

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER No. R2-2003-0086

**UPDATED WASTE DISCHARGE REQUIREMENTS AND RESCISSION OF ORDER
NO. 92-125 FOR:**

**CITY OF SAN JOSE
ACOSTA PROPERTIES, LLC
DANNA PROPERTIES
EAST COMMUNITY RESOURCE CENTER
JOHNSON AND MARYLOU RUSSELL**

**STORY ROAD LANDFILL
SAN JOSE, SANTA CLARA COUNTY**

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

SITE DESCRIPTION & LOCATION

1. The Story Road Landfill (herein referred to as the landfill or the site) covers about 60-acres and is located in San Jose near the intersection of Coyote Creek and Interstate 280 (Figure 1). The landfill currently consists of three discrete areas referred to as Areas 1 through 3 (Figure 2). Area 4 was historically considered part of the landfill, but does not contain waste and therefore is no longer considered part of the landfill. The landfill is bounded by Coyote Creek to the south and west, and Interstate 280 to the north. Several small industrial and commercial businesses are located along the eastern boundary of the landfill in a business park known as Remillard Court. Portions of five properties within the Remillard Court Business Park are located above waste. The San Jose Water Company operates a municipal drinking water well field directly across Coyote Creek to the west. Residential subdivisions exist directly across Interstate 280 to the north. Open space is located directly across Coyote Creek to the south. Two smaller, closed landfills are located nearby, including the Martin Park and Roberts Avenue Landfills (Figure 2).

PURPOSE OF ORDER

2. The purpose of this Order is to update waste discharge requirements (WDRs) regarding closure, maintenance, corrective action measures, monitoring, and development that may affect the Story Road Landfill. On-going and future corrective measures at the Story Road Landfill will be regulated by site cleanup requirements (SCRs) issued pursuant to the California Water Code, Section 13304. This Order rescinds WDR Order No. 92-125.

SITE HISTORY AND OWNERSHIP

3. The Story Road Landfill was originally the home of the Remillard-Dandini Brick Company. From 1891 to 1957 the brick company produced approximately 10 million bricks a year from clay mined along the east bank of Coyote Creek. The clay pit was subsequently used for refuse disposal beginning in 1957 when the site was operated as a private landfill, informally known as the Remillard-Dandini pit. In 1961 the San Jose City Council issued an ordinance condemning the property and established a municipal landfill. The City of San Jose operated the Story Road Landfill as a municipal landfill from 1961 to 1969. During that time, the unlined pits in which the refuse was placed were eventually filled to a height of 20 to 30 feet above the original ground surface. Approximately 500,000 cubic yards (cy) of refuse were disposed of at the landfill, although no records exist regarding its type or distribution. The landfill was closed with a soil cover about 1970.
4. The landfill historically included four discrete areas (see Areas 1-4, Figure 2). Area 4, located north of Interstate 280, is no longer considered part of the landfill because it does not contain any waste, although it is the location of the landfill's groundwater/leachate extraction and treatment system. Area 3 is only partially filled with waste and is separated from Areas 1 and 2 by an easement for the Western Pacific Railroad (Figure 2). Areas 1 and 2 are completely filled with waste and were historically separated by a railroad spur line for the Western Pacific Railroad. However, in 2002, the line was abandoned and returned to the City of San Jose, which undertook a project to fill the area with soil.
5. About the same time the landfill was closed in 1970, CC&F San Jose Properties, Inc. (now known as Cabot, Cabot, and Forbes (CC&F) Investment Co.) acquired a portion of the landfill property along the eastern landfill boundary, within Areas 1 and 2. From 1970 to 1975, CC&F developed their portion of the landfill into the Remillard Court Business Park and subsequently sold individual parcels (Figure 2). CC&F no longer owns any portion of the landfill, however, there are now five individual properties (or portions thereof) within the Remillard Court Business Park that are considered part of the landfill because they contain landfill waste. Table 1 summarizes the owners of land above waste within the Remillard Court Business Park.

Table 1. Additional Owners of Land Above Waste at the Story Road Landfill

Discharger	Property Description	Assessors Parcel Number
East Community Resource Center	749 Story Road	472-11-036
Acosta Properties, Inc.	930 Remillard Court	472-11-050
Danna Properties	940 Remillard Court	472-11-044
Johnson and Marylou Russell	925 Remillard Court 931 Remillard Court	472-11-053 472-11-052

DISCHARGERS

6. The Story Road Landfill is an unlined landfill where groundwater is in direct contact with waste. As such, the landfill is discharging waste into waters of the State. Therefore, all landowners named in this Order are hereinafter referred to as Dischargers.
7. The City of San Jose, as a former landfill operator and majority landowner, has taken primary responsibility for compliance with previous Board Orders and applicable regulations. The Board recognizes that the City of San Jose has committed to take primary responsibility for compliance with all obligations in this Order, including corrective action, detection monitoring, post-closure maintenance, and stormwater management. The Board also recognizes that the City of San Jose, under settlement agreement with the landowners identified in Table 1 (or their predecessors), accepts these responsibilities and agrees to fully indemnify and hold harmless the other landowners for obligations under this Order.
8. The Board recognizes that the landowners identified in Table 1 purchased landfill property after the landfill was closed, and did not cause or contribute to the initial placement of waste at the landfill. Therefore, the landowners identified in Table 1 may be eligible for secondarily responsible party status under future cleanup orders that may be issued by the Regional Board pursuant to the California Water Code, Section 13304. In such a case, the Board would only look to a secondarily responsible party for compliance with a cleanup order, if the primarily responsible party (City of San Jose) fails to comply with such an order.

REGULATORY STATUS

9. In October 1992, the Regional Board adopted Waste Discharge Requirements Order No. 92-125, which established corrective action and closure requirements for the Story Road Landfill. Order No. 92-125 also required a detection monitoring program to identify leaks from the landfill and for the protection of Coyote Creek and the San Jose Water Company's 12th Street Well Field, which are located directly along the western boundary of the landfill (Figure 2). In response to the corrective action requirements contained in Order No. 92-125, the City of San Jose installed a system to extract and treat groundwater to minimize off-site impacts.

HYDROLOGY & HYDROGEOLOGY

10. The Story Road Landfill is located in the central portion of the Santa Clara Valley. The water-bearing deposits of the Santa Clara Valley consist of semi-consolidated to unconsolidated valley fill derived from adjacent hills. Regionally and locally, there are two primary aquifer systems. The upper, or shallow aquifer is generally unconfined and extends from ground surface to about 200 feet below ground surface (fbgs). The lower, or deep aquifer is generally confined and extends from 250 to several hundred fbgs. A regional aquitard separates the aquifer systems from about 200 to 250 fbgs.

11. Beneath the Story Road Landfill, the shallow aquifer is divided into upper and lower transmissive zones, separated by an aquitard of varying thickness between 3 and 15 feet (Table 2). The aquitard is discontinuous and leaky and may be perforated by abandoned agricultural wells in the vicinity of the landfill, although a 1996 vertical conduit study conducted by the City of San Jose did not identify any such wells. The upper zone is generally unconfined with hydraulic conductivities around 3×10^{-3} centimeters per second (cm/sec). The lower zone is semi-confined with hydraulic conductivities ranging from 10^{-2} to 10^{-4}

Table 2. Groundwater Transmissive Zones Beneath the Story Road Landfill

Regional Aquifers	Transmissive Zones	Typical Depths (fbgs)
Shallow	Upper Water Bearing Zone	0 to 50
	Aquitard	50 to 60
	Lower Water Bearing Zone	60 to 200
Deep	---	> 200

12. The horizontal groundwater gradient in the shallow aquifer beneath the landfill is westerly, toward Coyote Creek and the San Jose Water Company's municipal well field. There is a slight downward vertical gradient across the upper and lower transmissive zones in the shallow aquifer system beneath the landfill.
13. The San Jose Water Company's 12th Street Well Field is located about 500 feet west and down-gradient from the landfill (Figure 2). Nine municipal wells are screened at various depth intervals between 250 and 800 fbgs and pump about two million gallons per day of high quality groundwater for distribution as drinking water to municipal customers.
14. Coyote Creek forms the western and southern boundaries of the Story Road Landfill (Figure 2). In total, about 4000 feet of the eastern creek bank borders the landfill. Data indicate that water levels are generally higher in Coyote Creek than groundwater, suggesting that Coyote Creek recharges the groundwater, at least during a portion of the year.

