

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 96-142

WASTE DISCHARGE REQUIREMENTS
FOR
THE CLOSURE OF THE
SIERRA PACIFIC INDUSTRIES
AUBREY RIDGE CLASS III LANDFILL
SHASTA COUNTY

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

1. Sierra Pacific Industries (hereafter Discharger) owns the Aubrey Ridge Class III Landfill. The facility ceased accepting waste in October 1990 and completed final closure in 1993. The landfill is currently regulated by Order No. 88-061, adopted 22 April 1988, which is no longer in conformance with California Code of Regulations (CCR) Title 23, Division 3, Chapter 15 (hereafter Chapter 15) or the current status of the facility.
2. Reports submitted by the Discharger describing activities at the landfill include, but are not limited to the following: *Final Closure/Postclosure Plan*, dated October 1991; *Revised Report of Waste Discharge*, dated June 1992; and *Construction Quality Assurance (CQA) Report for the Construction of the Final Closure Cover and Leachate Control System at the Sierra Pacific Industries Aubrey Ridge Landfill, SWIS NO. 45-AA-023*, dated August 1993.
3. The 160-acre site, comprising Assessor's Parcel No. 030-02-11, is approximately 4 miles northwest of Burney in Section 10, T35N, R2E, MDB&M as shown on Attachment A, which is incorporated herein and made part of this Order. Waste disposal activities are limited to approximately 35 acres of the parcel.
4. The disposal site was established in 1976 by Publishers Forest Products Company and purchased by Sierra Pacific Industries in 1978. The facility contains seven waste management units (WMUs) as shown on Attachment B, which is incorporated herein and made a part of this Order. WMUs No. 1 through 5 were used for the disposal of wood waste from the Discharger's lumber mill. WMU No. 6 was used for the disposal of wood waste and wood ash, and WMU No. 7 was used for the disposal of ash from the Discharger's cogeneration plant. Disposal of waste to WMUs No. 1 through 5 ceased and the WMUs were closed in 1984 prior to the implementation of Chapter 15 and, therefore, were not required to meet the provisions of Chapter 15. The closure of WMUs No. 6 and 7 was pursuant to the requirements of Chapter 15.

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5. Final closure of the landfill was completed in the summer of 1993. Closure consisted of grading the top of WMUs No. 6 and 7 to drain, installation of toe drains along the base of the waste piles for collection of any free liquids, and construction of a 1-foot-thick clay cap with a maximum permeability of 1×10^{-6} cm/sec over the WMUs. The clay cap was covered with a 1-foot-thick protective vegetation layer.
6. Any leachate collected in the toe drainage system is stored in two concrete sumps for evaporation over the summer months.
7. The landfill is within the Modoc Plateau geomorphic province, which is characterized by aerially extensive accumulations of predominantly basaltic lava and volcanic cinders interbedded with alluvial and lacustrine deposits. Locally, the landfill is underlain by a relatively thin layer of soil of the Cohasset-Windy-McCarthy Association, which is in turn underlain by massive basalt flows, cinders, and sand.
8. Ground water occurs within fractures and interbeds of the basalt lavas. There appears to be two distinct waterbearing zones beneath the site, a shallow zone consisting of soil and weathered bedrock and a deeper zone consisting of massive basalt flows and cinder interflows. The shallow ground water flows along with the general topography to the southeast. Water in the shallow zone is approximately 30 feet beneath the site, although under wet weather conditions it may rise to within 10 feet of the surface.
9. There are seven ground water monitoring wells surrounding the facility as shown on Attachment B.
10. The landfill is surrounded by private timberland with the closest structure or facility approximately 2 miles to the south.
11. The site receives an average of 40 inches of precipitation per year. The average annual evaporation is 50 inches per year as calculated from data provided by the California Department of Water Resources, "Evaporation from Water Surfaces in California."
12. The 100-year, 24-hour precipitation event at the site is 6 inches as calculated by design storm precipitation data provided by the California Department of Water Resources, Rainfall Analysis for Drainage Design, Bulletin No. 195.
13. Surface water drainage is to Burney Creek, which is tributary to the Pit River. The site is not within the 100-year flood plane.

