CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER No. 90-139

UPDATED WASTE DISCHARGE REQUIREMENTS AND RESCISSION OF ORDER NO. 77-153 FOR:

GUADALUPE RUBBISH DISPOSAL COMPANY
CLASS III SOLID WASTE DISPOSAL SITE
SAN JOSE, SANTA CLARA COUNTY

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

1. GUADALUPE RUBBISH DISPOSAL COMPANY (hereinafter called the discharger) owns and operates a municipal refuse disposal site located in the City of San Jose, in Santa Clara County, approximately 4 miles southeast of the City of Los Gatos, as shown on Attachment A. Attachment A is incorporated herein and made part of this order.

2. The Board adopted Waste Discharge Requirements for the site as Order No. 77-153 on July 19, 1977. Updating of these Requirements is necessary pursuant to Title 23, Division 3, Chapter 15 of the California Code of Regulations (hereinafter Chapter 15).

3. The discharger submitted a Report of Waste Discharge (ROWD) on October 14, 1988 for the purpose of updated Waste Discharge Requirements. The ROWD is hereby incorporated as part of this Order. The ROWD contains an Operations Plan, Closure Plan and Postclosure Plan. As part of the ROWD the discharger has submitted the results of a site characterization study entitled Geologic/Hydrogeologic Report and Groundwater Monitoring Program, Guadalupe Disposal Site, Santa Clara, California, as revised in November, 1987, which is also incorporated herein and made part of this Order.

4. The discharger is currently permitted to operate on 65 acres (called the existing landfill) of their 411 acre site (called the site). The discharger estimates that the existing landfill will reach capacity sometime in 1993.

5. The site was opened by the discharger in 1929, and operated as an open-burn dump until 1959, at which time the facility was converted to a sanitary landfill, in accordance with accepted practices of the time. The existing landfill was developed by placing and compacting refuse on the exposed surface of the site's canyon floor. This constitutes the base of the existing landfill.

6. The discharger has proposed development of an additional 50 acres of the site (called the expansion landfill) for disposal of municipal refuse. The discharger proposes to construct the expansion landfill in accordance with Chapter 15 requirements. A detailed workplan proposal for construction, operation and closure of the expansion

landfill has a scheduled completion date of January 1, 1992, pursuant to Provision No. 9 of this Order.

7. The site consists of moderately steep canyon land, near the base of the Santa Cruz Mountains along the southwestern edge of the Santa Clara Valley. Three principal geologic units underly the landfill: canyon fill alluvium/colluvium, Temblor Formation Bedrock, and Franciscan Formation Bedrock. The canyon fill deposits are located predominantly beneath the western portion of the site, near the toe of the landfill. This fill material consists of clay interbedded with gravel and coarse sand particles, approximately 25 to 30 feet thick, and is underlain by both the Temblor and Franciscan Formation Bedrock. The near surface Temblor and Franciscan Formations are separated by a branch of the Shannon Fault, which extends northeast-southwest, approximately through the center of the canyon. The Temblor Formation Bedrock is primarily sandstone, while much of the Franciscan Formation consists of serpentine and melange. Studies have indicated that the portion of the Shannon Fault which passes through the site, has not been active in recent geologic time, and therefore does not constitute a Holocene Fault.

8. Guadalupe Creek, which drains a large area to the south, west, and east of the site, is the principal drainage in the area. Bedrock of the foothills, in the Guadalupe Creek drainage system, contains groundwater which eventually enters the shallow alluvial materials of the Santa Clara Valley. Shallow groundwater in the canyon-fill deposits of the site, discharges into a tributary creek at the western limit of the fill deposits. Water in this tributary creek flows northwestward to Guadalupe Creek. Approximately a mile and a half downstream of this confluence, the Santa Clara Valley Water District (SCVWD) has installed percolation basins along Guadalupe Creek, to facilitate recharge of the region's groundwater municipal water supply. Groundwater, which does not directly recharge Guadalupe Creek, also flows in the direction of these SCVWD percolation basins. Depth to groundwater beneath the existing landfill ranges from 8 to 20 feet. Groundwater within the Franciscan bedrock west and downgradient of the termination of the canyon fill deposits, occurs at a depth of approximately 30 feet, and appears to be confined beneath low permeability clay materials.

   While there have been no springs identified at the site, several nonflowing seeps (moist soil conditions caused by localized shallow subsurface flow) averaging 10 feet in diameter, have been observed along the southestern portion of the landfill. The ROWD indicates that the seeps occur along contacts between silica-carbonate rocks and adjacent rocks. Due to the complex nature of the hydrogeologic conditions at the site, the discharger was notified by this Board's Executive Officer, in a letter dated August 27, 1990, that additional hydrogeologic studies are necessary to better define localized variations in site conditions.

9. The Self Monitoring Program for the site was revised via a letter signed by the Executive Officer, dated August 17, 1984. The current water quality monitoring network includes 8 groundwater monitoring wells identified as G-3, G-4 and G-8 (screened in the Franciscan

Formation), LG-1 and LG-2 (screened in the Temblor Formation), and G-1, G-2 and G-6 (screened the canyon-fill material). At present there is one background water quality monitoring well, identified as G-4, which is screened in the Franciscan Formation Bedrock, located east of the existing landfill. The discharger has been notified that the groundwater monitoring program must be expanded to include background water quality monitoring wells for each significant geologic unit at the site.