WATER QUALITY IMPACTS AND CORRECTIVE ACTION

15. The Story Road Landfill is an unlined landfill where waste exists directly in contact with groundwater. At 20 to 30 feet deep, the former quarry pit bottom was typically at or below the groundwater table. In some locations, waste is 40 to 50 feet thick, extending from the former pit bottom to 20 or 30 feet above the original ground surface.
16. The City of San Jose submitted a Solid Waste Assessment Test (SWAT) Report dated September 1987. The SWAT report concluded that shallow groundwater beneath the site was polluted with volatile organic compounds (VOCs), fuel constituents, and metals. Further investigation in 1990 and 1991 confirmed the presence of the following contaminants in groundwater in the upper transmissive zone of the shallow aquifer:

- Trichloroethylene (TCE)
- Dichloroethylene (DCE)
- Dichloroethane (DCA)
- Vinyl Chloride (VC)
- Total Petroleum Hydrocarbons as gasoline (TPH-g)
- Total Petroleum Hydrocarbons as diesel (TPH-d)
- Benzene
- Toluene

17. Since the SWAT report in 1987, the City of San Jose has submitted numerous investigation and corrective action reports, which include the following: (1) Additional Subsurface Investigation, January 1991; (2) Progress Report of Additional Subsurface Investigation, September 1991; (3) Additional Subsurface Investigation, Phase II, January 1992; (4) Corrective Action Investigation, October 1992; (5) Results of Shallow Landfill Gas Survey, October 1992; (6) Corrective Action Program, December 1992; (7) Operation and Maintenance Manual, Ground Water and Landfill Leachate Extraction, Treatment, and Discharge System, December 1993; (8) Best Management Practices Plan, Ground Water and Landfill Leachate Extraction, Treatment and Discharge System, December 1993; (9) Capture Zone Evaluation, August 1995; (10) Vertical Conduit Study, September 1996; (11) Revised Discharge Monitoring Program, July 1998.
18. In 1989, Santa Clara Transfer Services (SCTS), a tenant at 925 Remillard Court, removed four underground storage tanks (USTs) containing diesel fuel and gasoline. SCTS had installed the USTs directly within landfill refuse ten years earlier. After the USTs were removed it was apparent they had leaked an unknown amount of fuel into the landfill refuse. After considerable investigation, SCTS and the City of San Jose reached agreement in 2001, through judgment by an appointed Special Master, that the fuel release from the USTs was indistinguishable from fuel that may have existed in the landfill at the time of the UST release. Based on this judgment, and the fact that the landfill is required to contain all leachate and impacted groundwater (per Regional Board WDRs), the City of San Jose agreed to take full responsibility for the residual fuel that exists in the landfill. In December 2002, the Regional Board officially closed the UST case (see Regional Board Case No. 43-1871).
19. Table 3 summarizes the historic and current groundwater impacts in the upper and lower transmissive zones of the shallow aquifer beneath the landfill.

Table 3 Maximum VOCs and Petroleum Hydrocarbons Concentrations in Groundwater Beneath the Story Road Landfill¹

Contaminant	Maximum Historic Concentration (1988–1995) (ug/l)		Maximum Current Concentration (2000–2003) (ug/l)	
	Upper Zone	Lower Zone	Upper Zone	Lower Zone
TCE	130	ND	52	<1
cis-1,2-DCE	840	ND	65	<1
1,1-DCA	1100	ND	14	<1
VC	5200	ND	7.2	<1
TPH-g	1900	ND	54	<50
TPH-d	1900	ND	1400	730
Benzene	280	ND	---	---
Toluene	9200	ND	---	---
MTBE	---	ND	<1	<1
Hydrocarbon Mixture	18000	270	1830	124

¹ Does not include results from the SCTS UST fuel release investigation.

“---“ No Data

“ND” non-detect

20. In 1993, in response to the groundwater impacts in the shallow aquifer beneath the landfill, the City of San Jose implemented a groundwater extraction system to hydraulically capture contaminated groundwater before it could discharge to Coyote Creek or effect groundwater in the deep aquifer beneath at the San Jose Water Company’s 12 Street Well Field. Currently the City of San Jose operates three extraction wells located along the down-gradient (western) boundary of the landfill, which capture shallow polluted groundwater (EW-1, EW-3, & EW-4), and one extraction well, which captures landfill leachate (EW-2) (see Figure 3). Extracted groundwater (approximately 10,000 to 40,000 gallons per day) is treated and discharged to Coyote Creek. Extracted leachate is discharged directly to the City’s sanitary sewer system without treatment.

21. The landfill is currently within a Corrective Action Program (CAP) in accordance with Title 27, Division 2, Subdivision 1 of the California Code of Regulations (27CCR), Subchapter 3, Section 20430. In accordance with CAP monitoring requirements, the City of San Jose monitors water quality via 19 monitoring wells in the shallow aquifer (upper and lower zones) beneath the landfill and up-gradient and down-gradient. The City of San Jose also monitors surface water at six locations along Coyote Creek. Furthermore, groundwater in the deep aquifer beneath the San Jose Water Company’s 12th Street Municipal Well Field is sampled periodically in accordance with drinking water regulations enforced by the California Department of Health Services. To date, no impacts have been detected in the deep aquifer at the 12th Street Well Field, or in the surface water of Coyote Creek. Figures 3, 4a, and 4b illustrate current monitoring locations and groundwater gradients at the site.

22. The City of San Jose currently conducts quarterly landfill gas monitoring at nine locations along the landfill perimeter. To date, no threats to human and environmental health and water quality have been identified due to migration of landfill gas.

LANDFILL CLOSURE, POST-CLOSURE MAINTENANCE, AND DEVELOPMENT

23. About 1970, the landfill was closed with a monolithic-type soil cover of varying thickness. In 1995, and again in 2001, the City of San Jose placed additional soil on Areas 1 and 2 and re-graded portions of each. The current soil cover is estimated to be several feet thick in all areas. The City of San Jose plans to perform an aerial survey to evaluate cover thickness, slope, and drainage patterns.
24. In 2000, the City of San Jose improved drainage in Area 3 by adding a storm drain to convey ponded water off the landfill into Coyote Creek. The storm drain is located on a portion of Area 3 where no waste exists. Water entering the drain does not contact any waste.
25. In September 2002, the City of San Jose began filling a low area between Areas 1 and 2, which was the location of a spur line for the Western Pacific Railroad. This so-called "Notch" project is intended to create a level surface between the waste mounds in Areas 1 and 2 and is scheduled for completion by October 2003.
26. As part of a wetland mitigation project that is unrelated to the landfill, the City of San Jose plans to construct a wetland on a portion of Area 3 where no waste exists. This project is currently in the construction phase and planned for completion by October 2004.
27. The City of San Jose plans to incorporate portions of the Story Road Landfill into its park system along with the open space that exists directly across Coyote Creek to the south.

BASIN PLAN AND RESOLUTIONS

28. The Regional Board adopted a revised Water Quality Plan for the San Francisco Bay Basin (Basin Plan) in June 21, 1995. This updated and consolidated plan represents the Regional Board's master water quality control planning document. The State Water Resource Control Board and the Office of the Administrative Law approved the revised Basin Plan on July 20 and November 13, respectively, of 1995. A summary of regulatory provisions is contained in Section 3912, Title 23 of the California Code of Regulations. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface water and groundwater.
29. The Basin Plan provides that all groundwaters are considered suitable, or potentially suitable, for municipal or domestic water supply (MUN) and that, in making any exceptions, the Regional Board will consider the criteria referenced in Regional Board Resolution No. 89-39, "Sources of Drinking Water", where:

- (a) The total dissolved solids exceed 3,000 mg/l (5,000 μ S/cm, electrical conductivity), and it is not reasonably expected by the Regional Board that the groundwater could supply a public water system, or
- (b) There is contamination, either by natural processes or human activity (unrelated to the specific pollution incident), that cannot reasonably be treated for domestic use using best management practices or best economically achievable treatment practices, or
- (c) The water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day.

BENEFICIAL USES OF SURFACE WATER AND GROUNDWATER

Groundwater

30. The site resides within the boundaries of the Santa Clara Valley Groundwater Basin, as defined in the Basin Plan. The existing and potential beneficial uses identified for groundwater in this basin, according to the Basin Plan, include:
 - Municipal and Domestic Supply (MUN)
 - Industrial Process Supply (PROC)
 - Industrial Service Supply (IND)
 - Agricultural Supply (AGR)
31. Based on the hydrogeologic characterization and water quality data for the site, groundwater underlying the site qualifies as a potential source of drinking water in accordance with Regional Board Resolution 89-39. Therefore, all of the above beneficial uses apply to groundwater beneath the site.

Surface Water

32. Existing or potential beneficial uses identified for surface water in Coyote Creek, according to the Basin Plan, include:
 - Fish Spawning (SPWN)
 - Preservation of Rare and Endangered Species (RARE)
 - Water Contact Recreation (REC1)
 - Non-Water Contact Recreation (REC2)
 - Fish Migration (MIGR)
 - Fish Spawning (SPWN)
 - Wildlife Habitat (WILD)
 - Cold Freshwater Habitat (COLD)

CALIFORNIA ENVIRONMENTAL QUALITY ACT

33. This action relates to permitting existing waste management units and is thus exempt from provisions of the California Environmental Quality Act pursuant to Section 15301, Title 14 of the California Code of Regulations.

