

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER NO. R5-2004-0708

FOR  
SIMPSON PAPER COMPANY  
AND  
CONGRESS FINANCIAL CORPORATION

FORMER SHASTA PAPER COMPANY FACILITY AND PROPERTY:  
TWIN BRIDGES LANDFILL

SHASTA COUNTY

This Order is issued to Simpson Paper Company and Congress Financial Corporation based on provisions of California Water Code Section 13304, which authorizes the Regional Water Quality Control Board, Central Valley Region (hereafter Regional Board) to issue a Cleanup and Abatement Order.

The Executive Officer of the Regional Board finds that with respect to Simpson Paper Company's and Congress Financial Corporation's acts, or failure to act, the following:

**INTRODUCTION**

1. Simpson Paper Company is the former owner and operator of a paper manufacturing facility in Anderson, Shasta County. Paper pulp sludge wastes generated during the manufacture of paper were discharged to the Twin Bridges Landfill, located at 8103 Millville Plains Road, Assessor Parcel No. 060-020-044 as shown on Attachment A, which is attached hereto and made part of this Order.
2. On 11 January 1999, the Regional Board was notified that Shasta Acquisition, Inc. had purchased the Shasta Pulp and Paper Mill, Twin Bridges Landfill, Wastewater Treatment Lagoons, and the Shasta Ranch property, all formerly owned by Simpson Paper Company. The notice further stated that Shasta Acquisition, Inc. would be doing business as Plainwell Paper Shasta Paper Company.
3. On 1 November 2001, Mr. Ross Bell, the Environmental and Safety Manager for Shasta Paper Company, notified Regional Board staff by telephone that Shasta Paper Company had filed for bankruptcy on 31 October 2001. Written notification of the bankruptcy filing dated 5 November 2001 was submitted on 3 April 2002. The bankruptcy was assigned Case No. 01-32653-B-7 in the United States Bankruptcy Court for the Eastern District of California, Sacramento Division.

4. On 28 October 2002, the Executive Officer issued Cleanup and Abatement Order No. R5-2002-0731 to Shasta Acquisition, Inc., dba Plainwell Paper Shasta Paper Company and Simpson Paper Company, ordering them to cleanup and abate threatened discharges of leachate from the Twin Bridges Landfill.
5. On 15 November 2002, the Executive Officer Amended Cleanup and Abatement Order No. R5-2002-0731 naming Shasta Acquisition, Inc., dba Plainwell Paper Shasta Paper Company, only. This Order was sent to Mr. John Reger, the bankruptcy trustee for Case No. 01-32653-B-7. Simpson Paper Company was removed from the original Order due to a written agreement dated 12 November 2002, which indicated that they would manage leachate collection, transportation, and disposal operations at the Twin Bridges Landfill to ensure that a release of waste did not occur.
6. On 17 September 2003, the *Order Approving Settlement Agreement And Mutual Release of Claims Between The Estate And Congress Financial Corporation* for Bankruptcy Case No. 01-32653-B-7 was issued in United States Bankruptcy Court for the Eastern District of California, Sacramento Division. Congress Financial Corporation, senior secured creditor of Shasta Paper Company controls and/or owns the property listed in Finding No. 1 above.
7. Ross Bell, former Environmental and Safety Manager for Simpson Paper Company and Shasta Paper Company, was paid for services by Congress Financial Corporation to oversee environmental compliance issues at the facilities and properties affected by Bankruptcy Case No. 01-32653-B-7, from approximately June 2002 through January 2003. This indicates that Congress Financial Corporation operated and/or controlled the facility and property listed in Finding No. 1 while the case was being settled in United States Bankruptcy Court for the Eastern District of California, Sacramento Division.
8. On 9 February 2004, the Executive Officer issued Cleanup and Abatement Order No. R5-2004-0700 to Simpson Paper Company and Congress Financial Corporation requiring them to cleanup and abate wastes that have been discharged or are threatened to be discharged at the Shasta Pulp and Paper Mill, Shasta Ranch, and Twin Bridges Landfill. This Order was issued because the 12 November 2002 agreement with Simpson Paper Company expired on 8 May 2003 and because Plainwell Paper Shasta Paper Company is no longer a viable responsible party after settlements were approved through the bankruptcy court as detailed in Finding 6 above.
9. On 20 April 2004, Congress Financial Corporation sold at auction the Shasta Ranch property. The new owner becomes the responsible party for the cleanup and abatement issues associated with the property as detailed in Order No. R5-2004-0700. The Shasta Pulp and Paper Mill properties were also offered for sale on 20 April 2004, but no bids were received.