Upon completion of the additional hydrogeologic studies described in Finding 8, a revised proposal for groundwater monitoring shall be submitted pursuant to Provision 4 of this Order. This revised monitoring proposal shall be designed to monitor all potential pollutant migration pathways and provide a reliable indication of leakage from the waste management units at the earliest possible opportunity. Until completion of the forthcoming hydrogeologic studies, and approval of a revised water quality monitoring program, the discharger is required to perform the water quality monitoring program outlined in the attached Self Monitoring Program (Attachment B).

10. There are eight water producing wells within approximately one mile of the site, that are currently registered with the Santa Clara Valley Water District (SCVWD). Four of these wells are registered as active domestic wells, and four are registered as inactive domestic and agricultural wells. Groundwater usage north of the site is regulated by the SCVWD. Pursuant to the Provisions specified in this Order, the site shall be retrofitted with adequate monitoring and waste containment systems, capable of providing adequate protection for all designated current and potential beneficial uses of waters of the State.

11. The site is located within the New Almaden mercury mining district, and consequently, numerous historic mines are located in the vicinity of the landfill. Most of the ore mined in the district was removed prior to 1890, however, sporadic mining operations have taken place as recently as the mid-1970's. The existing landfill lies generally north of, and beyond a ridge from, several mine adits, shafts and stopes, which the ROWD collectively refers to as the mine workings. The ROWD identifies several areas where the existing mine workings could impact the proposed expansion, and discusses various alternative actions intended to minimize the potential for migration of leachate, and maximize the stability of the expansion landfill areas. The alternative mitigation measures discussed in the ROWD include plugging, backfilling, and partial excavation of mine workings, and/or combinations of these methods. The ROWD also includes relocation of proposed roads and disposal units as an alternative, for precarious areas where mitigation measures are determined to be insufficient or infeasible. A detailed workplan proposal, as outlined in Provision 9 of this Order, provides for mitigation of all mine workings that might pose a threat to the integrity of the expansion landfill. Each mitigation method must be approved in writting by the Executive Officer prior to disposal of wastes in those expansion areas.

12. Earthquakes posing a threat to the existing and/or expansion landfills could occur along the San Andeas, Berrocal, or Shannon fault zones. The San Andreas and Berrocal fault zones are located approximately 6 and 1 miles from the site, respectively. A branch of the Shannon Fault passes through the site. The Maximum Probable Earthquake (MPE) for the San Andreas Fault is estimated to be a magnitude 8.3 event, with resulting average peak ground accelerations at the site calculated at 0.54g. The MPE for the Berrocal and Shannon fault zones have been estimated to be magnitude 6.9 and 6.6 events, respectively. The resulting average peak ground accelerations at the site, for both the Berrocal and Shannon fault zones, has been calculated at 0.70g.

13. Section 13273 of the California Water Code requires that all owners of solid waste disposal sites perform a solid waste assessment test (SWAT) to determine if hazardous wastes have migrated from their site. The State Water Resources Control Board (SWRCB) has adopted a statewide ranking of sites required to perform this study. The Guadalupe Disposal Site was listed on the first rank. The discharger submitted the results of this study in August, 1987. The results of the SWAT and analytical results contained in subsequent quarterly Self Monitoring Reports indicate that the existing landfill is leaking waste constituents into groundwater adjacent to and downgradient of the fill areas. Some of the waste constituents which have migrated beyond the limits of the landfill exceed the Maximum Contaminant Levels for Drinking Water recommended by the California Department of Health Services.

14. Pursuant to Chapter 15 requirements, the discharger is required to initiate a verification monitoring program designed to define the lateral and vertical extent of groundwater pollution at the site. Based upon the results of this verification monitoring program, the discharger shall initiate a corrective action program to eliminate the migration of pollutants from the existing landfill. In addition, pursuant to Provisions 5, 7, and 9 of this Order, the discharger is also required to modify the leachate monitoring and extraction system workplans proposed in the ROWD.

15. Due to the site's hydrogeologic conditions, the proximity of the landfill to the Santa Clara Valley Water District's groundwater recharge areas and indications that the existing landfill is leaking, the expansion portions of the landfill are required to be constructed with composite liner and leachate collection and removal systems to provide adequate protection of the water resources in the region. Where it is not technically feasible to construct a composite liner/leachate collection system, alternative designs may be used as approved by the Executive Officer.

16. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin on December 17, 1986, and this order implements the water quality objectives of that Basin Plan.