NOTIFICATION AND PUBLIC MEETING

34. The Regional Board has notified the Dischargers and interested agencies and persons of its intent to update waste discharge requirements and has provided them with an opportunity to submit their written views and recommendations.
35. The Regional Board, in a public meeting, heard and considered all comments pertaining to the proposed waste discharge requirements for the site.

IT IS HEREBY ORDERED pursuant to the authority in Section 13263 of the California Water Code (CWC), Title 27, Division 2, Subdivision 1 of the California Code of Regulations (27CCR), that the Discharger, their agents, successors, and assigns shall meet the applicable provisions contained in 27CCR and Division 7 CWC, and shall comply with the following:

A. PROHIBITIONS

1. Leachate or ponded water containing leachate or in contact with waste shall not be discharged to waters of the State or of the United States unless specifically authorized under an NPDES permit.
2. The treatment, storage, and discharge of groundwater or leachate shall not create a condition of pollution or nuisance as defined in Section 13050(m) CWC, nor degrade the quality of the groundwater in the aquifers to which it is injected.
3. Untreated or inadequately treated groundwater or leachate shall not create a condition of pollution or nuisance as defined in Section 13050(m) CWC, nor degrade the quality of waters of the State or of the United States.
4. The creation of any new waste management unit is prohibited without prior Regional Board staff concurrence.
5. The relocation of wastes is prohibited without prior Regional Board staff concurrence.
6. The relocation of wastes to or from waste management units shall not create a condition of pollution or nuisance as defined in Section 13050 (1) and (m) CWC. Any relocated waste shall not be placed in or allowed to contact ponded water from any source whatsoever. Wastes shall not be relocated to any location where they can be discharged into waters of the State or of the United States.

7. Excavation within or reconfiguration of any existing waste management unit is prohibited without prior concurrence of Regional Board staff. Minor excavation or reconfiguration activities such as for installation of signs or landscaping, or for routine maintenance and repair do not require prior staff concurrence.
8. Discing of landfill covers is prohibited without prior Regional Board staff concurrence. Alternate methods of controlling vegetative growth, which do not affect the integrity of the waste management unit cap are preferred.
9. Surface drainage from tributary areas and internal site drainage from surface or subsurface sources shall not contact or percolate through wastes during the life of the site.
10. The Dischargers shall not cause the following conditions to exist in waters of the State or of the United States at any place outside existing waste management units:
 - a. Surface Waters:
 - (1) Floating, suspended, or deposited macroscopic particulate matter or foam
 - (2) Bottom deposits or aquatic growth
 - (3) Adverse changes in 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 exist in concentrations or quantities that may cause deleterious effects on aquatic biota, wildlife, or waterfowl, or that render any of these unfit for human consumption either at levels created in the receiving waters, or as a results of biological concentrations
 - b. Groundwater:
 - (1) Further degradation of groundwater quality and/or substantial worsening of existing groundwater impacts
 - (2) Further significant migration of pollutants through subsurface transport

B. SPECIFICATIONS

1. All reports submitted pursuant to this Order shall be prepared under the supervision of and signed by appropriately licensed professionals, such as a California registered civil engineer, registered geologist, and/or certified engineering geologist.
2. Containment, collection, drainage, and monitoring systems at the facility, shall be maintained as long as leachate is present and poses a threat to water quality.
3. Final cover systems for waste management units shall be graded and maintained to promote lateral runoff and prevent ponding and infiltration of water.

4. The Dischargers shall install any reasonable additional groundwater and leachate monitoring devices required to fulfill the terms of any future Self-Monitoring Program (SMP) issued by the Executive Officer.
5. The Dischargers shall maintain all devices or designed features, installed in accordance with this Order such that they continue to operate as intended without interruption.
6. The Dischargers shall conduct monitoring activities according to the SMP attached to this Order and as may be amended by the Executive Officer, to verify the effectiveness of groundwater remediation and containment systems and waste management unit closure systems.
7. The Dischargers shall implement a Corrective Action Program, pursuant to 27CCR, Section 20430 in order to remediate releases from the landfill and to achieve compliance with the Water Quality Protection Standard (WQPS) established by the Regional Board. The WQPS includes the following:
 - a. Constituents of Concern: The list of Constituents of Concern (COCs) established for the Story Road Landfill includes all organic and inorganic compounds identified in this Order (e.g., Finding Nos. 18 and 21) and in the SMP attached to this Order, or any future amendments thereof.
 - b. Concentration Limits: The Dischargers shall propose concentration limits (CLs) for all COCs detected at the specified points of compliance. CLs must be based on evaluation of background concentrations for each COC, pursuant to 27 CCR, Section 20400.
 - c. Points of Compliance: A Point of Compliance (POC) exists at every location along the perimeter of the landfill where waste exists. The point of compliance extends vertically to the deepest aquifer beneath the landfill. Each monitoring well and sampling point located along the down-gradient landfill waste perimeter, specified in this Order or the attached SMP to this Order, or any future amendments thereof, shall represent a point of compliance.
8. At any time, the Dischargers may file a written request (including supporting documentation) with the Executive Officer, proposing modifications to the attached SMP. If the proposed modifications are acceptable, the Executive Officer may issue a letter of approval that incorporates the proposed revisions into the SMP.
9. The Dischargers shall comply with all applicable provisions of 27CCR that are not specifically referred to in this Order.
10. The Dischargers shall provide a minimum of two surveyed permanent monuments near each waste management unit from which the location and elevation of wastes, containment structures, and monitoring facilities can be determined throughout the operation and post-closure maintenance period. A licensed land surveyor or registered civil engineer shall install these monuments.

11. The Dischargers shall notify the Regional Board immediately of any failure that threatens the integrity of any containment and control facilities, structures, or devices. Any such failure shall be promptly corrected after approval of the method and schedule by the Executive Officer.
12. The Dischargers shall maintain the landfill so as to prevent a statistically significant increase in water quality parameters at points of compliance as provided in 27CCR, Section 20420.
13. The Dischargers shall provide reasonable access to any property they own or lease at the site to allow for installation, sampling, monitoring, etc., of all devices and equipment necessary for compliance with the requirements of this Order.

C. PROVISIONS

1. **Self-Monitoring Program:** The Dischargers shall comply with the Self-Monitoring Program (SMP) as attached to this Order (Part A and Part B). The attached SMP is designed to collect information necessary to evaluate the effectiveness of the Corrective Action Program established for the closed landfill. The attached SMP is also designed to detect any new discharges from the landfill and their significance and stability. The attached SMP may be amended at the discretion of the Executive Officer, as necessary to better evaluate site conditions and discharges.

COMPLIANCE DATE: Immediate

2. **Landfill Cover, Grading, and Stormwater Runoff Evaluation:** The Dischargers shall submit a technical report, acceptable to the Executive Officer, containing an evaluation of the effectiveness of the existing soil cover and grading at promoting laterally runoff of stormwater, while minimizing infiltration, erosion, and sedimentation. At a minimum, the report shall describe the soil type, cover thickness, and compaction. The report shall also include topographic maps for each waste-filled parcel and other areas where grading has occurred in the past year, which demonstrate a minimum 3% slope and indicate the landfill drainage pattern and direction of stormwater conveyance.

COMPLIANCE DATE: March 1, 2004

3. **Report of Waste Discharge:** The Dischargers shall submit a technical report, acceptable to the Executive Officer, describing any proposed material change in the character, location, or volume of a discharge, or in the event of a proposed change in use or development of the landfill [CWC Section 13260(c)]. The technical report shall describe the project, identify key changes to the design that may impact waste management units, and specify components of the design necessary to maintain integrity of waste management unit covers and prevent water quality impacts. No material changes to any waste management unit shall be made without approval by the Executive Officer.

COMPLIANCE DATE: 120 days prior to any material change

4. **Stormwater Control Plans:** For each grading or development project proposed on property owned by the Dischargers and greater than 5 acres in size, the Dischargers shall submit a Notice of Intent to the State Water Resources Control Board, submit a Storm Water Pollution Prevention Plan acceptable to the Executive Officer, and implement Best Management Practices (BMPs) for the control of stormwater, in accordance with requirements specified in the State Water Resources Control Board General Permit for Storm Water Discharges Associated with Construction Activities (NPDES Permit No. CAS000002). The Dischargers will be deemed in compliance with this provision if another party constructing improvements on property owned by the Dischargers, pursuant to an easement granted by the Dischargers, has obtained coverage under the General Permit.

