

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM NO. 5-00-186

FOR
SUPER PALLET RECYCLING CORPORATION
DIXON PIT LANDFILL, A LIMITED CLASS III LANDFILL
LANDFILL CLOSURE AND POST CLOSURE MAINTENANCE
SACRAMENTO COUNTY

The Discharger shall maintain water quality monitoring systems that comply with the provisions of Title 27, California Code of Regulations (CCR), Division 2, Subdivision 1, Chapter 3, Subchapter 3, and are appropriate for detection monitoring, evaluation monitoring, and corrective action monitoring.

Monitoring and Reporting Program (MRP) No. 5-00-186, including Attachments A, B and C, and the Standard Provisions and Reporting Requirements (Standard Provisions), dated August 1997, are part of Waste Discharge Requirements (WDRs) Order No. 5-00-186. WDRs No. 5-00-186 and the Standard Provisions require compliance with this MRP. Failure to comply with this MRP, or with the Standard Provisions, constitutes non-compliance with the WDRs and with the Water Code, which can result in the imposition of civil monetary liability.

A. MONITORING

1. Groundwater Monitoring

The Discharger shall sample groundwater from each monitoring well currently at the facility (as shown on Attachment B), and any other wells installed after adoption of these WDRs for the purposes of background, detection or evaluation monitoring. The Discharger shall collect samples from the groundwater monitoring wells as specified in Table 1. The Discharger may request Regional Board staff to approve alternate EPA testing methods than those listed in Table 1. Samples to be analyzed for dissolved metals shall be field filtered prior to analysis. Sample collection shall follow standard EPA protocol.

For each monitored groundwater body, the Discharger shall measure the water level in each well (in feet and hundredths, MSL) and determine groundwater gradient and direction at least quarterly, including the times of expected highest and lowest water level elevations for the respective groundwater body. Groundwater elevations shall be measured for a given groundwater body within a period of time short enough to avoid temporal groundwater flow variations which could preclude accurate determination of groundwater gradient and direction.

The Discharger last monitored five-year constituents of concern during the first quarter of 2004. Therefore, beginning with the **first quarter of 2009**, the Discharger shall sample

all groundwater Monitoring Points for the Constituents of Concern listed in Table 1 that have a five year sampling frequency. Subsequent monitoring of five year Constituents of Concern for groundwater shall be completed every fifth year after the year 2009, beginning with the first quarter of 2014.

2. Unsaturated Zone Monitoring

An unsaturated zone monitoring system does not exist at the facility. This Order provides a waiver from unsaturated zone monitoring requirements unless the Executive Officer finds that the Discharger has successfully demonstrated that a source other than the landfill is the sole cause of the evidence of a release (see Finding No. 16 in the WDRs). If the Executive Officer finds that the Discharger has successfully demonstrated that a source other than the landfill is the sole cause of the evidence of a release, the Discharger is required to propose and install an unsaturated zone monitoring system and analyze soil-pore liquid samples from each unsaturated zone Monitoring Point as specified in Table 1.

3. Surface Water Monitoring

The Discharger shall sample Whitehouse Creek at upstream and downstream locations (surface water Monitoring Points WCUS and WCDS), as shown on Attachment B. The Discharger shall collect surface water samples after the first storm of the rainy season that produces significant flow and during at least one other storm event in the wet season. The Discharger shall collect samples from each location as specified in Table 2. The Discharger may request Regional Board staff to approve alternate EPA testing methods than those listed in Table 2. Samples to be analyzed for dissolved metals shall be field filtered prior to analysis. Sample collection shall follow standard EPA procedures.

Beginning with the **first quarter of 2006**, the Discharger shall sample all surface water Monitoring Points for Constituents of Concern listed in Table 2 that have a five year sampling frequency. Subsequent monitoring of five year Constituents of Concern for surface water shall be completed every fifth year after the year 2006, beginning with the first quarter of 2011.

TABLE 1 – GROUNDWATER MONITORING PROGRAM

<u>Parameter</u>	<u>Units</u>	<u>Test Method</u>	<u>Frequency</u>
Field Parameters			
Temperature	°C	Field Measure	Semiannually
Groundwater Elevation	Feet (100ths), MSL	Field Measure	Quarterly
Specific Conductance	µmhos/cm	Field Measure	Semiannually
pH	Standard Units	Field Measure	Semiannually
Turbidity	NTUs	Field Measure	Semiannually
Monitoring Parameters			
Bicarbonate	mg/l	EPA 310.1 or 310.1	Semiannually
Chloride	mg/l	EPA 300.0	Semiannually
Dissolved Iron	mg/l	EPA 6010B or 236.1	Semiannually
Magnesium	mg/l	EPA 6010B or 200.7	Semiannually
Manganese	mg/l	EPA 6010B or 200.7	Semiannually
Nitrate-Nitrogen	mg/l	EPA 300.0	Semiannually
Sulfate	mg/l	EPA 300.0	Semiannually
Total Dissolved Solids (TDS)	mg/l	EPA 160.1	Semiannually
Total Organic Carbon	mg/l	EPA 415.1 or 415.2	Semiannually
Volatile Organic Compounds (See Attachment C)	µg/l	EPA 8260B	Semi-annually
Metals/General Mineral ¹	mg/l	Footnote 1	Semi-annually
Constituents of Concern			
Metals/General Mineral ¹	mg/l	Footnote 2	5 years