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14. The beneficial uses of surface water are municipal supply; recreation; esthetic enjoyment; hydroelectric power generation; ground water recharge; fresh water replenishment; and preservation and enhancement of fish, wildlife, and other aquatic resources.
15. The beneficial uses of underlying ground water are domestic, industrial, and agricultural supply.

CEQA CONSIDERATIONS

16. The action to revise waste discharge requirements for this facility is exempt from the provisions of the California Environmental Quality Act (CEQA), in accordance with Title 14, California Code of Regulations (CCR), Section 15301.

OTHER LEGAL REFERENCES

17. This Order implements (1) the Water Quality Control Plan, Third Edition, for the Sacramento River Basin and the San Joaquin River Basin (hereafter Basin Plan); and (2) the prescriptive standards and performance goals of Chapter 15.

PROCEDURAL REQUIREMENTS

18. 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 discharge of wastes to land stated herein.
19. The Board has notified the Discharger and interested agencies and persons of its intent to prescribe closure 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.
20. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Order No. 88-061 is rescinded and that Sierra Pacific Industries, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

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A. Discharge Prohibitions

1. The discharge of additional waste of any kind at this facility is prohibited.
2. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or ground water is prohibited.

B. Discharge Specifications

1. The waste shall not cause pollution or a nuisance as defined by the California Water Code, Section 13050.
2. The waste shall not cause degradation of any water supply.
3. Water used for facility maintenance shall be limited to the minimum amount for dust control, construction, or proper compaction of clay cap during any necessary repairs.
4. Leachate from the collection sumps shall be disposed in a method approved by the Executive Officer.

C. Facility Specifications

Protection from Storm Events

1. Annually, prior to the anticipated rainy season but no later than **15 October**, 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 facility and to prevent surface drainage from contacting or percolating through wastes.
2. Surface drainage from tributary areas and internal site drainage from surface or subsurface sources shall not contact or percolate through wastes.
3. Precipitation and drainage control systems for the final cover system shall be maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100-year, 24-hour precipitation conditions as described in Finding No. 11.
4. The closed landfill shall be maintained to prevent inundation or washout due to floods with a 100-year return period, and to prevent, to the greatest extent

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possible, ponding, infiltration, inundation, erosion, slope failure, and washout, under the 100-year wet season, as described in Finding No. 11.

5. Methane and other landfill gases shall be adequately vented, removed from the landfill units, or otherwise controlled to prevent the impairment of beneficial uses of ground water due to migration through the unsaturated zone.

D. Financial Assurance

1. The Discharger shall obtain and maintain assurances of financial responsibility for initiating and completing corrective action for all known and reasonably foreseeable releases from the waste management units. The Discharger shall also establish and maintain an irrevocable closure fund or other means to ensure post-closure maintenance of the landfill. Documentation of assurances or funds for corrective action and post-closure maintenance shall be submitted to the Board by **1 January** of each year.

E. Provisions

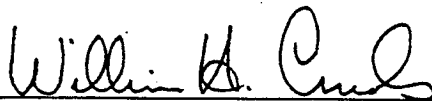
1. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order.
2. The Discharger shall comply with Monitoring and Reporting Program No. 96-142, which is attached hereto and made part of this Order.
3. The Discharger shall comply with all the items of the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated 1 September 1993, which are part of this Order. This attachment and its individual paragraphs are referred to as "Standard Provision(s)."
4. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.
5. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

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6. The owner of the waste management facility shall have the continuing responsibility to assure protection of usable waters from discharged wastes and from gases and leachate generated by discharged waste during the closure and post-closure maintenance period of the landfill and during subsequent use of the property for other purposes.
7. A copy of this Order shall be kept at the facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
8. The post-closure maintenance period shall continue until the Board determines that remaining wastes in the landfill will not threaten water quality.
9. The Discharger shall comply with all applicable provisions of Chapter 15 that are not specifically referred to in this Order.
10. The Board will review this Order periodically and will revise these requirements when necessary.

