

Case

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 96-222

WASTE DISCHARGE REQUIREMENTS
FOR
INTERMOUNTAIN LANDFILL, INC.
FOR THE CLOSURE OF THE
INTERMOUNTAIN CLASS III LANDFILL
SHASTA COUNTY

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

1. Intermountain Landfill, Inc. (hereafter Discharger) owns and operates the Intermountain Class III Landfill. The landfill was operated from 1985 through June 1993. The facility was regulated by Order No. 90-229, adopted 10 August 1990, in conformance with Title 23, California Code of Regulations (CCR), Division 3, Chapter 15 (hereafter Chapter 15). Order No. 90-229 was amended 17 September 1993 by Order No. 93-200, implementing State Water Resources Control Board Resolution No. 93-62 and federal municipal solid waste regulations (Subtitle D). These waste discharge requirements reflect the changes at the landfill during the closure and post-closure maintenance periods.
2. Reports submitted by the Discharger describing activities at the landfill include, but are not limited to the following: *Report of Waste Discharge*, dated 20 May 1996, *Preliminary Closure and Post-Closure Maintenance Plans*, dated June 1990 and revised December 1990; *Financial Assurance Provisions and Article 5 Monitoring Program*, dated June 1992; and *Final Closure Documents*, including: Closure Implementation, Drainage Evaluation, and Construction Quality Assurance Plan, dated June 1995 and Slope Stability Report, dated October 1994.
3. The landfill is approximately 5 miles northeast of Burney in Shasta County in the northwest quarter of Section 36, T36N, R3W, MDB&M, as shown on Attachment A, which is incorporated herein and made part of this Order. The facility consists of a 40-acre permitted disposal site within Assessor's Parcel No. 023-320-26; however, only 10 acres have been utilized for waste disposal.
4. The landfill facility consists of six waste management units (WMUs), as described in Table 1. The WMUs are shown on Attachment B, which is incorporated herein and made part of this Order. Approximately 109,000 tons of waste were discharged at the landfill during the 9 years of operation.

WASTE DISCHARGE REQUIREMENTS
 INTERMOUNTAIN CLASS III LANDFILL
 SHASTA COUNTY

Table 1 Waste Management Units		
Unit	Classification/ Waste Type	Description
WMU-1	Class III landfill for municipal solid waste, wood waste and ash	WMU-1 consists of a 4-acre, clay-lined landfill with a leachate collection and recovery system (LCRS). The unit has been closed with a clay cap. The LCRS consists of a clay liner, gravel interceptor, underdrains, and a mainline pipe.
WMU-2	Unclassified landfill for tires (inert material)	WMU-2 consists of a 1/2-acre, unlined landfill without an LCRS. The unit has been closed by covering the waste tires with native material and grading to promote surface runoff.
WMU-3	Class III landfill for wood ash	WMU-3 was an unlined landfill with no LCRS. The unit was clean-closed in 1995 by transferring all of the wood ash to WMU-6.
WMU-4	Unclassified surface impoundment	WMU-4 is a 1/4-acre, clay-lined pond. The pond was constructed to contain leachate and contact water; however, it is currently used as secondary containment for the leachate collection tank.
WMU-5	Unclassified surface impoundment	WMU-5 is a 1/3-acre, clay-lined pond. The pond was constructed to contain leachate and contact water; however, it is currently unused.
WMU-6	Class III landfill for wood waste and ash	WMU-6 consists of a 3-acre, unlined landfill with no LCRS. WMU-6 was previously part of WMU-1, but has been designated a separate WMU for closure since it does not contain municipal solid waste. WMU-6 is separated from WMU-1 by a clay berm.

- Leachate from the WMU-1 LCRS flows by gravity to a 3,000-gallon steel storage tank. The aboveground leachate tank is within WMU-4, a clay-lined, unclassified surface impoundment for secondary containment. Some leachate evaporates from the open-end storage tank, while the remaining leachate has historically been hauled to the Burney wastewater treatment plant for treatment and disposal.

WASTES AND THEIR CLASSIFICATION

6. The Discharger has discharged municipal solid waste, wood waste, and ash to WMU-1; tires to WMU-2; and wood waste and ash to WMU-6. These wastes are classified as 'nonhazardous solid waste' or 'inert waste' using the criteria set forth in Chapter 15.

