CALIFORNIA WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER No. 96-040

WASTE DISCHARGE REQUIREMENTS
AND RECISION OF ORDER NO. 88-27 FOR:

THE CITY OF MOUNTAIN VIEW
SHORELINE REGIONAL PARK (544-ACRE SITE), VISTA AND CRITTENDEN SITES, CLASS III SOLID WASTE DISPOSAL SITE
MOUNTAIN VIEW, SANTA CLARA COUNTY

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

1. The City of Mountain View (hereinafter called the discharger) owns and operates an inactive Class III Solid Waste Disposal Site known as the Shoreline Regional Park (formerly called the Mountain View Landfill). The Solid Waste Disposal Site is composed of the 544-Acre Site containing approximately 350 landfilled acres, the Vista Site containing 84 landfilled acres, and the Crittenden Site containing 27 landfilled acres (hereinafter referred to collectively as the LANDFILL). The LANDFILL is located within the City of Mountain View adjacent to areas of salt evaporation ponds along San Francisco Bay.

PURPOSE OF ORDER UPDATE:

2. The primary objectives of this Order are to revise the landfill's groundwater, surface water and leachate monitoring program, and to bring the site into full compliance with the appropriate requirements of Article 5, Chapter 15, Title 23 of the California Code of Regulations. Additionally, this Order requires the discharger to incorporate the requirements of the General Industrial Stormwater Runoff program and to document if the 544 acre parcel final cover construction is in compliance with the requirements of Order No. 78-11 as amended by Order Nos. 81-26 and 88-27. The discharger is also required to establish an inward gradient or single point (s) of extraction of groundwater to prevent a release of leachate beyond the point of compliance

OWNERS & OPERATORS:

3. The City of Mountain View is the present owner of the LANDFILL. Prior to the acquisition of the landfill by the City in mid-1984, the Crittenden parcel was owned and operated by the Ferrari Brothers. Laidlaw Waste System, Inc. operated the 544-

Acre parcel beginning in 1970. The name of Laidlaw Waste System Incorporation has changed several times since the company started operating the landfill in 1970. The original name was Easley and Brassey Corporation. In 1980, Easley and Brassey became Genstar, and in 1986 Genstar became Laidlaw.

SITE DESCRIPTION:

4. The LANDFILL is located in the northern part of the City of Mountain View, Santa Clara County, California. The LANDFILL is bounded on the north by Cargill Salt Company's salt evaporation ponds, on the south by Amphitheater Parkway and Crittenden Lane, on the east by Stevens Creek, and on the west by Garcia Avenue as shown in Figure 1 which is hereby incorporated as part of this order.

5. The landfill covers 698 acres and consisted of three main parcels: the 544-acre parcel (Shoreline Regional Park), the Crittenden (formerly the Ferrari Parcel), the Vista parcel (formerly the 150-acre parcel).

6. **The 544-acre parcel (Shoreline Regional Park):** Landfilling at this parcel apparently began in the 1930s, but no records are available to describe the early waste disposal operations at the landfill. The City of Mountain View acquired the 544-acre parcel in 1970, and operated it as a municipal landfill from 1970 to 1981. The 544-acre parcel is divided into 13 separate waste disposal cells covering about 544 acres.

7. **Vista parcel (150-acre parcel):** This parcel was formerly called the 150-acre parcel. This parcel covers about 150 acres, lies to the south of the 544 acre parcel, and is separated from it by a PG&E Easement on the north and Permanente Creek on the west. The City of San Francisco bought this parcel for the City of Mountain View as a part of an agreement that provided for disposal of San Francisco municipal wastes until 1983. Operation of the municipal landfill at this parcel began in 1980. The Shoreline Amphitheater and its associated parking lots have been developed on the northeast portion of this parcel.

8. **Crittenden parcel (Ferrari Parcel):** This parcel was formerly called the Ferrari parcel. It covers about 50 acres and lies to the south of the 544 acre parcel and to the east of Vista parcel. The Crittenden parcel was operated as a landfill by Ferrari Brothers in 1968 and has accepted demolition debris and municipal waste. The City acquired the Crittenden parcel in 1984 and used it as a sanitary landfill from April 27 to November 6, 1987 and from April 28 to May 3, 1988.

WASTE STREAM DISPOSAL HISTORY:

9. The LANDFILL is a class III solid waste facility and has received approximately 19,000,000 cubic yards of non-hazardous solid waste from 1971 through 1993. The waste principally was of residential and commercial origin. The City of Mountain View began operating the landfill at the 544 acre parcel in 1970, accepting wastes from the Cities of Mountain View and San Francisco under a 5 year waste disposal agreement. The waste disposal agreement with San Francisco was renewed in 1975 for an eight year period ending in 1983. In 1976, the 544-acre parcel and the Vista parcel were reportedly receiving approximately 2,000 tons of waste per day on a five day per week basis of which an average of 1, 868 tons of waste came from San Francisco. In addition, the site was also receiving 200 tons per day of digested sewage sludge on a seven day per week basis. The discharger placed approximately 30,000 cubic yards of sludge over a 162-acre area of the landfill from September 1986 to January 1987.

SITE CONSTRUCTION HISTORY:

1 0. Most of waste disposal areas at the 544-acre and Vista parcels were excavated prior to placement of waste. Typically, a landfill cell was excavated to the desired depth and suitable soil from the excavation was stockpiled for use as landfill cover or for other grading and construction purposes. The excavations were dewatered by a perimeter ditch that was installed approximately 5-foot deeper than the excavation.

11. **The 544-Acre Parcel:** During the first year of refuse placement operation, engineered liners were not routinely constructed at the 544-acre parcel. It was thought that the low-permeability native soil was sufficient to contain the wastes. The native soil in the parcels were examined by a consulting inspector for Cooper Clark Engineers or by the City resident Engineer for suitability as natural liner material. These inspections usually included shallow borings to determine the nature and thickness of low-permeability silts and clays underlying the excavation. If 5 feet or more of silt and clay was present, the waste was placed directly on the native soil without constructing an engineered clay liner. Where permeable sand and/or gravel was encountered at the bottom of the cell, a 5-foot thick recompacted clay layer was constructed to seal off the permeable material. Additional recompacted clay was placed as needed to form a 5-foot thickness of low permeability materials where a 5-foot thickness was not present. This procedure was eventually suspended and 5-foot recompacted clay liners were routinely placed over the entire cell bottom and sides.

12. A series of dikes have been constructed at the parcel to contain the waste in the cells and to isolate it from the surrounding surface water bodies. During construction, dewatering of cells was accomplished by pumping collected water out of a perimeter

trench. The trench was excavated around the perimeter of refuse cell, and the trench excavation was advanced as cell excavation progressed.

13. **Vista Parcel (150-acre parcel)** : The Vista parcel was excavated and dewatered in much the same manner as the 544-acre parcel. The bottom of the landfill consists of three areas each sloping to a low centerline. The entire landfill was designed to be lined with minimum of 5 feet of recompacted native clay. The dewatering trenches around this landfill were converted to French drains and covered over by the liner. The drains slope toward a collection sump at the southwest corner of the landfill where the water was pumped out and discharged to Permanente Creek. Operation of this dewatering system was discontinued in 1990.

14. **Crittenden Parcel (Ferrari Parcel):** At the time this parcel was acquired by the City, part of the area had been excavated to approximately 50 feet Mountain View Vertical Datum (MVD). According to the 1988 Preliminary SWAT report, 5 foot of clay liners were constructed in areas excavated after mid-1984. Municipal refuse was also placed on top of some areas that had been operated by the Ferrari Bothers; engineered liners may not exist beneath those areas. Drilling and sampling in July 1988 encountered apparent native soils beneath refuse in two locations where subgrade excavation and refuse placement was conducted by the Ferrari Brothers.