I, WILLIAM H. CROOKS, 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 3 May 1996.



WILLIAM H. CROOKS, Executive Officer

PVW:djc

AMENDED 5/3/96

Attachments

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 96-142

FOR
THE CLOSURE OF THE
SIERRA PACIFIC INDUSTRIES
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The Discharger shall maintain water quality monitoring systems that are appropriate for detection monitoring and that comply with the revisions of Title 23, California Code of Regulations (CCR), Division 3, Chapter 15, Article 5.

Compliance with this Monitoring and Reporting Program, and with the companion Standard Provisions and Reporting Requirements, is ordered by Waste Discharge Requirements Order No. 96-142. Failure to comply with this Program, or with the Standard Provisions and Reporting Requirements, constitutes noncompliance with the waste discharge requirements and with the Water Code, which can 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 which do not comply with the required format will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the waste discharge requirements.

In reporting the monitoring data required by this program, 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 illustrate clearly the compliance with waste discharge requirements or the lack thereof. Historical and current monitoring data shall be graphed at least once annually. Graphs for the same constituent shall be plotted at the same scale to facilitate visual comparison of monitoring data. A short discussion of the monitoring results, including notations of any water quality violations, shall precede the graphical and tabular summaries.

Semi-annual, and annual monitoring reports shall be submitted to the Board by the **15th day of the month** following the calendar quarter in which the samples were taken.

The results of any monitoring done more frequently than required at the locations specified herein shall be reported to the Board.

An annual report shall be submitted to the Board which contains both tabular and graphical summaries of the monitoring data obtained during the previous year. The report shall

include a discussion of any violations of waste discharge requirements, exceedences of water quality protection standards, and any actions taken to bring the site into compliance with waste discharge requirements.

WATER QUALITY PROTECTION STANDARD

The Discharger shall submit by **15 June 1996** a report establishing Water Quality Protection Standards for the site. The Water Quality Protection Standard, as defined in Section 2550.2 of Chapter 15, shall consist of constituents of concern, their concentration limits, the point of compliance, and all water quality monitoring points.

Constituents of concern are constituents that are reasonably expected to be in or derived from waste contained in the landfill. Concentration limits in each medium shall consist of background concentrations of each constituent of concern or concentrations greater than background pursuant to Section 2550.4 of Chapter 15. For each monitoring period, the Discharger shall determine whether there is statistically significant evidence of a release from the landfill and whether the landfill is in compliance with the Water Quality Protection Standard using procedures specified in Section 2550.7 of Chapter 15.

If the Discharger, through a detection monitoring program, or the Board finds that there is statistically significant evidence for 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 Board or acknowledge the Board's finding in writing within 7 days, and shall implement verification procedures within 30 days, pursuant to Section 2550.7(e)(8)(E) of Chapter 15. Within 90 days, the Discharger shall submit to the Board the results of the resampling and either:

- a. A report that demonstrates pursuant to Section 2550.8(k)(7) of Chapter 15 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 ground water, surface water, or the unsaturated zone; or
- b. An amended Report of Waste Discharge for the establishment of an evaluation monitoring program, pursuant to Section 2550.9 of Chapter 15, to assess the nature and extent of the release from the landfill and to design a corrective action program meeting the requirements of Section 2550.10 of Chapter 15. Within **180** days of determining statistically significant evidence of a release, the Discharger shall submit an engineering feasibility study pursuant to Section 2550.8(k)(6) for a corrective action program necessary to meet the requirements of Section 2550.10 of Chapter 15.

If subsequent sampling of "background" monitoring wells indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management.

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activities at the site, the Discharger may request modification of the water quality protection standard.

Ground Water Monitoring

The following 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 OB-1S, OB-1D, and MW-7 and downgradient monitoring wells OB-2S, OB-2D, OB-3S, and OB-4S. Wells OB-2S, OB-2D, OB-3S, and OB-4S shall constitute the "points of compliance" with respect to ground water around the landfill. The locations of the wells and sampling locations are shown on Attachment B, which is incorporated herein and made a part of this Order. Samples from all monitoring wells shall be analyzed and collected at the frequencies indicated in Table I.

