

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 91-015

WASTE DISCHARGE REQUIREMENTS
FOR
COUNTY OF SAN BERNARDINO
BIG BEAR WASTE MANAGEMENT FACILITY
CLASS III LANDFILL
North of Baldwin Lake - San Bernardino County

The California Regional Water Quality Control Board, Colorado River Basin Region, finds that:

1. The County of San Bernardino Solid Waste Management Department (hereinafter also referred to as the discharger) 621 East Carnegie Drive, Suite 270, San Bernardino, California 92415-0017, operates a municipal solid waste disposal site located 1½ miles north of Baldwin Lake, along Holcomb Valley Road in the SW¼ of Section 30 and the NW¼ of Section 31, T3N, R2E, SBB&M, as shown in Attachments A and B, incorporated herein and made part of this Board Order.
 2. The land on which the site is located is owned by the United States Department of Agriculture with administration by the United States Forest Service, 144 North Mountain Avenue, San Bernardino, California 92415.
 3. The discharger submitted a Report of Waste Discharge dated October 29, 1990. The Big Bear Waste Management Facility (WMF) has been subject to waste discharge requirements under Board Order No. 88-068. The waste discharge requirements are being updated to comply with Section 13263 of the California Water Code.
 4. The discharger submitted a Solid Waste Assessment Testing (SWAT) report on December 30, 1987 as required by Section 13273 of the California Water Code. The SWAT report contains technical information describing the site hydrogeology, topography, disposal operations and waste classification.
 5. The WMF consists of two waste management units designated the "upper level" and "lower level". The lower level was closed, in accordance with Article 8, Chapter 15, Division 3, Title 23 of the California Code of regulations (hereinafter also referred to as Chapter 15), in 1989. The total site area is 58.6 acres.
 6. The discharger reports that the areas of the lower level may be used to store and grind biomass for subsequent erosion control application on finished and capped slopes.
- The discharger reports that an average of 125 tons-per-day (250 yds) of non-hazardous solid waste, as defined in Chapter 15, is being discharged to the upper level of the landfill.

9-15-93
Adopted
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8. The non-hazardous solid waste consists of garbage, rubbish, demolition materials, dead animals, abandoned automobiles, household trash, manures, dry sewage sludge residue, and plant residue.
9. The total remaining capacity of the landfill, at the upper level, is approximately 300,000 cubic yards. It has an estimated remaining life of four years. However, the discharger reports, that due to implementation of recycling and bailing programs at this site and constructing the landfill cells with 2:1 slopes, the site's life is estimated to last approximately 20 years.
10. Waste disposal at this site is accomplished by the area method of landfilling. This operation consists of a working face in front of which refuse is placed. The waste is compacted to an estimated density of 800 pounds-per-cubic-yard. At the end of each day, six inches of cover soil is placed on the working face and the top surface is covered with one foot of soil. The ratio of waste to soil volume is approximately 4:1.
11. The site is located in a mountainous region along the northeastern flank of Nelson Ridge. Elevations range from approximately 6,900 feet in the southern part of the site to approximately 6,500 feet in the northern part. The site is located on the axis of a surface drainage divide. Natural drainage along the northeast flank of Nelson Ridge flows northeast towards Cactus Flat. The drainage along the southwest flank of the ridge flows south toward Baldwin Lake.
12. The site is entirely underlain by bedrock. The bedrock consists of highly faulted and fractured Paleozoic Saragossa quartzite and marble-localized Mesozoic granite and quartz monzonite; and pre-Columbian gneiss and schist.
13. Although the rocks have very low permeabilities, the existing faults and fractures result in overall bulk permeabilities, which may be quite high, and which appear to be hydraulically interconnected.
14. The topographic form of the site is that of a north to north-northwest trending ridge on the upper north-facing slopes of the San Bernardino Mountains.
15. The site is located in an area that is generally seismically active. The discharger reports that the maximum probable earthquake at the site would be caused by a 7.5 magnitude earthquake on the San Andreas Fault, approximately thirty miles to the southwest, causing a maximum ground acceleration of 0.3g.
16. Ground water depth ranges from 32 feet at the north end of the facility below the inactive area, to 236 feet, just north of the active landfill area. Although the facility straddles the boundary separating two Regional Water Quality Board jurisdictions, all water quality matters are administered by this Regional Board.
17. The discharger has constructed five 4-inch ground water monitoring wells at the site, which meet the requirements of Article 5 of said Chapter 15, as shown in Attachment B incorporated herein and made part of this Board Order.
18. Analyses of ground water samples collected in March 1990 from upgradient Monitoring Well BB-3 indicate that the ground water has a total dissolved solids content of 1580 mg/l.