15 The Shoreline Amphitheater has been constructed at the landfill site immediately west of North Shoreline Boulevard on the easterly portion of the Vista parcel and adjacent to the 544-acre Parcel. A subsurface cut-off wall (2.5 feet wide and extends to a depth of approximately 55 feet below ground surface) has been constructed around the Amphitheater to reduce the subsurface migration of groundwater and leachate into the Amphitheater. No refuse was placed inside the area protected by the cutoff wall. A dewatering system within the cut-off wall collects any seepage through the wall and discharges to Permanente Creek.

SITE CLOSURE DETAILS:

16. The 544 acre parcel was to be closed in conformance with Board adopted requirements, by July 1, 1983, as required by Order No. 78-11, as amended by Order Nos. 81-26, 88-027 and 88-099. The discharger was to have submitted by August 1, 1988, a report prepared by a certified engineering geologist or registered engineer documenting that full compliance had been achieved according to the closure plan specifications. The discharger has not satisfactorily shown that the landfill was properly closed.

17. The closure plans for the Vista and Crittenden parcels have been approved by this Board and by the Integrated Waste Management Board.

LAND USE:

18. The 544-acre parcel has been converted into a park and golf course. The official name of the park is "Shoreline at Mountain View". The park consists of non-irrigated open space vegetated with grass and occasional bushes, and irrigated landscaped areas with grass, trees, and other plantings. Large portions of the park, including several tidal flats, have been designated as wildlife refuges.

19. A sailing lake has been constructed on the northwestern portion of Shoreline park, with several small ponds along the golf course. The sailing lakes are supplied with salt water pumped from Charleston Slough. The golf course consists of two separate nine-hole playing areas, a driving range and a clubhouse. The golf course is regularly irrigated. An overflow parking area for the Shoreline Amphitheater is located on eastern portion of the 544-acre parcel. Other improvements within Shoreline at Mountain View included a boathouse, clubhouse and restaurant and Rengstorff House constructed on non landfill areas.

20. The Shoreline Amphitheater is located south of the 544-acre parcel and on the easterly portion of the Vista parcel. Both the Vista and Crittenden landfill areas are designated as open space with trails and some landscaping. To the north of the 544 acre parcel are two large shallow evaporation basins operated by the Cargill Salt Company.

REGIONAL GEOLOGIC SETTING:

21. The LANDFILL is located within the Coast Ranges geomorphic province along the southwest side of San Francisco Bay. The Bay is flanked on the west by the Santa Cruz Mountains and on the east by the Diablo Range. Three major northwest-trending faults lie on either side of the Bay: The San Andreas Fault to the west, and the Hayward and Calaveras Faults to the east. Tectonic activity along these faults, and associated down warping of the area between them, are responsible for the formation of the Bay.

22. At lower elevations within the Bay area, the well-consolidated Mesozoic rocks that crop out in the Santa Cruz Mountains and the Diablo Range have been buried under thick deposits of younger alluvium that interfinger with marine Bay deposits. Within the Mountain View area, the alluvial deposits are divided into the lower Plio-Pleistocene Santa Clara Formation and Quaternary fluvial and interfluvial deposits. Lithologically, the two alluvial units are nearly identical and cannot be distinguished

in boring logs from the site.

23. The LANDFILL site is underlain by interfingering fine and coarse-grained alluvial deposits and more extensive marine silts and clays. The coarser alluvial sands, gravel, and silty and clayey sands and gravel tend to occur as lenses within finer-grained silts and clays. The coarse-grained sediments were deposited by steams flowing northward into the San Francisco Bay; thus lenses of these stream-beds deposits tend to be elongated along a north-south axis region wise as shown in Figure 2.

24. A laterally extensive, thin layer of black, peaty, Young Bay Mud is present beneath the northern half of the landfill site. This recent marsh deposit is thickest at the northern boundary of the landfill site and pinches out at its southernmost edge. At some locations, the Young Bay Mud has been removed during the construction of dike and landfill cells.

25. Marine and nonmarine silts and clays comprise most of the stratigraphic column beneath the LANDFILL. The interfingered and gradational contacts between different lithologies make it difficult to distinguish between marine and nonmarine silts and clays. A thick sequence of silts and clays occurs roughly between elevations- 80 MVD and -150 to -180 MVD. This sequence contains very little coarse-grained material, and probably represents along interval of maine depositions.

26. Within the LANDFILL the relatively recent laterally continuous and unconsolidated San Francisco Bay Mud reportedly underlies approximately the northern one-half of the property at depths between 0 and -10 feet below ground surface. Fluvial and interfluvial deposits underlying the Bay Mud consists of fine-grained sand, silt and organic and silty clays with local lenses and channels of coarse-grained sands and gravel. These alluvial sediments are interpreted to have been deposited in a continental environmental by ancestral Steven's Creek. Depth to bedrock at the site is estimated to be on the order of 1500 feet.

27. The site is located in a seismically active area approximately midway between the San Andreas and Hayward fault systems. The site lies approximately 12 miles east of the San Andreas fault, 10 miles southwest of the Hayward fault, and 17 miles west of the Calaveras fault. A fault is suspected to underlie the site at a depth of 1,000 feet. The discharger has indicated that there is no geologic evidence that this fault has offset sediments of Holocene age near the surface. The attached Figure No. 3 shows the location of the Shoreline at Mountain View with respect the regional faulting system,

REGIONAL HYDROGEOLOGIC SETTING:

28. Groundwater within the vicinity of the LANDFILL is found within three water bearing zones designated as the upper, intermediate and lower. Each of these zones are separated from the other by an aquitard.

    a. The Upper Aquifer is an unconfined water bearing zone consisting of fluvial sands, silts and clays, with gravel lenses and channels. The depth of this aquifer below the LANDFILL varies form -35 feet in the south of the LANDFILL to -70 feet within the immediate vicinity of the landfill . An aquitard known as "AB" aquitard, separates the Upper an Intermediate water bearing zones in the area immediately north of Highway 101 (CH_2M Hill, 1988). In this area, the unit is on the order of five feet thick and extends from a depth of approximately -40 to -45 feet. In the immediate vicinity of the LANDFILL, the Upper and Intermediate water bearing zones appear to constitute one hydrologic unit.

    b. The Intermediate Aquifer is considered a semi-confined unit found at depths between -45 to -70 feet. In general, the head differential between the Upper and Intermediate water bearing zones is reported to be on the order of one foot. In areas of industrial pumping from the Upper Aquifer, the gradient between the two units is expected to be upward. Nearer the landfill where dewatering operations are conducted to depths greater than -45 feet, the gradient between the Upper and Intermediate Aquifers is expected to be downward.

    c. The Lower aquifer at the site is a confined water bearing zone. A 70 feet thick regional aquitard confines the lower water bearing zone. The lower bearing zone is interpreted to have an approximate 10-feet upward gradient relative to overlying units.

29. Groundwater below the LANDFILL typically flows from south to north toward the Bay and is found at depths from 5 to 15 feet below the existing ground surface. The most dominant hydrologic features in the vicinity of the landfills are the de-watering sump at the Crittenden Landfill and the slurry wall groundwater barrier and de-watering sump at the Shoreline Amphitheater. The influences of these two systems overlap and modify the local groundwater flow patterns by reducing groundwater levels in the area to depths as great as 60 feet below ground surface and inducing radial inward flow from as far away as approximately one mile.

30. Surface water bodies in the vicinity of the LANDFILL include two tidal creeks

(Permanente and Stevens Creeks), two salt evaporation ponds, three tidal marshes, four artificial golf-course ponds, one artificial sailing lake and a number of tributary drainage. The surface water bodies are separated from refuse by levees that were reportedly constructed to include a minimum of five feet thick clay liner.

