

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ORDER No. 90-09

WASTE DISCHARGE REQUIREMENTS
FOR THE
COUNTY OF SAN DIEGO

OTAY ANNEX SANITARY LANDFILL
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter the Regional Board), finds that:

1. On May 20, 1974 this Regional Board adopted Order No. 74-44, Waste Discharge Requirements for the County of San Diego Otay Disposal Site. Order No. 74-44 established requirements for the disposal of Group 1, 2, and 3 wastes in a county-operated Class I and II-1 sanitary landfill located in the Otay River Valley.
2. On April 1, 1977, the County of San Diego (hereinafter **discharger**) submitted a Report of Waste Discharge proposing expansions and reclassification of the existing Class I and II-1 sanitary landfill, the Otay Valley Landfill. The Report of Waste Discharge was accepted on October 17, 1978 after receiving supplementary information from the discharger. In response to the discharger's submittal of the Report of Waste Discharge, tentative Waste Discharge Requirements were prepared for the expansion of the Otay Valley Landfill. Upon the request of Department of Sanitation and Flood Control, County of San Diego, the tentative requirements were never issued by the Regional Board.
3. On December 15, 1978, the discharger submitted a Report of Waste Discharge requesting new Waste Discharge Requirements for disposal of Group 2 and 3 wastes to a 251-acre site described as the Otay Annex Landfill. The discharger also requested that Order No. 74-44 remain in effect for the Otay Valley Sanitary Landfill.
4. On February 26, 1979, the Regional Board adopted Order No. 79-18 to regulate the discharge of waste to the Otay Annex Landfill. The Otay Annex Landfill is operated by Solid Waste Division, Department of Public Works, County of San Diego.
5. The Otay Annex Landfill, located adjacent to the eastern boundary of the Otay Valley Landfill, is 1/4 mile north of Otay Valley Road, approximately six miles downstream from the

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Lower Otay Reservoir, three miles east of the San Diego Bay and in the Otay Valley Hydrologic Area (2.10).

6. The Otay Annex Landfill is in the East 1/2 of Section 17, and portions of Lots 39, 40, 41, and 43 of Otay Ranch, T18S, R1W of San Bernandeno Benchmark & Meridian (SBB & M) as shown in Attachment A.
7. The discharger reported that a 100-foot wide buffer zone of native material would be left in place to separate the Otay Valley Landfill from the Otay Annex Landfill.
8. The discharger estimated that the Otay Annex Landfill would have a capacity of 36 million cubic yards of refuse and have an expected life to year 2005.
9. The Report of Waste Discharge indicated that the elevation at the Otay Annex Landfill exceed 450 feet mean sea level (MSL) on mesa tops and range below 250 feet MSL in the intervening valleys. Total relief is approximately 200 feet. Surface water runoff from the landfill drains to the Otay River which flows into south San Diego Bay, some three miles to the west.
10. The Regional Board staff has determined that in order to achieve full compliance with Subchapter 15, Title 23 of California Code of Regulations (23 CCR 15), it is necessary for the discharger to:
 - a. Upgrade the present leachate collection and removal system in accordance with Section 2543 (23 CCR 15);
 - b. Upgrade the Otay Annex Landfill detection monitoring program for ground water and add vadose zone monitoring program in accordance with Article 5 (23 CCR 15).
11. On June 26, 1987, the discharger submitted a report entitled "Solid Waste Assessment Test (SWAT) Report for the Otay Annex Landfill" (hereinafter the SWAT report) to meet the requirements of Section 13273 of the California Water Code.
12. The SWAT report indicated that the Otay Annex Landfill is located within the low permeability fine grained sandstone and claystone of the Otay Formation. The sedimentary rock column at the Otay Annex Landfill site consists of the following geologic formations:

Lindavista Formation caps ridges over much of the site. The rocks consist of moderately indurated red-brown sandstone and cobble-pebble conglomerate.

San Diego Formation consists of light yellow-brown fine sand, grading upward to pebble and cobble conglomerate with medium sand matrix.

Otay Formation consists of poorly indurated massive sandstone and claystone. The claystone is waxy and composed of bentonite clay of estimated hydraulic conductivity of 10^{-8} cm/sec.

Mission Valley Formation lies unconformably under Otay Formation and consists of marine sandstone units known to contain water.

13. The following two main aquifers were identified at the landfill site:

The Shallow Aquifer is within the alluvium deposits of the Otay River valley approximately half mile to the south of the Otay Annex Landfill and contains substantial ground water; but of poor quality.

The Deep Aquifer was encountered at an elevation of approximately 120 feet in several wells and yielded approximately 6 gallons per minute (gpm).

In addition, ground water was sporadically encountered within the sandstone and claystone units of the Otay Formation; but of poor yield.

14. To address the monitoring deficiencies noted in the SWAT report dated June 16, 1987, the discharger submitted a report entitled "Revised Review Comments, Solid Waste Assessment Test, Report for the Otay and Encinitas Landfills" prepared by International Technology Corporation, dated February 8, 1990. The subject report proposed to: 1) eliminate wells of marginal quality; 2) redevelop some older wells; 3) install two additional monitoring wells (OTGW-20 and OTGW-21); and 4) monitor the shallow and deep aquifers for four calendar quarters. Regional Board staff has determined that additional information is necessary to determine if the proposed monitoring network is adequate. Pursuant to Provision C.15 and Reporting Requirement D.1 of this Order, the discharger is required to submit the necessary information by July 30, 1990.