17. The existing and potential beneficial uses of the surface waters in the vicinity of the site include:

    Municipal Water Supply
    Wildlife Habitat
    Warm Fresh Water Habitat

18. The existing and potential beneficial uses of the groundwaters in the vicinity of the site include:

    Municipal Water Supply
    Agricultural Supply
    Industrial Process Water Supply
    Industrial Service Supply

19. The City of San Jose has approved a final Environmental Impact Report in accordance with the California Environmental Quality Act (Public Resources Code Section 2100 et. seq.). The project, as approved by the City of San Jose, could cause a significant effect on the environment in that the presence of the landfill and landfill activity may degrade water quality unless appropriate mitigation measures are taken. The Prohibitions, Specifications and Provisions of this Order are intended to mitigate or avoid any adverse or potential adverse impacts.

20. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

21. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Guadalupe Rubbish Disposal Company and any other persons that currently or in the future own this land or operate this facility, shall meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and shall also comply with the following:

A. <u>Prohibitions</u>

1. The disposal of waste shall not create a condition of pollution or nuisance as defined in Sections 13050(l) and 13050(m) of the California Water Code.

2. Wastes shall not be placed in any area of the site outside of the existing landfill area until the Executive Officer has approved an as built verification report regarding the construction of each section of the expansion landfill.

3. Wastes shall not be placed in or allowed to contact ponded water from any source whatsoever.

4. Wastes shall not be disposed of in any position where they can be carried from the disposal site and discharged into waters of the State or of the United States.

6. Hazardous and designated wastes as defined in Sections 2521 and 2522 of Chapter 15, and high moisture content wastes (including sewage sludge, septic tank waste, cannery waste, restaurant grease, and other wastes containing less than 50% solids), with the exception of leachate and methane gas condensate generated at the site, shall not be deposited at this site. Asbestos and infectious wastes may be deposited provided that all regulations and provisions of the California Integrated Waste Management Board, California Department of Health Services and local health agencies are complied with.

7. The discharger, or any future owner or operator of this site, shall not cause the following conditions to exist in waters of the State at any place outside the waste management facility:

   a. Surface Waters

      1. Floating, suspended, or deposited macroscopic particulate matter or foam.

      2. Bottom deposits or aquatic growth.

      3. Alteration of temperature, turbidity, or apparent color beyond natural background levels.

      4. Visible, floating, suspended or deposited oil or other products of petroleum origin.

      5. Toxic or other deleterious substances to be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

   b. Groundwater

      1. The groundwater shall not be degraded as a result of the waste disposal operation.

8. Leachate from wastes and ponded water containing leachate or in contact with refuse shall not be discharged to waters of the State or the United States.

B. SPECIFICATIONS

1. Water used during disposal operations shall be limited to a minimal amount necessary for dust control and fire supression.

2. The site shall be protected from any washout or erosion of wastes or covering material and from inundation which could occur as a result of a 100 year 24 hour precipitation event.

3. Surface drainage from tributary areas, and internal site drainage from surface and subsurface sources, shall not contact or percolate through wastes during disposal operations or during the life of the site. Drainage ditches constructed over final refuse fill will be underlain with a minimum 5-foot thickness of compacted earthfill or an equivalent protection layer as approved by this Board's Executive Officer. Surface drainage ditches shall be constructed to ensure that all rainwater is diverted off-site and does not contact wastes or leachate.

4. The discharger shall install and operate leachate collection and removal systems (LCRS) for both the existing and expansion landfill areas, so as to minimize the build-up of leachate in the landfill. Measures shall be taken to ensure that leachate in the leachate collection systems can flow freely into any collection sump. Measures shall also be taken to assure that the LCRS will remain operational throughout the closure/post-closure maintenance period of the landfill.

5. The leachate monitoring and control systems shall be designed, maintained, and operated to minimize the build-up of hydraulic head on the bottom of the landfill. These systems shall be inspected weekly, and any accumulated fluid shall be removed. The discharger shall submit reports, on at least an annual basis, which demonstrate that the leachate control systems are functioning properly.

6. A periodic load checking program shall be implemented to ensure that hazardous materials are not discharged at the landfill.

7. The discharger shall ensure that the foundations of the existing and expansion landfills, and the structures which control leachate, surface drainage, erosion and gas migration for this site, are constructed and maintained to withstand conditions generated during a maximum probable earthquake event at the San Andreas, Berrocal or Shannon fault zones.

8. As portions of the landfill are closed, the exterior surfaces shall be graded to a minimum slope of three percent in order to promote lateral runoff of precipitation. In addition, all completed disposal areas shall be covered with a minimum of 4 feet of cover and meet other applicable requirements as described in Article 8 of Chapter 15.

9. The discharger shall operate the waste management facility so as not to cause a statistically significant difference to exist between water quality at the compliance points and Water Quality Protection Standards (WQPS) to be established for the following parameters. The discharger shall establish these WQPS according to the requirements of this Order and Article 5 of Chapter 15.

a. pH=
b. Electrical Conductivity=
c. Chloride=
d. Total Organic Carbon=
e. Nitrate Nitrogen=
f. Total Kjeldahl Nitrogen=
g. Total Phenol=
h. Total Disolved Solids=
i. Chemical Oxygen Demand=
j. Arsenic=
k. Cadmium=
l. Total Chromium=
m. Copper=
n. Cyanide=
o. Lead=
p. Mercury=
q. Nickel=
r. Silver=
s. Zinc=

10. The discharger shall install any additional groundwater and leachate monitoring devices required to fulfill the terms of any Self-Monitoring Program issued to the discharger in order that the Board may evaluate compliance with the conditions of this Order.