31. There are four small clay-lined ponds located at the 544-acre site within Shoreline at Mountain View. There is no refuse beneath these ponds which are filled with water form the City's supply system. In addition a 50 acre salt water lake, known as the Small Boat Lake exists at the north west corner of the landfill, adjacent to the Coast Casey Foreby. At least two thirds of the lake is surrounded by landfill; however, there is no refuse beneath the lake. Discharge from this lake into San Francisco Bay is regulated by Board Order No.93-120, NPDES Permit No. CA0038563.

32. The beneficial use of the shallow groundwater (elevation MSL to approximately 40 feet below grade) found in the surficial alluvial deposits at and around the landfill is to recharge the surface waters of South Francisco Bay and contiguous waters. The beneficial uses of South San Francisco Bay and contiguous waters are as follows:

    a. Wildlife Habitat Navigation
    b. Water contact recreation
    c. Non-contact water recreation
    d. Commercial and sport fishing
    e. Preservation of rare and endangered species
    f. Estuarine habitat
    g. Fish migration and spawning

33. The present and potential beneficial uses of the deeper groundwater (drinking water bearing zone which is located at elevation 150 feet below MSL) are as follows:

    a. Domestic and municipal water supply
    b. Industrial process water supply
    c. Industrial service supply
    d. Agricultural supply

34. Groundwater wells within a mile of the site are located in all groundwater zones and are primarily used for monitoring water quality.

35. Surface runoff from the site discharges into Permanente Creek and Stevens Creek, salt ponds along the northern boundary of the site, Coast Casey Forebay, Shoreline

Lake, and the Mountain View Tidal Marsh.

GROUNDWATER MONITORING NETWORK:

36. An existing network of 18 shallow groundwater monitoring wells (SMW1, SMW2, SMW3, SMW4, SMW-5, SMW19, SMW12, SMW-13, SMW15, SMW16, SMW17, SMW18, SMW19, SMW20, SMW22, SMW25, SMW-26, and CH-1), 10 (ten) Piezometers (SMW6, SMW7 SMW8, MSW9, SMW10, SMW11, SMW14, SMW20, SMW23, SMW24) , 7 surface water monitoring points (SW1, SW2, SW3, SW4, SW5, SW6 and SW7) and 26 leachate risers (GR1, GR2, GR3, GR4, GR5A, GR6, GR7, GR8, GR9, GR10, GR11,GR12, GR13, GR14, GR15, GR16, GR17A, GR18, GR20, GR21, GR22, GR23, GR24, GR25, F1 and F2) monitor groundwater, surface water and leachate within the LANDFILL as shown on Figure 1 of Part B of the facility's Discharge Monitoring Program. In addition, to the existing groundwater monitoring points, the City has proposed to install two additional upgradient groundwater monitoring wells (SMW 27 and SMW 28). For purpose of water quality compliance issues, the LANDFILL is considered as one unit. The LANDFILL's monitoring networks will consist of a series of up and down gradient wells under pumping and non-pumping conditions as identified in Tables 1 & 1A of the facility's discharge monitoring program.

37. As per June 1995 Detection Monitoring Report, the upper and intermediate aquifers within the area of the landfill are considered to be a single unit and are not differentiable. Therefore, no monitoring points exist at the LANDFILL to monitor the intermediate aquifer and only the shallow groundwater unit is monitored for compliance issues. The lower aquifer which is used as a drinking water source, is a confined aquifer and has a 10-feet total head relative to overlying units. Therefore, the potential for migration of contaminants from the landfill downward is reduced.

38. A number of pump and treat extraction systems have been constructed in proximity to the LANDFILL. These include systems operated by Teledyne Semiconductor's and Spectra-Physics', Chevron/Arco, North Bay Extraction, and the NASA Ames Facility.

39. The shallow (10-30 feet below ground surface) and intermediate (40-70 feet below ground surface) groundwater zones upgradient of the landfill are monitored and contain volatile organic compounds (VOCs), primarily trichloroethane (TCE) and trans 1,2 dichloroethene (DCE). The plume of VOCs may originate form Teledyne Semiconductors', Spectra-Physics', and Montwoods' facilities located about one mile south of the landfill and upgradient with respect to groundwater flow.

40. Laboratory results recently obtained for the summer 1995 monitoring period recorded

the detection of a number of VOCs at four surface water monitoring points (SW-3, SW-5, SW-6, and SW-7) and eight background water monitoring points (SMW-2, SMW-13, SMW-15, SMW-16, SMW-17, SMW-19, SMW-20, and SMW-26). Of the sixteen VOCs recently detected, three were found at levels below trace concentration (below laboratory PQLs) and two were found at levels exceeding Federal and State drinking water standards. Geologic Associates, the dischargers consultant, believe that the detection of chlorinated organic compounds are mostly related to the upgradient plumes rather than the LANDFILL itself.

41. Federal Regulations [40 Code of Federal Regulations (CFR) Parts 122, 123, and 124] require specific categories of industrial activities, including landfills, to obtain a NPDES permit for storm water discharges. The State Water Resources Control Board has issued a General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES Permit No. CAS000001). This facility is subject to these requirements. Pursuant to the Stormwater Discharge Program, this facility is required to submit a Notice of Intent for coverage under the General Permit; to prepare and implement a monitoring program; and to submit an annual report. Compliance with the monitoring and reporting requirements of this Order are intended to assure compliance with the requirements of the General Permit.

CALIFORNIA ENVIRONMENTAL QUALITY ACT:

42. This action is exempt from the provisions of the California Environmental Quality Act pursuant to Section 15308, Title 14 of the California Code of Regulations.

43. Sanitary landfills could potentially impact groundwater if not properly designed maintain and/or operated. Groundwater can also be affected by water that percolates through waste materials and extracts or dissolves substances from it and carries them into the groundwater.

44. No solid waste has been disposed of at the LANDFILL since its closure to public in 1993. The Vista and Crittenden sites are considered inactive facilities. The closure status of 544-acre parcel is to be determined as a requirement of this order.

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

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

IT IS HEREBY ORDERED that the discharger, its agents, successors and assigns shall meet the applicable provisions contained in Division 3, Title 23, Chapter 15 of the California Code of Regulations, and Division 7 of California Water Code, and shall comply with the following:

A. PROHIBITIONS:

1. Wastes shall not be in contact with ponded water.

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

3. The Vista, Crittenden, and 544-acre parcels are inactive. Therefore, no additional wastes of any origin or type shall be allowed to be deposited or stored within or upon the LANDFILL.

4. 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. Adversely alter 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

The groundwater shall not be degraded as a result of the waste maintained at the facility.

B. SPECIFICATIONS

1. All reports pursuant to this Order shall be prepared under the supervision of a registered civil engineer, California registered geologist or certified engineering geologist.

2. The site shall be protected from any washout or erosion of wastes from inundation which could occur as a result of a 100-year 24-hour precipitation event, or as the result of flooding with a return frequency of 100 years.

3. The discharger shall assure that the foundation of the site, the refuse fill, and the structures which control leachate, surface drainage, erosion and gas for this site are constructed and maintained to withstand conditions generated during the maximum probable earthquake.

4. The discharger shall maintain and monitor the waste unit so as not to cause a statistically significant difference to exist between water quality parameters at the compliance point and Water Quality Protection Standards as defined in Section 2550.2 of Article 5. The point of compliance as per Section 2550.5, Article 5 of Chapter 15 is a vertical surface located at the hydraulically downgradient limit of the waste management unit that extends through the uppermost aquifer underlying the unit.

5. In the event of a release of a constituent of concern beyond the Point of Compliance, the site will begin a Compliance Period pursuant to Section 2550.6(a) of Chapter 15. During the Compliance Period, the discharger shall perform an Evaluation Monitoring Program and a Corrective Action Program.