15. The San Diego Ground Water Studies, Phase III report, prepared by the State Department of Water Resources and dated October 1986 noted that ground water of inferior quality is common in the Otay Valley Hydrologic Area. The report concluded that the quality of the ground water will likely remain poor in the future.
16. Based on the information in the SWAT report dated June 26, 1987, the discharger correspondence letters and technical reports, the State Division of Mines and Geology technical publications, and site investigations, the Regional Board staff has determined that the entire Otay Annex Landfill site complies with the requirements stipulated in Article 4, Section 2533, 23 CCR 15 for the reclassification as **Class III Waste Management Unit**.
17. On February 8, 1988, the Regional Board adopted Resolution No. 88-06 providing criteria for the disposal of shredder waste to the Otay Annex Landfill. Resolution 88-06 states that shredder waste which is not determined hazardous by DHS is suitable for disposal at Class III waste management units as designated by this Regional Board without special segregation of management.
18. **The Comprehensive Water Quality Control Plan Report, San Diego Basin (9)** (the Basin Plan), adopted by this Regional Board on March 17, 1975; approved by the State Board on March 20, 1975; and updated by this Regional Board on February 27, 1978; March 23, 1981; January 24 and October 3, 1983; August 27, 1984; December 16, 1985; March 25, 1986; April 25, 1988. The updates were subsequently approved by the State Board.
19. On April 25, 1988, this Regional Board adopted Resolution No. 88-49, relaxing the Basin Plan ground water standards for that portion of Otay Valley Hydrologic Area (2.10) limited to lands within and tributary to Salt Creek on the east and Poggi Canyon on the west and including the several smaller drainage courses between these tributaries of the Otay River. The Otay Annex Landfill is located within the area that the water quality standards had been relaxed by Resolution No. 88-49, but is bordering and upgradient of the portion of the Otay Valley Hydrologic Area that the more stringent Basin Plan standards apply.
20. The Basin Plan has established the following beneficial uses for the waters of the Otay Valley Hydrologic Area (10.20)

Surface waters

- a. Agricultural Supply
- b. Industrial Supply
- c. Non Contact Water Recreation
- d. Wildlife Habitat
- e. Preservation of Rare and Endangered Species

Ground waters

- a. Municipal and Domestic Supply^a
- b. Agriculture Supply^a
- c. Industrial Service Supply
- d. Ground Water Recharge^a

21. The Basin Plan has established the following Water Quality Objectives for the Otay Hydrologic Area (2.10):

^a The beneficial uses have been deleted from that portion of the Hydrologic area (2.10) limited to lands within and tributary to Salt Creek on the east and Poggi Canyon on the west and including the several smaller drainage courses between these tributaries of the Otay River.

Constituent	Surface Water	Ground water
Total Dissolved Solids	1000 mg/L	1500 mg/L ^b
Chloride	400 mg/L	500 mg/L ^b
Percent Sodium	60 %	60 % ^b
Sulfate	500 mg/L	500 mg/L ^b
Nitrate (as NO ₃)	— ^c	10 mg/L ^b
Nitrogen & Phosphorus	— ^c	—
Iron	0.3 mg/L	0.3 mg/L ^b
Manganese	0.05 mg/L	0.05 mg/L ^b
Methylene Blue Active Substances	0.5 mg/L	0.50 mg/L ^b
Boron	0.5 mg/L	0.50 mg/L ^b
Odor	None	None
Turbidity	20 NTU	5 mg/L ^b
Color	20 Units	15 mg/L ^b
Fluoride	1.0 mg/L	1.0 mg/L ^b

Note: The above concentration not to be exceeded more than 10%

^b The ground water objectives have been deleted from that portion of the Hydrologic Area (2.10) limited to lands within and tributary to Salt Creek on the east and Poggi Canyon on the west and including the several smaller drainage courses between these tributaries of the Otay River.

^c Concentrations of nitrogen and phosphorus, by themselves or in combinations with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth. Threshold total Phosphorus (P) concentrations shall not exceed 0.05 mg/L in any stream at the point where it enters any standing body of water, nor 0.025 mg/L in any standing body of water. A desired goal in order to prevent plant nuisances in streams and other flowing waters appears to be 0.1 mg/L total P. These values are not to be exceeded more than 10 percent of the time unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N:P = 10:1 shall be used.

of the time.

22. The Basin Plan established the following ground water objectives which apply to all ground water of the basin.

Tastes and Odors

Ground water shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

Bacteria

In ground water used for domestic or municipal supply (MUN) the median concentration of coliform organisms over any seven-day period shall be less than 2.2/100 milliliters (ml).

Chemical Constituents

Ground water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the limits specified in California Administrative Code Title 17, Chapter 5, Subchapter 1, Group 1, Article 4, Section 7019, Tables 2, 3, and 4. To the extent of any conflict between these limits and those specified in Table 4-7, the more stringent shall apply at all times.

Ground water designated for use as agricultural supply (AGR) shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use.

Radioactivity

Ground water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the limits specified in California Administrative Code Title 17, Chapter 5, Subchapter 1, Group 1, Article 4, Section 7019, Tables 5.

23. The Basin Plan contains the following prohibitions which are applicable to the site:

"The dumping or deposition of oil, garbage, trash or other solid municipal, industrial or agricultural waste directly

into inland waters or watercourses or adjacent to watercourses in any manner which may permit its being washed into the watercourse is prohibited."

"Dumping or deposition of oil, garbage, trash or other solid municipal, industrial or agricultural waste into natural or excavated sites below historic water levels or deposition of soluble industrial wastes at any site is prohibited, unless such site has been specifically approved by the Regional Board for that purpose."

"Land grading and similar operations causing soil disturbance which do not contain provisions to minimize soil erosion and limit suspended matter in are runoff are prohibited."

24. Based upon the information contained in the technical reports noted in the Findings of this Order, the discharge of waste at the Otay Annex Landfill, if conducted and monitored in accordance with this Order, should not cause the Basin Plan objectives for the Otay Valley Hydrologic Area to be exceeded or violate the Basin Plan prohibitions.
25. The Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to the following:
 - a. Past, present, and probable future beneficial uses of water;
 - b. Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto;
 - c. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
 - d. Economic considerations;
 - e. The need for developing housing within the region;
 - f. Beneficial uses to be protected and water quality objectives reasonably required for that purpose;
 - g. Other waste discharges; and
 - h. The need to prevent nuisance.