SITE DESCRIPTION

7. Land within 1,000 feet of the landfill is zoned and used for agriculture, timber production, and light industry. The Packway Materials, Inc. ready-mix batch plant, light industrial complex, and aggregate mining and processing operations are within 1,000 feet of the landfill.
8. The site receives an average of 23 inches of precipitation per year. The average annual evaporation is estimated at 37 inches per year. Based on these data, the net annual evaporation is approximately 14 inches.
9. The 100-year, 24-hour precipitation event for the site is 4.0 inches, as interpolated from isopluvial maps published by the U.S. Department of Commerce, NOAA, December 1972.
10. The site generally slopes to the north toward an intermittent drainage which is tributary to the Pit River. However, surface runoff from the site is minimal due to soils with high infiltration rates. The Pit River is approximately 3.5 miles north of the facility.
11. The facility is not within a 100-year floodplain.
12. The beneficial uses of the Pit River are domestic; agricultural supply; recreation; aesthetic enjoyment; power generation; and the preservation and enhancement of fish, wildlife, and other aquatic resources.
13. The nearest potentially active fault is the Hat Creek Rim Fault approximately 6 miles east of the site. The last known movement of this fault appears to be within the last 15,000 years. The maximum credible earthquake on the Hat Creek Rim Fault is estimated to be a Richter magnitude of 6.0.
14. The facility is in the western part of the Modoc Plateau geologic province. The landfill is underlain by 20 to 50 feet of alluvial deposits (sandy silt and silty clays),

WASTE DISCHARGE REQUIREMENTS
INTERMOUNTAIN CLASS III LANDFILL
SHASTA COUNTY

-4-

that are underlain by approximately 20 feet of diatomaceous earth. These deposits are underlain by moderately fractured basalt bedrock.

15. During wet periods, discontinuous perched ground water occurs in the shallow alluvial deposits, approximately 7 to 35 feet beneath the site. It is estimated that shallow ground water generally flows from south to north. Deeper ground water is approximately 400 feet beneath the site and occurs in volcanic rocks.
16. There are ten ground water monitoring wells and four vacuum lysimeters at the facility. Although several of the wells contain water during the wet months, most of the wells remain dry year-round. Several wells, which are typically dry, are proposed to be abandoned. In addition, two lysimeters will be abandoned. A surface water monitoring system has not been established since there is no reliable surface drainage course.
17. The nearest downgradient domestic water supply well is approximately 4,000 feet to the northeast.
18. The beneficial uses of underlying ground water are domestic, municipal, industrial, and agricultural supply.

CLOSURE CONSTRUCTION

19. Closure of the facility was started during the summer of 1995. WMU-1 was closed by constructing 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. WMU-2 has been closed by covering the tires with clean native material and grading to promote surface runoff and prevent ponding. No additional closure measures are required for WMU-2 at this time. WMU-3 was clean-closed during 1995. WMU-6 will be closed by the fall of 1996. The top-deck of WMU-6 will have a 1-foot-thick clay cap with a permeability of 1×10^{-6} cm/sec. The sideslopes of WMU-6 are covered with a minimum of 2 feet of native material. No closure activities have been initiated for WMUs-4 and -5.
20. Routine quarterly gas monitoring of the landfill perimeter has shown no significant quantities of methane. The Discharger has been exempted from installing a permanent gas monitoring system, due to the remoteness of the facility and its small size. The landfill does not have a gas extraction monitoring system.

CEQA CONSIDERATIONS

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

OTHER LEGAL REFERENCES

22. On 9 October 1991, the United States Environmental Protection Agency promulgated regulations (Title 40, Code of Federal Regulations, Parts 257 and 258, "federal municipal solid waste regulations" or "Subtitle D") that apply, in California, to dischargers who own and operate Class II or Class III landfill units at which municipal solid waste is discharged. The majority of the federal municipal solid waste regulations became effective on the "Federal Deadline", which was 9 October 1993. Since the Discharger ceased acceptance of wastes at Intermountain Landfill prior to the Federal Deadline, only the closure requirements of Subtitle D are applicable to this site.
23. This Order implements:
 - a. the Water Quality Control Plan, Third Edition, for the Sacramento River Basin and the San Joaquin River Basin (hereafter Basin Plan);
 - b. the prescriptive standards and performance goals of Chapter 15, effective 27 November 1984, and subsequent revisions;
 - c. the prescriptive standards and performance criteria of Part 258, Title 40 of the Code of Federal Regulations (Subtitle D); and
 - d. State Water Resources Control Board Resolution No. 93-62, Policy for Regulation of Discharges of Municipal Solid Waste, adopted 17 June 1993.

PROCEDURAL REQUIREMENTS

24. 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.

WASTE DISCHARGE REQUIREMENTS
INTERMOUNTAIN CLASS III LANDFILL
SHASTA COUNTY

-6-

25. 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.
26. In a public meeting, the Board heard and considered all comments pertaining to the facility and discharge.