¹ Metals & General Mineral (by EPA methods in parentheses. Method 200.8 allowed only if TDS is less than 1,000 mg/L): **Field Filtered/Dissolved:** Aluminum (6010B or 200.7), Arsenic (7062 or 206.2), Barium (6010B or 200.7), Total Chromium (6010B or 200.8), Hexavalent Chromium (7197), Copper (6010B or 200.8), Lead (7421 or 200.8), Nickel (7521 or 200.8), and Zinc (6010B or 200.7). **Unfiltered:** Calcium (6010B or 200.7), Potassium (6010B or 200.7), and Sodium (6010B or 200.7).

² Metals & General Minerals - 5 Years (by EPA methods in parentheses. Method 200.8 allowed only if TDS is less than 1,000 mg/L): **Field Filtered/Dissolved:** Antimony (6010 or 200.8), Beryllium (6010B or 200.8), Cadmium (7131A or 200.8), Cobalt (6010B or 200.8), Mercury (7471A or 245.1), Molybdenum (6010B or 200.8), Selenium (7742 or 200.8), Silver (6010B or 200.8), Thallium (7841 or 200.8), Tin (6010B or 200.8), and Vanadium (6010B or 200.8). **Unfiltered:** Sulfides (6010B or 376.2).

TABLE 2 - SURFACE WATER MONITORING PROGRAM

<u>Parameter</u>	<u>Units</u>	<u>Test Method</u>	<u>Frequency</u>
Field Parameters			
Temperature	°C	Field Measure	Each Winter ¹
Specific Conductance	µmhos/cm	Field Measure	Each Winter ¹
pH	Standard units	Field Measure	Each Winter ¹
Turbidity	Turbidity Units	Field Measure	Each Winter ¹
Monitoring Parameters			
Chloride	mg/l	EPA 300.0	Each Winter ¹
Chemical Oxygen Demand	mg/l	EPA 410.4	Each Winter ¹
Dissolved Iron	mg/l	EPA 6010B or 236.1	Each Winter ¹
Nitrate-Nitrogen	mg/l	EPA 300.0	Each Winter ¹
Manganese	mg/l	EPA 6010B or 200.7	Each Winter ¹
Magnesium	mg/l	EPA 6010B or 200.7	Each Winter ¹
Sulfate	mg/l	EPA 300.0	Each Winter ¹
Total Dissolved Solids (TDS)	mg/l	EPA 160.1	Each Winter ¹
Total Suspended Solids	mg/l	EPA 160.2	Each Winter ¹
Total Organic Carbon	mg/l	EPA 415.1 or 415.2	Each Winter ¹
Constituents of Concern			
Metals/General Mineral ²	mg/l	Footnote 2	5 years

¹ The first storm of the rainy season and at least one other storm event during the wet season.

² Metals & General Minerals - 5 Years (by EPA methods in parentheses. Method 200.8 allowed only if TDS is less than 1,000 mg/L): **Field Filtered/Dissolved:** Aluminum (6010B or 200.7), Antimony (7062 or 200.8), Arsenic (7062 or 206.2), Barium (6010B or 200.7), Beryllium (6010B or 200.8), Cadmium (7131A or 200.8), Total Chromium (6010B or 200.8), Hexavalent Chromium (7197), Cobalt (6010B or 200.8), Copper (6010B or 200.8), Cyanide (6010B), Lead (7421 or 200.8), Mercury (7471A or 245.1), Nickel (7521 or 200.8), Selenium (7742 or 200.8), Silver (6010B or 200.8), Thallium (7841 or 200.8), Tin (6010B or 200.8), Vanadium (6010B or 200.8), and Zinc (6010B or 200.7). **Unfiltered:** Calcium (6010B or 200.7), Potassium (6010B or 200.7), Sodium (6010B or 200.7), Sulfides (6010B or 376.2).

B. REPORTING

The Discharger shall report monitoring data and information as required in this MRP and as required in the Standard Provisions. Reports that do not comply with the required format will be **REJECTED** and the Discharger shall be deemed to be in non-compliance with the WDRs.