10. On 20 May 2004, Congress Financial Corporation sold at auction the Shasta Pulp and Paper Mill. The new owner becomes the responsible party for cleanup and abatement issues associated with the property as detailed in Order No. R5-2004-0700.
11. Congress Financial Corporation did not offer the Twin Bridges Landfill facility and property for sale at the auctions on 20 April and 20 May 2004. By not offering this property for sale, Congress Financial Corporation precluded a potential new owner from coming forward to act as responsible party for the cleanup and abatement issues detailed in Order No. R5-2004-0700.
12. Simpson Paper Company is subject to this Order because it, as prior owner and operator of the facilities and as discussed in more detail in this Order, has caused or permitted waste to be deposited where it may be discharged into waters of the state (due to lack of oversight and failure to comply with applicable laws, regulations, and permits), and threatens to create a condition of pollution or nuisance. Congress Financial Corporation employed staff to manage basic maintenance operations at the property subject to this Order throughout the bankruptcy process and subsequent settlement described in Findings Nos. 3, 6, and 7 above. Congress Financial Corporation also failed to offer the Twin Bridges Landfill property for sale while still auctioning off two other facilities they obtained through the bankruptcy process of former owner Shasta Paper Company. By failing to offer the Twin Bridges Landfill for sale, Congress Financial Corporation precluded finding a new owner and responsible party for the cleanup and abatement issues detailed in Order No. R5-2004-0700. Due to its control and activities at these properties, Congress Financial Corporation has caused or permitted waste to be deposited where it may be discharged into waters of the state, and threatens to create a condition of pollution or nuisance. Through the settlement of Bankruptcy Case No. 01-32653-B-7, Congress Financial Corporation controls access to the property and facility listed in Finding No. 1, has made decisions concerning the waste management practices at this property and facility, and has chosen and paid contractors to conduct activities to prevent waste from discharging from the subject property and facility. As discussed below, however, its failure to continue to perform such activities will very probably result in significant discharges of waste to surface and ground waters of the state. Simpson Paper Company and Congress Financial Corporation are hereby referred to as Discharger.

### **BACKGROUND**

13. On 31 May 1989, Simpson Paper Company submitted a Report of Waste Discharge that proposed construction and operation of a new Class II landfill and Class II surface impoundment. The name of this disposal facility is the Twin Bridges Landfill, located approximately seven miles east of the town of Anderson in the southeast one-fourth of Section 34, T31N, R3W, MDB&M, in Shasta County. On 27 October 1989, Simpson Paper Company was issued Waste Discharge Requirements (WDR) Order No. 89-198 for operation of the Class II Landfill and Class II Surface Impoundment (hereafter Twin Bridges Landfill).