6. The discharger shall install any reasonable additional groundwater and leachate monitoring devices required to fulfill the terms of any Discharge Monitoring Program issued by the Executive Officer.

7. Methane and other landfill gases shall be adequately vented, removed from the landfill units, or otherwise controlled to minimize the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water due to

migration through the vadose (unsaturated) zone in accordance with applicable regulatory requirements.

8. 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 as provided for by the performance standards adopted by the California Integrated Waste Management Board.

9. The discharger shall provide and maintain a minimum of two permanent surveyed monuments near the landfill from which the location and elevation of wastes, containment structures, and monitoring facilities can be determined throughout the post-closure and maintenance periods. These monuments shall be installed by a licensed land surveyor or registered civil engineer.

10. The discharger is required to prevent the release of landfill leachate beyond the Point of Compliance. The discharger has the options to achieve containment either by extracting leachate and/or by single point(s) extraction of groundwater.

11. The discharger must not create a condition to cause migration of the upgradient plume toward the landfill such to interfere with the cleanup activities of the facilities noted in Findings 37 and 38.

C. PROVISIONS:

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

2. The discharger shall submit a detailed Post Earthquake Inspection and Corrective Action Plan acceptable to the Executive Officer to be implemented in the event of any earthquake generating ground shaking of Richter Magnitude 7 or greater at or within 30 miles of 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 72 hours of the occurrence of the earthquake. Immediately after an earthquake event causing damage to the landfill structures, the corrective action plan shall be implemented and this Board shall be notified of any damage.

NOTIFICATION:	**IMMEDIATELY**
REPORT DUE DATE:	**WITHIN THREE MONTHS OF ADOPTION OF THIS ORDER**

3. The discharger shall submit a Contingency Plan to be instituted in the event of a leak or spill from the leachate facilities. The discharger shall give immediate notification to the San Francisco Bay Regional Water Quality Control Board, the Local Enforcement Agency (LEA), the California Department of Toxic Substances Control and Bay Area Air Management District. The discharger shall initiate its corrective action plan to stop and contain the migration of pollutants from the site.

NOTIFICATION:	**IMMEDIATELY**
REPORT DUE DATE:	**WITHIN 7 DAYS AFTER THE INCIDENT**

4. The reports pursuant to these Provisions shall be prepared under the supervision of a registered civil engineer, registered geologist, or California certified engineering geologist.

5. The discharger shall comply with the Self Monitoring Program which is attached to and made part of this order and/or any amendments thereafter.

6. The discharger shall immediately notify the 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 precipitation and drainage control structures.

NOTIFICATION:	**IMMEDIATELY**
REPORT DUE DATE:	**WITHIN 7 DAYS AFTER THE INCIDENT**

7. The discharger shall prepare, implement and submit Storm Water Pollution Prevention Plans in accordance with requirements specified in State Water Resources Control Board General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES Permit No. CAS000001).

REPORT DUE DATE: NOVEMBER 1, 1996

8. In the event of settlement which threatens to allow ponding of water or exposure of waste, the discharger shall regrade or install drainage system at the settled portions of the landfill's cap.

9. In the event of release of leachate from the waste unit into the environment, the

discharger shall develop and implement groundwater/leachate management plan in accordance with Specification B-10 of this Order. The implementation of this plan shall prevent leachate migration offsite.

REPORT DUE DATE: WITHIN 60 DAYS FROM EVENT

10. The discharger shall maintain a copy of this Order at its office with the environmental compliance staff who are responsible for related operation of this site.

11. This Board considers the property owners and site operators to have continuing responsibility for correcting any problems which arise in the future as a result of this waste discharge or related operations during the post-closure maintenance period.

12. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation of this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. (Refer to Standard Provisions referenced above). The request must contain the requesting entity's full legal name, the address and telephone number of the persons responsible for contract with the Board and a statement. The statement shall comply with the signatory paragraph described in Standard Provisions and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code.

13. The discharger shall permit the Board or its authorized representative, upon presentation of credentials:

    a. Immediate 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 or by any other California State Agency.

    d. Sampling of any discharge or ground water governed by this Order.

14. 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 or local laws; and do not authorize the discharge of wastes without appropriate permits from other agencies or organizations.

15. 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.

16. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications and Provisions of this Order, shall also be provided to the Environmental Health Services Division of Santa Clara Country.

17. This Order rescinds WDR Order No. 88-27.

18. The discharger shall analyze groundwater, surface water and leachate samples for the parameters as presented in Table 2 of the facility's Discharge Monitoring Program.

19. The discharger must reconstruct those portions of the 544 acre parcel's final cap which have been identified deficient pursuant to the survey required by Provision C-26 of this Order. Those portions identified must be constructed in conformance with Order No. 78-11 as amended by Order No. 81-26 and 88-027.

REPORT DUE DATE: OCTOBER 15, 1997

20. Task 1: Installation of two additional Groundwater Wells.

The discharger is required to submit a technical report acceptable to the Executive Officer that documents that the groundwater monitoring wells SMW-27 and SMW-28 as listed in Table No. 1 Part B of the attached Self Monitoring Program have been installed.

REPORT DUE DATE: SEPTEMBER 1, 1996

21. The Regional Board shall be notified immediately of any failure occurring in the waste management unit. Any failure which threatens the integrity of containment feature or the landfill shall be promptly corrected after approval of the method and schedule by the Executive Officer.

NOTIFICATION: IMMEDIATELY
REPORT DUE DATE: WITHIN 7 DAYS AFTER THE

INCIDENT

22. The discharger shall prevent the release of landfill leachate beyond the point of compliance as identified under the requirements of Specification B-10 of this Order.

23. The discharger shall maintain the facility so as to prevent a statistically significant increase in water quality parameters at the point of compliance as provided in Section 2550.5. According to Sections 2550.2 and 2550.3 of Chapter 15, the discharger is also required to establish a Water Quality Protection Standards (WQPS) and a list of Constituents of Concern (COCs) . The discharger shall meet the following schedule in implementing the requirements of this Provision. The discharger shall monitor a minimum of four quarters (one year) for the parameters listed in Table 2. Based upon the results of the monitoring, the discharger shall propose a revised list of COC's and monitoring parameters in accordance with the requirements of this Order and Article 5 of Chapter 15. Within 15 months following the adoption of this Order, the discharger shall submit a monitoring program to include a statistical analysis method to the Board for approval by the Executive Officer. A non statistical method (e.g., concentration trend analysis and comparison to practical quantitation limits) will be utilized to evaluate the significance of groundwater data until the proposed statistical methods are approved by the Board.

REPORT DUE DATE: MAY 1, 1997

24. The discharger is required to evaluate and report on the effect of landscape irrigation on leachate level buildup and groundwater quality. This evaluation must consider: method of irrigation, volume of water (gallon) being applied per each irrigation event, and frequency of irrigation.

REPORT DUE DATE: JULY 1, 1997

25. The discharger is required to conduct a comprehensive investigations to determine whether detection of Volatile Organic Carbons (VOC) in the facility's groundwater monitoring networks are the result of landfill leakage, upgradient plume, or both sources. Under either condition, the discharger is required to submit a technical report, acceptable to the Executive Officer, presenting the results of the investigation. The report is to include a predetermined corrective action plan to be implemented if required.

REPORT DUE DATE: OCTOBER 1, 1997

26. Prepare a technical report, acceptable to the Executive Officer, providing the results

of a detailed engineering and geotechnical survey of the landfill cap of the 544 acre parcel to evaluate constructed cap compliance with the requirements of Order No. 78-11 as amended by Order Nos. 81-26 and 88-027.