IT IS HEREBY ORDERED that Order No. 90-229 is rescinded, and Attachment I of Order No. 93-200 is amended to delete Item 41, Intermountain Landfill, Inc., and it is FURTHER ORDERED that Intermountain Landfill, Inc., 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:

A. Discharge Prohibitions

1. The discharge of any waste 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

General 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. Methane and other landfill gases shall be adequately vented, removed from the landfill units, or otherwise controlled to prevent the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water due to migration through the vadose (unsaturated) zone.

WASTE DISCHARGE REQUIREMENTS
INTERMOUNTAIN CLASS III LANDFILL
SHASTA COUNTY

-7-

5. Landfill leachate shall be discharged to the leachate tank in compliance with this Order and disposed of at a location approved by the Regional Board Executive Officer.
6. LCRSs shall be maintained to collect twice the anticipated daily volume of leachate generated by the landfill and to prevent the buildup of hydraulic head.

Protection from Storm Events

7. Precipitation and drainage control systems shall be designed, constructed, and maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100-year, 24-hour precipitation conditions.
8. Waste management units shall be designed, constructed, and maintained to prevent inundation or washout due to floods with a 100-year return period, and to prevent, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure and washout, and overtopping under the 100-year, 24-hour precipitation conditions.
9. 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.

Closure Specifications

10. Landfill closure shall be under the direct supervision of a California registered civil engineer or certified engineering geologist. Construction shall be in accordance with a Closure Plan and Closure Construction Quality Assurance Plan, as approved or modified by Board staff.
11. At closure, each landfill unit shall receive a final cover which is designed and constructed to function with minimum maintenance. All of WMU-1 and the top-deck of WMU-6 shall consist, at a minimum, of a 2-foot-thick foundation layer which may contain waste materials, overlain by a 1-foot-thick clay liner compacted to attain a hydraulic conductivity of 1×10^{-6} cm/sec, and finally by a 1-foot-thick vegetative soil layer. The sideslopes of WMU-6 (the wood waste and ash unit) shall consist of a minimum of 2 feet of native material.

WASTE DISCHARGE REQUIREMENTS
INTERMOUNTAIN CLASS III LANDFILL
SHASTA COUNTY

-8-

12. Materials used to construct and maintain the cover system shall have appropriate physical and chemical properties to ensure containment of discharged wastes during the closure and post-closure maintenance period.
13. Closed WMUs-1, -2, and -6 shall be graded to at least a three percent grade and maintained to prevent ponding. Areas with slopes greater than ten percent, surface drainage courses, and areas subject to erosion by wind or water shall be designed and constructed to prevent erosion.
14. The closed landfill facility shall be provided with at least two permanent monuments, installed by a licensed land surveyor, from which the location and elevation of all wastes, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period.
15. Vegetation shall be planted and maintained over the closed WMUs-1 and -6. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall have a rooting depth not in excess of the vegetative layer thickness.
16. At closure of the surface impoundments (WMUs-4 and -5), all residual wastes, including liquids, sludges, precipitates, settled solids, liner materials, and adjacent natural geologic materials contaminated by wastes, shall be completely removed and discharged to a disposal facility approved by the Executive Officer. Remaining containment features shall be inspected for contamination and, if not contaminated, may be dismantled.

C. Receiving Water Limitations

Water Quality Protection Standard

1. The Water Quality Protection Standard is specified in Monitoring and Reporting Program No. 96-222, which is part of this order. The concentrations of field parameters, monitoring parameters, and Constituents of Concern in waters passing through the Points of Compliance shall not exceed the Concentration Limits established pursuant to Monitoring and Reporting Program No. 96-222.

D. Financial Assurance

1. The Discharger shall 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

WASTE DISCHARGE REQUIREMENTS
INTERMOUNTAIN CLASS III LANDFILL
SHASTA COUNTY

-9-

also maintain an irrevocable closure fund or other means to ensure post-closure maintenance of the waste management units. Documentation of assurances or funds for corrective action and post-closure maintenance shall be submitted to the Board by **1 January** of every fifth year, beginning with **1 January 1997**.

E. Provisions

1. The Discharger shall comply with all the items of the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated September 1993, which are part of this Order. This attachment and its individual paragraphs are referred to as "Standard Provision(s)." The Standard Provisions contain important provisions and requirements with which the Discharger must comply. A violation of any of the Standard Provisions is a violation of these waste discharge requirements.
2. The Discharger shall comply with Monitoring and Reporting Program No. 96-222. Any violation of the Monitoring and Reporting Program No. 96-222 is a violation of these waste discharge requirements.
3. The Discharger shall comply with all applicable provisions of Chapter 15 and 40 CFR Part 258 that are not specifically referred to in this Order.
4. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order.
5. 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 facility and during subsequent use of the property for other purposes.
6. The Discharger shall submit a proposal and schedule to properly abandon ground water monitoring wells at the facility by **30 September 1996**.
7. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources with regard to the construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with Monitoring and Reporting Program No. 96-222, as required by Sections 13750 through 13755

WASTE DISCHARGE REQUIREMENTS
INTERMOUNTAIN CLASS III LANDFILL
SHASTA COUNTY

-10-

of the California Water Code. A record of the abandonment of such wells shall be sent to the Board.