COMPLIANCE DATE: 30 days prior to construction

5. **Availability:** A copy of these waste discharge requirements shall be maintained by the Dischargers and shall be made available by the Dischargers to all employees or contractors performing work (maintenance, monitoring, repair, construction, etc.) at the landfill. [CWC Section 132631]
6. **Change In Ownership:** The Dischargers must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new Discharger. The notice must include a written agreement between the existing Dischargers and the new Discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current Dischargers and the new Discharger. This agreement shall include an acknowledgment of which Dischargers are liable for violations up to the transfer date and which Dischargers are liable from the transfer date on. [CWC Sections 13267 and 13263]
7. **Revision:** These waste discharge requirements are subject to review and revision by the Regional Board. [CCR Section 13263]
8. **Termination:** Where a Discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information. [CWC Sections 13260 and 13267]
9. **Vested Rights:** This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the Dischargers from liability under Federal, State or local laws, nor do they create a vested right for the Dischargers to continue the waste discharge. [CWC Section 13263(g)]
10. **Severability:** Provisions of these waste discharge requirements are severable. If any provisions of these requirements are found invalid, the remainder of these requirements shall not be affected. [CWC 9213]

11. **Operation and Maintenance:** The Dischargers shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Dischargers to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this order. [CWC Section 13263(f)]
12. **Reporting of Hazardous Substance Release:** If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the Dischargers shall report such discharge to the Regional Board by calling (510) 286-1255 during regular office hours (Monday through Friday, 8:00 to 5:00). A written report shall be filed with the Regional Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.
13. **Entry and Inspection:** The Dischargers shall allow the Regional Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this order;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this order;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this order or as otherwise authorized by the California Water Code, any substances or parameters at any location. [CWC Section 13267]
14. **Monitoring Devices:** All monitoring instruments and devices used by the Dischargers to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. Annually, the Dischargers shall submit to the Executive Officer a written statement signed by a registered professional engineer certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required.
15. **Analytical Methods:** Unless otherwise permitted by the Regional Board Executive officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. The Regional Board Executive Officer may allow use of an uncertified laboratory under exceptional circumstances, such as when the closest laboratory to the monitoring location is outside the State boundaries and therefore not subject to

certification. All analyses shall be required to be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" [40 CFR Part 136] promulgated by the U.S. Environmental Protection Agency. [CCR Title 23, Section 2230]

16. **Discharges To Navigable Waters:** Any person discharging or proposing to discharge to navigable waters from a point source (except for discharge of dredged or fill material subject to Section 404 of the Clean Water Act and discharge subject to a general NPDES permit) must file an NPDES permit application with the Regional Board. [CCR Title 2 Section 223571]

17. **Endangerment of Health or the Environment:** The Dischargers shall report any noncompliance that may endanger health or the environment. Any such information shall be provided orally to the Executive officer within 24 hours from the time a Discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time a Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following occurrences must be reported to the Executive Officer within 24 hours;
 - a. Any bypass from any portion of the treatment facility.
 - b. Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge or any other circumstances.
 - c. Any treatment plant upset that causes the effluent limitation of this Order to be exceeded. [CWC Sections 13263 and 13267]

18. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:
 - a. RWQCB - San Francisco Bay Region
 - b. City of San Jose, Local Enforcement Agency
 - c. Santa Clara Valley Water District
 - d. California Integrated Waste Management Board

The Executive Officer may modify this distribution list as needed.

19. **Duty to Comply:** The Dischargers shall comply immediately, or as prescribed by the time schedule below, with all Prohibitions, Specifications and Provisions of this Order. All required submittals must be acceptable to the Executive Officer. The Dischargers must also comply with all conditions of these waste discharge requirements. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective

action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board. (CWC Section 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350).

20. **Requests for Technical Reports:** All technical and monitoring reports required by this Order are requested pursuant to Section 13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the Discharger to enforcement action pursuant to Section 13268 of the California Water Code. Evidence relating to the Discharger's past discharges is located in the Regional Board files.
21. **Electronic Reporting Format:** In addition to print submittals, all reports submitted pursuant to this Order must be submitted as electronic files in PDF format. The Regional Board has implemented a document imaging system, which is ultimately intended to reduce the need for printed report storage space and streamline the public file review process. Documents in the imaging system may be viewed, and print copies made, by the public, during file reviews conducted at the Regional Board's office. PDF files can be created by converting the original electronic file format (e.g., Microsoft Word) and/or by scanning printed text, figures & tables. Data tables containing water level measurements, sample analytical results, coordinates, elevations, and other monitoring information shall also be provided electronically in Microsoft Excel[®] or similar spreadsheet format to provide an easy to review summary, and to facilitate data computations and/or plotting that Regional Board staff may undertake during their review. Data tables submitted in electronic spreadsheet format will not be included in the case file for public review. All electronic files must be submitted on CD or diskette and included with the print report.
22. This Order supersedes WDR Order No. 92-125. Order No. 92-125 is hereby rescinded.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on September 17, 2003.



Loretta K. Barsamian
Executive Officer

- Attachments:
- Figure 1 - Site Location Map
 - Figure 2 - Landfill Layout and Vicinity Map
 - Figure 3 - Groundwater and Surface Water Monitoring Locations
 - Figure 4a - Groundwater Gradient, Upper Zone
 - Figure 4b - Groundwater Gradient, Lower Zone
 - Self-Monitoring Program (Part A and Part B)