C. PROVISIONS

1. The discharger shall comply with all Prohibitions, Specifications, and Provisions of this Order immediately upon adoption of this Order.

2. The discharger shall submit and implement by January 1, 1991, a plan for monitoring horizontal and vertical deformations of all waste management units.

3. The discharger shall submit by January 1, 1991, a detailed inspection and corrective action plan to be implemented in the event of any earthquake generating ground shaking of Modified Mercalli Intensity V or greater at or near the landfill. The report shall describe the containment features, and ground water monitoring and leachate control facilities potentially impacted by the static and seismic deformations of the landfill. The plan shall provide for reporting results of the

post earthquake inspection to the Board within 18 hours of the occurrence of the earthquake. In the event of any damage due to liquefaction, or other slope failure, the corrective action plan shall be implemented immediately, and the Board notified immediately.

4. The discharger shall submit by February 1, 1991, a detailed workplan proposal, acceptable to the Executive Officer, for an investigation designed to provide a characterization of localized variations in the site's hydrogeologic conditions. This report shall provide a strategy and workplan designed for identification of preferential migration pathways at the site. The proposal shall also include workplans for definition of the extent and sources of soil and groundwater pollution, due to the migration of waste constituents from the existing landfill and/or the historic burn areas.

5. The discharger shall submit a detailed leachate management plan for the existing and expansion landfill areas by April 1, 1991. This plan shall evaluate the buildup of leachate within all portions of the landfill, the quantity of leachate produced, the storage of leachate, and the ultimate disposal of the leachate. The report should evaluate the quantity of leachate which will have to be extracted from the leachate collection system in order to minimize the build up of leachate within the refuse disposal units. The plan shall provide a detailed assessment of alternative treatment and disposal methods along with a plan for implementation of a preferred alternative or combination of alternatives. This plan shall provide for an annual evaluation of leachate management at the site to be included with the annual Self-Monitoring Reports. If recirculation of the leachate is to be considered, the discharger must demonstrate that the quantity of leachate being recirculated will not result in a solid to liquid ratio within the landfill less than 5:1 using a minimum moisture content of the solid waste of 30%.

6. The discharger shall submit, by June 1, 1991, evidence of an irrevocable closure fund, acceptable to the Executive Officer, pursuant to Section 2580(f) of Chapter 15. The Closure Fund must provide sufficient funds to properly close the landfill and for the post-closure monitoring and maintenance of the site. The duration of the post-closure monitoring and maintenance period will be a minimum of 30 years unless specified otherwise by the Executive Officer.

7. The discharger shall submit, by July 1, 1991, a workplan proposal for a Corrective Action Program, acceptable to the Executive Officer, designed to eliminate the migration of waste constituents from the existing landfill and/or the historic burn areas. This Corrective Action Program should be based in part upon the results of the hydrogeologic investigation described in Provision 4 of this Order. As part of this Corrective Action Program, the discharger shall include a revised proposal for a

leachate collection and removal system for the existing landfill, designed to minimize the buildup of leachate within the disposal units and prevent leachate migration. The Corrective Action Program shall also include a workplan proposal for remediation of existing soil and groundwater pollution at the site.

8. The discharger shall submit, by April 15, 1992, a proposal acceptable to the Executive Officer, for a revised water quality monitoring program designed to provide a reliable indication of waste constituent leakage, at the earliest possible opportunity. This monitoring program proposal should be based in part upon the results of the hydrogeologic investigation outlined in Provision 4 of this Order. The revised monitoring program should serve to monitor the existing landfill, the effectiveness of the existing landfill's Corrective Action Program, the expansion landfill, any mitigation measures provided to secure mine workings in the vicinity of the site, all leachate storage facilities and the proposed septic leach field.

9. The discharger shall submit, by April 15, 1992, a proposal acceptable to the Executive Officer, which provides workplans for development of the various components of the expansion landfill, including detailed specifications for construction of composite liners and leachate collection and removal systems, and mitigation of mine workings that might threaten the stability of the site or provide migration pathways for waste constituents. This proposal should also include maintenance, operation and closure plans, as well as a slope stability analysis, for the expansion landfill. The workplans for construction and operation of the liners/LCRS should include detailed specifications regarding the sequence of construction of the various segments of the expansion, and provide sufficient detail about how the various cells and modules of the expansion areas will interface structurally. All design and as-built construction reports must be approved in writting by the Executive Officer, prior to disposal of wastes in those areas.

10. The discharger shall submit, within 13 months of approval of a revised water quality monitoring program as outlined in Provision 8, a report on the groundwater quality at the site that evaluates the background concentrations of applicable water quality indicator parameters and develops Water Quality Protection Standards for the constituents listed in Specification B.9 of this Order, according to the requirements of Article 5 of Chapter 15.