14. Twin Bridges Landfill is located on a 160-acre parcel, with approximately 25 to 30 acres used for disposal activities and leachate collection and storage. A sedimentation basin is located just south of the Class II leachate ponds. The sedimentation basin allows suspended matter to settle out of storm water before it is discharged off-site towards Dry Creek, a tributary of Bear Creek, which flows into the Sacramento River.
15. Simpson Paper Company owned and operated the Twin Bridges Landfill from 1989 until 8 January 1999. During that time period, Simpson Paper Company placed approximately 89,252 tons of waste in the landfill. Former Shasta Paper Company deposited approximately 26,173 tons of waste at the landfill between January 1999 and March 2002. Approximately 77% of the waste tonnage currently in place at the Twin Bridges Landfill was deposited by Simpson Paper Company. Approximately 23% of the waste tonnage currently in place at the Twin Bridges Landfill was deposited by former Shasta Paper Company.
16. The paper sludge waste consists mostly of primary clarifier solids with high moisture content. A screw press at the mill effectively reduced the moisture content of the waste to 50 percent or less. Chemical analyses of the sludge identified concentrations of 2,3,7,8-Tetrachloro-dibenzo-p-dioxin (2,3,7,8-TCDD) ranging from 23 to 278 parts per trillion and 2,3,7,8-Tetrachloro-dibenzo-furan (2,3,7,8-TCDF) ranging from 264 to 6,740 parts per trillion. While dioxins were not detected in leachate from the paper waste sludge at a detection limit of 2.5 parts per quadrillion, furans were identified in leachate at concentrations ranging from 22 to 160 parts per quadrillion. Dioxins and furans are formed during the bleaching process of the wood pulp. In the early 1990s, Simpson Paper Company began using chlorine dioxide during the bleaching process in an effort to reduce the concentration of dioxins in the waste stream. The materials discharged to the Twin Bridges Landfill are “wastes” as defined in California Water Code Section 13050.
17. Significant quantities of leachate are produced at the Twin Bridges Landfill, partly from precipitation infiltrating the wastes and also because the paper pulp sludge waste has a moisture content of nearly 50 percent. Leachate generated at the Twin Bridges Landfill is collected via subsurface drain lines that discharge to the Class II surface impoundment. The Class II surface impoundment is uncovered and collects precipitation in addition to leachate. Between October 2001 and April 2002, more than 1,480,000 gallons of leachate was collected for off-site treatment and disposal. Prior to the sale of the Shasta Pulp and Paper Mill and Shasta Ranch properties, leachate was removed from the surface impoundment and transported back to the Shasta Pulp and Paper Mill in Anderson for processing and subsequent discharge to the Wastewater Treatment Lagoons. However, discharge of leachate to the Wastewater Treatment Lagoons is no longer an option without appropriate permits and approval of the new owner. In the absence of continued maintenance, including leachate collection and hauling, leachate will overflow the Class II surface impoundment at the landfill and discharge toward Dry Creek, a tributary of Bear Creek, which flows into the Sacramento River.

18. On 15 January 2003, undiluted leachate discharging to the Class II surface impoundment was sampled. Laboratory analyses of the leachate were performed to characterize the waste's chemistry and determine its threat to waters of the state in the event of a release. The leachate sample contained sodium, barium, cadmium, iron, manganese, nickel, and bis-(2-ethylhexyl) phthalate in concentrations that would exceed their respective Water Quality Objective or promulgated criterion if discharged to surface or ground waters of the state. In addition, no test fish survived 96 hour Acute Bioassay tests at undiluted and 10 percent leachate concentrations. Results of this sampling indicates that leachate from the Twin Bridges Landfill has the potential to cause groundwater and/or surface water degradation or pollution, or cause or contribute to the in-stream toxicity of surface waters if the Class II surface impoundment was to overflow.
19. Significant quantities of liquid have recently been detected between the primary and secondary liners of the Class II surface impoundment. Analysis of the liquid indicates leachate may be present between the liners due to detections of tannins and lignins and total organic carbon, indicating a potential breach of the primary containment system.
20. The last facility monitoring report submitted (in accordance with Waste Discharge Requirements Order No. 89-198) was for data collected during January 2003. The last groundwater monitoring occurred during September 2002. Both reports were signed and submitted by Mr. Ross Bell, Acting Environmental and Safety Manager for Congress Financial Corporation. Site monitoring required pursuant to Revised Monitoring and Reporting Program Order No. 89-198 stopped after submittal of the January 2003 report.

#### **AUTHORITY – LEGAL REQUIREMENTS**

21. The *Water Quality Control Plan for the Sacramento and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board (State Board). The Basin Plan identifies the beneficial uses applicable to the Sacramento River, Anderson Creek, Bear Creek and their tributaries. The listed existing or potential beneficial uses are domestic, municipal, agricultural and industrial supply; power generation; recreation; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources.
22. The Basin Plan water quality objectives for surface and ground water include the “Chemical Constituents Objective”, which states, in part, that “waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs)” (i.e., state drinking water standards); and a narrative objective that states “All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. . .”. The Basin Plan contains implementation policies, including the “Policy for Application of Water Quality Objectives”. That Policy

specifies, among other things, how to implement narrative water quality objectives. The Regional Board considers standards and criteria issued by other appropriate agencies, such as the United States Environmental Protection Agency, in applying narrative objectives. The chemical constituents in the wastes and leachate at the Twin Bridges Landfill may cause or contribute to exceedances of water quality objectives in the Basin Plan if discharged to surface or ground water.

23. Section 13304(a) of the California Water Code provides that:

“Any person who has discharged or discharges waste into waters of this state in violation of any waste discharge requirements or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged where it is, or probably will be, discharged into the waters of the State and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board clean up such waste or abate the effects thereof or, in the case of threatened pollution or nuisance, take other necessary remedial action. Upon failure of any person to comply with such cleanup and abatement order, the Attorney General, at the request of the board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order. In the suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant.”