Figure 1: Site Location - Story Road Landfill, San Jose CA

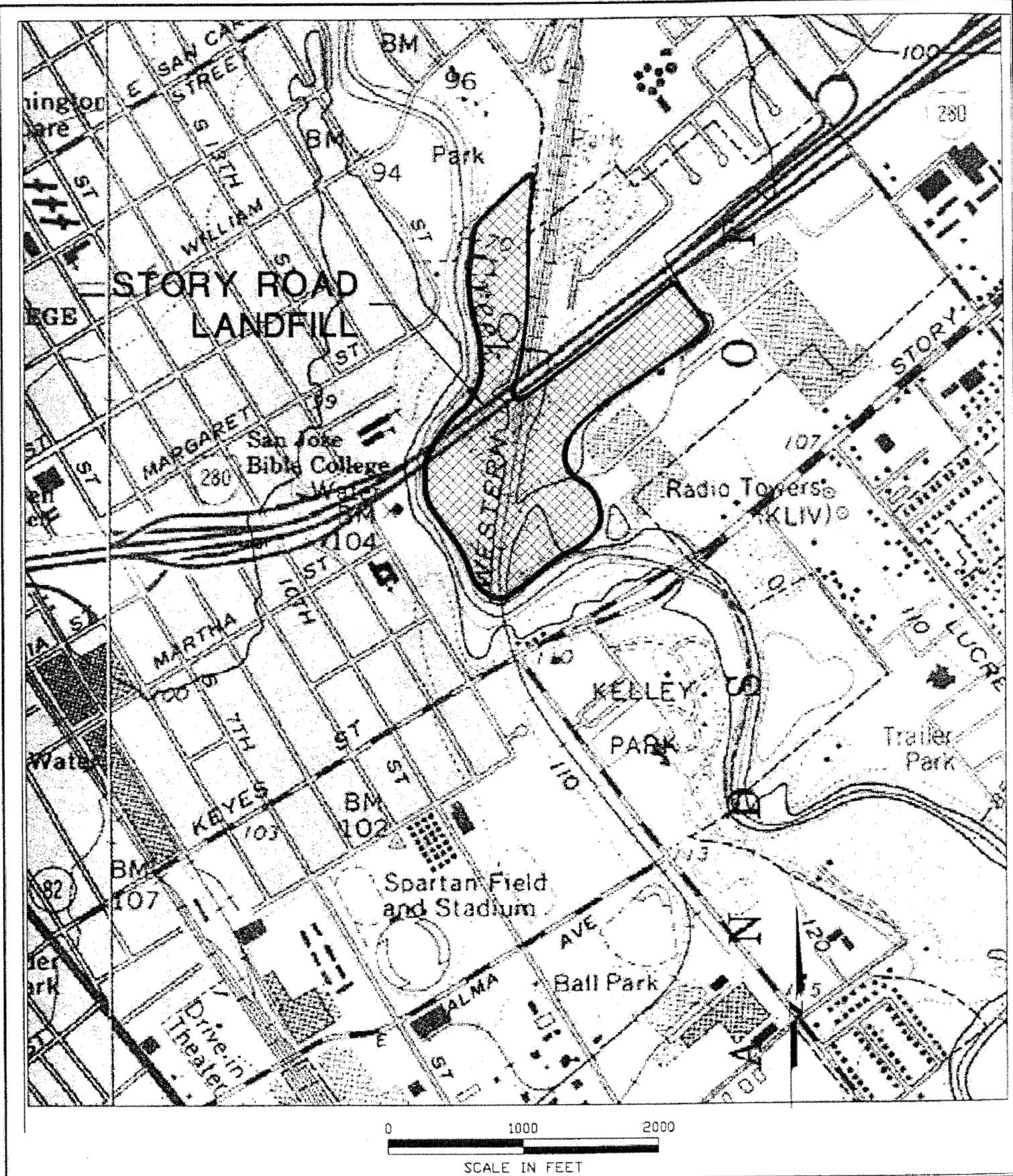
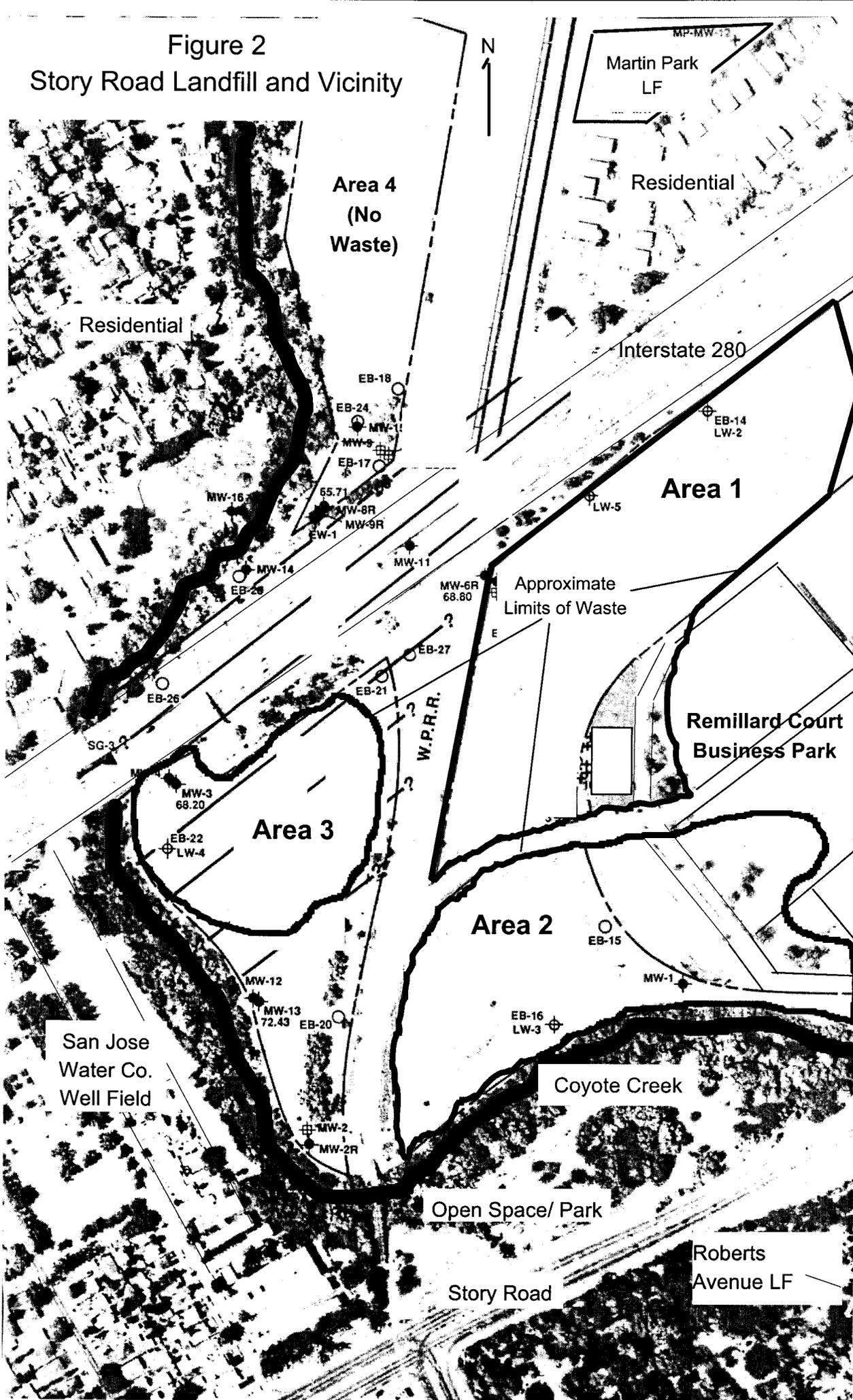
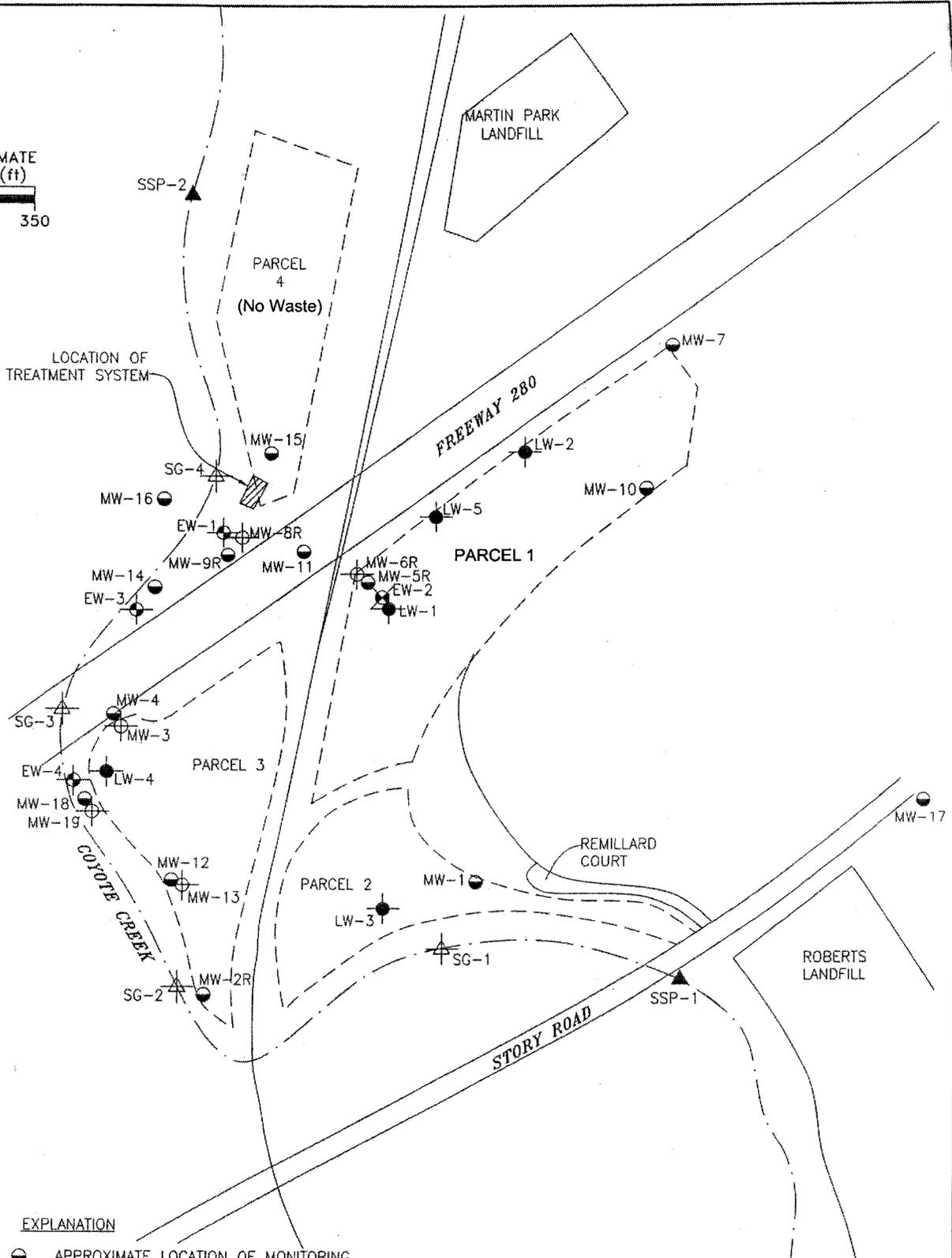
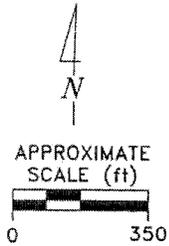