26. As a part of the original Report of Waste Discharge for the Otay Annex Landfill, the County of San Diego prepared an Environmental Impact Report (EIR) dated March 25, 1976 in accordance with California Environmental Quality Act and the State Guidelines.
27. The EIR indicated that the Otay Annex Landfill would have the following significant effects on the environment:
- a. All the Snake Cholla and Coast Barrel Cactus, both are rare and endangered, located on-site will be destroyed.
 - b. The vernal pools on the mesa may be destroyed with consequent destruction resident plant species.
 - c. Removal of vegetation and earth would cause resident faunal populations to be gradually eliminated or transposed to the surrounding environment. Due to the site proximity to the ocean, it is already an established sea gull feeding ground.
 - d. Other potential localized adverse impacts of the Otay Annex Landfill include odor, gas generation, nuisance animals and unsightness.
28. The EIR identified the following changes or alterations which would mitigate or avoid the significant effects on the environment:
- a. The following measures would mitigate impacts on the plants and animals of the project site:
 - 1. If practical, limited rescue of individuals of Opuntia Parryi var. Serpentina and Ferocactus Viridescens may be considered; and
 - 2. Botanic gardens, county parks, or other interested groups will be allowed to remove plants or plant materials for replanting in other areas.
 - b. A perimeter fence will be constructed for site security and to keep grazing cattle off the site. An interior wind screen will be strategically located around the operation area to catch any blowing papers;

- c. The refuse will be covered with soil daily to minimize rainfall penetration, trash scatter and vector activity. In addition, the cover material will allow re-establishment of plants;
- d. Dust will be controlled by periodic watering by water trucks;
- e. Rehabilitation of the site will include reseedling of native vegetation similar to that presently on site. Rehabilitation will take place in stages as portions of the fill are completed;
- f. The ultimate configuration of the face of the landfill will be contoured and benched to blend with the existing hills;
- g. Most cover material will probably be obtained from the 250-acres Annex. Some soil cover may be available from the confines of the existing Otay Valley Landfill boundaries;
- h. Any cultural remains discovered during the excavation and disposal operations will be reported to a qualified archaeologist for evaluation and consideration;
- i. Surface water will be diverted around the fill. Fill slopes will be graded to eliminate any potential for ponded water. There is no off-site drainage onto the site;
- j. Proper watering and compaction techniques will be practiced during operation of the landfill;
- k. Ground water quality will be periodically monitored by chemical and bacteriological analyses in accordance with expected water quality requirements;
- l. Illegal dumping along Otay Valley Road or on the access road will be monitored and corrected as necessary;
- m. Off-road vehicle use will be prohibited within undeveloped portions of the project site by appropriate fencing in order to protect wildlife resources and to ensure security of the landfill

equipment;

- n. The site will be landscaped in a continuous program throughout the duration of the landfill. Initial landscape effort will be performed at the entrance to the landfill from the paved access road. Appropriate dense screening will consist of shrubs and trees where necessary for aesthetic purposes. Where possible, native species and final cuts including benching will be landscaped to reduce erosion; and
 - o. Screening will be established in selected location to maximize seclusion.
- 29. Provision C.2 of this Order mitigates or avoids the adverse environmental impacts of the project on water quality.
 - 30. The Regional Board has considered all water resource related environmental factors associated with the existing discharge.
 - 31. The Regional Board has notified the discharger and all known interested parties of the intent to update waste discharge requirements for the existing discharge.
 - 32. The Regional Board in a public meeting heard and considered all comments pertaining to the existing discharge.

IT IS HEREBY ORDERED, the County of San Diego shall comply with the following Waste Discharge Requirements:

A PROHIBITIONS

- 1. Discharges of wastes to lands which have not been specifically described to the Regional Board and for which valid waste discharge requirements are not in force are prohibited.
- 2. The discharge of waste shall not cause the following:
 - a. Occurrence of coliform or pathogenic organisms in waters pumped from the basin;
 - b. Presence of objectionable tastes and odors in waters pumped from the basin;
 - c. Waters pumped from the basin to foam;
 - d. Presence of toxic materials in waters pumped from

the basin;

- e. Changes in the pH value of the water pumped from the basin outside the range of 6.0 to 9.0 units;
 - f. Violation of the objectives for the ground or surface waters of the Otay Valley Hydrologic Area, as established in the Basin Plan; and
 - g. Odors, vectors, and other nuisances of waste origin beyond the limits of the Otay Annex Landfill site.
3. Disposal of hazardous waste is prohibited at the Otay Annex Landfill site.
4. Disposal of designated waste at the Otay Annex Landfill is prohibited except as provided for by Subchapter 15, Section 2520(a)(1). Subchapter 15, Section 2520(a)(1) indicates that the waste classification specified in Subchapter 15, Article 2 shall determine where the waste may be discharged unless the discharger establishes, to the satisfaction of the Regional Board, that a particular waste constituent or combination of constituents presents a lower risk of water quality degradation than indicated by classification according to Subchapter 15, Article 2 criteria.
5. Disposal of liquids or semi-solid waste at the Otay Annex Landfill is prohibited except as provided for by Subchapter 15, Section 2520(d)(3). Subchapter 15, Section 2520(d)(3) indicates that liquids or semi-solid waste (waste containing less than 50 percent solids), other than dewatered sewage or water treatment sludge, shall not be discharged to a Class III landfill. Exemptions may be granted if the discharger can demonstrate that such discharge will not exceed the moisture-holding capacity of the Otay Annex Landfill, either initially or as a result of waste management operations, compaction, or settlement.
6. Disposal of sewage or water treatment sludge at the Otay Annex Landfill is prohibited except as provided for by Subchapter 15, Section 2520(d)(3) and 2523(c). Subchapter 15, Section 2523(c) indicates that dewatered sewage or water treatment sludge may be discharged at a Class III landfill under the following conditions, unless DHS determines that the waste must be managed as hazardous waste:
- a. The Otay Annex Landfill is equipped with a leachate collection and removal system;

- b. The sludge contains at least 20 percent solids if primary sludge, or at least 15 percent solids if secondary sludge, mixtures of primary and secondary sludge, or water treatment sludge; and
 - c. A minimum solids-to-liquid ratio of 5:1 by weight shall be maintained to ensure proper moisture holding capacity of waste material to prevent movement of leachate. Any foreign solid added to the sludge must be nondecomposable and of specific retention equal to or greater than the sludge substance. Nonabsorbent solids such as glass, metals, etc. will not be included in the solid-to-liquid ratio of 5:1 estimation.
- 7. The discharge of solid, liquid waste, or leachate to surface waters or surface water drainage courses is prohibited.
- 8. The discharge of waste to ponded water from any source is prohibited.
- 9. It is prohibited to discharge wastes which have potential to reduce or impair the integrity of containment structure or which, if commingled with other wastes in the Otay Annex Landfill, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products which in turn:
 - a. Require a higher level of containment than provided by the Otay Annex Landfill.
 - b. Constitute "restricted hazardous wastes"; or
 - c. Impair the integrity of containment structure.