24. Section 13304(c)(1) of the California Water Code provides that:

“If the waste is cleaned up or the effects of the waste are abated, or, in the case of threatened pollution or nuisance, other necessary remedial action is taken by any governmental agency, the person or persons who discharged the waste, discharges the waste, or threatened to cause or permit the discharge of waste within the meaning of subdivision (a), are liable to that governmental agency to the extent of the reasonable costs actually incurred in cleaning up the waste, abating the effects of the waste, supervising the cleanup or abatement activities, or taking other remedial action. The amount of the costs is recoverable in a civil action by, and paid to, the governmental agency and state board to the extent of the latter’s contribution to the cleanup costs from the State Water Pollution and Abatement Account or other available funds.”

25. Section 13267(b) of the California Water Code 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 discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or 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 report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”

26. Simpson Paper Company and Congress Financial Corporation have violated the Waste Discharge Requirements and Monitoring and Reporting Program for the Twin Bridges Landfill and have caused or permitted, cause or permit, and/or threaten to cause or permit waste to be discharged where it is, or probably will be, discharged into the waters of the State and that creates, and threatens to create, a condition of pollution or nuisance as described below:
  - a. The Twin Bridges Landfill Class II surface impoundment is uncovered and will collect precipitation, in addition to leachate, during the rainy season. Failure to manage daily operations at the Twin Bridges Landfill, including collecting, hauling, and disposal of leachate will result in the filling of the Class II surface impoundment, causing overflow, and releasing untreated leachate to Dry Creek. A release of leachate from the Class II surface impoundment may additionally impact groundwater. A release of waste from the landfill would cause or contribute to violations of water quality objectives in the Basin Plan. Failure to manage daily operations as described above constitutes violations of Waste Discharge Requirements Order No. 89-198. Failure to monitor the site in accordance with Revised Monitoring and Reporting Program Order No. 89-198 may result in a failure to detect releases of waste to waters of the state and lead to further violations of Order No. 89-198. The threat of discharge has occurred since Simpson Paper Company constructed and placed waste in the Twin Bridges Landfill and the threat continued through ownership by former Shasta Paper Company and subsequent control by Congress Financial Corporation. With no site management, the threat of unregulated discharge becomes imminent because the surface impoundment contains waste that is open to rain water. In the area of the landfill, rainfall totals average nearly 35 inches per year. Currently, a viable means of leachate treatment and disposal does not exist due to the recent sale and new ownership of the Shasta Pulp and Paper Mill. As described in Finding No. 16, the Twin Bridges Landfill contains wastes, as defined in the California Water Code, at concentrations that exceed applicable water quality objectives in the Basin Plan, and if discharged, applicable water quality objectives in Dry Creek may be exceeded. Exceedance of applicable water quality objectives constitutes “pollution” as defined in California Water Code section 13050.
27. The information and actions required by this Order are necessary to prevent further violations of WDR Order No. 89-198 and are also necessary to prevent a condition of pollution or nuisance as defined by the California Water Code. As former owner and operator of the Twin Bridges Landfill, Simpson Paper Company managed the facility and disposed of the majority of waste currently in place at the site. Through the bankruptcy process and its financial oversight of site maintenance and operations, Congress Financial Corporation currently controls and/or owns the property described in Finding No. 1 and has precluded a new owner and responsible party from coming forward to abate threatened discharges of waste and comply with applicable permits, codes, and regulations.

28. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act, pursuant to Section 15321(a)(2), Title 14, California Code of Regulations.
29. Any person adversely affected by this action of the Regional Board may petition the State Board to review the action in accordance with Section 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions may be found on the Internet at [http://www.swrcb.ca.gov/water\\_laws/cawtrcde/wqpetition\\_instr.html](http://www.swrcb.ca.gov/water_laws/cawtrcde/wqpetition_instr.html) or will be provided upon request.

