

California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM
ORDER NO. R1-2015-0041

FOR

CALIFORNIA DEPARTMENT OF TRANSPORTATION
WILLITS BYPASS PROJECT
LOUISIANA PACIFIC WOODWASTE SITE 1
CLEAN CLOSURE

Mendocino County

California Department of Transportation (CalTrans, or the Discharger), shall maintain water quality monitoring systems that comply with Subchapter 3, Chapter 3, Subdivision 1, Division 2, Title 27, CCR, and any other applicable provisions therein.

Compliance with this Monitoring and Reporting Program (MRP) is ordered under the authority of California Water Code section 13267(b). Failure to comply with this MRP, or with the General monitoring and Reporting Requirements, constitutes non-compliance with the August 10, 2010 Water Quality certification for the Willits Bypass project, and with Division 7 of the California Water Code, which can result in the imposition of civil monetary liability.

I. REPORTING

The Discharger shall report monitoring data and information as required in this MRP, and as required in the General Monitoring and Reporting Requirements. The Discharger shall submit one paper copy of each quarterly monitoring report and a copy of the monitoring report in an electronic format, with transmittal letter, text, tables, figures, laboratory analytical data, and appendices in PDF format (one PDF for the entire report). Daily reports, as described within this MRP, may be submitted either by facsimile or by email to NorthCoast@waterboards.ca.gov. Quarterly monitoring reports must include, but should not be limited to the following:

1. Letter of Transmittal

A letter transmitting the essential points must accompany each report. Both the monitoring report and the transmittal letter must be signed by the director of the agency. Upon Regional Water Board Executive Officer approval, the cited signature can be by a California Registered Civil Engineer, Certified Engineering Geologist, or Professional Geologist who has been given signing authority by the cited signatory. The transmittal letter must contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

2. Monitoring Results Summary

The summary report shall contain at least a narrative of the monitoring results, including a discussion of comparisons with background soil concentrations, or other monitoring results of potential significance to water quality, and describe any corrective actions taken.

3. Tabular Presentation of Data

In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form for each medium sampled, so that the date, the constituents, the concentrations, and the units are readily discernible.

4. Site Activity Summary

Summary of clean closure activities occurring during the monitoring period. Once clean closure has been completed and certified, the activity summary shall summarize wetland restoration activities underway during the monitoring period, through completion.

5. Laboratory Results

Summarize and report laboratory results and statements demonstrating compliance with Part II. Include results of analyses performed at the Site that are outside of the requirements of this Monitoring and Reporting Program.

6. Sampling Summary

- a. For each monitoring well addressed by the report, a description of: 1) the method and time of water level measurement, 2) the method of purging and purge rate and well recovery time, and 3) field parameter readings.
- b. For each Monitoring Point addressed by the report, a description of the type of sampling device used, its placement for sampling, and a description of the sampling procedure (number of samples, field blanks, travel blanks, and duplicate samples taken; the date and time of sampling; the name and qualification of the person actually taking the samples; and description of any anomalies).

7. Standard Observations

A summary of standard observations, including summary of any work or activities underway at the site during monitoring/sampling event(s), weather conditions during the observations, and the precipitation during the five days preceding the observations.

8. Map(s):

The map for the Monitoring Report must consist of a current aerial photograph or include relative topographical features, along with Monitoring Points, features of the Site, and groundwater gradient.

A. REQUIRED REPORTS

1. Workplan (background, Plasma background, monitoring wells)

By no later than August 10, 2015, the Discharger shall submit a workplan and schedule for the following:

- a. Background soil testing**
Identify location(s), depth(s), and a schedule to collect at least 3 background soil samples.
- b. Plasma site ambient soil testing**
Identify location(s) and schedule to collect at least 3 samples from the Plasma site, to be tested for total metals, TPH in the diesel and motor oil ranges, and PAHs.
- c. Groundwater monitoring well installation**
Identify location(s) and schedule to install at least three groundwater monitoring wells around the perimeter of the waste management unit. At least one well must be located downgradient of the waste management unit.

2. Plasma site soil disposal reports

Monthly, the Discharger and/or its contractor(s) shall submit a report describing material placement/disposal on the Plasma site. Information provided in the report shall include, but not be limited to:

- Source(s) and respective volume(s) of material placed on the Plasma site; if appropriate, include a map showing source location(s).
- Map of Plasma site showing approximate location(s) where material was placed over the reporting period and locations where accompanying photographs have been taken.
- Site photographs of soil disposal/placement areas cross-referenced to the accompanying map.
- Description of any measures taken or BMPs installed to stabilize or contain soils placed, spread, stockpiled, or moved on the site over the past month.