8. The Discharger shall notify the Board within 24 hours of any flooding, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or of precipitation and drainage control structures.
9. The Discharger shall maintain waste containment facilities and precipitation and drainage controls, and shall continue to monitor ground water, the unsaturated zone, and leachate from the landfill units per Monitoring and Reporting Program No. 96-222 throughout the closure and post-closure maintenance period.
10. The Discharger shall notify the Board in writing of any proposed change in ownership or responsibility for the facility. This notification shall be given 90 days prior to the effective date of the change. The Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall immediately be sent to the Board.
11. The Discharger shall submit a landfill closure certification report, signed by a registered professional engineer, to the Board **within 60 days following construction of the final cover system**, which contains sufficient information to verify that construction of the foundation layer, barrier layer, and vegetative layer meet all applicable requirements contained in Chapter 15 and specifications of the approved Closure Plan. The Discharger shall also include with the report, a Final Construction Quality Assurance Report and As-Built.
12. The Discharger shall provide proof to the Board **within 60 days after completing final closure** that the deed to the landfill facility property, or some other instrument that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that: (a) the parcel has been used as a municipal solid waste landfill; (b) land use options for the parcel are restricted in accordance with the post-closure land uses set forth in the post-closure plan and in WDRs for the landfill; and (c) in the event that the Discharger defaults on carrying out either the post-closure maintenance plan or any corrective action needed to address a release, then the responsibility for carrying out such work falls to the property owner.

WASTE DISCHARGE REQUIREMENTS
INTERMOUNTAIN CLASS III LANDFILL
SHASTA COUNTY

-11-

13. The Discharger shall notify the Board of any notable change in the landfill closure plans. This notification shall be given 90 days prior to the effective date of the change and shall be accompanied by any technical documents that are needed to demonstrate continued compliance with the waste discharge requirements.
14. The Discharger shall submit to the Board, for approval, a final post-closure maintenance plan by **31 October 1996**. The post-closure maintenance plan shall describe the methods and controls to be used to assure protection of the quality of surface and ground waters of the area. The plan shall be prepared by or under the supervision of a California registered civil engineer or certified engineering geologist.
15. The post-closure maintenance period shall continue until the Board determines that remaining wastes in the landfill will not threaten water quality.
16. 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 9 August 1996.



WILLIAM H. CROOKS, Executive Officer

CNC:djc

Attachments

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 96-222

FOR
INTERMOUNTAIN LANDFILL, INC.
FOR THE CLOSURE OF THE
INTERMOUNTAIN CLASS III LANDFILL
SHASTA COUNTY

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. 96-222. 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, and 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, 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. 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 which cannot be quantified and/or specifically identified.

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.

MONITORING REPORTS

Water Quality Protection Standard Report

The Discharger submitted a water quality protection standard in *Financial Assurance Provisions and Article 5 Monitoring Program*, dated June 1992. Any changes to the water quality protection standard shall be described in the annual monitoring report.

Detection Monitoring Report

The Discharger shall submit semi-annual reports of the results of detection monitoring in accordance with the schedules specified in this Monitoring and Reporting Program.

Annual Monitoring Summary Report

The Discharger shall submit the Annual Monitoring Summary Report by **15 January of each year**, as specified in the Standard Provisions and Reporting Requirements. The annual report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. Graphs for the same constituent shall be plotted at the same scale to facilitate visual comparison of monitoring data.

MONITORING

If the Discharger, through a detection monitoring program, or the Board finds that there is statistically significant increase in indicator parameters or waste constituents over the water quality protection standards (established pursuant to Monitoring and Reporting Program No. 96-222) at or beyond the Points of Compliance indicating a release, the Discharger shall notify the Board or acknowledge the Board's finding in writing within seven days, and shall immediately resample for the constituent(s) or parameter(s) at the point where the standard was exceeded. Within 90 days, the Discharger shall submit to the Board the results of the resampling and either:

- a. a report demonstrating that the water quality protection standard was not, in fact, exceeded; 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 corrective action program necessary to meet the requirements of Section 2550.10 of Chapter 15.

If the Discharger, through an evaluation monitoring program, or the Board verifies that water quality protection standards have been exceeded at or beyond the Points of Compliance, the Discharger shall notify the Board or acknowledge the Board's finding in writing within seven days. Within 180 days, the Discharger shall submit to the Board an amended Report of Waste Discharge for the establishment of a corrective action program, per Section 2550.10 of Chapter 15, which is designed to achieve compliance with the water quality protection standards.