**IT IS HEREBY ORDERED THAT**, pursuant to Sections 13267 and 13304 of the California Water Code, that Cleanup and Abatement Order No. R5-2004-0700 is hereby rescinded and Simpson Paper Company and Congress Financial Corporation (hereafter referred to as “Discharger”) shall comply as specified below:

1. Congress Financial Corporation shall provide access to the property listed in this Order for each named Discharger to take actions necessary to comply with this Order and other applicable orders of the Regional Board, including compliance activities, remediation actions, and actions to correct or prevent conditions of pollution or nuisance.
2. Congress Financial Corporation shall provide access to Regional Board staff and representatives in order to conduct inspections, assure compliance with this Order and other applicable Orders of the Regional Board, and take other actions as necessary to implement the California Water Code, Division 7.

The Discharger shall:

3. **Beginning immediately**, assess the Class II surface impoundment monthly during summer months and weekly from 1 October through 1 June annually to determine the amount of remaining freeboard for storage of leachate. The Class II surface impoundment shall additionally be assessed within 24 hours after each significant rainfall event of one inch or greater within a 24 hour period for remaining freeboard. Results of the Class II surface impoundment assessments shall be transmitted to the Regional Board via e-mail or written correspondence **within 24 hours of conducting the assessment**. All leachate stored in the Class II surface impoundment shall be removed and properly disposed of **by 15 October annually** in preparation for winter precipitation and operations. The Class II surface impoundment shall be managed to maintain at least two feet of freeboard at all times. When remaining freeboard reaches two feet or less, the Discharger shall begin immediately collecting leachate for off-site disposal in accordance with an approved leachate management contingency plan. Leachate generated at the Twin Bridges Landfill shall be collected, transported, and disposed at an appropriate wastewater treatment and/or disposal facility acceptable to the Executive Officer.



4. **By 1 August 2004**, submit to the Regional Board a leachate management contingency plan that takes into account the volume of leachate (including precipitation) generated during a normal year, collection and transportation of the leachate, and disposal of leachate. Any proposed leachate disposal facilities must be approved by the Executive Officer. The leachate management contingency plan must be implemented immediately upon approval of the Executive Officer.
5. **By 1 September 2004**, submit to the Regional Board a work plan that proposes to determine the source of the liquid between the primary and secondary liners of the Class II surface impoundment. The work plan must include a means of determining whether the primary liner is breached. Any necessary repairs to the Class II surface impoundment must be completed **by 1 November 2004**.
6. **By 1 October 2004**, sample all wells, lysimeters, storm water, and leachate in accordance with Monitoring and Reporting Program No. R5-2004-0708 as shown in Attachment B, which is incorporated herein and made part of this Order. Continue to monitor the site in accordance with Monitoring and Reporting Program No. R5-2004-0708.
7. **By 1 January 2005**, submit to the Regional Board a Final Closure and Postclosure Maintenance Plan in accordance with applicable provisions of Title 27, California Code of Regulations, Division 2. The Final Closure and Postclosure Maintenance Plan must include a construction quality assurance program, cost estimates for closure and postclosure maintenance, and take into account long term handling of leachate.
8. **By 1 January 2005**, submit to the Regional Board cost estimates for corrective actions associated with known or reasonably foreseeable releases from the Twin Bridges Landfill.
9. **By 1 March 2005**, establish financial assurance mechanisms for the Twin Bridges Landfill in accordance with provisions of Title 27, California Code of Regulations, Division 2, Chapter 6, for corrective action associated with known or reasonably foreseeable releases, and for closure, and postclosure maintenance in the amounts of the approved cost estimates. Financial assurances are to be established with oversight provided by the California Integrated Waste Management Board and must name the Regional Board as beneficiary.

10. **By 1 November 2005**, complete closure construction activities at the Twin Bridges Landfill in accordance with the approved Final Closure and Postclosure Maintenance Plan and applicable provisions of Title 27, California Code of Regulations, Division 2. Submit to the Regional Board a final report documenting closure construction activities within 60 days of completing the closure project.

THOMAS R. PINKOS, Executive Officer

By: \_\_\_\_\_  
James C. Pedri, Assistant Executive Officer

\_\_\_\_\_  
(Date)

DPS/klc: sae

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ATTACHMENT B  
MONITORING AND REPORTING PROGRAM NO. R5-2004-0708

FOR  
TWIN BRIDGES CLASS II LANDFILL  
CLASS II SURFACE IMPOUNDMENT  
SHASTA COUNTY

Compliance with this Monitoring and Reporting Program and with the companion Standard Provisions and Reporting Requirements dated August 1997 (Standard Provisions and Reporting Requirements), is ordered by Cleanup and Abatement Order No. R5-2004-0708. Failure to comply with this Program or with the Standard Provisions and Reporting Requirements, constitutes noncompliance with the Order and with the Water Code, and may result in the imposition of civil monetary liability.