Table I Ground Water Monitoring Parameters/Frequency		
<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Field Parameters		
Temperature	°C and °F	Semi-annually
Ground Water Elevation	Feet and Hundredths, M.S.L.	Semi-annually
Specific Conductance	µmhos/cm	Semi-annually
pH	pH units	Semi-annually
Turbidity	Turbidity units	Semi-annually
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L	Semi-annually
Chlorides	mg/L	Semi-annually
Constituents of Concern		
Chemical Oxygen Demand	mg/L	5-years
Tannins & Lignins	mg/L	5-years
Nitrate nitrogen	mg/L	5-years
Sulfates	mg/L	5-years
Calcium	mg/L	5-years
Magnesium	mg/L	5-years
Potassium	mg/L	5-years
Sodium	mg/L	5-years
Total Alkalinity	mg/L	5-years
Metals ¹ (EPA Method 6010 and 7000 series)	µg/L	5-years
Report all peaks discovered by the EPA test methods. Metals shall be analyzed and reported as dissolved. Selenium, arsenic, and mercury analyses shall be done by atomic absorption (AA).		
¹ Metals to include arsenic, barium, cadmium, chromium VI, iron, lead, manganese, mercury, nickel, selenium, and silver.		

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Field and laboratory tests shall be reported in the semi-annual monitoring reports. All parameters shall be graphed so as to show historical trends at each well.

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

LANDFILL COVER MONITORING

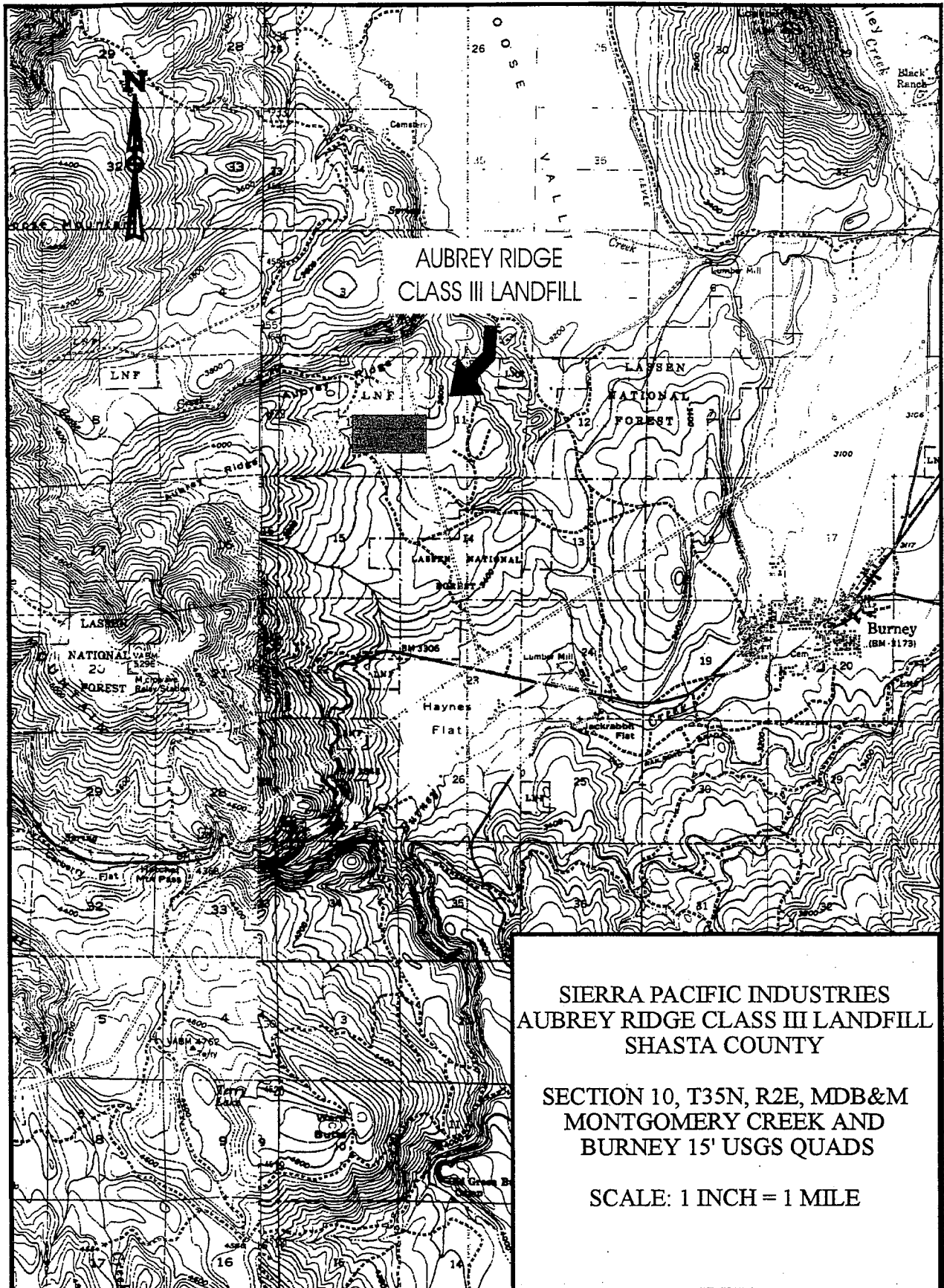
The landfill cover and side slopes shall be inspected in February and August for erosion, cracks, fissures, and subsidence. Erosion gullies, cracks, and fissures, or areas of subsidence which have the potential to pond water, shall be repaired, filled, and regraded as necessary no later than **1 October** of each year. Also by **1 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. A report summarizing the inspections and repairs shall be submitted to the Regional Board by **1 November** of each year.