B DISCHARGE SPECIFICATIONS

- 1. Nonhazardous waste and inert waste as described by Subchapter 15, Sections 2523 and 2524 may be disposed of at the Otay Annex Landfill.
- 2. Shredder waste which has been granted a variance from disposal as "hazardous waste" by the DHS may be disposed of at the landfill.

3. Asbestos or asbestos-containing waste shall be disposed of at the landfill conditional to:
 - a. Packaged in sealed, leak-tight, and non-returnable containers, such as plastic bags of 6-millimeter thickness or sealed containers, from which the fibers can not escape.
 - b. Waste within the containers must be adequately wetted to prevent blowing of fibers in case of the container is broken.
 - c. Each container should be properly labeled which spills out warning from asbestos.
 - d. Covering with a minimum of six inches of non-asbestos waste or clean fill within 24 hours, or earlier, of discharge.
4. The concentration of indicator parameters as waste constituents in waters passing through the Points of Compliance shall not exceed the "Water Quality Protection Standards" established and enumerated in Monitoring and Reporting Program No. 90-09, which is attached to and made part of this Order.
5. During the months when precipitation can be expected, the disposal activity shall be confined to the smallest area possible based upon the anticipated quantity of wastes and operational procedures.
6. The Otay Annex Landfill shall be adequately protected from any washout, and erosion of waste materials. Adequate protection is defined as protection from at least a 100-year flood.
7. The discharger is responsible for accurate characterization of wastes, including determinations of whether or not wastes will be compatible with containment features and other wastes at the Otay Annex Landfill in order to comply with Subchapter 15, Section 2520(b), and whether or not wastes are required to be managed as hazardous wastes under Section 66300 of the California Administrative Code, Title 22.
8. The discharger shall implement a periodic load-checking program to ensure that hazardous materials are not discharged at the Otay Annex Landfill. The program shall be approved by the Executive Officer.

9. The discharger shall comply with all applicable requirements of Subchapter 15, Article 3 at the Otay Annex Landfill. Article 3 establishes siting, design, construction, operation, and maintenance standards. Sections 2530, 2533, and Table 3.1 are applicable in whole or in part to the Otay Annex Landfill.
10. The discharger shall comply with all applicable requirements of Subchapter 15, Article 4 at the Otay Annex Landfill. Article 4 establishes construction standards for waste management units.
11. Materials used to construct leachate collection and removal systems (LCRSs) shall have appropriate physical and chemical properties to ensure the required transmission of leachate over the life of the Otay Annex Landfill and the post-closure maintenance period.
12. LCRSs shall be designed, constructed, and maintained to collect twice the anticipated daily volume of leachate generated by the sludge disposal ponds and to prevent the buildup of hydraulic head on the underlying liner.
13. All containment structures shall be designed and constructed under the direct supervision of a California registered engineer or a certified engineering geologist and shall be certified by that individual as meeting the perspective standards and performance goals of Subchapter 15 prior to waste discharge.
14. Surface drainage from tributary areas and internal site drainage from surface or subsurface sources shall not contact or percolate through waste.
15. Annually, prior to the anticipated rainy season but not later than October 31, 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. The discharger shall submit an annual report to the Regional Board by January 31 describing measures taken to comply with this specifications.
16. The closure of the Otay Annex Landfill shall be under the direct supervision of a California civil engineer or certified engineering geologist.

17. At closure, the Otay Annex Landfill shall receive a final cover which is designed and constructed to function with minimum maintenance and consists, at a minimum, of two-foot thick foundation layer which may contain waste materials, overlain by a one-foot thick clay liner, and finally by a one-foot thick vegetation soil layer, or an engineered equivalent final cover approved by the Regional Board pursuant to Subsections 2510(b) and (c) of Subchapter 15.
18. 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 minimize such erosion.

C PROVISIONS

1. Neither the treatment nor the discharge of waste shall create a pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code.
2. The discharger must comply with all conditions of this Order. Any noncompliance with this Order constitutes a violation of the California Water Code and is grounds for (a) enforcement action; (b) termination, revocation and re-issuance, or modification of this Order.
3. In an enforcement action, it shall not be a defense for the discharger that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order.
4. The discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.
5. The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate laboratory and process controls including appropriate quality assurance procedures.
6. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.

7. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:
 - a. Violation of any terms or conditions of this Order;
 - b. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts; or
 - c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge. The filing of a request by the discharger for the modification, revocation and re-issuance, or termination of this Order, or notification of planned changes or anticipated noncompliance does not stay any condition of this Order.
8. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the discharger from liability under federal, state, or local laws, nor create a vested right for the discharger to continue the regulated activity.
9. The discharger shall allow the Regional Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law to:
 - a. Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
 - e. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the California Water Code, any substances or parameters at any location.