11. The discharger shall initiate and complete a Corrective Action Program, by November 1, 1992, according to the workplan proposal outlined in Provision 7, as approved by the Executive Officer.

12. The discharger shall file with the Regional Board self-monitoring reports performed according to any self-monitoring program issued by the Executive Officer. The frequency of such submittals are dependent upon the requirements of Chapter 15 in effect at such

time. The discharger shall also provide the Water Quality Protection Division of the Santa Clara Valley Water District with copies of all technical reports and information, and self-monitoring program reports, required pursuant to this Order and Chapter 15 specifications.

13. The discharger shall submit, within 90 days after closure of any portion of the landfill, a closure certification report which documents that the area has been closed according to the requirements of this Order and Chapter 15.

14. All reports pursuant to these Provisions shall be prepared under the supervision of a registered civil engineer, registered geologist or certified engineering geologist where applicable.

15. The discharger shall comply with all applicable provisions of Chapter 15 that are not specifically referred to in this Order.

16. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.

17. The discharger shall file with this Board a report of any material change or proposed change in the character, location, or quantity of the waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries of the disposal areas or the ownership of the site. Revisions to this Order shall not be considered for a minimum of 3 years from the date of this Order.

18. The discharger shall maintain a copy of this Order at the site so as to be available at all times to site operating personnel.

19. This Board considers the property owner and site operator to have continuing responsiblity for correcting any problems which arise in the future as a result of this waste discharge or related operations.

20. The discharger shall maintain all devices or designed features installed in accordance with this Order such that they continue to operate as intended without interruption except as a result of failures which could not have been reasonably foreseen or prevented by the discharger.

21. The discharger shall, at any time, permit the Regional Board or its authorized representitive, upon presentation of credentials:

    a. Entry upon the premises on which wastes are located or in which any required records are kept.

    b. Access to copy any records required to be kept under the terms and conditions of this Order.

c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this Order.

d. Sampling of any discharge or groundwater covered by this Order.

22. This Board's Order No. 77-153 is hereby rescinded.

23. These requirements do not authorize commission of any act causing injury to the property of another or of the public; do not convey any property rights; do not remove liability under Federal, State of Local laws; and do not authorize the discharge of wastes without appropriate permits from other agencies or organizations.

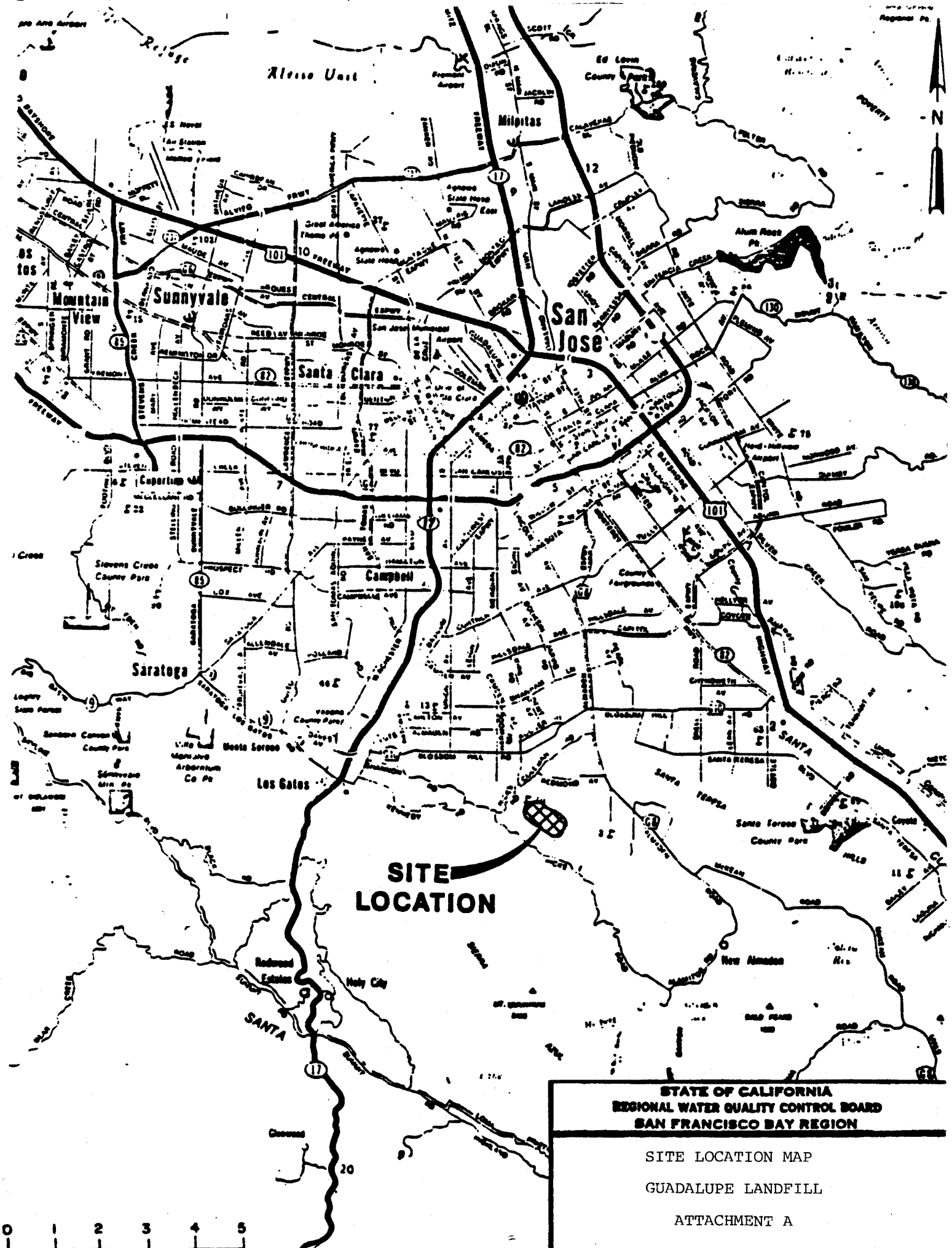
24. This Order is subject to Board review and updating, as necessary, to comply with changing State or Federal laws, regulations, policies, or guidelines; changes in the Board's Basin Plan; or changes in the discharge characteristics, in five year increments from the effective date of this Order.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 17, 1990.