Figure 2
Story Road Landfill and Vicinity

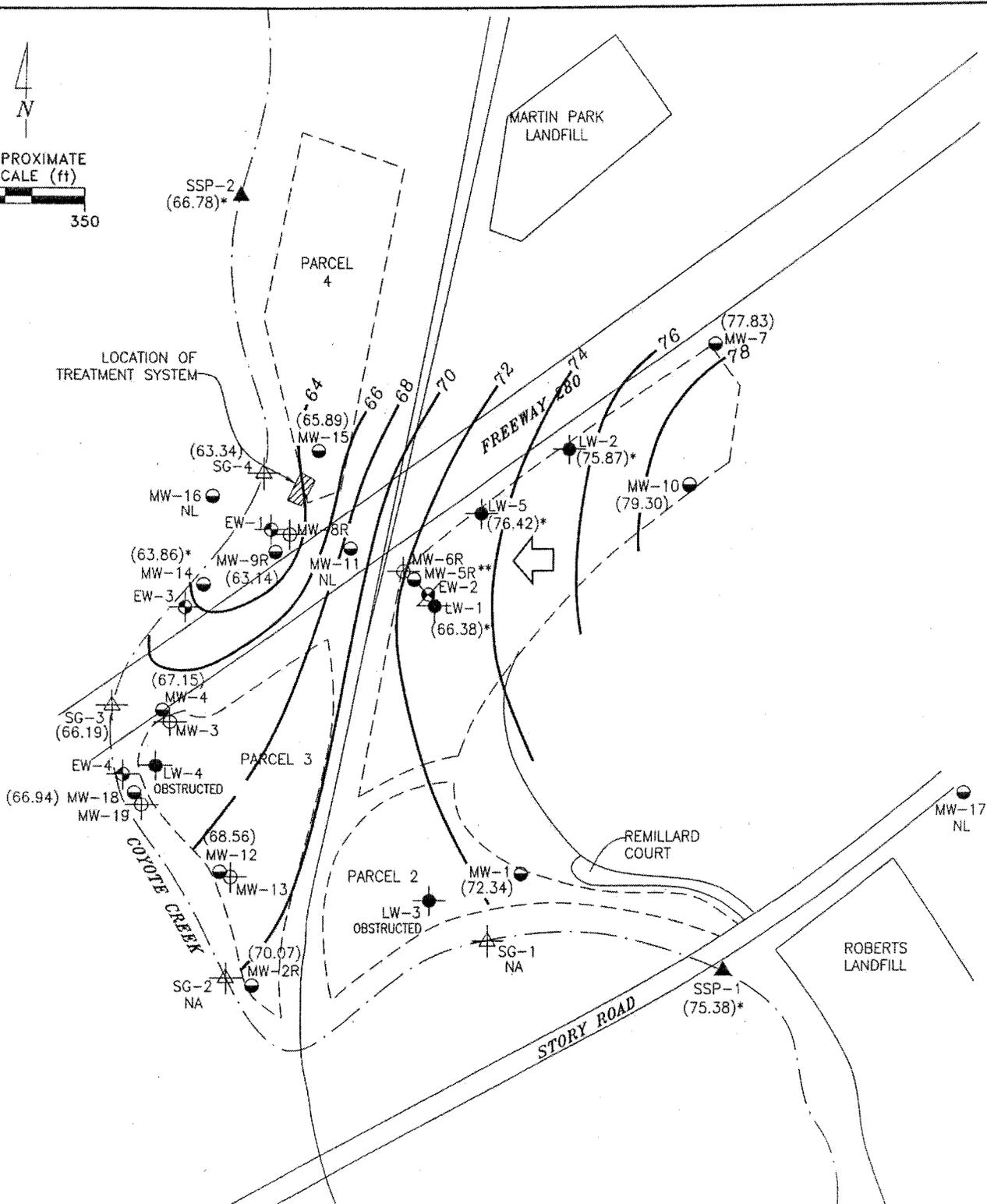
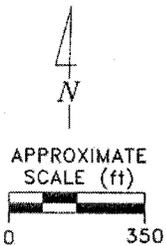




EXPLANATION

- APPROXIMATE LOCATION OF MONITORING WELLS IN FIRST WATER BEARING ZONE
- ⊕ APPROXIMATE LOCATION OF MONITORING WELLS IN SECOND WATER BEARING ZONE
- APPROXIMATE LOCATION OF LEACHATE MONITORING WELLS
- ▲ SSP-1 APPROXIMATE LOCATION OF CREEK SAMPLING POINTS
- ⊠ SG-1 APPROXIMATE LOCATION OF STREAM GAGE LOCATIONS
- ⊗ EW-1 APPROXIMATE LOCATION OF GROUNDWATER EXTRACTION WELL
- ⊗ EW-2 APPROXIMATE LOCATION OF LEACHATE EXTRACTION WELL

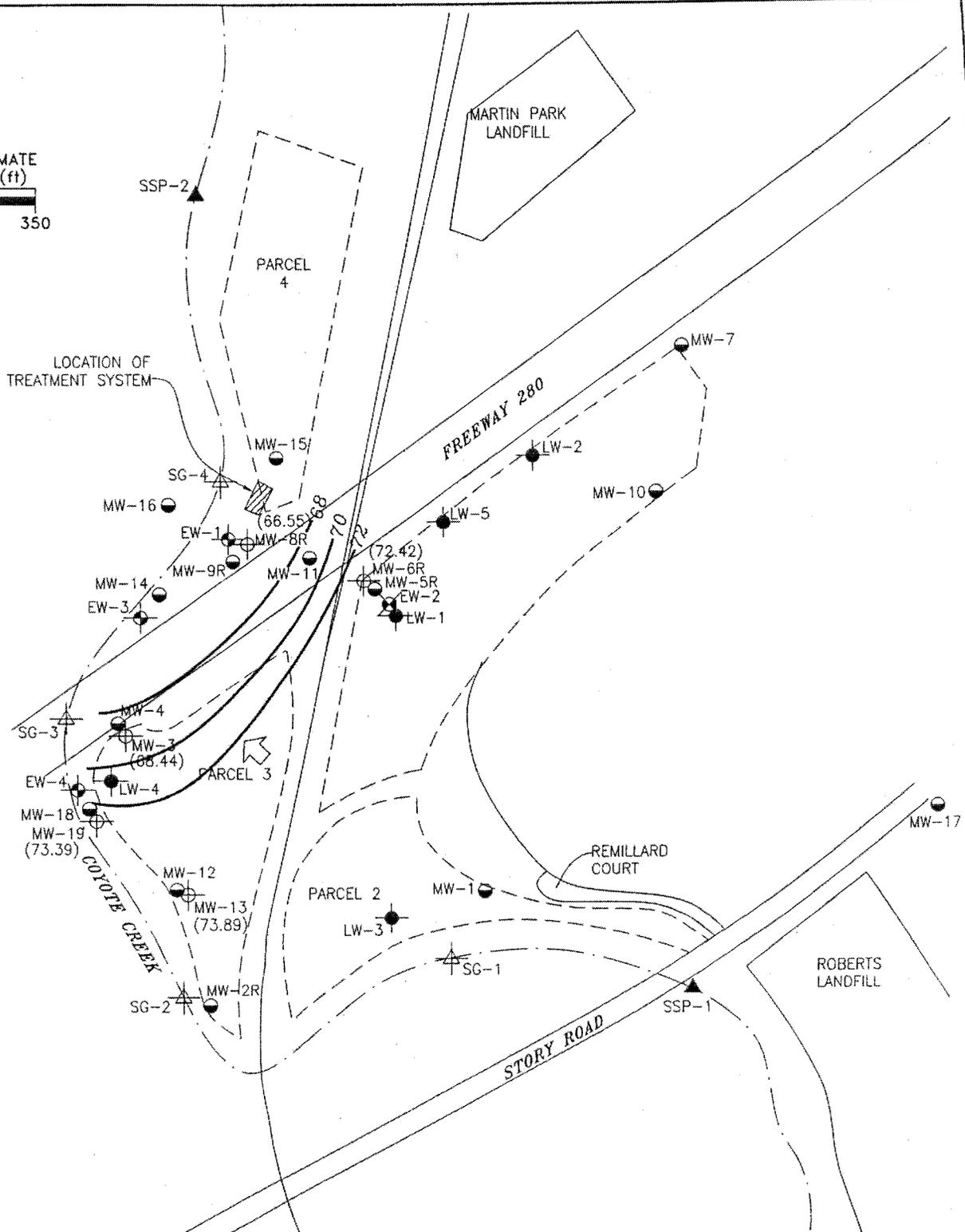
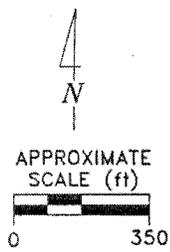
Figure 3: Monitoring Locations



EXPLANATION

- APPROXIMATE LOCATION OF MONITORING WELLS IN FIRST WATER BEARING ZONE
- ⊕ APPROXIMATE LOCATION OF MONITORING WELLS IN SECOND WATER BEARING ZONE
- APPROXIMATE LOCATION OF LEACHATE MONITORING WELLS
- ▲ SSP-1 APPROXIMATE LOCATION OF CREEK SAMPLING POINTS
- ⊕ SG-1 APPROXIMATE LOCATION OF STREAM GAGE LOCATIONS
- ⊕ EW-1 APPROXIMATE LOCATION OF GROUNDWATER EXTRACTION WELL
- ⊕ EW-2 APPROXIMATE LOCATION OF LEACHATE EXTRACTION WELL
- (72.34) GROUNDWATER ELEVATION, FT MSL
- 68 — GROUNDWATER ELEVATION CONTOUR, FT MSL
- ↙ DIRECTION OF GROUNDWATER FLOW
- * NOT USED IN CONTOURING
- ** APPROXIMATELY 4.72 PRODUCT IN WELL
- NL WELL NOT LOCATED IN FIELD
- NA DATA NOT AVAILABLE, LOCATION NOT SURVEYED