10. A copy of this Order shall be maintained at the Otay Annex Landfill and shall be available to operating personnel at all times.
11. This Order becomes effective on the date of adoption by the Regional Board. This Order supersedes Order No. 79-18. Order No. 79-18 is hereby rescinded.
12. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.
13. Alternatives and exceptions to and exemptions and waivers from requirements of Subchapter 15 shall be subject to the approval of the Executive Officer and shall be authorized only as provided for by Subchapter 15. Implemented alternatives to Subchapter 15 requirements shall meet the conditions for approval of such alternatives established in Subchapter 15 as long as the wastes pose a threat to water quality.
14. The discharger shall comply with all applicable requirements of Subchapter 15, Article 8 for partial and final closure and post-closure maintenance of the Otay Annex Landfill. Article 8 establishes closure and post-closure maintenance requirements.
15. The discharger shall complete the tasks outlined in this Waste Discharge Requirements and the attached Monitoring and Reporting Program No. 90-09 in accordance with the following time schedule:

Task	Date of Compliance	Report of Compliance
1. To achieve compliance with Prohibition No. A.6, complete installation of the Leachate Collection & Removal System.	06/30/1991	-----
a. First Progress Report	-----	06/30/1990
b. Second Progress Report	-----	12/30/1990
c. Final Report	-----	07/30/1991
2. Ground water monitoring assessment report as noted in Finding Number 14 and Reporting Requirement D.1	06/30/1990	07/30/1990

The discharger shall submit to the Regional Board, on or before each compliance report date, a report of compliance or noncompliance with the specific task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date of compliance with the time schedule.

D. REPORTING REQUIREMENTS

1. A ground water monitoring assessment report is due by July 30, 1990 that defines the background and downgradient monitoring wells and rationalizes the selected locations and the number of monitoring wells at the site.
2. In accordance with Section 2210 of California Water Code, the discharger shall file a new Report of Waste Discharge at least 120 days prior to the following:
 - a. Significant change in the disposal method;
 - b. Change in the disposal location from that described in the findings of this order or the SWAT report;
 - c. Other circumstances which result in a material change in character, amount, or location of the waste discharge; and
 - d. Any planned change in the regulated facility or activity which may result in noncompliance with this order.

3. The discharger shall furnish to the Executive Officer of this Regional Board, within a reasonable time, any information which the Executive Officer may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The discharger shall also furnish to the Executive Officer upon request, copies of records required to be kept by this Order.
4. The discharger must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage between the current discharger and a new discharger. This agreement shall include an acknowledgement that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable from the transfer date on.
5. The discharger shall comply with the attached Monitoring and Reporting Program No. 90-09.
6. Where the discharger becomes aware that it failed to submit any relevant facts in the technical report or submitted incorrect information in the technical report or in any report to the Regional Board, it shall promptly submit such facts or information.
7. The discharger shall report any noncompliance which may endanger health or the environment. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, or prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
8. The discharger shall conduct such monitoring as may be necessary in order to provide information requested by the Executive Officer.

9. The discharger shall maintain legible records of the amount (volume or weight) and type of each waste discharged at the Otay Annex Landfill and the manner and location of discharge.
10. The discharger shall notify the Regional Board 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.
11. All applications, reports, or information submitted to the Executive Officer of this Regional Board shall be signed and certified as follows:
- a. The Report of Waste Discharge shall be signed as follows:
 1. For a corporation - by a principal executive officer of at least the level of vice-president;
 2. For a partnership or sole proprietorship - by a general partner or the proprietor, respectively;
 3. For a municipality, state, federal or other public agency - by either a principal executive officer or ranking elected official; and
 4. For a military installation - by the base commander or the person with overall responsibility for environmental matters in that branch of the military.
 - b. All other reports required by this Order and other information required by the Executive Officer shall be signed by a person designated in paragraph (a) of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if:
 1. The authorization is made in writing by a person described in paragraph (a) of this provision;
 2. The authorization specifies either an individual or a position having responsibility

for the overall operation of the regulated facility or activity; and

3. The written authorization is submitted to the Executive Officer.

c. Any person signing a document required by this Order and other information required by the Executive Officer shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

12. The discharger shall submit reports required under this Order and other information requested by the Executive Officer, to:

Executive Officer
California Regional Water Quality Control Board
San Diego Region
9771 Clairemont Mesa Blvd., Suite B
San Diego, California 92124-1331

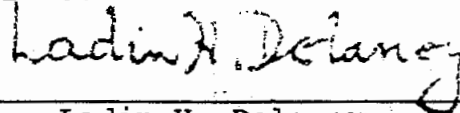
E. NOTIFICATIONS

1. No discharge of waste to the waters of the state, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the state are privileges, not rights.
2. These requirements have not been officially reviewed by the United States Environmental Protection Agency and are not issued pursuant to Section 402 of the Clean Water Act.
3. The California Water Code provides that any person who intentionally or negligently violates any waste discharge requirements issued, reissued, or amended by this Regional Board is subject to administrative civil liability of up to ten dollars per gallon of waste discharged, or, if no discharge occurs, up to one thousand dollars per day of

violation. The Superior Court may impose civil liability of up to ten thousand dollars per day of violation or, if a cleanup and abatement order has been issued, up to fifteen thousand dollars per day of violation.

4. The California Water Code provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this Order, or falsifying any information provided in the monitoring reports is guilty of a misdemeanor and may be subject to administrative civil liability of up to one thousand dollars per day of violation.
5. Definitions of terms used in this Order shall be as set forth in Subchapter 15.
6. Operation of the Otay Annex Landfill may be subject to regulations of the California Waste Management Board.
7. This Order becomes effective on the date of adoption by the Regional Board.