MONITORING PROGRAMS

Detection Monitoring

For each monitored medium, all Monitoring Points assigned to detection monitoring shall be monitored semi-annually or annually for the Monitoring Parameters listed in this Program, unless otherwise specified.

For any given monitored medium, a sufficient number of samples shall be taken from all Monitoring Points to satisfy the data analysis requirements for a given Reporting Period, and shall be taken in a manner that ensures sample independence to the greatest extent feasible.

Ground water sampling shall also include an accurate determination of the ground water surface elevation and field parameters (pH, temperature, specific conductance, turbidity) for that Monitoring Point. Ground water elevations taken prior to purging the well and sampling for Monitoring Parameters shall be used to fulfill the ground water gradient/direction analyses required. For each monitored ground water body, the discharger shall measure the water level in each well and determine ground water gradient and direction at least semi-annually, including the times of expected highest and lowest elevations of the water level for the respective ground water body. Ground water elevations for all downgradient wells for a given ground water body shall be measured within a period of time short enough to avoid temporal variations in ground water flow which could preclude accurate determination of ground water gradient and direction. This information shall be included in the annual monitoring reports.

Statistical or nonstatistical analysis shall be performed as soon as the monitoring data are available.

MONITORING AND REPORTING PROGRAM
 INTERMOUNTAIN CLASS III LANDFILL
 SHASTA COUNTY

Leachate Monitoring

Leachate samples for detection monitoring shall be collected semi-annually, in the first and third quarters of each year for the parameters in Table 1. Field and laboratory results shall be reported in semi-annual monitoring reports.

The total quantity of leachate that discharges into the tank shall be determined at least once per month and reported semi-annually. In addition, the Discharger shall report semi-annually the quantity of leachate hauled for treatment and any overflows from the leachate tank.

Table 1 Leachate Monitoring Parameters/Reporting Frequency		
Parameter	Units	Frequency ¹
Field Parameters		
Quantity Discharged to Tank	gallons/month	Monthly ²
Quantity Hauled for Disposal	gallons	Semi-annually
Specific Conductance	µmhos/cm	Semi-annually
pH	pH units	Semi-annually
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L	Semi-annually
Chloride	mg/L	Semi-annually
Sulfate	mg/L	Semi-annually
Nitrate-nitrogen	mg/L	Semi-annually
Constituents of Concern		
Dissolved Organic Carbon	mg/L	Semi-annually
Carbonate	mg/L	Semi-annually
Bicarbonate	mg/L	Semi-annually
Total Alkalinity	mg/L	Semi-annually
Manganese	mg/L	Semi-annually
Volatile Organic Compounds (EPA Method 8260)	µg/L	Annually

¹ Semi-annual samples shall be collected during the first and third quarters of each year and annual samples shall be collected during the first quarter of each year.
² Measure discharge to tank on a monthly basis and report semi-annually.

Unsaturated Zone Monitoring

Samples for detection monitoring of the unsaturated zone shall be collected semi-annually and annually, as indicated in Table 2. Field and laboratory results shall be reported in semi-annual monitoring reports.

MONITORING AND REPORTING PROGRAM
 INTERMOUNTAIN CLASS III LANDFILL
 SHASTA COUNTY

The unsaturated zone monitoring system shall consist of suction lysimeters L-1 (along the northeast edge of WMU-6) and L-3 (along the west edge of WMU-1), as shown on Attachment B. Lysimeters L-1 and L-3 shall constitute the "points of compliance" with respect to the unsaturated zone.

Table 2 Unsaturated Zone Monitoring Parameters/Frequency		
Parameter	Units	Frequency ¹
Field Parameters Specific Conductance pH	μ mhos/cm pH units	Semi-annually Semi-annually
Monitoring Parameters Total Dissolved Solids (TDS) Chloride Sulfate Nitrate-nitrogen	mg/L mg/L mg/L mg/L	Semi-annually Semi-annually Semi-annually Semi-annually
Constituents of Concern Dissolved Organic Carbon Carbonate Bicarbonate Total Alkalinity Manganese Volatile Organic Compounds (EPA Method 8260)	mg/L mg/L mg/L mg/L mg/L mg/L μ g/L	Annually Annually Annually Annually Annually Annually Annually
¹ Semi-annual samples shall be collected during the first and third quarters of each year and annual samples shall be collected during the first quarter of each year. If moisture is not present in the lysimeters during the scheduled sampling event, the lysimeters shall be checked monthly and samples shall be collected at the first detection of liquid.		