Steven R. Ritchie

Executive Officer

Attachments: A) Site map
B) Self Monitoring Program



STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SITE LOCATION MAP

GUADALUPE LANDFILL

ATTACHMENT A

DRAWN BY: WBH	DATE: 9/10/90	DRWG. NO. 1

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

GUADALUPE RUBBISH DISPOSAL COMPANY

CLASS III SOLID WASTE DISPOSAL SITE

SAN JOSE, SANTA CLARA COUNTY

ORDER NO. 90-139

CONSISTS OF

PART A

AND

PART B

PART A

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No.73-16. This Self-Monitoring Program is issued in accordance with Provision C.12 of Regional Board Order No. 90-***.

The principal purposes of a self-monitoring program by a waste discharger are: (1) to document compliance with waste discharge requirements and prohibitions established by the Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

Sampling

Sample collection, storage, and analyses shall be performed according to most recent version of Standard Methods for the Analysis of Wastewater and in accordance with an approved sampling and analysis plan.

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State Department of Health. 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.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.

2. A composite sample is a sample composed of individual grab samples mixed in proportions varying not more than plus or minus five percent from the instantaneous rate of waste flow corresponding to each grab sample collected at regular intervals not greater than one hour, or collected by the use of continuous automatic sampling devices capable of attaining the proportional accuracy stipulated above throughout the period of discharge or 24 consecutive hours, whichever is shorter.

3. Receiving waters refers to any water which actually or potentially receives surface or groundwaters which pass over, through, or under waste materials or contaminated soils. In this case the groundwater beneath and adjacent to the landfill areas, the surface runoff from the site, the tributary creek at the toe of the landfill, and Guadalupe Creek are considered the receiving waters.

4. Standard observations refer to:

   a. Receiving Waters

      1) Floating and suspended materials of waste origin: presence or absence, source, and size of affected area.

      2) Discoloration and turbidity: description of color, source, and size of affected area.

      3) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.

      4) Evidence of beneficial use: presence of water associated wildlife

      5) Flow rate.

      6) Weather conditions: wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

   b. Perimeter of the waste management unit.

      1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area and flow rate. (Show affected area on map)

      2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.

      3) Evidence of erosion and/or daylighted refuse.

   c. The waste management unit.

      1) Evidence of ponded water at any point on the waste management facility.

      2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.

      3) Evidence of erosion and/or daylighted refuse.

4) Standard analysis and measurements refer to:

a. pH
b. Electrical Conductivity (EC)
c. Total Dissolved Solids (TDS)
d. Total Phenols
e. Chloride
f. Total Organic Carbon
g. Nitrate Nitrogen
h. Total Kjeldahl Nitrogen
i. Water elevation in feet above Mean Sea Level
j. Settleable Solids, ml/l/hr
k. Turbidity, NTU
l. Chemical Oxygen Demand
m. EPA Method 624, identifying all peaks greater than laboratory reporting limits
n. EPA Method 625, identifying all peaks greater than laboratory reporting limits
o. EPA Method 608, identifying all peaks greater than laboratory reporting limits
p. The following metals:

Arsenic	Cadmium	Total Chromium
Copper	Cyanide	Lead
Mercury	Nickel	Silver
Zinc		

D. SCHEDULE OF SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B, and the requirements in Article 5 of Chapter 15.

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger, and shall be retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

1. Identity of sample and sample station number.

2. Date and time of sampling.

3. Date and time that analyses are started and completed, and name of the personnel performing the analyses.

4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used. A reference to a specific section of a reference required in Part A, Section B is satisfactory.