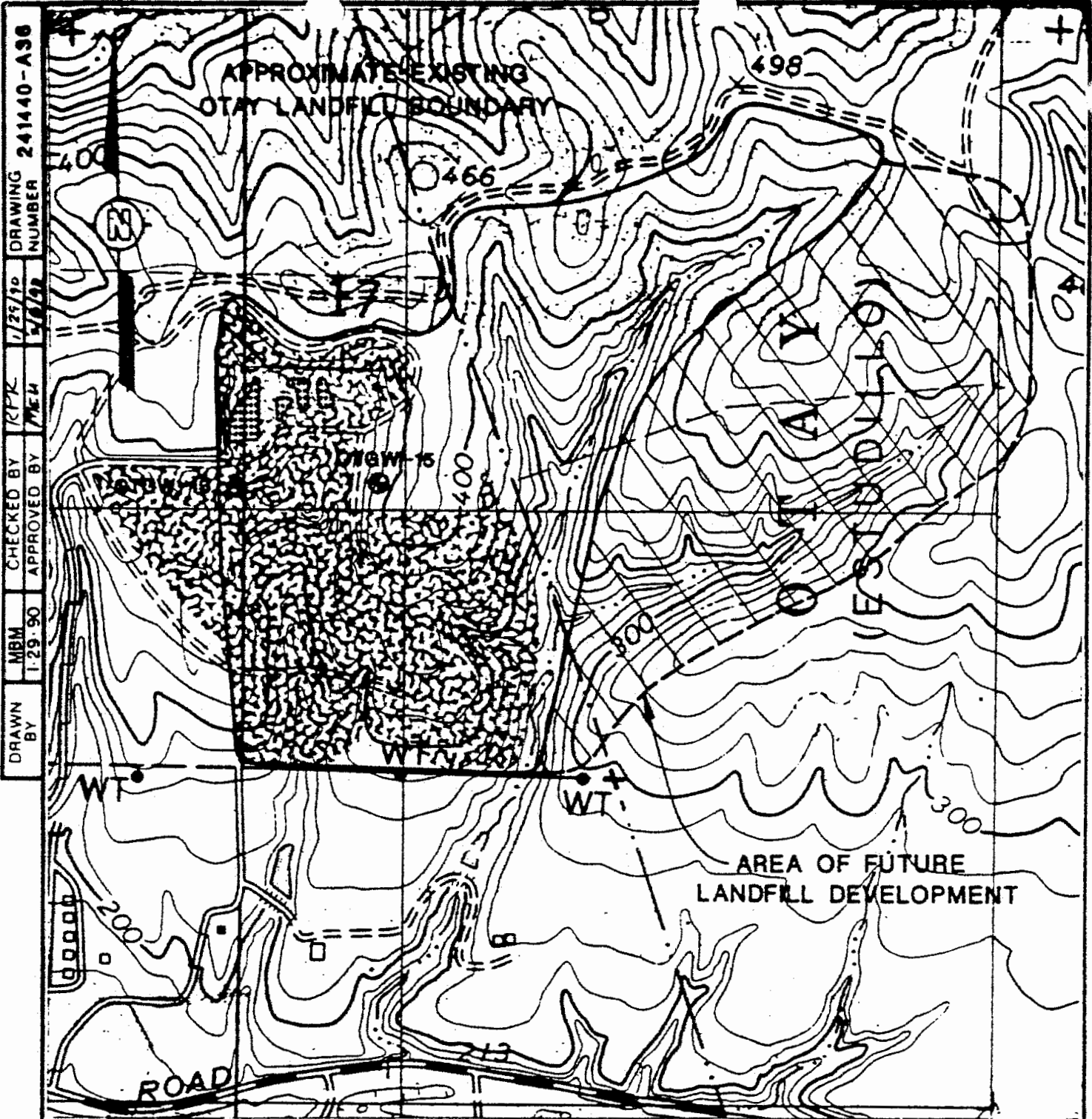
I, Ladin H. Delaney, Executive Officer, do hereby certify the forgoing is a full true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on March 12, 1990.



Ladin H. Delaney
Executive Officer

- Attachment A: Early Detection Monitoring System Location Map.
Attachment B: Ground Water Monitoring System Location Map.

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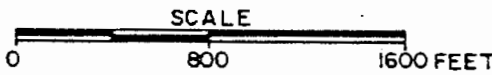