Ground Water Monitoring

Ground water samples for detection monitoring shall be collected semi-annually and annually, as indicated in Table 3. Field and laboratory results shall be reported in semi-annual monitoring reports.

The shallow ground water monitoring network shall consist of background monitoring well B-4, and downgradient monitoring wells B-1, B-6, and B-9, as shown on Attachment B. Wells B-1, B-6, and B-9 shall constitute the "points of compliance" with respect to ground water.

MONITORING AND REPORTING PROGRAM
 INTERMOUNTAIN CLASS III LANDFILL
 SHASTA COUNTY

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 gradient 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 annual monitoring report.

Table 3 Ground Water Monitoring Parameters/Frequency		
Parameter	Units	Frequency ¹
Field Parameters		
Temperature	°C or °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
Chloride	mg/L	Semi-annually
Sulfate	mg/L	Semi-annually
Nitrate-nitrogen	mg/L	Semi-annually
Constituents of Concern		
Dissolved Organic Carbon	mg/L	Annually
Carbonate	mg/L	Annually
Bicarbonate	mg/L	Annually
Total Alkalinity	mg/L	Annually
Manganese	mg/L	Annually
Volatile Organic Compounds (EPA Method 8260)	µg/L	Annually
¹ Semi-annual samples shall be collected during the first and third quarters of each year and annual samples shall be collected during the first quarter of each year. If water is not present in the upgradient well and at least two downgradient wells during the scheduled sampling event, the wells shall be checked monthly and samples shall be collected at the first detection of liquid in those wells.		

LCRS Monitoring

The LCRS shall be tested annually to demonstrate operation in conformance with waste discharge requirements. The results of these tests shall be reported to the Board and shall include comparison with earlier tests made under comparable conditions:

WATER QUALITY PROTECTION STANDARD

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 listed in Tables 1, 2, and 3.

Concentration Limits

The Concentration Limits for synthetic constituents (VOCs) shall be set at the analytical detection limits. The Discharger proposed Concentration Limits for general water quality parameters and metals using the tolerance interval method and using historical data (EMCON, 1992). Table 4 lists these proposed Concentration Limits for the unsaturated zone (LY-1 and LY-3) and for the shallow ground water (B-1, B-4, B-6, and B-9). Undetermined Concentration Limits shall be calculated by the Discharger when sufficient data are available.

Concentration Limits for field and monitoring parameters and Constituents of Concern shall be updated by the Discharger on an annual basis.

Table 4 Concentration Limits							
Parameter	Units	L-1	L-3	B-1	B-4	B-6	B-9
Specific Conductance	µmhos/cm	2,048	681	TBD	314	TBD	TBD
pH	pH units	5.6-9.2	5.1-8.3	TBD	5.2-7.7	TBD	TBD
Total Dissolved Solids	mg/L	2,443	344	TBD	1498	TBD	TBD
Chloride	mg/L	18	4.3	TBD	4.4	TBD	TBD
Sulfate	mg/L	TBD	TBD	TBD	TBD	TBD	TBD
Nitrate-nitrogen	mg/L	TBD	TBD	TBD	TBD	TBD	TBD
Dissolved Organic Carbon	mg/L	TBD	TBD	TBD	TBD	TBD	TBD
Carbonate	mg/L	TBD	TBD	TBD	TBD	TBD	TBD
Bicarbonate	mg/L	TBD	TBD	TBD	TBD	TBD	TBD
Total Alkalinity	mg/L	TBD	TBD	TBD	TBD	TBD	TBD
Manganese	mg/L	TBD	TBD	TBD	TBD	TBD	TBD
Volatile Organic Comp.	µg/L	MDL	MDL	MDL	MDL	MDL	MDL
TBD = To be determined		MDL = Method Detection Limit					

MONITORING AND REPORTING PROGRAM
INTERMOUNTAIN CLASS III LANDFILL
SHASTA COUNTY

-8-

Monitoring Points

The Monitoring Points for the detection monitoring of the vadose zone are L-1 and L-3. The Monitoring Points for the detection monitoring of the ground water are B-1, B-4, B-6, and B-9.

Points of Compliance

The Points of Compliance for vadose zone are L-1 and L-3. The Points of Compliance for ground water are B-1, B-6, and B-9.