19. There is one intermittent spring, below the lower level, approximately 700 feet northeast of the site. It is located along a trace of the Helendale Fault, which acts as a ground water barrier forcing the ground water to the surface.
20. The average annual rainfall for the general vicinity of the site is 15 inches, while evaporation rates average 56 inches. Most precipitation falls in the form of snow during storm events that occur in the months of December through February.
21. Land within 1,000 feet of this site falls within the San Bernardino National Forest, administered by the United States Forest Service. The current land use is largely recreational. An electric power substation is located immediately south of the site.
22. The Water Quality Control Plan for the Colorado River Basin Region of California designates the beneficial uses of ground and surface waters in this Region.
23. The beneficial uses of ground waters in the Johnson Hydrologic Unit are:
 - a. Municipal supply (MUN)
 - b. Industrial supply (IND)
 - c. Agricultural supply (AGR)
24. The Board has notified the discharger and all known interested agencies and persons of its intent to update waste discharge requirements for this discharge.
25. The Board in a public meeting heard and considered all comments pertaining to this discharge.
26. The County of San Bernardino Solid Waste Management Department performed an initial environmental study and prepared a Negative Declaration on March 12, 1991 for the Big Bear Waste Management Facility in accordance with the provisions of the California Environmental Quality Act.

IT IS HEREBY ORDERED, that the discharger shall comply with the following:

A. Discharge Specifications

1. New waste management units constructed on top of virgin soil (soil which does not contain solid waste) must have an adequate liner and leachate collection and removal system, in accordance with Chapter 15.
2. The treatment or disposal of wastes at this facility shall not cause pollution or nuisance as defined in Sections 13050(1) and 13050(m) of Division 7 of the California Water Code.
3. Waste materials shall be confined to the waste management facility as described on the attached site maps.
4. Waste material shall not be discharged on any ground surface which is less than five feet above the highest anticipated ground water level.
5. This discharge shall not cause degradation of any water supply.

6. The waste management units shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods having a predicted frequency of once in 100 years.
7. Surface drainage from tributary areas, and internal site drainage from surface or subsurface sources, shall not contact or percolate through the wastes discharged at this site.
8. The exterior surfaces of the disposal area, including the intermediate and final landfill covers, shall be graded and maintained to promote lateral runoff of precipitation and to prevent ponding.
9. The discharger shall provide a final cover for closure of the landfill units in conformance with the requirements of Chapter 15.
10. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.
11. Water used for site maintenance shall be limited to amounts necessary for dust control.
12. The discharger shall maintain a hazardous waste load checking program at the WMF. The discharger shall report the finding of said program in the quarterly monitoring reports submitted in accordance with Provision C.6 of this Board Order.

B. Discharge Prohibitions

1. The discharge or deposit of hazardous waste (as defined in Chapter 15) at this site is prohibited.
2. The discharge or deposit of designated waste (as defined in Chapter 15) at this site is prohibited.
3. The discharge of liquid or semi-solid waste (i.e., waste containing less than 50 percent solids) to the landfill units is prohibited unless approved by the Regional Board's Executive Officer.
4. The discharge of wastes to surface waters, surface water drainage courses, or to ground waters is prohibited.
5. The discharge or deposit of waste to land not owned or controlled by the discharger is prohibited.
6. The discharge or deposit of any waste to the lower level of the WMF is prohibited.
7. The co-disposal of incompatible wastes is prohibited.

