged, discharges, or is suspected of having discharge or discharging, or who proposed to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who had discharged, discharges, or is suspected of having discharged or discharging, or who proposed to discharge waste outside of its region that could affect the quality of the 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.”

57. The technical reports required by this Order and the attached "Monitoring and Reporting Program R5-201X-XXXX" are necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates the Facility that discharges the waste subject to this Order.

### **PROCEDURAL REQUIREMENTS**

58. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.

59. 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.

60. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

**IT IS HEREBY ORDERED**, pursuant to Water Code sections 13263 and 13267, that Order 5-00-133 is rescinded except for purposes of enforcement, and that the BNSF Railway Company, its agents, successors, and assigns, in order to meet the provisions of Division 7 of the Water Code and the regulations adopted thereunder, shall comply with the following:

#### **A. PROHIBITIONS**

1. The discharge of 'hazardous waste' at this facility is prohibited. For the purposes of this Order, the term 'hazardous waste' is as defined in California Code of Regulations, title 22, section 66261.1 *et seq.*
2. The discharge of solid waste or liquid waste to surface waters, surface water drainage courses, or groundwater is prohibited.
3. The discharge of wastes outside of a waste management unit or portions of a waste management unit specifically designed for their containment is prohibited.

#### **B. DISCHARGE SPECIFICATIONS**

##### **General Specifications**

1. Wastes shall only be discharged into, and shall be confined to, the waste management units (WMUs) specifically designed for their containment.

2. Prior to the discharge of waste to a WMU, all wells within 500 feet of the unit shall have sanitary seals or shall be properly abandoned. A record of the sealing and/or abandonment of such wells shall be sent to the Central Valley Water Board and to the State Department of Water Resources.

### **Protection From Storm Events**

3. Waste management units shall be designed, constructed and operated to prevent inundation or washout due to flooding events with a 100-year return period.
4. 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 100-year, 24-hour precipitation conditions.
5. Annually, prior to the anticipated rainy season, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the site.
6. Annually prior to the anticipated rainy season, as part of MRP R5-2013-XXXX Facility Monitoring Section A.7 the Discharger shall determine through a water balance analysis the required storage capacity of the evaporation pond necessary to contain the anticipated quantity of designated waste generated during the rainy season and shall take the necessary measures to ensure adequate storage capacity is available to contain such waste. The Discharger shall certify in the MRP R5-2013-XXXX Facility Monitoring Report (Section B.3.d) that such conditions exist.

### **Class II Surface Impoundment**

7. The evaporation pond, a Class II surface impoundment, shall consists of from the top down:
  - a. A primary 60-mil-thick High Density Polyethylene (HDPE) geomembrane
  - b. A geonet drainage layer, as a Leachate Collection and Removal System (LCRS)
  - c. A secondary 60-mil-thick HDPE geomembrane in lieu of the clay liner
  - d. A pan lysimeter composed of a geonet drainage layer and a tertiary 60-mil-thick HDPE geomembrane in lieu of a vadose zone monitoring system (VZMS)
8. The unsaturated (Vadose) zone monitoring system shall be capable of measuring both saturated and unsaturated flows that may occur as a result of a release from the Class II surface impoundment.

9. Surface impoundments and related containment structures shall be maintained to prevent, to the greatest extent possible, inundation, erosion, slope failure, washout, and overtopping under 1,000-year, 24-hour precipitation conditions, and shall be designed to contain the 100-year wet season precipitation without using the required 2 feet of freeboard.
10. At all times the Discharger shall maintain a minimum of two feet of freeboard in all surface impoundments as measured from the lowest point of overflow.
11. The Discharger shall not spray designated waste during windy or other climatic conditions such that the designated waste is discharged from the Class II surface impoundment to surrounding areas outside the lined surface impoundment.
12. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the surface impoundments.
13. Materials used to construct LCRSs shall have appropriate physical and chemical properties to ensure the required transmission of leachate over the life of the surface impoundments and the post-closure maintenance period.
14. LCRSs shall be designed, constructed, and maintained to collect twice the anticipated daily volume of leachate generated by each surface impoundment and to prevent the buildup of hydraulic head on the underlying liner at any time. The depth of the fluid in any LCRS sump shall be kept at the minimum needed for safe pump operation.
15. Any direct-line discharge to a surface impoundment shall have fail-safe equipment or operating procedures to prevent overfilling.
16. The surface impoundment(s) shall be designed, constructed and maintained to prevent scouring and/or erosion of the liners and other containment features at points of discharge to the impoundments and by wave action at the water line.
17. Leachate removed from a surface impoundment's primary LCRS shall be discharged to the impoundment from which it originated.
18. If leachate is detected in the VZMS of a surface impoundment indicating a leak in the containment structures the Discharger shall:
  - a. Immediately cease discharge of waste, excluding leachate to the surface impoundment until the leaks can be found and repaired,
  - b. report to the Central Valley Water Board that the containment structures have failed within 72 hours,
  - c. submit written notification of the release to the Central Valley Water Board within seven days, the notification should include a time schedule to repair the containment structures, and
  - d. discharge of wastes to the surface impoundment will not resume until the Central Valley Water Board has determined that repairs to the liners are