Compliance Period

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

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

Ordered by:

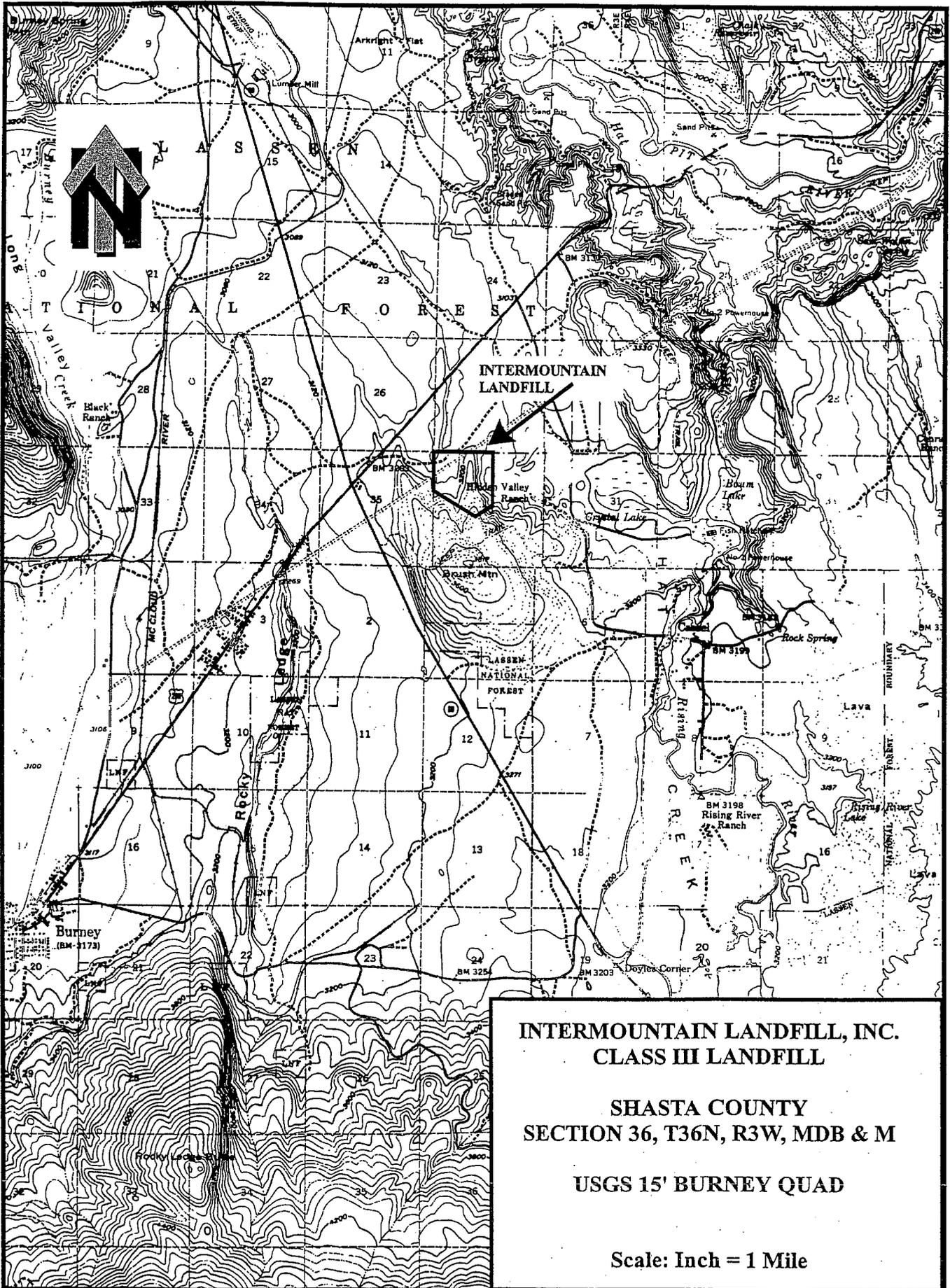


WILLIAM H. CROOKS, Executive Officer

9 August 1996

(Date)