DRAWN BY: MBM
 CHECKED BY: RPK
 APPROVED BY: MEH
 DATE: 1/25/90
 DATE: 5/8/92
 DRAWING NUMBER: 241440-AS6

EXPLANATION

OTWG-15 LOCATION OF EXISTING EARLY DETECTION MONITORING WELLS

OTAY EARLY DETECTION MONITORING SYSTEM
OTAY LANDFILL

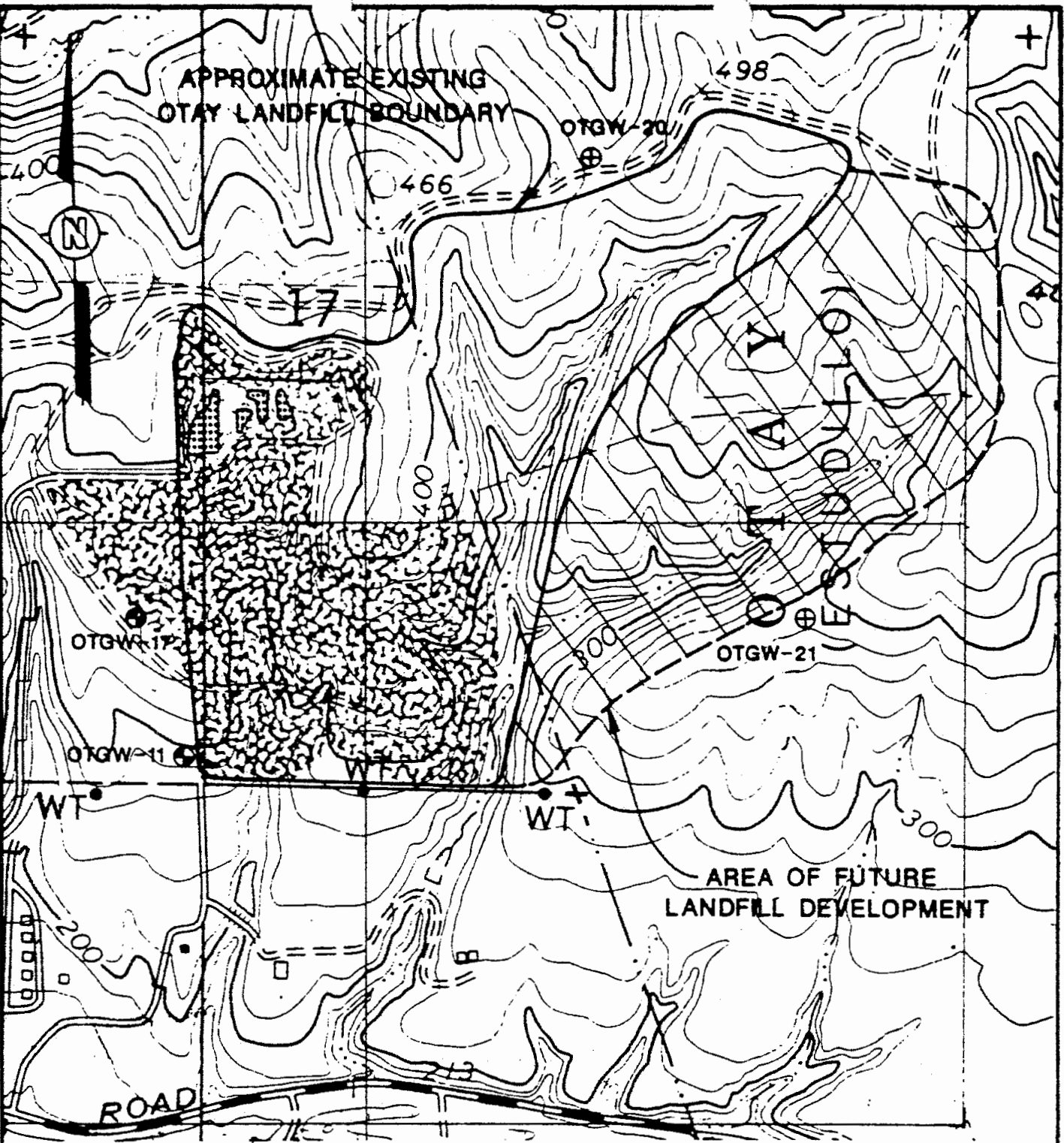


Attachment A
Otay Annex Landfill

REFERENCE:
 7.5 MINUTE USGS TOPOGRAPHIC MAP OF
 IMPERIAL BEACH, CALIFORNIA QUADRANGLE.
 DATED: 1967 PHOTOREVISED: 1975 SCALE=1:24000

After IT Corporation

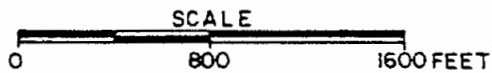
DRAWING NUMBER 2414-J-A37
 1/29/90
 CHECKED BY RPK
 APPROVED BY MEK
 MBM
 1-29-90
 DRAWN BY



EXPLANATION

- OTGW-11 ⊕ EXISTING MONITORING WELLS
- OTGW-21 ⊕ PROPOSED MONITORING WELLS

OTAY REGIONAL AQUIFER
 GROUND-WATER MONITORING SYSTEM
 OTAY LANDFILL



Attachment B
 Otay Annex Landfill

REFERENCE:

7.5 MINUTE USGS TOPOGRAPHIC MAP OF
 IMPERIAL BEACH, CALIFORNIA QUADRANGLE
 DATED: 1967 PHOTOREVISED: 1975 SCALE-1:24000

After IT Corporation

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO

MONITORING AND REPORTING PROGRAM No. 90-09

COUNTY OF SAN DIEGO
OTAY ANNEX SANITARY LANDFILL
SAN DIEGO COUNTY

A. GENERAL PROVISION

1. Samples and measurements taken shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this Order and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification and the approval of the Executive Officer.
2. Monitoring must be conducted according to United States Environmental Protection Agency test procedures approved under Title 40, Code of Federal Regulations (CFR), Part 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act" as amended, unless other test procedures have been specified in this Order.
3. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services or a laboratory approved the Executive Officer. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.
4. If the discharger monitors any pollutants more frequently than required by this Order, using test procedures approved under 40 CFR, Part 136, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharger's monitoring report. The increased frequency of monitoring shall also be reported.
5. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

6. A composite sample is defined as a combination of at least 8 sample aliquot of at least 100 milliliters, collected at periodic intervals during the operating hours of the landfill. For volatile pollutants, aliquot must be combined in the laboratory immediately before analysis.
7. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

B. REPORTING AND DATA ANALYSIS

1. The discharger shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.
2. The following records of monitoring information shall be retained:
 - a. Date, exact place, and time of sampling or measurements;
 - b. Individual(s) who performed the sampling and field measurements;
 - c. Date(s) analyses were performed;
 - d. Analytical techniques or method used;
 - e. Results of such analyses;
 - f. Detection limit for each parameter measured; and
 - g. Laboratory quality assurance results (e.g. percent recovery, response factor, etc.).
3. In the annual report, the discharger shall provide a statistical analysis of the results in accordance with Appendix II of 23 CCR 15 or equivalent statistical method. The discharger shall identify whether a significant difference was found above the cumulative background values

for each parameter.

4. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Executive Officer or in this Order.
5. The discharger shall submit a summary of the groundwater analyses obtained for each quarter. The summary shall include the following information:
 - a. Field monitoring parameters, samples identifications, and the chain-of-custody sheets;
 - b. The method detection limit (MDL);
 - c. Measured concentrations found in the current sampling event;
 - d. Whether a significant difference was found above the background value of each parameter; and
 - e. The laboratory quality assurance data performed during sample analyses.

The measured concentrations shall be reported with a "<" symbol only if the value listed after the symbol is the MDL.

6. The discharger shall provide a graphical description of the direction of groundwater flow in and around the subject landfill.
7. In the annual report, the discharger shall calculate the arithmetic mean and standard deviation for each parameter specified of the samples obtained.

C. GROUND WATER WELL CONSTRUCTION

1. All monitoring wells shall be constructed by a licenced water well contractor in a manner that maintains the integrity of the drill hole and prevents cross-contamination of saturated zones. The casing shall be a minimum of four inches in diameter. The monitoring wells shall be constructed, developed, and maintained in accordance with the state Water Well Standards or better. Each well shall be marked permanently so as to readily identify it and shall have a reference point tied into mean sea level elevation by a licensed surveyor. All

monitoring wells shall be logged during drilling under the direct supervision of a California registered geologist. All monitoring well logs submitted to the Board shall be signed by the registered geologist. All monitoring well logs shall be filed with the proper local agency (e.g. the county, city, etc.). Soil shall be described according to the Unified Soil Classification System. Copies of the logs and as-built specifications of the wells shall be submitted to the Regional Board.