**REPORTING**

The Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program and as required in the Standard Provisions and Reporting Requirements. Reports that do not comply with the required format will be rejected and the Discharger shall be deemed to be in noncompliance with the Order.

In reporting the monitoring data, 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 clearly illustrate compliance with the Order or lack thereof. A short discussion of the monitoring results, including notations of any water quality violations, shall precede the tabular summaries.

Method detection limits and practical quantitation limits shall be reported. All peaks shall be reported, including those that cannot be quantified and/or specifically identified.

**Monthly Monitoring Reports**

The Discharger shall submit monthly reports of the results of monitoring conducted in accordance with the schedules specified in this Monitoring and Reporting Program **by the end of the month following the month the monitoring was performed.**

Quarterly and semiannual monitoring reports shall be submitted to the Regional Board **by the end of the month following the end of each calendar quarter or semiannual monitoring period in which samples were taken.** The results of any monitoring done more frequently than required at the locations specified herein shall be reported to the Regional Board within 30 days after performing the monitoring.

### **Annual Summary Report**

The Discharger shall submit an **Annual Monitoring Summary Report** to the Regional Board covering the reporting period of the previous monitoring year. This report shall contain:

- a. All monitoring parameters and constituents of concern shall be graphed so as to show historical trends at each monitoring point and background monitoring point, for all samples taken within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents for the period of record for a given monitoring point or background monitoring point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. For any given constituent or parameter, the scale for background plots shall be the same as that used to plot downgradient data. Graphical analysis of monitoring data may be used to provide significant evidence of a release.
- b. Unless otherwise exempted by the Executive Officer, all monitoring analytical data obtained during the previous two six-month reporting periods, shall be submitted in tabular form as well as in a digital file format acceptable to the Executive Officer. The Regional Board regards the submittal of data in hard copy and in digital format as "...the form necessary for..." statistical analysis [Title 27 CCR Section 20420(h)], in that this facilitates periodic review by the Regional Board.
- c. A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the Order.
- d. A map showing the area and elevations in which filling has been completed during the previous calendar year and a comparison to final closure design contours.
- e. A written summary of the monitoring results, indicating any changes made or observed since the previous annual report.
- f. An evaluation of the effectiveness of the leachate monitoring/control facilities.

The Discharger shall submit the Annual Monitoring Summary Report **by 31 January annually**.

### **Water Quality Protection Standards**

The Water Quality Protection Standard shall consist of: 1) Constituents of Concern, 2) Concentration Limits, 3) Monitoring Points, 4) Points of Compliance, and 5) Compliance Period.

**Constituents of Concern**

The Constituents of Concern are the waste constituents, reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the waste management unit. The Constituents of Concern at the facility are those listed in Table 1. The Discharger shall monitor all Constituents of Concern in Table 1 every 5 years or more frequently, if required, in accordance with a Corrective Action Program.

<b>Table 1 Groundwater Monitoring Parameters/Frequency</b>		
<u>Parameter</u>	<u>Units</u>	<u>Frequency</u> <sup>1</sup>
Field Parameters Groundwater Elevation Specific Conductance pH Turbidity	Feet and Hundredths, MSL µmhos/cm pH units Turbidity units	Quarterly Quarterly Quarterly Quarterly
Monitoring Parameters Total Dissolved Solids Chloride Sulfate Nitrate (as N) Bicarbonate Alkalinity Total Alkalinity Sodium Magnesium Calcium Potassium Chemical Oxygen Demand	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	Quarterly Quarterly Annually Annually Annually Annually Annually Annually Annually Annually Annually
Constituents of Concern Volatile Organics <sup>2</sup> Semi-Volatiles <sup>3</sup> Metals <sup>4</sup> 2,3,7,8-TCDD <sup>5</sup> 2,3,7,8-TCDF <sup>6</sup>	µg/L µg/L mg/L picograms/L picograms/L	5 years 5 years 5 years 5 years 5 years
<sup>1</sup> Annual samples shall be collected in the second quarter of each year. <sup>2</sup> EPA Method 8260 shall be used. All peaks shall be reported. <sup>3</sup> EPA Method 8270 shall be used. All peaks shall be reported. <sup>4</sup> Metals shall include arsenic, cadmium, chromium VI, copper, iron, lead, manganese, mercury, nickel, selenium, silver, and zinc and shall be analyzed by ICAP or AA. Arsenic, mercury, and selenium analyses shall be analyzed by AA. <sup>5</sup> 2,3,7,8-Tetrachloro-dibenzo-p-dioxin <sup>6</sup> 2,3,7,8-Tetrachloro-dibenzo-p-furan		

### **Monitoring Parameters**

Monitoring parameters are the waste constituents, reaction products, hazardous constituents, and physical parameters that provide a reliable indication of a release from a waste management unit. The monitoring parameters for all WMUs are those listed in Table 1.