5. Calculation of results.

6. Results of analyses, and detection limits for each analyses.

F. REPORTS TO BE FILED WITH THE BOARD

1. Written self-monitoring reports shall be filed by the 15th day of the month following the report period. In addition an annual report shall be filed as indicated in F.3. The reports shall be comprised of the following:

   a. Letter of Transmittal

      A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations, such as, operation and/or facilities modifications. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

   b. Each monitoring report shall include a compliance evaluation summary sheet. This sheet shall contain:

      1) The sample mean and the sample variance for all sample sets taken from all compliance points, and shall determine if the difference between the mean of each sample set and the water quality protection standard is significant at the 0.05 level using Cochran's Approximation to the Behrens-Fisher Student's t-test as described in Appendix II of Chapter 15. The discharger may propose an alternative statistical procedure to be used in making this determination pursuant to Section 2555(h)(3) of Chapter 15. If a statistically significant difference is found this shall be reported as a suspected requirement violation in the letter of transmittal.

      2) A graphic description of the velocity and direction of groundwater flow under/around the waste management unit, based upon the past and present water level elevations and pertinent visual observations.

3) The method and time of water level measurement, the type of pump used for purging, pump placement in the well; method of purging, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of the pH, temperature conductivity and turbidity testing, well recovery time, and method of disposing of the purge water.

4) Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations.

c. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.

d. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board.

1) The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review.

2) In addition to the results of the analyses, laboratory quality control/quality assurance (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 80%; the results of equipment and method blanks; the results of spiked and surrogote samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.

e. An evaluation of the effectiveness of the leachate monitoring/ control facilities.

f. A summary and certification of completion of all standard observations for the waste management unit, the perimeter of the waste management unit, and the receiving waters.

g. The quantity and types of wastes disposed of during the past quarter, and the locations of the disposal operations.

2. CONTINGENCY REPORTING

A. A report shall be made by telephone of any seepage from the disposal area immediately after it is discovered. A written report shall be filed with the Board within five days. This report shall contain the following information:

1) a map showing the location(s) of discharge;
2) approximate flow rate;
3) nature of effects; i.e. all pertinent observations and analyses; and
4) corrective measures underway or proposed.

B. A report shall be made in writing to the Board within seven days if an unprecedented statistically significant difference is found between a self-monitoring sample set and a WQPS. Notification shall indicate what WQPS(s) have been exceeded. The discharger shall immediately resample and analyze another sample set from the compliance point(s) where this difference has been found.

C. If resampling and analysis confirms the earlier finding of a statistically significant difference between self-monitoring results and WQPS(s) the discharger must submit to the Board within 90 days an amended Report of Waste Discharge for establishment of a verification monitoring program meeting the requirements of Section 2557 of Chapter 15. This submittal shall include the information required in Section 2556(b)(2) of Chapter 15.

D. The discharger must notify the Board within seven days if the verification monitoring program finds a statistically significant difference between samples from the verification monitoring program point of compliance and the WQPS(s).

E. If such a difference or differences are found by the verification monitoring program, it will be concluded that the discharger is out of compliance with this Order. In this event the discharger shall submit within 180 days an amended Report of Waste Discharge requesting authorization to establish a corrective action program meeting the requirements of Section 2558 of Chapter 15. This submittal shall include the information required in Section 2557(g)(3) of Chapter 15.

3. By July 31 of each year the discharger shall submit an annual report to the Board which covers the previous 12 months. This report shall contain:

a. Tabular and graphical summaries of the monitoring data obtained during the previous year.

b. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements.

c. A map showing the area, if any, in which filling has been completed during the previous calendar year.

d. A written summary of the groundwater analyses indicating any change in the quality of the groundwater.

e. An evaluation of the effectiveness of the leachate monitoring/ control facilities.

4. A boring log shall be submitted for each sampling well established for this monitoring program, as well as a report of inspection or certification that each well has been constructed in accordance with the construction standards of the Department of Water Resources. These shall be submitted within 30 days after well installation.

Part B

1. DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

A. WASTE MONITORING

1. Record the total volume and weight of refuse in cubic yards and tons disposed at the site during the month. Report this information quarterly.

2. Record the volume of fill completed, in cubic yards, showing locations and dimensions on a sketch or map. Report this information quarterly.

B. ON-SITE OBSERVATIONS

STATION	DESCRIPTION	OBSERVATIONS	FREQUENCY
V-1 thru V-'n'	Located on the waste disposal area as delineated by a 500 foot grid network.	Standard observations for the waste management unit.	Weekly
P-1 thru P-'n' (perimeter)	Located at equidistant intervals not exceeding 1000 feet around the perimeter of the waste management unit.	Standard observations for the perimeter.	Weekly

C. GROUND WATER MONITORING

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
G3, G4, G5, G6, G7, G8, G10,G11,G15, LG1,LG2	Ground water monitoring wells, as shown on the attached site map.	Standard analysis other than "j".	Once per quarter.

D. SURFACE WATER MONITORING

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
SW1	Surface water sampling location at the "tributary creek", as shown on the attached site map.	Standard analysis other than "j".	Once per quarter.