complete and there is no further threat to water quality.

19. Solids that accumulate in the surface impoundments shall be periodically removed to maintain minimum freeboard requirements and to maintain sufficient capacity for surface impoundment leachate and for the discharge of wastes. Prior to removal of these solids, sufficient samples shall be taken for their characterization and classification pursuant to Article 2, Subchapter 2, Chapter 3, Division 2 of Title 27. The rationale for the sampling protocol used, the results of this sampling, and a rationale for classification of the solids shall be submitted to Central Valley Water Board staff for review.
20. Leachate generation by a waste containment unit LCRS shall not exceed 85% of the design capacity of (a) the LCRS which is 1250 gallons. If leachate generation exceeds this value, then the Discharger shall immediately cease the discharge of waste, excluding leachate, to the waste management unit and shall notify the Central Valley Water Board in writing within **seven days**. Notification shall include a timetable for a remedial action to repair the containment structures or other action necessary to reduce leachate production.

#### **Class II Surface Impoundment Closure**

21. The closure of each Class II surface impoundment shall be under the direct supervision of a California registered civil engineer or certified engineering geologist.
22. At closure of Class II surface impoundments, all residual wastes, including liquids, sludges, precipitates, settled solids, and liner materials and adjacent natural geologic materials contaminated by wastes, shall be completely removed and discharged to a waste management unit approved by Central Valley Water Board staff. If after reasonable attempts, the Discharger demonstrates the removal of all remaining contamination is infeasible, the surface impoundment shall be closed as a landfill.

### **C. RECEIVING WATER LIMITATIONS**

#### **Water Quality Protection Standards**

The concentrations of Constituents of Concern in waters passing through the Points of Compliance shall not exceed the Concentration Limits established pursuant to Monitoring and Reporting Program R5-2013-XXXX, which is attached to and made part of this Order.

#### **D. FINANCIAL ASSURANCE**

1. The Discharger shall, by **30 April of each year**, submit for approval by the Executive Officer, detailed cost estimates and a demonstration of assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the waste management unit. The Discharger shall provide the assurances of financial responsibility to the Board as required by Chapter 6 of Division 2 of Title 27 of the California Code of Regulations. The assurances of financial responsibility shall name the Board as beneficiary and shall provide that funds for corrective action shall be available to the Board upon the issuance of any Order under Chapter 5 of Division 7 of the Water Code. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation. The financial assurance fund for corrective action shall be established prior to discharging waste to the surface impoundment.
2. The Discharger shall demonstrate financial responsibility for closure and post-closure maintenance of each waste management unit, and shall submit a report of financial assurances by **30 April of each year** for Executive Officer review and approval. The Discharger shall provide the assurances of financial responsibility to the Central Valley Water Board as required by Chapter 6 of Division 2 of Title 27 of the California Code of Regulations. The assurances of financial responsibility shall provide that funds for closure and post-closure maintenance shall be available to the Central Valley Water Board upon the issuance of any Order under Chapter 5 of Division 7 of the Water Code. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation. The financial assurance fund for closure and post-closure maintenance shall be established prior to discharging waste to the surface impoundment.

#### **E. PROVISIONS**

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements (SPRRs), 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. The Discharger shall comply with Monitoring and Reporting Program R5-2013-XXXX, which is attached to and made part of this Order. This compliance includes, but is not limited to, maintenance of waste containment facilities and precipitation and drainage controls and monitoring groundwater, the unsaturated zone, and surface waters (if applicable) throughout the active life of the waste management units and the post-closure maintenance period. A

violation of Monitoring and Reporting Program R5-2013-XXXX is a violation of these waste discharge requirements.