### **Concentration Limits**

The concentration limits for each constituent of concern are as follows:

- a. For naturally occurring constituents of concern, the concentration limit shall be the calculated statistical concentration limit.
- b. For anthropogenic (not naturally occurring) constituents, which have no natural or background values, the concentration limits (water quality protection standard) shall be the detection limit of the analytical method(s) used.

The Discharger shall use a statistical method approved by Regional Board staff and the groundwater quality data obtained from the detection monitoring program to revise the concentrations annually. The Discharger shall submit the revised concentration limits to Regional Board staff for review and approval in the Annual Monitoring Summary Report.

### **Monitoring Points**

The monitoring points for the groundwater detection monitoring program are monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, and MW-8. The monitoring points shall be sampled and analyzed for Field Parameters, Monitoring Parameters, and Constituents of Concern as indicated and listed in Table 1.

### **Point of Compliance**

The Point of Compliance is the vertical surface at the hydraulically downgradient limit of the waste management unit that extends through the uppermost aquifer underlying the unit. The point of compliance for groundwater monitoring is monitoring wells MW-3, MW-5, MW-6, MW-7, and MW-8.

### **Compliance Period**

The Compliance Period for the landfill is the number of years of operation plus the closure period. Each time the Water Quality Protection Standard is exceeded (i.e., a release is discovered), the landfill begins a Compliance Period on the date the Regional Board directs the Discharger to begin an Evaluation Monitoring Program.

## MONITORING

If the Discharger, through a detection monitoring program, or the Regional Board finds that there is statistically significant evidence of a release from the landfill for any Monitoring Parameter or Constituent of Concern, or significant physical evidence of a release from the landfill, the Discharger shall notify the Regional Board or acknowledge the Regional Board's finding in writing within **7 days**, and shall implement verification procedures within **30 days**, pursuant to Section 20415(e)(8)(E) of Title 27. Within **90 days**, the Discharger shall submit to the Regional Board the results of the re-sampling and either:

- a. A report that demonstrates that a source other than the landfill caused the evidence of a release, or that the evidence resulted from an error in sampling, analysis, or evaluation, or from natural variation in groundwater, surface water, or the unsaturated zone; or
- b. An amended Report of Waste Discharge for the establishment of an evaluation monitoring program to assess the nature and extent of the release from the landfill and to design a corrective action program for approval by the Executive Officer. Within **180 days** of determining statistically significant evidence of a release, the Discharger shall submit an engineering feasibility study for a corrective action program.

## GROUNDWATER MONITORING

The following groundwater detection monitoring program shall be implemented at the facility to determine compliance with the water quality protection standards. The monitoring network shall consist of background monitoring wells MW-1, MW-2, and MW-4, and down gradient monitoring wells MW-3, MW-5, MW-6, MW-7, and MW-8. Additional wells installed to comply with Order No. R5-2004-0708 shall be included as they are installed. Samples from all monitoring wells shall be analyzed for the parameters and at the frequencies listed in Table 1.

The Discharger shall determine at each sampling whether there is a statistically significant increase over water quality protection standards for each parameter and constituent analyzed.

The groundwater surface elevation (in feet and hundredths, M.S.L.) in all wells shall be measured quarterly and used to determine the velocity and direction of groundwater flow. This information shall be displayed on a water table contour map and/or groundwater flow net for the site.

### UNSATURATED ZONE MONITORING

The following unsaturated zone monitoring program shall be implemented at the facility to determine if there is leakage of waste constituents from the WMUs into the unsaturated zone. The unsaturated zone monitoring network shall consist of background suction lysimeter L-1, compliance suction lysimeters L-3, L-5, and L-6, and pan lysimeters L-2, L-4, L-7, LII-1, and LII-2. Lysimeters LII-1 and LII-2 in WMU No. 2 shall undergo a minimum of two sampling events prior to waste being placed in the WMU.