E. LEACHATE MONITORING

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
LW1	Leachate collection sump, as shown on the attached site map	Depth of leachate built-up in the sump, and volume removed.	Once each week and at time of removal.
		Standard analysis other than "j"	once per quarter

F. SEEPAGE MONITORING

STATION	DESCRIPTION	OBSERVATION/ ANALYSIS	FREQUENCY
S-1 thru S-'n' (seepage)	At any point(s) at which seepage is found occurring from the waste management unit.	Standard observations for the perimeter, and standard analysis other than "i".	Daily until remedial action is taken and seepage ceases.
R-001 (receiving waters, upstream)	Located in receiving waters 200 feet upstream from the upper-most point of seepage discharge(s).	Standard observation for receiving waters and standard analysis other than "i".	Daily, during a seepage event.

R-002 (receiving waters, downstream)	Located in receiving waters 200 feet downstream of seepage discharge(s).	Same as receiving waters upstream.	Daily during a seepage event.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 90-139.

2. Is effective on the date shown below.

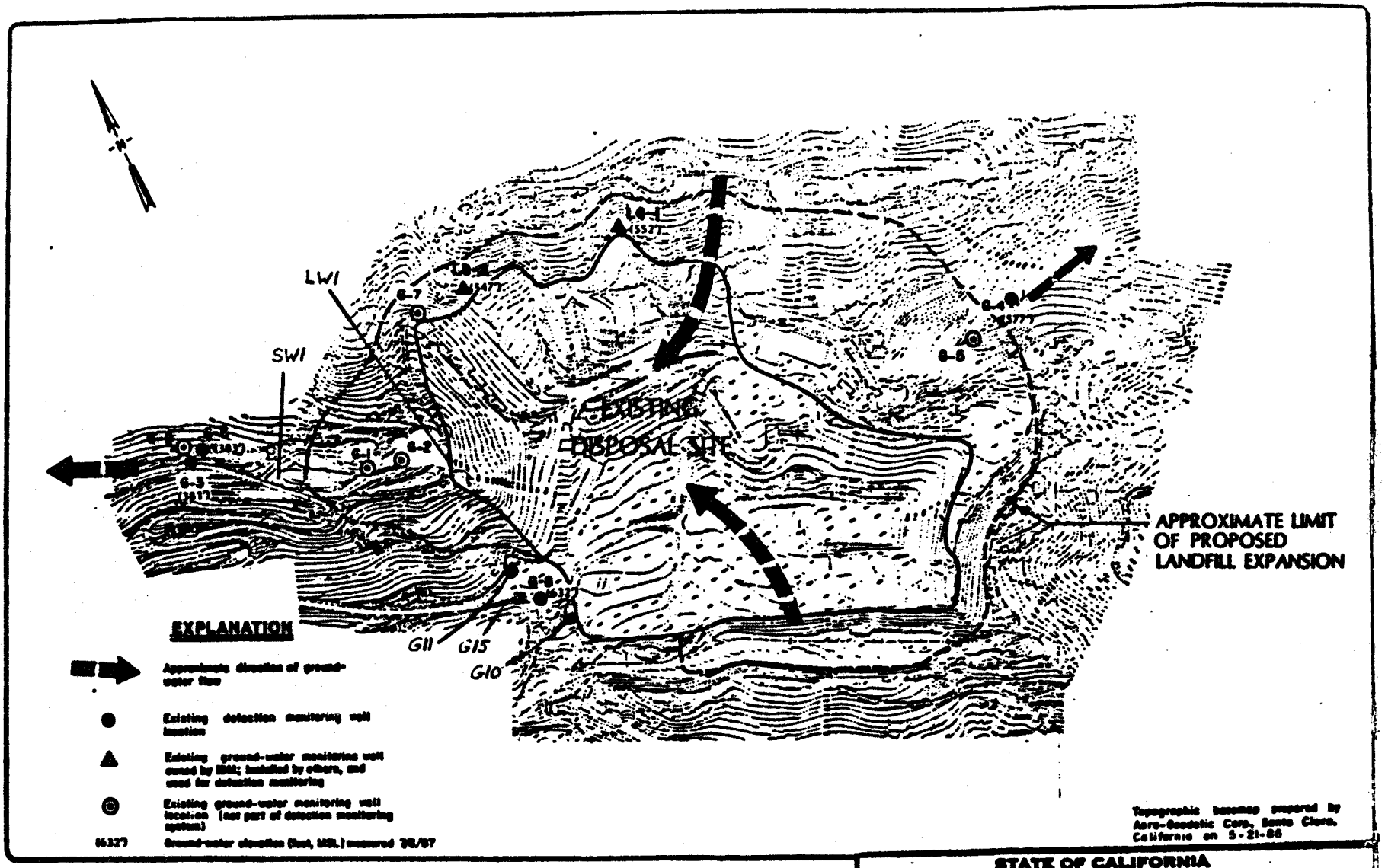
3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer.

Steven R. Ritchie

Executive Officer

Date Ordered
October 17, 1990

Attachment: Site Map



STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF MONITORING PROGRAM
MONITORING POINT LOCATION MAP
GUADALUPE LANDFILL
SAN JOSE, SANTA CLARA CO.

DRAWN BY: WBH	DATE: 9/10/90	DRWG NO. 2