REPORT DUE DATE: WITHIN 120 DAYS OF ADOPTION OF THIS ORDER

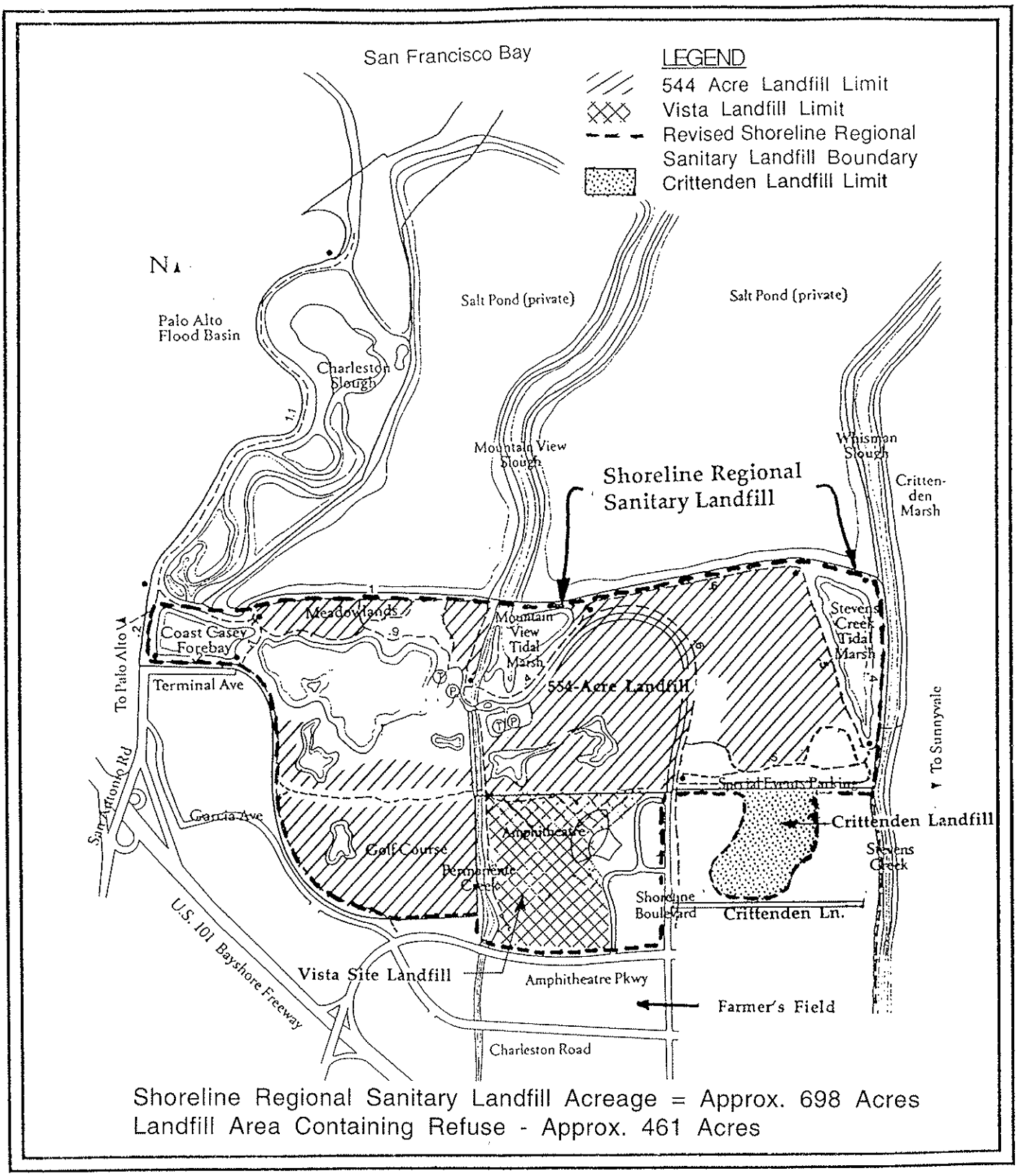
I, Loretta K. Barsamian Executive Officer, do hereby certify that the foregoing is a full, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on March 20, 1996.

Loretta K. Barsamian
Executive Officer

Attachments:

A. Figures:
   1. Site Location Map
   2. Regional Geologic Cross Sections
   3. Regional faulting system

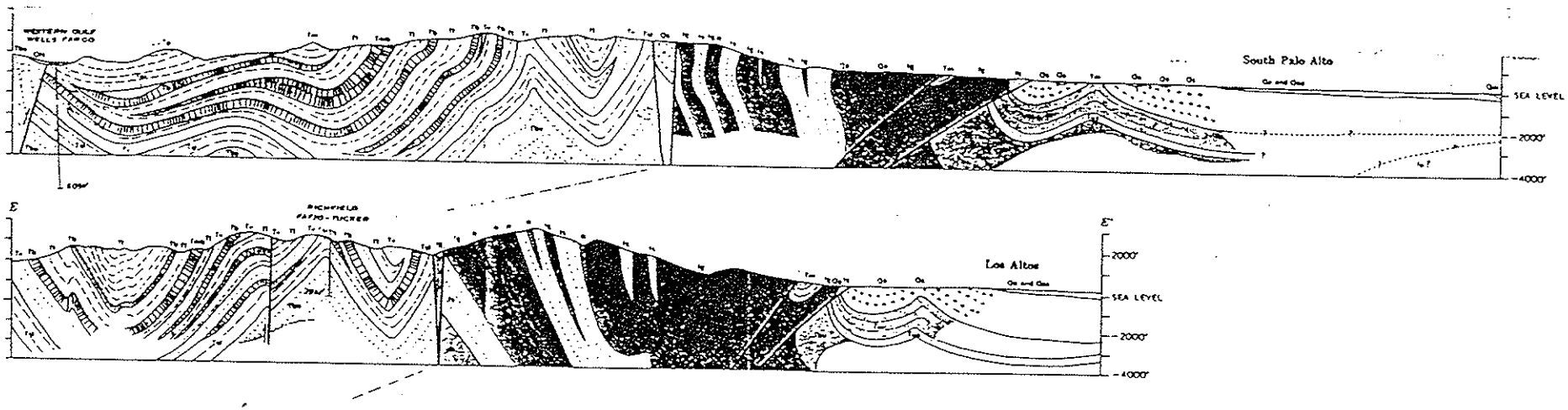
B. Discharge Monitoring Program



CITY OF MOUNTAIN VIEW

SOLID WASTE DISPOSAL SITE

FIGURE 1



NOTES 1 REGIONAL CROSS SECTIONS FROM "GEOLOGIC MAP AND SECTIONS OF THE PALO ALTO 15' QUADRANGLE, CALIFORNIA

2 SEE FIGURE 3-1 FOR LOCATIONS OF CROSS SECTIONS

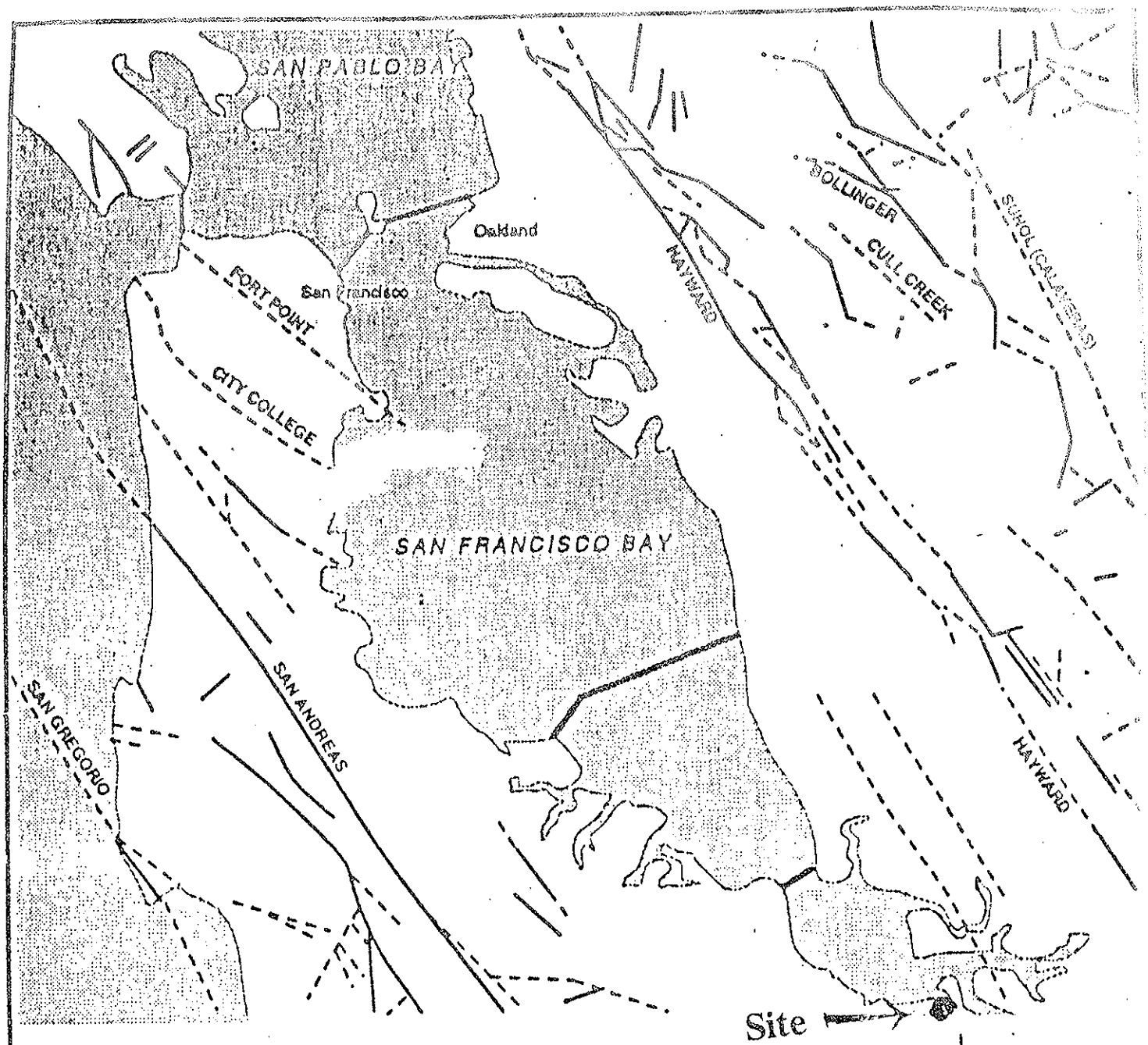
Figure 2

REGIONAL GEOLOGIC CROSS-SECTIONS

MOUNTAIN VIEW LANDFILL PRELIMINARY SWAT
MOUNTAIN VIEW, CA
AUGUST, 1988

SFO 26289 A0

HM HILL



LEGEND

OBSERVED FAULT

INFERRED FAULT

5 0 5

Approximate Scale (miles)

Based on Kahle and Goldman, "Geologic Map of San Francisco Bay Area," August 1966.

© 1992, by Kleinfelder, Inc.

KLEINFELDER	Regional Faulting System	Figure No. 3
DRAFTED BY: L. Sue DATE: 10-22-92		
CHECKED BY: G. Jett DATE: 10-23-92	PROJECT NUMBER 10-2196-03	

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

DISCHARGE MONITORING PROGRAM

FOR

SHORELINE REGIONAL PARK CLASS III WASTE DISPOSAL SITE
MOUNTAIN VIEW, SANTA CLARA COUNTY

ORDER NO. 96-040

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 Discharge Monitoring Program is issued in accordance with Provision C.5 of Regional Board Order No. 96-040.

The principal purposes of a discharge monitoring program 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 standards of performance, and toxicity standards,

(4) to assist the discharger in complying with the requirements of Article 5, Chapter 15 as revised July 1, 1991.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the most recent version of EPA Standard Methods 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 of California. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and he/she or their authorized representative 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. Receiving waters refers to any surface water which actually or potentially receives surface or groundwater which pass over, through, or under waste materials or

contaminated soils. In this case, the groundwater beneath and adjacent to the landfill areas and the surface runoff from the site are considered receiving waters.

3. 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 a 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 (SA) and measurements are listed on Table 2 (attached).

D. SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analyses, and observations in the following media:

1. Groundwater per Section 2550.7(b)

2. Surface water per Section 2550.7(c) and per the general requirements specified in Section 2550.7(e) of Article 5, Chapter 15 and
3. Vadose zone per Section 2550.7(d). This item is neither feasible nor applicable for this landfill.

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger or laboratory, 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 of analyses, and name of the personal performing the analyses.

4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used where applicable; or reference to standard EPA methods.

5. Calculation of results.

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

F. REPORTS TO BE FILED WITH THE BOARD

1. Written detection 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 below. The reports shall be comprised of the following:

a. Letter of Transmittal

A letter transmitting the essential points in each 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. 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. The summary shall contain:

1) 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. A statistical evaluation of the water quality monitoring data for all groundwater compliance points (As required under Part B.Table 1).

2) 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.

3) 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 qualification 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 and approval by the Executive Officer prior to use.

2) In addition to the results of the analyses, laboratory quality assurance/quality control (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; and explanation for any recovery rate that is outside of the normal range specified by the EPA for that method; the results of equipment and method blanks; the results of spiked and surrogate samples; the frequency of quality control analysis; and the name of the person(s) performing the analyses.

e. An evaluation of the effectiveness of the leachate monitoring or control facilities, which includes an evaluation of leachate buildup within the disposal units, a summary of leachate volumes removed from the units, and a discussion of the leachate disposal methods utilized. [This item will be in effect after the installation of a leachate collection and recovery system at the facility]

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. [Not applicable for this site]

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 thereafter. 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 of determining that a statistically significant increase occurred at a point of compliance (between a down gradient sample and a WQPS). Notification shall indicate what WQPS(s) has/have been exceeded. The discharger shall immediately re-sample at the compliance point where this difference has been found and reanalyze.

c. If re-sampling and analysis confirms the earlier finding of a statistically significant increase between monitoring results and WQPS(s), the discharger must submit to the Board an amended Report of Waste Discharge as specified in Section 2550.8(k)(5) for establishment of an Evaluation Monitoring Program (EMP) meeting the requirements of Section 2550.9 of Chapter 15.

d. Within 180 days of determining statistically significant evidence of a release, submit to the regional board an engineering feasibility study for a Corrective Action Program (CAP) necessary to meet the requirements of Section 2550.10. At a minimum, the feasibility study shall contain a detailed description of the corrective action measures that could be taken to achieve background concentrations for all constituents of concern.

3. REPORTING

By January 31 of each year, the discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:

a. Tabular and graphical summaries of the monitoring data obtained during the previous year; the report should be accompanied by a 5-1/4" or 3-1/2" computer data disk, MS-DOS ASCII format, tabulating the year's data.

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 written summary of the groundwater analyses indicating any change in the quality of the groundwater

d. An evaluation of the effectiveness of the leachate monitoring/control facilities, which includes an evaluation of leachate buildup within the disposal units, a summary of leachate volumes removed from the units, and a discussion of the leachate disposal methods utilized.

4. WELL LOGS

A boring log and a monitoring well construction log shall be submitted for each new 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. ON-SITE OBSERVATIONS - Report Semi-annually

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

A map showing visual and perimeter compliance points (V and P stations) shall be submitted by the discharger in the semi-annually monitoring report.

B. GROUNDWATER, LEACHATE AND SURFACE WATER MONITORING

Report Semi-annually

Groundwater, surface water, Leachate and seepage monitoring points shall be monitored as outlined below on Table No. 1 and Table No. 1A and shown on Figure No. 1 & Figure No. 2 (Attached).