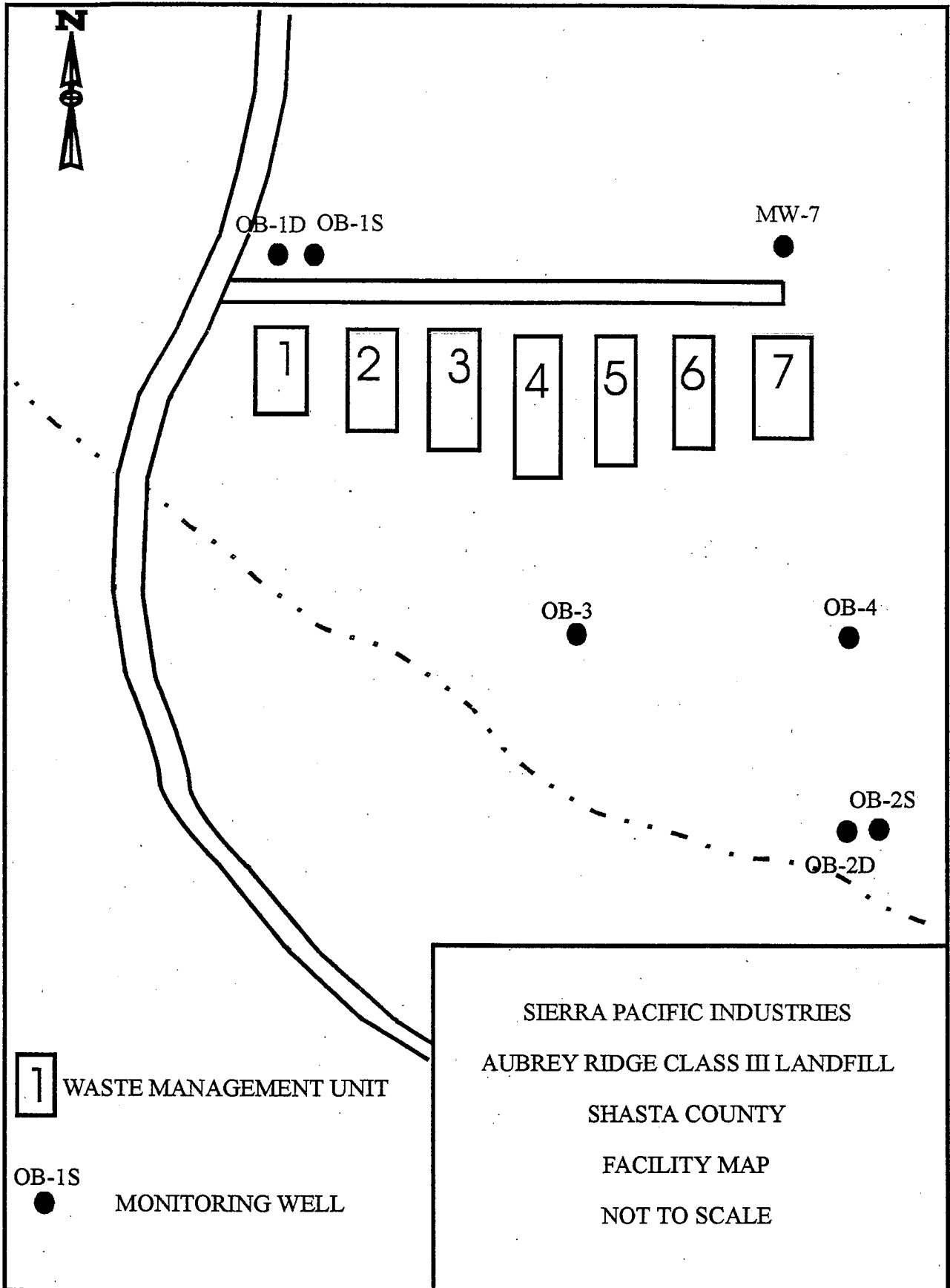
The Discharger shall implement the above monitoring program on the effective date of this Order.