Figure 4a: Groundwater Gradient at the Story Road LF - Upper Zone, Shallow Aquifer



EXPLANATION

- APPROXIMATE LOCATION OF MONITORING WELLS IN FIRST WATER BEARING ZONE
- ⊕ APPROXIMATE LOCATION OF MONITORING WELLS IN SECOND WATER BEARING ZONE
- APPROXIMATE LOCATION OF LEACHATE MONITORING WELLS
- ▲ SSP-1 APPROXIMATE LOCATION OF CREEK SAMPLING POINTS
- △ SG-1 APPROXIMATE LOCATION OF STREAM GAGE LOCATIONS
- ⊖ EW-1 APPROXIMATE LOCATION OF GROUNDWATER EXTRACTION WELL
- ⊗ EW-2 APPROXIMATE LOCATION OF LEACHATE EXTRACTION WELL

- (73.89) GROUNDWATER ELEVATION, FT MSL
- 68 — GROUNDWATER ELEVATION CONTOUR, FT MSL
- ↗ DIRECTION OF GROUNDWATER FLOW

Figure 4b: Groundwater Gradient at the Story Road LF - Lower Zone, Shallow Aquifer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CITY OF SAN JOSE
ACOSTA PROPERTIES, LLC
DANNA PROPERTIES
EAST COMMUNITY RESOURCE CENTER
JOHNSON AND MARYLOU RUSSELL

STORY ROAD LANDFILL
SAN JOSE, SANTA CLARA COUNTY

ORDER NO. R2-2003-0086

CONSISTS OF

PART A

AND

PART B

PART A

A. AUTHORITY AND PURPOSE

For discharges of waste to land, water quality monitoring is required pursuant to the California Code of Regulations, Division 2, Title 27, Subdivision 1, Chapter 3, Subchapter 3, Sections 20380 through 20435. The principal purposes of a self-monitoring program (SMP) are: (1) to document compliance with waste discharge requirements and prohibitions established by the Regional Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from the waste discharge, (3) to develop or assist in the development of effluent standards of performance, and toxicity standards, and (4) to assist the discharger in complying with the requirements of Title 27.

B. MONITORING REQUIREMENTS

Monitoring refers to the measurement and sampling of environmental media, the making of standard observations in and around waste management units (WMUs), the inspection of containment and control facilities, and the monitoring of waste disposed in each WMU. Part B of this SMP indicates the specific types of monitoring required as well as the monitoring frequency and reporting schedule. The following defines the types of monitoring that may be required in Part B of this SMP.

Monitoring of Environmental Media

The Regional Board may require monitoring of any of the following environmental media:

1. Groundwater
2. Surface water (streams, stormwater runoff, etc.)
3. Leachate
4. Landfill gas

Sample collection, storage, and analyses shall be performed according to the most recent version of EPA Standard Methods or in accordance with an approved sampling and analysis plan. Water and waste analyses shall be performed by a California State approved laboratory for the required analyses. 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.

Standard Observations

Standard observations refers to observations within the limits of each WMU, at their perimeter, and of the receiving waters beyond their limits. Standard observations include:

1. WMUs:
 - a. Evidence of ponded water at any point on the WMU

- b. Evidence of odors, including their presence or absence, characterization, source, and distance of travel from source
 - c. Evidence of erosion and/or daylighted waste
2. Perimeter of WMUs:
- a. Evidence of liquid leaving or entering the WMU, estimated size of affected area and flow rate (show affected area on map)
 - b. Evidence of odors, including their presence or absence, characterization, source, and distance of travel from source
 - c. Evidence of erosion and/or daylighted waste
3. Receiving Waters:
- a. Floating and suspended materials of waste origin: including their presence or absence, source, and size of affected area
 - b. Discoloration and turbidity: description of color, source, and size of affected area
 - c. Evidence of odors, presence or absence, characterization, source, and distance of travel from source
 - d. Evidence of beneficial use: presence of water associated with wildlife
 - e. Flow rate
 - f. Weather conditions: wind direction and estimated velocity, total precipitation

Facilities Inspections

Facilities inspections refers to the inspection of all containment and control structures and devices associated with WMUs. Containment and control facilities include the following:

1. Leachate Collection and Removal System(s)
2. Sedimentation Pond(s)
3. Leachate Collection Tank(s)
4. Perimeter diversion channels
5. Underdrain system.

Waste Monitoring

Waste monitoring includes recording the total volume (in cubic yards) and weight (in tons) of waste disposed in each WMU during each month, and the percentage of each waste type (e.g., residential, commercial, industrial, construction/demolition, etc.)

C. REPORTING REQUIREMENTS

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 and Order No. 93-113. The monitoring frequency and reporting schedule are indicating in Part B of this SMP. Each monitoring report shall include the following information:

1. **Transmittal Letter:** A letter transmitting essential points shall be included in each monitoring report. The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall also certify the completion of all monitoring requirements. The letter shall be signed by the discharger's principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.
2. **Compliance Evaluation Summary:** Each monitoring report shall include a compliance evaluation summary containing the following information:
 - a. A summary and certification of completion of all environmental media monitoring, standard observations, and facilities inspections
 - b. A graphic presentation of the velocity and direction of groundwater flow under/around each waste management unit, based upon the past and present water level elevations and pertinent visual observations
 - c. A graphic demonstration (e.g., piezometric surface contour maps) of hydraulic containment and/or separation from groundwater beneath and around the perimeter of waste management units where required
 - d. The quantity and types of wastes disposed of during the past quarter, and the locations of the disposal operations
 - e. A description of the waste stream including the percentage of each waste type (e.g., residential, commercial, industrial, construction/demolition, etc.)
 - f. Map(s) or aerial photograph(s) showing observation and monitoring station locations
 - g. An evaluation of the effectiveness of the leachate monitoring/control facilities, including a summary of leachate management procedures, an evaluation of leachate buildup within each WMU, a summary of leachate volumes removed from the units, and a discussion of the leachate disposal methods and leachate containment capacity for each WMU
 - h. The signature of the laboratory director whose name appears on the laboratory certification, indicating that he/she has supervised all analytical work in his/her laboratory
3. **Appendices:** Include the following information in appendices, unless the information is already contained in an approved Sampling and Analysis Plan:
 - a. New boring and well logs
 - b. Method and time of water level measurements
 - c. Purging methods and results including the type of pump used, pump placement in the well, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity, calibration of the field equipment, pH, temperature, conductivity, and turbidity measurements, well recovery time, and method of disposing of the purge water
 - d. Sampling procedures, 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 relevant observations

- e. Documentation of laboratory results, analytical methods, detection limits, and Quality Assurance/Quality Control (QA/QC) procedures for the required sampling, including:
 - (1) Laboratory statements of results of analyses
 - (2) Descriptions of analytical methods used (note, 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)
 - (3) Actual detection limits for each sample results (note, detection limits must be appropriate for the expected concentrations)
 - (4) Laboratory quality assurance/quality control (QA/QC) information and results including analytical methods, detection limits, recovery rates, explanations for low recovery rates (less than 80%), equipment and method blanks, spikes and surrogates, and QA/QC sample frequency

The appendices need not include the actual laboratory analytical data sheets and QA/QC report summary, however, this information shall be provided upon request.

D. ANNUAL REPORTING

The discharger(s) shall submit an annual self-monitoring report to the Regional Board covering the previous calendar year. The annual report must summarize all monitoring, investigation, and remedial activities that have occurred in the previous year. The annual report shall include the following information for **each monitoring event during the year** required pursuant to this self-monitoring program, in addition to the transmittal letter and appendices described in Sections C.1 and C.3 of this self monitoring program:

1. **Graphic Presentation:** Include site maps (plot plans) for each aquifer or water-bearing zone monitored that are drawn to a scale that remains constant from reporting period to reporting period. These maps shall include the following information:
 - a. Known or probable contaminant sources
 - b. Well locations
 - c. Groundwater elevation contours
 - d. Inferred groundwater flow direction(s)
 - e. Extent of phase-separated product (NAPL)
 - f. Extent of dissolved chemical constituents (e.g., isoconcentration maps)
 - g. Appropriate analytical results

Line or bar graphs are helpful to illustrate variations in groundwater elevations, phase-separated product thickness, and dissolved chemical concentrations with time. Geologic cross sections are required if new data is available and/or the previous interpretation of subsurface conditions has changed. When required, geologic cross sections shall include the following:

- h. Vertical and lateral extent of contamination
- i. Contaminant sources
- j. Geologic structures