During the wet season (October through April), estimate or calculate the volume of

storm water discharge from each outfall and collect and analyze samples of storm water discharge from two storm events during each wet season which produce significant storm water discharge as defined in State Water Resources Control Board Order No. 92-12-DWQ (General Permit for Storm Water Discharges). The samples must be analyzed for:

- pH, total suspended solids (TSS), specific conductance, and total organic carbon (TOC);

- Toxic chemicals and other pollutants that are likely to be present in storm water discharge in significant quantities.

TABLE 1
MONITORING POINTS FOR EACH MONITORING MEDIUM
NATURAL GROUNDWATER FLOW and/or NO PUMPING CONDITION

MONITORIN G MEDIA	MONITORING POINT	UP GRADIENT POINTS	DOWN GRADIENT COMPLIANCE POINTS
Surface water		SMW-6, SW-7,	SW-1, SW-2, SW-3, SW-4, SW-5
Groundwater		SMW12, SMW-13, SMW-15, SMW-16, SMW-17, SMW-20, SMW-25, SMW-26.	SMW1, SMW-2, SMW-3, SMW-4, SMW-18, SMW-22, SMW-27, SMW-28, CH-3, CH-4, CH-5
Piezometers	CH-1, CH-2, SMW-6, SMW-7, SMW-8, SMW-9, SMW-10, SMW-11, SMW-21, SMW-23, SMW-24, SMW-19, SMW-24, , SMW-14,	Not Applicable	Not Applicable
Leachate	GR1, GR2, GR3, GR4, GR5A, GR6, GR7, GR8, GR9, GR10, GR11,GR12, GR13, GR14, GR15, GR16, GR17A, GR18, GR19, GR20, GR21, GR22, GR23, GR24, GR25, F1 and F2	Not Applicable	Not Applicable
Seepage	S-1 through S-n		

TABLE 1A
MONITORING POINTS FOR EACH MONITORING MEDIUM
SINGLE POINT GROUNDWATER EXTRACTION CONDITION

MONITORING MEDIA	MONITORING POINT	UPGRADIENT POINTS	DOWN GRADIENT COMPLIANCE POINTS
Surface water		SMW-6, SW-7,	SW-1, SW-2, SW-3, SW-4, SW-5,
Groundwater		SMW-13, SMW-20, SMW-26, SMW-15, SMW-16, SMW-17, SMW-25, CH-05, SMW-28, CH-04, SMW-04, SMW-2, SMW-27	SMW-01, CH-03, SMW-03, SMW-22, SMW-18, SMW-12, and Crittenden Sum
Piezometers	SMW-05, SMW-06, SMW-07, SMW-08, SMW-09, SMW-10, SMW-11, SMW-14, SMW-19, SMW-21, SMW-23, SMW-23, CH-01	Not Applicable	Not Applicable
Leachate	GR1, GR2, GR3, GR4, GR5A, GR6, GR7, GR8, GR9, GR10, GR11,GR12, GR13, GR14, GR15, GR16, GR17A, GR18, GR19, GR20, GR21, GR22, GR23, GR24, GR25, F1 and F2	Not Applicable	Not Applicable
Seepage	S-1 through S-n	Not Applicable	Not Applicable

C. FACILITIES MONITORING

The discharger shall inspect all facilities to ensure proper and safe operation once per quarter and report semi-annually. The facilities to be monitored shall include, but not be limited to:

a. Leachate collection and removal systems;
b. Surface water monitoring points;
c. Shallow and deep groundwater monitoring wells;
d. Perimeter diversion channels;
e. Leachate wells;

I, Loretta K. Barsamian 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. 96-040
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.

Loretta K. Barsamian
Executive Officer

Date Ordered: March 20, 1996

Figure 1 - Natural Groundwater Flow and/or No Pumping Condition
Figure 2- Single Point Extraction Condition
Table 2 - Discharge Monitoring Plan

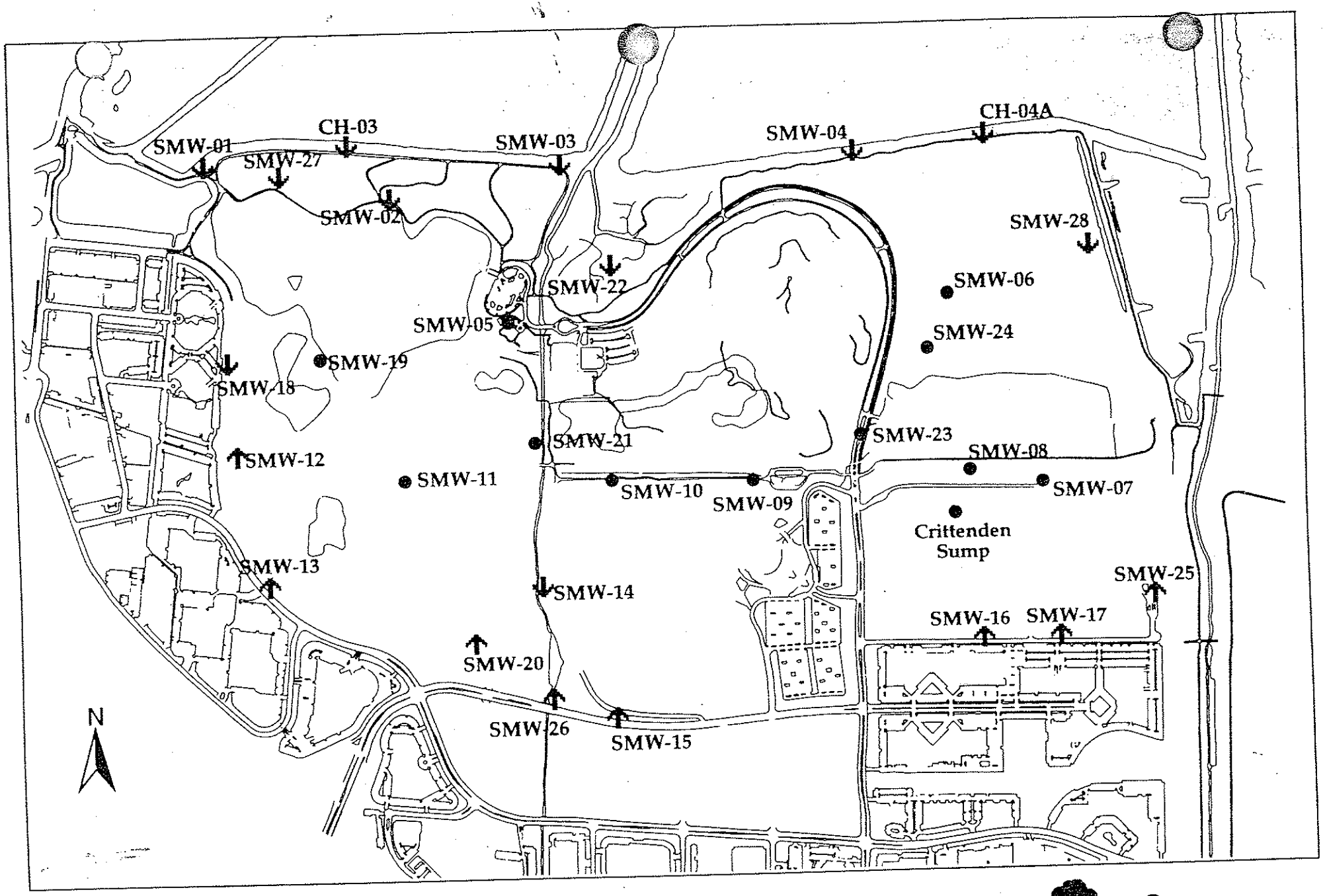


FIGURE 1

NATURAL GROUNDWATER FLOW and/or
NO PUMPING CONDITION

Not to Scale

● Piezometer
↑ Upgradient Points
↓ Downgradient Points

Note: SMW-27 & SMW-28 are proposed wells.