CNC:djc

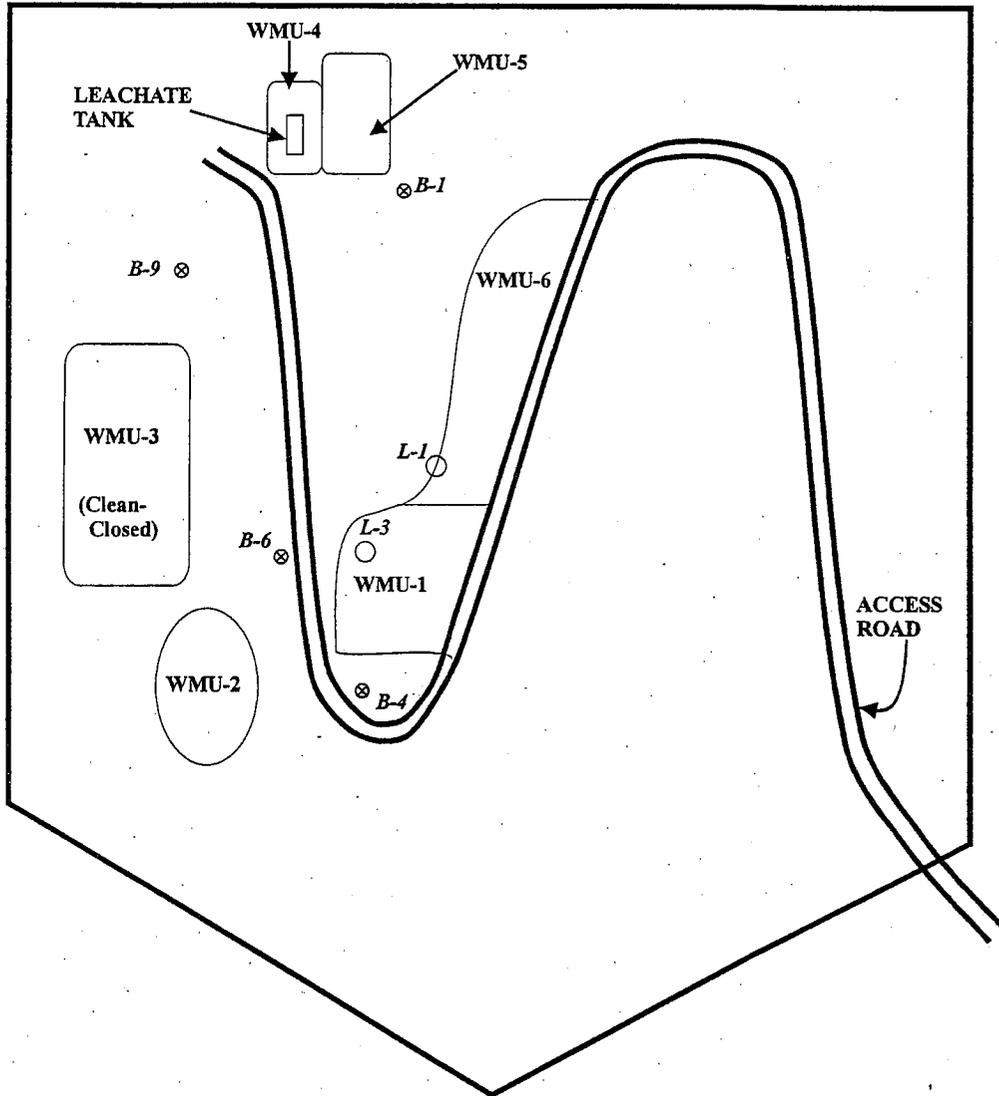


**INTERMOUNTAIN LANDFILL, INC.
CLASS III LANDFILL**

**SHASTA COUNTY
SECTION 36, T36N, R3W, MDB & M**

USGS 15' BURNEY QUAD

Scale: Inch = 1 Mile



INTERMOUNTAIN LANDFILL, INC.
CLASS III LANDFILL

SHASTA COUNTY

Site Map

Not to Scale

⊗ Ground Water
Monitoring Wells

○ Lysimeters

INFORMATION SHEET

INTERMOUNTAIN LANDFILL, INC. FOR THE CLOSURE OF THE INTERMOUNTAIN CLASS III LANDFILL SHASTA COUNTY

The Intermountain Landfill accepted approximately 109,000 tons of waste from 1985 to 1993. The 10-acre disposal area is approximately 5 miles northeast of Burney. The landfill consists of a lined unit for municipal solid waste, an unlined unit for tires, an unlined unit for wood waste and ash, and a leachate tank contained within a lined surface impoundment. The Discharger clean-closed an ash unit in 1995.

Average annual precipitation is 23 inches, with an average annual evaporation of 37 inches. Surface runoff from the site is toward the Pit River; however, runoff is minimal due to soils with high infiltration rates.

The landfill is underlain by 20 to 50 feet of alluvial deposits immediately beneath the site, approximately 20 feet of diatomaceous earth, and an extensive layer of moderately fractured basalt bedrock. The depth to discontinuous perched ground water is 7 to 35 feet. Deeper ground water is approximately 400 feet beneath the site.

The Discharger ceased waste acceptance in June 1993, which is prior to the RCRA Subtitle D "Federal Deadline" of 9 October 1993. Only the RCRA Subtitle D final cover requirements are applicable to the municipal solid waste unit. The final cover of the municipal solid waste unit must meet Chapter 15 requirements, since Chapter 15 is more stringent than RCRA Subtitle D. The tire unit has been closed by covering the waste with native material and grading to promote surface runoff. The top-deck of the wood waste and ash unit will meet Chapter 15 requirements and the sideslopes will have a minimum of 2 feet of native material covering the waste.

This order directs the Discharger to complete the closure of the existing landfill and implement post-closure maintenance.

CNC:djc 8/9/96