Additional lysimeters installed to comply with Order No. R5-2004-0708 shall be included as they are installed and as waste is placed into the WMU that they monitor. Samples from all lysimeters shall be analyzed for the parameters and at the frequencies listed in Table 2.

<b>Table 2</b>		
<b>Unsaturated Zone Monitoring Parameters/Frequency</b>		
<u>Parameter</u>	<u>Units</u>	<u>Frequency<sup>1</sup></u>
Field Parameters		
Specific Conductance	µmhos/cm	Semiannually
pH	pH units	Semi-annually
Monitoring Parameters		
Total Dissolved Solids	mg/L	Semiannually
Chloride	mg/L	Semiannually
Chemical Oxygen Demand	mg/L	Semiannually
Constituents of Concern		
Volatile Organics <sup>2</sup>	µg/L	Annually
Semi-Volatiles <sup>3</sup>	µg/L	Annually
Metals <sup>4</sup>	mg/L	Annually
2,3,7,8-TCDD <sup>5</sup>	picograms/L	5 years
2,3,7,8-TCDF <sup>6</sup>	picograms/L	5 years
<sup>1</sup> Semiannual samples shall be collected in February and August of each year. <sup>2</sup> EPA Method 8260 shall be used. All peaks shall be reported. <sup>3</sup> EPA Method 8270 shall be used. All peaks shall be reported. <sup>4</sup> Metals shall include arsenic, cadmium, chromium VI, copper, iron, lead, manganese, mercury, nickel, selenium, silver, and zinc analyzed by ICAP or AA. Arsenic, mercury, and selenium analyses shall be analyzed by AA. <sup>5</sup> 2,3,7,8-Tetrachloro-dibenzo-p-dioxin <sup>6</sup> 2,3,7,8-Tetrachloro-dibenzo-p-furan		

The Discharger shall determine at each sampling whether there is a statistically significant increase for each parameter and constituent analyzed.



## LEACHATE MONITORING

All landfill leachate discharge pipes, sumps, and landfill slopes shall be inspected monthly for leachate generation. Upon detection of leachate, the Discharger shall immediately sample the leachate and shall continue to sample and analyze the leachate for the Monitoring Parameters, and Constituents of Concern at the frequencies listed in Table 1 for groundwater monitoring. Leachate flow rate (measured in gallons/day) and the quantity of leachate removed from the Class II surface impoundment (measured in total gallons) for off-site disposal in accordance with an approved leachate management contingency plan shall be reported in monthly monitoring reports.

## SURFACE WATER MONITORING

The Discharger shall establish surface water monitoring stations on Dry Creek above and below the point where runoff from the WMUs enters the stream channel. The monitoring station shall be located as follows:

- R1 200 feet upstream from the point of discharge
- R2 200 feet downstream from the point of discharge

An additional surface water monitoring station (R3) shall be established at the point where surface water from on and around the WMUs leaves the facility boundary.

Surface water samples shall be obtained from R1, R2, and R3 during the first storm of the rainy season that produces significant flows. Surface water samples shall be analyzed for the constituents and at the frequency described in Table 3, and weekly thereafter during significant storm events (1 inch or greater in 24 hours).

<u>Parameters/Constituent</u>	<u>Units</u>	<u>Frequency</u>
Specific Conductance	µmhos/cm	Weekly
pH	pH Units	Weekly
Total Dissolved Solids	mg/L	Weekly
Turbidity	NTUs	Weekly
Suspended Matter	mg/L	Weekly

### COVER AND LINER MONITORING

The landfill cover and side slopes shall be inspected semiannually for erosion, cracks, fissures, and subsidence. Erosion gullies, cracks, and fissures, or areas of subsidence that have the potential to pond water shall be repaired, filled, and regraded as necessary no later than **15 October** of each year. Also by **15 October** of each year, any necessary erosion control measures shall be in-place to prevent further erosion of the facility during the upcoming winter season.

All visible portions of synthetic liners shall be inspected on a weekly basis and their condition reported monthly to the Regional Board.

A summary of the inspections and repairs shall be submitted to the Regional Board in the Annual Monitoring Summary Report.

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

THOMAS R. PINKOS, Executive Officer

By:

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James C. Pedri, Assistant Executive Officer

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(Date)

DPS: sae