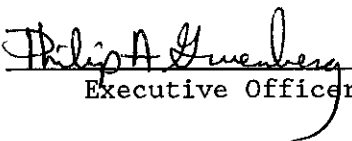
C. Discharge Provisions

1. The discharger shall immediately notify the Regional Board of any flooding, slope failure or other change in site conditions which could impair the integrity of waste containment facilities or of precipitation and drainage control structures.
2. The discharger shall maintain legible records on the volume and type of each waste discharged at the site. These records shall be available for review by representatives of the Regional Board at any time during normal business hours. At the beginning of the post-closure maintenance period, copies of these records shall be sent to the Regional Board.
3. The discharger shall maintain visible monuments identifying the boundary limits of the entire waste management facility.
4. One year prior to the anticipated closure of the facility or any unit (portion) thereof, the discharger shall submit to the Regional Board, for review and approval by the Executive Officer, a closure and post-closure maintenance plan in accordance with Section 2597 of Chapter 15.
5. The discharger shall comply with all applicable provisions of Chapter 15 that are not specifically referred to in this Board Order.
6. The discharger shall comply with "Monitoring and Reporting Program No. 91-015", and future revisions thereto, as specified by the Regional Board's Executive Officer.
7. Prior to any change in ownership or management of this operation, the discharger shall transmit a copy of this Board Order to the succeeding owner/operator, and forward a copy of the transmittal letter to the Regional Board.
8. The discharger shall ensure that all site operating personnel are familiar with the content of this Board Order.
9. The discharger shall obtain prior written approval from the Regional Board's Executive Officer specifying location and method of disposal, before disposing of treated or untreated sludge, or similar solid waste materials. In addition, the discharger shall provide the results of any sludge analyses as specified by the Executive Officer.
10. All containment structures and erosion and drainage control systems shall be designed and constructed under direct supervision of a California registered civil engineer and shall be certified by the individual as meeting the prescriptive standards and performance goals of Chapter 15.
11. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of wastes over the operating life, closure and post-closure maintenance period of the landfill.

12. In place permeabilities of liners shall be determined in the field using techniques approved by the Executive Officer. Construction methods and quality assurance procedures shall be sufficient to ensure that all parts of the liners are adequate to contain landfill leachate.
13. Each disposal cell, constructed in accordance with Discharge Specification No. A.1, shall have a leachate collection and removal system. Leachate collection sumps shall be designed and operated to keep leachate levels at the minimum needed to ensure efficient pump operation. Leachate collected shall be disposed of in accordance with local, state, and federal regulations.
14. Materials used to construct leachate collection and removal systems shall have appropriate physical and chemical properties to ensure the required transmission of leachate through the system over the operating life, closure and post-closure maintenance period of the landfill. Materials shall have sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials and equipment used on the landfill.
15. The discharger shall maintain in good working order and operate as efficiently as possible any facility or control system installed by the discharger to achieve compliance with the waste discharge requirements.
16. This Board Order is subject to Regional Board review and updating, as necessary, to comply with changing State or Federal laws, regulations, policies, or guidelines; changes in the discharge characteristics, in three year increments from the effective date of this Board Order.
17. The Regional Board considers the property owner to have a continuing responsibility for correcting any problems which may arise in the future as a result of this waste discharge.

IT IS FURTHER ORDERED that Board Order No. 88-068 be superseded by this Board Order.

I, Philip A. Gruenberg, 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, Colorado River Basin Region, on March 13, 1991.



Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 91-015
FOR
COUNTY OF SAN BERNARDINO
BIG BEAR WASTE MANAGEMENT FACILITY
CLASS III LANDFILL
North of Baldwin Lake - San Bernardino County

Location of Discharge: SW $\frac{1}{4}$ of Section 30 and NW $\frac{1}{4}$ Section 31, T3N, R2E, SBB&M

MONITORING

The discharger shall monitor all wastes discharged to the disposal site and report to the Regional Board the following:

<u>Item</u>	<u>Unit</u>	<u>Reporting Frequency</u>
1. Solid wastes discharged	Cubic Yards	Quarterly
2. Type of materials discharged	-	Quarterly
3. Remaining capacity of Waste Management Facility	Cubic Yards	Quarterly
4. Any discharge of wastes other than those allowed by this Board Order	Type, Volume and Location	Immediately upon becoming aware that the waste has been discharged together with action for immediate correction and prevention of recurrence.

GROUND WATER MONITORING

The ground water monitoring wells shall be sampled quarterly during March, June September and December. The samples shall be analyzed for the following:

<u>Parameters & Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Reporting Frequency</u>
1. pH	Number	Grab	Quarterly
2. TDS	mg/l	Grab	Quarterly
3. Specific Conductance	micromohs/cm	Grab	Quarterly
4. Temperature	°F	Grab	Quarterly
5. COD	mg/l	Grab	Quarterly
6. Calcium	mg/l	Grab	Quarterly
7. Magnesium	mg/l	Grab	Quarterly

<u>Parameters & Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Reporting Frequency</u>
8. Sulfate	mg/l	Grab	Quarterly
9. Sodium	mg/l	Grab	Quarterly
10. Nitrate	mg/l	Grab	Quarterly
11. Ground Water Elevations (USGS Datum)	Feet	Measurement	Quarterly
12. Volatile Organics (EPA Methods 524.2)	µg/l	Grab	Quarterly
13. Semi-volatile	µg/l	Grab	Quarterly

The collection, preservation and holding times of all samples shall be in accordance with EPA-approved methods. All analyses shall be conducted by a laboratory certified by the State Department of Health Services to perform the required analyses.

REPORTING

1. Quarterly monitoring reports shall be submitted to the Regional Board by January 15, April 15, July 15, and October 15 of each year.
2. The discharger shall arrange the data in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the waste management facility is operating in compliance with waste discharge requirements.
3. Submit monitoring reports to:

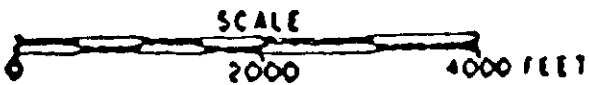
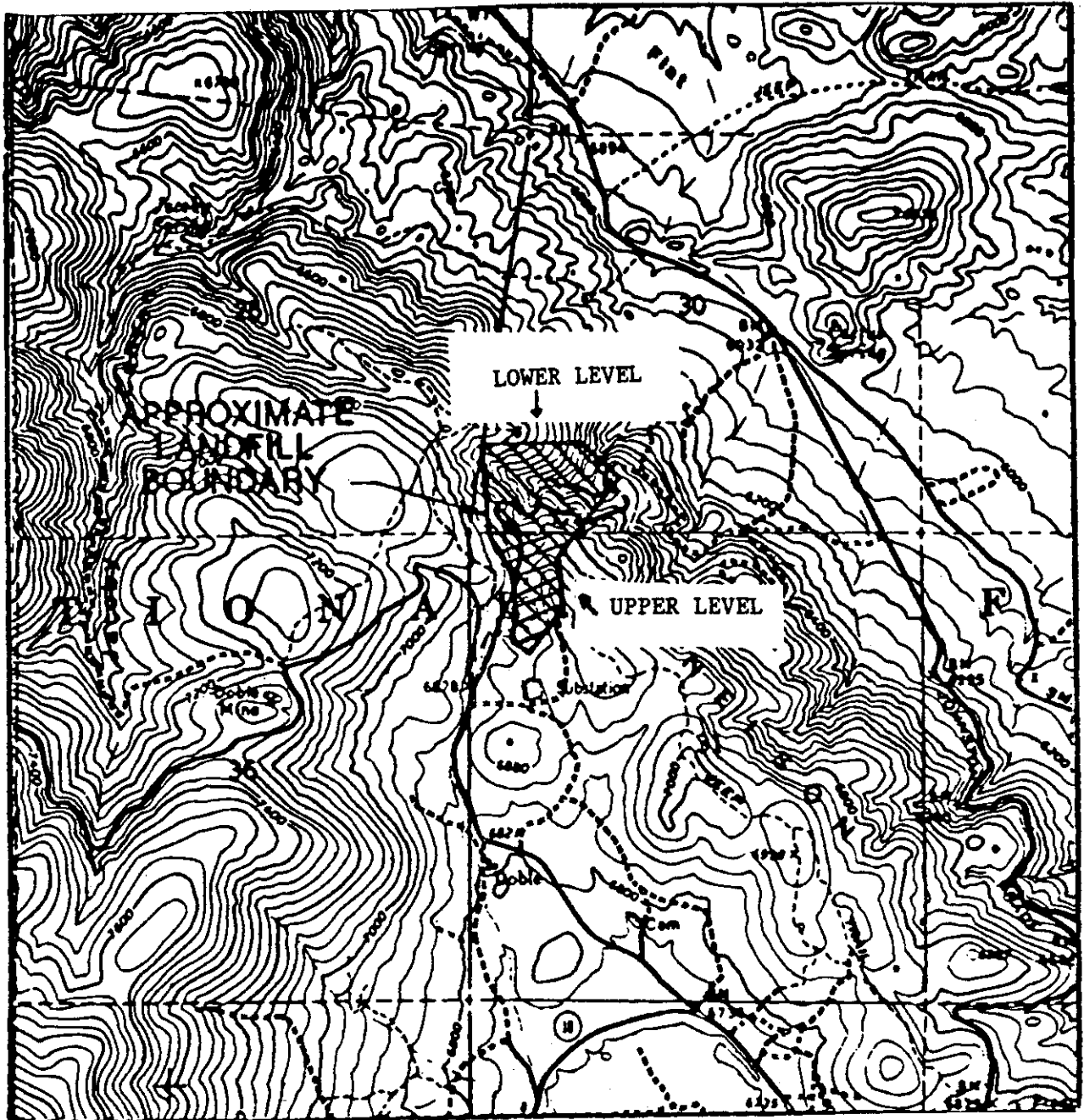
California Regional Water Quality Control Board
Colorado River Basin Region
73-271 Highway 111, Suite 21
Palm Desert, CA 92260

ORDERED BY:

Philip A. Greenberg
Executive Officer

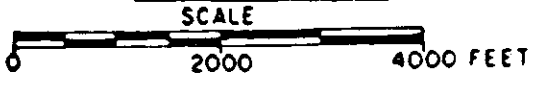
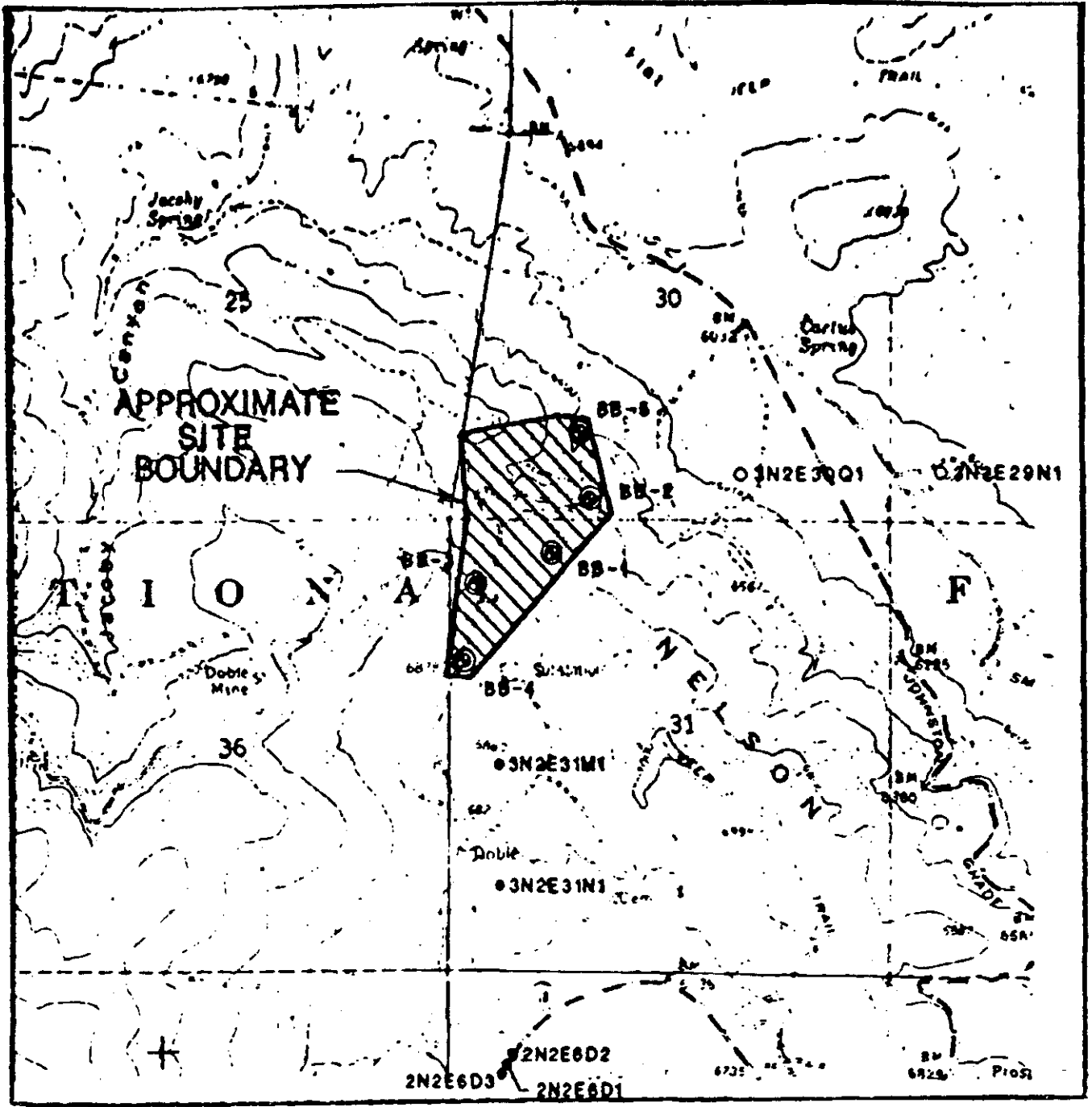
March 13, 1991

Date



ATTACHMENT A

COUNTY OF SAN BERNARDINO
BIG BEAR WASTE MANAGEMENT FACILITY
CLASS III LANDFILL
North of Baldwin Lake - San Bernardino County
SW $\frac{1}{4}$ of Section 30 and the NW $\frac{1}{4}$ of Section 31, T3N, R2E, SBB&M



LEGEND:

- 2N2E6C1 WATER WELL LOCATION
 - 3N2E30Q1 ABANDONED OR DESTROYED WELL
 - ⊙ BB-1 MONITORING WELL LOCATION
- ATTACHMENT B
COUNTY OF SAN BERNARDINO
BIG BEAR WASTE MANAGEMENT FACILITY
CLASS III LANDFILL

North of Baldwin Lake - San Bernardino County
SW¼ of Section 30 and the NW¼ of Section 31, T3N, R2E, SBB&M