3. The Discharger shall comply with all applicable provisions of Title 27 that are not specifically referred to in this Order.
4. The Discharger shall comply with all applicable water quality criteria/objectives pertaining to this Facility specified in the Water Code and the Basin Plan that are not explicitly addressed in this Order.
5. If there is any conflicting or contradictory language between the WDRs, the MRP, or the SPRRs, then language in the WDRs shall supersede either the MRP or the SPRRs, and language in the MRP shall supersede the SPRRs.
6. All reports required by this Order shall be submitted pursuant to Water Code section 13267.
7. The Discharger shall maintain a copy of this Order at the Facility, including the MRP No. R5-201X-XXXX and the SPRRs dated September 2003 which are part of this Order, and make it available at all times to Facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.
8. The Discharger shall maintain legible records of the volume and type of waste discharged to the surface impoundments and the manner and location 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 Board and of the State Water Resources Control Board, copies of these records shall be sent to the Central Valley Water Board.
9. The Discharger shall provide proof to the Central Valley Water Board **within sixty days after completing final closure** that the deed to the surface impoundment facility property, or some other instrument that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that:
  - a. the parcel has been used for disposal of liquid wastes;
  - b. land use options for the parcel are restricted in accordance with the post-closure land uses set forth in the post-closure plan and in WDRs for the surface impoundment; and
  - c. in the event that the Discharger defaults on carrying out either the post-closure maintenance plan or any corrective action needed to address a release, then the responsibility for carrying out such work falls to the property owner.

10. The Central Valley Water Board will review this Order periodically and may revise requirements when necessary.

## F. REPORTING REQUIREMENTS

1. The Discharger shall comply with the reporting requirements specified in this Order, in Monitoring and Reporting Program Order R5-2013-XXXX and in the Standard Provisions and Reporting Requirements dated September 2003.
2. The Discharger shall complete the tasks outlined in these WDRs and the attached Monitoring and Reporting Program R5-2013-XXXX upon adoption of this Order in accordance with the following time schedule:
  - a. **Evaluation of Groundwater Monitoring Network. By 1 November 2013** the Discharger shall determine the source (ambient air, sampling procedures, upgradient sources, etc.) of TPH-Diesel and TPH-Oil and Grease detections in groundwater monitoring wells. The Discharger shall implement their proposal to install dedicated low flow pumps described in Finding 40 and collect groundwater, field, ambient air, and travel samples. The Discharger shall provide a report that includes an implementation plan and sampling schedule to rectify the problem with detections of hydrocarbons and VOCs in travel, field, and/or method blanks. Upon approval of the proposed changes and verification that the proposed changes were successful in eliminating the contamination of groundwater monitoring samples and/or identifying the source of TPH-d in groundwater samples the Discharger shall revise the Groundwater Monitoring Network and/or Sample Collection and Analysis Plan, and the Discharger shall submit a revised Water Quality Protection Standard Report for approval by the Central Valley Water Board. The evaluation will include the use of split samples for analysis by third party ELAP-certified laboratory to verify that contamination of VOCs in sample collection and analysis has been corrected.
  - b. **Revised Groundwater Supply Well Survey. By 1 November 2013** the Discharger shall submit a report describing a supply well survey that identifies all groundwater supply wells within a one mile radius of the surface impoundment as well as identify any residences by location and Well ID. that uses a domestic supply well within 1000 feet of the Class II surface impoundment.

- c. **Report on high TSS/turbidity in groundwater monitoring wells.** By **1 November 2013** the Discharger shall provide a report with the results of an investigation as to the source of high TSS concentrations being reported in monitoring wells. If the Discharger determines that the wells need to be redeveloped, then the report will show that the work has been completed and the results documenting the reduction of TSS/turbidity in each redeveloped well.
  - d. **Water Balance Analysis of the Class II Surface Impoundment.** By **1 November 2013** the Discharger shall perform a water balance analysis and provide a report to Central Valley Water Board staff that will incorporate historical data on inflows to the surface impoundment as well as discharges to the Baker Tanks to revise the design, operation, and maintenance of the designated waste impoundment to ensure sufficient designated waste storage capacity is available at the beginning of the anticipated rainy season. If the water balance analysis indicates insufficient storage capacity the Discharger shall determine the additional storage necessary and shall provide an implementation schedule as to when such permanent storage capacity shall be installed.
3. All tasks and reports required in Section F.2 of this Order shall be overseen and certified by the appropriate registered professional with the state of California qualified to perform such tasks.
  4. In the event of any change in ownership of this waste management facility, the Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Central Valley Water Board.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

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 Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this 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.

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 \_\_\_\_\_.

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PAMELA C. CREEDON, Executive Officer

Attachments