City of Mountain View
Public Services Department

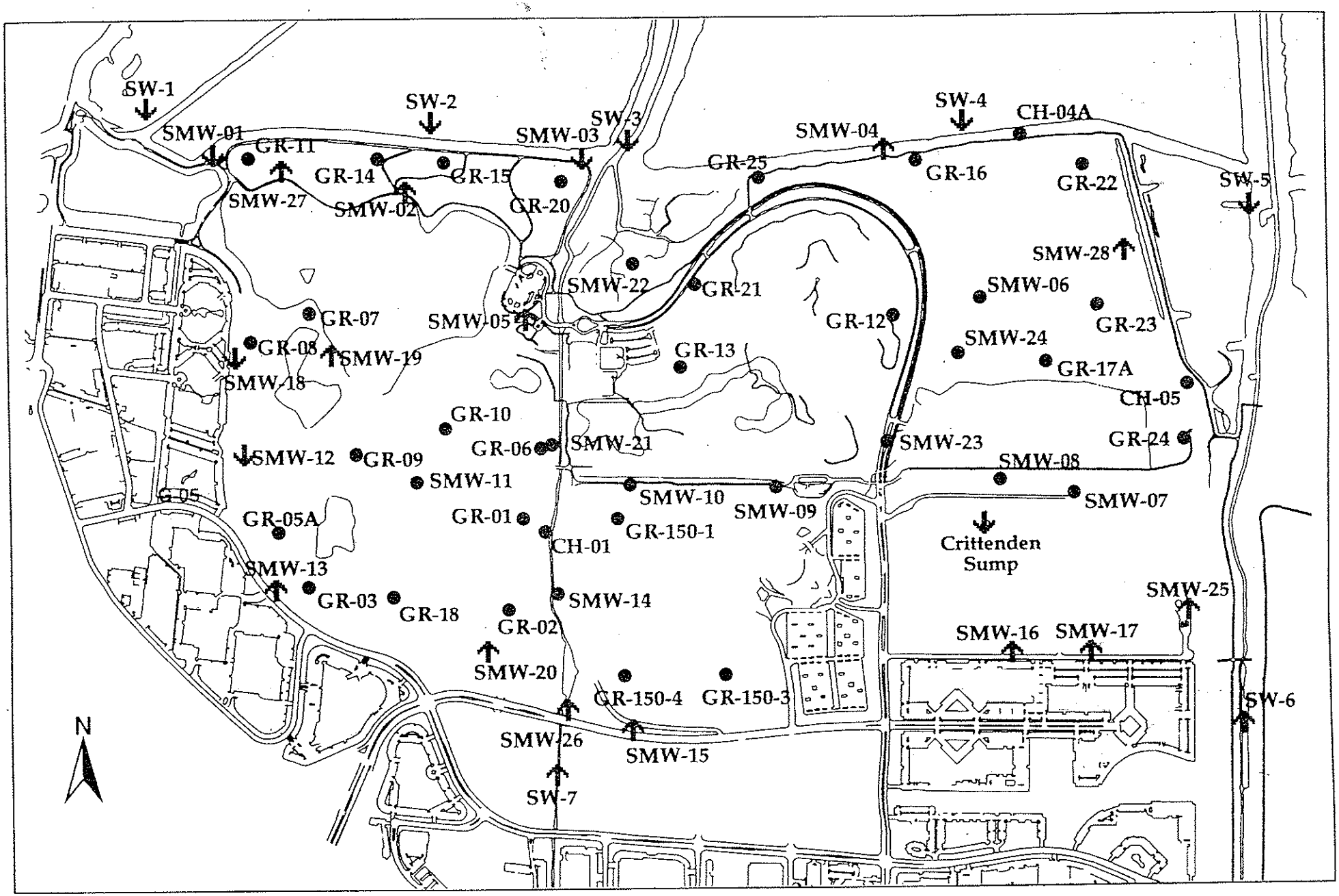


FIGURE 2

SINGLE POINT EXTRACTION CONDITION

Not cale

● Piezometer

↑ Upgradient Points

↓ Downgradient Points

Note: SMW-27 & SMW-28 are proposed wells.

City of Mountain View
Public Services Department

Table 2 - Discharge Monitoring Plan, List of Analytical Parameters

Shoreline Regional Park
City of Mountain View
Santa Clara county

Parameter	Medium	Method	Frequency[4]	Reference
Leachate Extraction Rate	Leachate	Field	See Note 5	1
Leachate Level Measurements	Leachate	Field	Semi-annual	1
Water Level Measurements	Leachate , SW & GW	Field	Semi-annual	1
Temperature Measurements	Leachate , SW & GW	Field	Semi-annual	1
Electrical Conductivity	Leachate , SW & GW	Field	Semi-annual	3
pH	All	Field	Semi-annual	3
Total Kjeldahl Nitrogen	Leachate , SW & GW	351.2	Semi-annual	2
Turbidity	GW & SW	Field	Semi-annual	1
Ammonia as N (non--ionized)	GW & SW	350.1	Semi-annual	
Chemical Oxygen Demand	GW & SW	410.4	Semi-annual	2
Total Dissolved Solids	GW & SW	160.1	Semi-annual	2
Volatile Organic Compounds (Appendix I)	GW & SW	8260	Semi-annual	3
Volatile Organic Compounds (Appendix I&II)	GW	8260	Once in 5 yrs[6]	3
Appendix II Semi-volatile Organics Compounds	GW & SW	8270	Once in 5 yrs	3
Organophosphorus	GW & SW	8141	Once in 5 yrs	3
Pesticides & PCB's	GW	8080	Once in 5 yrs	3

Table 2-Discharge Monitoring Plan
Shoreline Regional Park

Parameter	Medium	Method	Frequency[4]	Reference
Chlorinated Herbicides	GW & SW	8150 w/ capillary column	Once in 5 yr	3
Arsenic	All	7061	Semi-annual	3
Barium	All	6010	Semi-annual	3
Cadmium	All	7131	Semi-annual	3
Chromium	All	6010	Semi-annual	3
Copper	All	6010	Semi-annual	3
Lead	All	7421	Semi-annual	3
Mercury	All	7471	Semi-annual	3
Nickel	All	7520	Semi-annual	3
Selenium	All	7741	Semi-annual	3
Silver	All	6010	Semi-annual	3
Cyanide	All	9010	Semi-annual	3
Zinc	All	6010	Semi-annual	3

NOTES:

1. Not Applicable
2. Methods for Chemical Analysis of Water and Wastes, EPA600/4/79/029, revised March 1983
3. EPA SW-846
4. Winter/Spring Reporting Period: October 1 to March 31 (Samples to be collected between February 1 and March 31) report due by April 30.
   Summer/Fall Reporting Period: April 1 to September 30 (Samples to be collected between August 1 and September 30) report due by October 30.
5. The leachate extraction rates shall be recorded weekly and reported as follows:
   - total weekly flow (gallons per week)
   - total quarterly flow (gallons)
   - total number of days the system was shutdown during the quarter
   - average pumping rate in gallons per minute (average gallons per minute)
   - total cumulative flow since system start up (gallons)
6. Once every 5 yrs beginning with the Winter/Spring Reporting Period report due by April 30, 1996.
7. Monitoring Media: GW=groundwater, All=leachate & GW.
   Leachate analysis to be conducted on sample from leachate extraction system.
8. Alternative EPA-approved methods may be substituted for the above methods provided the alternative methods provide detection limits that are equal to or less than those attainable by the indicated method.
9. Metals samples shall be field filtered using a 5 micron filter.