3. Daily Clean Closure Reports

During times of active clean closure activities, legible copies of the daily field notes and summary reports shall be submitted to the Regional Water Board via facsimile at (707) 523-0135 or email to Diana.Henriouille@waterboards.ca.gov by noon the following weekday. The document shall be addressed to the

Regional Water Board, Compliance Assurance Unit, and include the name of the staff person assigned to the Site.

Daily field reports will include at least the following information:

- i. General site conditions, weather, and site security;
- ii. Summary and scaled sketch of completed landfill removal activities;
- iii. Description of removal methods;
- iv. Approximate removal volumes and truck load summary/destination;
- v. Description of uncharacteristic waste, unsuitable materials, or apparent contamination;
- vi. Leachate or groundwater occurrence/management;
- vii. PID monitoring date;
- viii. Sampling summary;
- ix. Onsite personnel and authorized visitors;
- x. Equipment used; and
- xi. Other pertinent observations.

4. Quarterly Monitoring Report

Quarterly Monitoring Reports (QMRs) shall be prepared and submitted to the Regional Water Board quarterly by the 15th of the month following the sampling period. Wells shall be sampled quarterly in January, April, July, and October. The reports shall include the results of all monitoring programs listed herein.

The established monitoring and reporting period is as follows:

<u>QUARTER</u>	<u>PERIOD NO.</u>	<u>REPORTING DATE</u>
January through March	1	April 15
April through June	2	July 15
July through September	3	October 15
October through December	4	January 15

5. Clean Closure Verification Report

The clean closure verification report shall be submitted within 60 days of the completion of clean closure of the waste management unit. The clean closure verification report will be prepared and certified by the Construction Quality Assurance (CQA) Officer performing the third party verification of the clean closure. The CQA officer must be a registered civil engineer or a certified engineering geologist licensed in the State of California. The report must be submitted under penalty of perjury to the Regional Water Board and other appropriate agencies, in accordance with Sections 21090(f) and 21810(e) Title 27, CCR. The report, at a minimum, will include the certificate of closure; a description of any required postclosure maintenance activities; daily

construction logs; waste manifests; documentation of volume and placement of cap material at the Plasma Site; material acceptance reports; photo logs of closure activities; final CQA documentation; laboratory testing results; field testing results; discussion of verification sampling results; and an as-built topographic map of the waste management unit prior to commencement of wetland restoration activities, prepared at a scale of one-inch to 100 feet, with a contour interval of five feet.

II. MONITORING PROGRAMS

A. CONSTITUENTS OF CONCERN

Except as otherwise indicated in this Order, the Discharger shall monitor each medium of the Site for applicable Constituents of Concern (per State Water Resources Control Board Resolution 93-62). The monitoring media and/or locations, analytical methods, and frequency of analysis are as follows:

1. Monitoring Media/Locations

a. Cap soils

A minimum of one four-point sample shall be collected for every 5,000 yards of material removed from the waste management unit (WMU).

b. Woodwaste

Woodwaste will be taken to Potrero Hills landfill for disposal. Therefore, testing of this medium is not required under this Order, however any sampling/testing/analytical data developed for Potrero Hills as clean closure/woodwaste disposal is underway must be provided in quarterly monitoring report(s) covering the period(s) in which such data is developed.

c. WMU bottom and perimeter soils

Following removal and disposal of woodwaste and stained soils in the waste management unit perimeter, soils in the waste management unit bottom and perimeter shall be sampled and tested per the verification testing provisions provided in the April 2015 workplan, with a minimum of four additional samples collected from the WMU bottom in the vicinity of direct push boring WDP10, and additional samples as warranted based on visual observations of wastes uncovered during waste excavation.

d. Background soils

Prior to or as clean closure activities are underway, additional background samples shall be collected and tested for total concentrations of COCs per approved workplan.

e. Leachate – Liquids encountered within the waste management during clean closure activities are to be pumped and trucked to the Willits municipal wastewater treatment facility. Therefore, testing of this medium is not required under this Order, however any sampling/testing/analytical data

developed for the wastewater treatment facility as clean closure/leachate pumping and disposal is underway must be provided in quarterly monitoring report(s) covering the period(s) in which such data is developed.

- f. Groundwater – The existing groundwater monitoring well located within the waste management unit footprint is to be destroyed as part of the clean closure project. New groundwater wells to be installed pursuant to approved workplan will be measured and sampled quarterly.