2. Prior to pumping monitoring wells for sampling, the static water level shall be measured in each well.
3. Prior to sampling monitoring wells, the presence of a floating immiscible layer in all wells shall be determined at the beginning of each sampling event. This shall be done prior to any other activity which may disturb the surface of the water in a well, e.g. water level measurements. If an immiscible layer is found, it must be sampled, analyzed and reported.
4. Prior to sampling monitoring wells, the water standing in the casing shall be purged until the water chemistry has stabilized with respect to pH and specific conductance. Integrity of the samples should be considered in selecting sampling equipment.
5. Field logs used during well purging shall be included in the monitoring reports. The information contained in these logs shall include: the method of monitoring the field parameters, calibration of the field equipment, method of purging (if a pump is used, include pump placement and pumping rate), date each well was purged, well recovery time, method of disposal of the purged water, an estimate of volume of water purged from each well, the results of all field analyses, well number, date, depth to groundwater, method of measuring the water level, and field personnel signatures.

D. SITE MONITORING

The discharger shall submit an annual report consisting of a map showing the site boundaries, ground surface elevation, the monitoring locations of ground water, vadose zone, excavated areas, areas underlain by constructed liners and filled areas, precipitation and drainage control facilities; and a report of the estimated total volume of wastes deposited in the landfill and the estimated remaining capacity.

E. WASTE MONITORING PROGRAM

1. Annually, the discharger shall submit an assessment that documents the effectiveness of the periodic load-checking program and describes any new control measures being implemented to improve the program.
2. The discharger shall perform quarterly inspections of the landfill site and report the results quarterly. The report shall contain information of the landfill conditions and a discussion of any significant findings with regard to:
 - a. General site condition;
 - b. Surface cover and slope;
 - c. Drainage facilities;
 - d. Ground water and vadose zone monitoring networks;
 - e. Methane gas control system;
 - f. Observation of seepage from the landfill;
 - g. Liquid condensate disposal facilities; and
 - h. Maintenance activities at the site.
3. Annually, the discharger shall submit a report describing the quantity of nonhazardous solid wastes, dewatered sewage sludge or water treatment sludge, asbestos and asbestos-containing waste, shredder wastes, nonhazardous incinerator wastes, and inert wastes discharged at the landfill.

F. GROUND WATER MONITORING


1.  A ground water monitoring assessment report is due by July 30, 1990 that defines the background and downgradient monitoring wells and rationalizes the selected locations and the number of monitoring wells at the site. Until the monitoring plan is approved by the Executive Officer, the monitoring program shall consist of an early detection monitoring system of two shallow wells (OTGW-13 and OTGW-15) and four deep wells (OTGW-11, OTGW-17, OTGW-20, and OTGW-21) as shown in Attachments A and B.
2. Table #1 defines the sampling frequency, the constituents to be monitored, and the reporting requirements.

Table #1
Ground Water Monitoring Parameters

Constituent	Units	Sampling Frequency	Reporting Frequency
pH	pH Units	Quarterly	Quarterly
Specific Conductance	umhos/cm	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Quarterly	Quarterly
Calcium	mg/L	Quarterly	Quarterly
Iron	mg/L	Quarterly	Quarterly
Magnesium	mg/L	Quarterly	Quarterly
Sodium	mg/L	Quarterly	Quarterly
Potassium	mg/L	Quarterly	Quarterly
Carbonate	mg/L	Quarterly	Quarterly
Bicarbonate	mg/L	Quarterly	Quarterly
Chloride	mg/L	Quarterly	Quarterly
Sulfate	mg/L	Quarterly	Quarterly
Nitrate as nitrogen	mg/L	Quarterly	Quarterly
Total Phosphate	mg/L	Quarterly	Quarterly
Alkalinity (as a CaCO ₃)	mg/L	Quarterly	Quarterly
Volatile Organics	ug/L	Quarterly	Quarterly
Semi-volatile Organics	ug/L	Quarterly	Quarterly
Arsenic	mg/L	Quarterly	Quarterly
Barium	mg/L	Quarterly	Quarterly
Beryllium	mg/L	Quarterly	Quarterly
Cadmium	mg/L	Quarterly	Quarterly
Chromium	mg/L	Quarterly	Quarterly
Cobalt	mg/L	Quarterly	Quarterly
Copper	mg/L	Quarterly	Quarterly
Lead	mg/L	Quarterly	Quarterly
Mercury	mg/L	Quarterly	Quarterly
Molybdenum	mg/L	Quarterly	Quarterly
Nickel	mg/L	Quarterly	Quarterly
Selenium	mg/L	Quarterly	Quarterly
Silver	mg/L	Quarterly	Quarterly
Thallium	mg/L	Quarterly	Quarterly
Vanadium	mg/L	Quarterly	Quarterly
Zinc	mg/L	Quarterly	Quarterly

Note: mg/L = milligrams/liter and ug/L = micrograms/liter

G. WATER QUALITY PROTECTION STANDARDS

Water Quality Protection Standards (WQPS) shall be established by the Regional Board executive officer based upon the results of the monitoring program. Quarterly samples obtained from the designated background well(s) for four calendar quarters shall be used to develop WQPS for the site based on the arithmetic mean and standard deviation for each parameter. If subsequent sampling of the background well(s) indicates significant water quality changes, the discharger may request modification of these WQPS.

H. REPORTING SCHEDULE

The monitoring reports shall be submitted to the Executive Officer in accordance with the following schedule:

<u>Reporting</u>	<u>Monitoring Period</u>	<u>Report Due Date</u>
Quarterly	January - March	April 30 <i>last</i>
	April - June	July 30 <i>semi annual</i>
	July - September	October 30 <i>annual</i>
	October - December	January 30 <i>annual</i>
Annually	January - December	January 30

Ordered by Ladin H. Delaney
 Ladin H. Delaney
 Executive Officer
 March 12, 1990

- Attachment A: Early Detection Monitoring System Location Map
- Attachment B: Ground Water Monitoring System Location Map.

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