1. Semiannual Reports

The Discharger shall report field and laboratory test results in quarterly monitoring reports. The Discharger shall submit the semiannual monitoring reports to the Regional Board by the **15th day of the month** following the calendar semester in which the samples were collected or observations made, with the exception of the annual report due by 31 January (**i.e., by 15 July and 31 January**). The Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The Discharger shall summarize the data to clearly illustrate compliance with waste discharge requirements or the lack thereof. A short discussion of the monitoring results, including notations of any water quality violations, shall precede the tabular summaries. As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all reports shall be prepared by a registered professional or their subordinate and signed by the registered professional.

Each semiannual report is to include the information listed in the Standard Provisions as well as:

- (a) tabulated cumulative monitoring data including depth to groundwater measurements, groundwater elevations above mean sea level, groundwater, surface water, unsaturated zone analytical data (if applicable), and Concentration Limits from the most recent annual report;
- (b) groundwater contour maps for the previous two calendar quarter's groundwater elevation data showing hydraulic gradient, flow direction and an estimation of flow velocity;
- (c) a copy of the laboratory analytical reports; and
- (d) if applicable, the status of any ongoing remediation, including all applicable data.

2. Annual Report

The second semiannual report shall also constitute the Annual Report for the previous calendar year. The Discharger shall report to the Regional Board the results of any monitoring done more frequently than specified herein.

Each Annual Report is to include the information listed in the Standard Provisions as well as:

- (a) tabular and graphical summaries of all historical monitoring data for TDS, chloride, sulfate, and bicarbonate, so as to show historical trends;
- (b) groundwater contour maps for the previous year's groundwater elevation data showing hydraulic gradients, flow directions and estimations of flow velocity;
- (c) a discussion of the long-term trends in the concentrations of any pollutants in groundwater;
- (d) a discussion of any pollutants in surface water, and corrective actions;
- (e) a description of all remedial activities including effectiveness and proposed changes or modifications in remedial action; and
- (f) an updated Water Quality Protection Standard including proposed Concentration Limits for all Constituents of Concern for each monitored medium.

C. WATER QUALITY PROTECTION STANDARD

The Water Quality Protection Standard (Standard) shall consist of the following elements:

1. Constituents of Concern;
2. Concentration Limits;
3. Monitoring Points (groundwater and surface water);
4. Point of Compliance; and
5. Compliance Period.

Each of these is described as follows:

1. Constituents of Concern

The list of Constituents of Concern shall include all parameters listed in Tables 1 and 2 of this MRP.

2. Concentration Limits

The Discharger shall determine the Concentration Limit for each Constituent of Concern or Monitoring Parameter in each monitored medium (i.e., groundwater and surface

water). The Discharger shall use the Concentration Limits as the basis of comparison with data from the Monitoring Points in that monitored medium. Background groundwater Monitoring Point(s) shall be used to establish Concentration Limits for each naturally occurring Constituent of Concern for groundwater. The upstream surface water Monitoring Point shall be used to establish Concentration Limits for each naturally occurring Constituent of Concern for surface water. The background unsaturated zone Monitoring Point shall be used to establish Concentration Limits for each naturally occurring Constituent of Concern for pore-liquid in the unsaturated zone.

The each Annual Report shall include a proposal for statistical methods for determining Concentration Limits for each naturally occurring Constituent of Concern, and non-statistical methods for determining Concentration Limits for man-made Constituents of Concern, in accordance with the Standard Provisions. On an annual basis, Concentration Limits shall be proposed for all Constituents of Concern for which there is sufficient data.

If the Discharger finds that the concentration of one or more Constituents of Concern have exceeded the approved Concentration Limit(s), the Discharger shall perform the tasks outlined under the heading “**RESPONSE TO A RELEASE**” in the Standard Provisions.

3. Monitoring Points

The background **groundwater** Monitoring Point shall be monitoring well MW-1, and any other background wells that may be installed subsequent to the adoption of this order. The downgradient groundwater Monitoring Points shall be groundwater monitoring wells MW-2, MW-3, MW-4, MW-5, MW-6, industrial supply well ISW-2 (installed for corrective action), and any other groundwater monitoring wells that may be installed subsequent to the adoption of this Order for the purposes of background, detection or evaluation monitoring.

The **surface water** Monitoring Points shall be WCUS (upstream) and WCDS (downstream) as shown on Attachment B.

4. Point of Compliance

The Point of Compliance for groundwater and the unsaturated zone shall be the vertical surface located at the hydraulically downgradient limit of the waste management units that extends through the uppermost aquifer underlying the units. The Point of Compliance for surface water shall be the site property line.

5. Compliance Period

The Compliance Period is the number of years equal to the active life of the waste management unit plus at least three consecutive years of compliance with the Water Quality Protection Standard (as described in §20410 of Title 27).

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

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

26 April 2006

Date

WLB