2. Monitoring Parameters

**TABLE II. A.
 CONSTITUENTS OF CONCERN MONITORING**

<u>Parameter</u>	<u>Units</u>	<u>Medium</u>
Bicarbonate Alkalinity	mg/l CaCO ₃	Groundwater
Alkalinity	mg/l CaCO ₃	Groundwater
Hardness	mg/l CaCO ₃	Groundwater
Biological Oxygen Demand	mg/l	Groundwater
Fluoride	mg/l	Groundwater
Sulfate	mg/l	Groundwater
Magnesium	mg/l	Groundwater
Nitrate	mg/l	Groundwater
Tannins and Lignins	mg/l mg/Kg	Groundwater/ Soil
ICAP Metals (EPA 200 Series – 23 metals)	mg/l mg/Kg	Groundwater/ Soil
Volatile Organic Compounds (EPA Method 601/602)	ug/l ug/Kg	Groundwater/ Soil
Total Petroleum Hydrocarbons (Gas, Diesel, and Motor Oil) (with and without silica gel clean-up)	ug/l ug/Kg include chromatographs	Groundwater/ Soil

B. GROUNDWATER ELEVATION MONITORING

Groundwater elevations taken prior to purging the well and sampling for Monitoring Parameters shall be used to fulfill the groundwater gradient/direction analyses required. For each monitored groundwater body, the Discharger shall measure the water level in each well and piezometer and shall determine groundwater gradient and direction at least quarterly, including the times of expected highest and lowest elevations of the water level for the respective groundwater body. Groundwater elevations for all upgradient and downgradient wells for a given groundwater body shall be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater gradient and direction. This information shall be included in the monitoring reports.

C. VERIFICATION MONITORING

Verification monitoring for clean closure will include monitoring of the native soils beneath and around the perimeter of the current WMU as defined by the 1994 waste footprint. The monitoring locations, analytical methods, and frequency of analysis are as follows:

1. Monitoring Locations

- a. Natural soil beneath and around the perimeter of the WMU** – A minimum of 16 random soil samples (approximately one every 1000 square feet) will be taken from the native soil beneath and a minimum of ten random samples (approximately one every 200 feet) around the perimeter of the WMU once the waste has been removed. A minimum of four additional samples shall be taken from the vicinity of WDP10. Additional samples shall be taken in areas with discoloration, odors, or suspected contamination by atypical waste materials (i.e., materials other than “clean” woodwaste).
- b. Suspected Contaminated Waste** – Samples of any suspect or atypical material will be taken where it appears this material has or may have contaminated underlying soils. Specifically, if atypical wastes, including, but not limited to ash, treated wood, chemical containers, are encountered during the clean closure project, those materials shall be assessed and adequately characterized to enable the Discharger to identify “hot spots” or other areas of interest underlying the waste management unit that may require additional sampling and/or inclusion of analyses for additional constituents of concern to verify complete removal and clean closure.

III. WATER QUALITY PROTECTION STANDARD

The Water Quality Protection Standard (WQPS) consists of the following elements:

- a.** Constituents of Concern;
- b.** Concentration Limits;
- c.** Monitoring Points;
- d.** Points of Compliance; and
- e.** Compliance Period.

Each of these is described as follows:

A. Constituents of Concern

The Constituents of Concern (COCs) are identified above.

B. Concentration Limits

The Concentration Limit for any given Constituent of Concern or Monitoring Parameter in a given monitored medium at the Site shall be as follows, and shall be used as the basis of comparison with data from the Monitoring Points in that monitored medium:

- a.** For groundwater, the background value is expected to be that in the upgradient monitoring well(s);
- b.** For soils, site-specific background values for the woodwaste site and the Plasma site will be developed/augmented through implementation of the workplan. Values from respective sites will be used as the basis for comparison of bottom/perimeter soils samples collected for verification monitoring and for cap material samples collected as clean closure activities are underway.

C. Monitoring Points

- 1.** Groundwater – Wells to be installed pursuant to approved workplan.
- 2.** Soils – As described in II.A.1, above.

D. Point of Compliance

The point of compliance for the waste management unit is the vertical surface located at the downgradient limit of the WMU that extends through the uppermost aquifer underlying the WMU.

E. Compliance Period

The Compliance period will extend through the life of the clean closure project and following completion of the project until four sequential quarters of groundwater monitoring demonstrate that the waste management unit is not or is no longer impacting water quality.

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

Ordered by: _____

Matthias St. John
Executive Officer

July 22, 2015