Ordered by: William H. Crooks
WILLIAM H. CROOKS, Executive Officer

3 May 1996
(Date)

PVW:djc 5/3/96





1 WASTE MANAGEMENT UNIT

OB-1S
● MONITORING WELL

SIERRA PACIFIC INDUSTRIES
AUBREY RIDGE CLASS III LANDFILL
SHASTA COUNTY
FACILITY MAP
NOT TO SCALE

INFORMATION SHEET

FOR THE CLOSURE OF THE
SIERRA PACIFIC INDUSTRIES
AUBREY RIDGE CLASS III LANDFILL
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Sierra Pacific Industries owns and operated a solid waste disposal site for disposal of wood waste and wood ash from their lumber mill in Burney. Final closure of the landfill was completed in 1993 and the site no longer accepts waste.

The 160-acre site, comprising Assessor's Parcel No. 057-220-02, is approximately 4 miles northwest of Burney in Section 10, T35N, R2E, MDB&M. Approximately 35 acres are used for waste disposal.

The disposal site was established in 1976 by Publishers Forest Products Company and purchased by Sierra Pacific Industries in 1978. Waste was deposited into open pits and covered with soil. WMUs 1 through 5 were used for the disposal of wood waste only. Disposal to these WMUs was discontinued and they were closed in 1984, prior to the implementation of Chapter 15. WMU No. 6 was used for the disposal of wood waste and wood ash and WMU No. 7 was used only for the disposal of wood ash. WMUs No. 6 and 7 were closed pursuant to the requirements of Chapter 15.

Final closure consisted of grading the tops of WMUs No. 6 and 7 to drain and construction of a 1-foot-thick clay cap with a maximum permeability of 1×10^{-6} cm/sec. The clay cap was covered with a 1-foot-thick protective vegetation layer.

Ground water occurs approximately 30 feet beneath the landfill in fractures and interbeds in the underlying basalt. The quality is generally excellent. Ground water flows to the southeast.

The site receives an average of 40 inches of precipitation per year. The average annual evaporation is approximately 60 inches per year.

Surface water drainage is to Burney Creek which is tributary to the Pit River. The site is not within the 100-year flood plane.

PVW:djc 5/3/96