- k. Soil lithology
 - l. Water table/piezometric surfaces
 - m. Sample locations
 - n. Sample analytical results
 - o. Subsurface utilities and any other potential natural or manmade conduits for contaminant migration
2. **Tabular Presentation:** Present all of the following data in one or more tables to show a chronological history and allow quick and easy reference:
- a. Well designations
 - b. Well location coordinates (latitude and longitude)
 - c. Well construction (including top of well casing elevation, total well depth, screen interval depth below ground surface, and screen interval elevation)
 - d. Groundwater depths
 - e. Groundwater elevations
 - f. Horizontal groundwater gradients
 - g. Vertical groundwater gradients (including comparison wells from different zones)
 - h. Phase-separated product elevations
 - i. Phase-separated product thicknesses
 - j. Current analytical results (including analytical method and detection limits for each constituent)
 - k. Historical analytical results (including the past five years unless otherwise requested)
 - l. Measurement dates
 - m. Groundwater extraction, including:
 - (1) Average daily extraction rate
 - (2) Total volume extracted for monitoring period
 - (3) Cumulative total volume extracted since system inception
 - n. Contaminant mass removal, including:
 - (1) Average daily removal rate
 - (2) Total mass removed for monitoring period
 - (3) Cumulative total mass removed since system inception
 - o. Leachate volumes removed and disposed of, including leachate buildup in disposal units
3. **Discussion:** Provide a discussion of the field and laboratory results that includes the following information:
- a. Data Interpretations
 - b. Conclusions
 - c. Recommendations
 - d. Newly implemented or planned investigations & remedial measures
 - e. Data anomalies
 - f. Variations from protocols
 - g. Conditions of wells
 - h. Effectiveness of leachate monitoring and control facilities

E. CONTINGENCY REPORTING

1. The discharger(s) shall report by telephone to the Regional Board, any discharge from the disposal area immediately after it is discovered. The discharger(s) shall submit a written report with the Regional Board within five days of discovery of any discharge. The written report shall contain the following information:
 - a. a map showing the location(s) of discharge
 - b. approximate flow rate
 - c. nature of effects (e.g., all pertinent observations and analyses)
 - d. corrective measures underway or proposed
2. The discharger(s) shall submit a written report to the Regional Board within seven days of determining that a statistically significant difference occurred between a self-monitoring sample set and an approved Water Quality Protection Standard (WQPS). The written report shall indicate what WQPS(s) have been exceeded. The discharger(s) shall immediately resample at the compliance point(s) where this difference has been found and analyze another sample set of at least four portions split in the laboratory from the source sample.
3. If re-sampling and analysis confirms the earlier finding of a statistically significant difference between self-monitoring results and WQPS(s) the discharger(s) shall submit to the Regional Board an amended Report of Waste Discharge as specified in Title 27, Section 20420 for establishment of an Evaluation Monitoring program meeting the requirements of Title 27, Section 20425.
4. Within 180 days of determining statistically significant evidence of a release, the discharger(s) shall submit to the Regional Board an engineering feasibility study for a Corrective Action Plan (CAP) necessary to meet the requirements of Title 27, Section 20430. At a minimum, the feasibility study shall contained a detailed description of the corrective action measures that could be taken to achieve background concentrations for all constituents of concern.

F. ELECTRONIC REPORTING FORMAT

In addition to print submittals, all reports submitted pursuant to this self-monitoring program must be submitted as electronic files in PDF format. The Regional Board has implemented a document imaging system, which is ultimately intended to reduce the need for printed report storage space and streamline the public file review process. Documents in the imaging system may be viewed, and print copies made, by the public, during file reviews conducted at the Regional Board's office. PDF files can be created by converting the original electronic file format (e.g., Microsoft Word) and/or by scanning printed text, figures & tables.

Monitoring results shall also be provided electronically in Microsoft Excel[®] or similar spreadsheet format to provide an easy to review chronological summary of monitoring data, and to facilitate data computations and/or plotting that Regional Board staff may undertake during their review. Data tables submitted in electronic spreadsheet format will not be

included in the case file for public review. Electronic tables shall include the following information:

1. Well designations
2. Well location coordinates (latitude and longitude)
3. Well construction (including top of well casing elevation, total well depth, screen interval depth below ground surface, and screen interval elevation)
4. Groundwater depths (water levels)
5. Groundwater elevations
6. Phase-separated product elevations
7. Phase-separated product thicknesses
8. Current analytical results by constituent of concern (including detection limits for each constituent)
9. Historical analytical results (including the past five years unless otherwise requested)
10. Measurement dates

All electronic files must be submitted on CD or diskette and included with the print report.

G. MAINTENANCE OF WRITTEN RECORDS

Information required pursuant to this Self-Monitoring Program shall be maintained by the discharger(s) for a minimum of five years. The five-year period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board.

PART B

A. MONITORING LOCATIONS AND FREQUENCY

1. Groundwater, Surface Water, Leachate, and Landfill Gas

Environmental media shall be monitored at locations indicated on Figure B-1 and in accordance with Table B-1.

2. Standard Observations

Standard observations shall be made for all waste-filled parcels at the Story Road Landfill at least twice per year.

3. Facilities Inspections

All landfill facilities shall be inspected at least twice per year.

4. Waste Monitoring

Not Applicable.

B. REPORTING SCHEDULE

The Discharger(s) shall submit self-monitoring reports per the schedule indicated in Table B-2. Reports due at the same time may be combined into one report for convenience, as long as monitoring activities and results pertaining to each monitoring period are clearly distinguishable. All monitoring reports shall be submitted to the Regional Board in accordance with the schedule indicated in Table B-2.

Table B-2 Reports and Due Dates

Report Type	Reporting Frequency	Report Due Dates
Groundwater, Surface Water, Leachate, & Landfill Gas Monitoring	Semi-Annually	Jun 30, Jan 30
Standard Observations & Facilities Inspections	Semi-Annually	Jun 30, Jan 30

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 Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Regional Board's Order No. R2-2003-0086.
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: September 17, 2003

Attachments: Table B-1
Figure B-1

**Table B-1
Story Road Landfill, Self Monitoring Program (SMP) for Order No. R2-2003-0086**

Well ID	Well Construction Details				Parameters and Monitoring Frequency									
	date installed	well elevation ft, MSL	screen interval ftgs	screen interval ft, MSL	Head	VOCs ⁽²⁾	TPH-d ⁽³⁾	TPH-g ⁽⁴⁾	MtBE ⁽⁵⁾	GenCh ⁽⁶⁾	NH ₃ ⁽⁷⁾	NO ₃ ⁽⁸⁾	+/- ⁽⁹⁾	GeoCh ⁽¹⁰⁾
GROUNDWATER														
Upper Zone⁽¹⁾														
MW-1	pre-1992	102.71	32-42	60-70	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
MW-2R	pre-1992	85.40	20-25	60-65	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
MW-4	pre-1992	90.95	15-25	66-76	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
MW-5	pre-1992	101.33	24-44	57-77	SA-1,3									
MW-7	pre-1992	105.69	35-45	61-71	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
MW-9R	pre-1992	93.84	22-32	62-72	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
MW-10	pre-1992	101.64	31-41	61-71	SA-1,3									
MW-11	pre-1992	96.43	27-32	64-69	SA-1,3									
MW-12	pre-1992	86.01	23-30	56-63	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
MW-14	pre-1992	88.55	23-30	59-66	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
MW-15	pre-1992	93.87	25-31	63-69	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
MW-16	pre-1992	78.35	13-18	60-65	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
MW-17	pre-1992	102.66	27-31	72-76	SA-1,3									
MW-18	1993	89.94			SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
Lower Zone⁽¹⁾														
MW-3	pre-1992	91.39	39-49	42-52	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
MW-6R	pre-1992	96.60	54-56	41-43	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
MW-8R	pre-1992	93.85	46-50	44-48	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
MW-13	pre-1992	85.83	50-60	25-35	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
MW-19	1993	88.87			SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
GW Extraction														
EW-1	pre-1992	93.67	22-32	62-72										
EW-3	1993													
EW-4	1993													
LEACHATE														
LW-1	1993	104.26			SA-1,3	5A	5A	5A	5A	5A	5A	5A	5A	5A
LW-2	1993	117.59			SA-1,3	5A	5A	5A	5A	5A	5A	5A	5A	5A
LW-3	1993	103.15			SA-1,3	5A	5A	5A	5A	5A	5A	5A	5A	5A
LW-4	1993	114.95			SA-1,3	5A	5A	5A	5A	5A	5A	5A	5A	5A
LW-5	1993	120.17			SA-1,3	5A	5A	5A	5A	5A	5A	5A	5A	5A
EW-2	pre-1992	103.68	27-37	67-77										
SURFACE WATER														
SSP-1	pre-1992	78.13	1-4	74-77	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
SSP-2	pre-1992	69.62	4-7	63-66	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3	SA-1,3
SG-1	1993	75.07			SA-1,3									
SG-2	1993	71.54			SA-1,3									
SG-3	1993	68.39			SA-1,3									
SG-4	1993	66.60			SA-1,3									

Footnotes:

* These wells are monitored for VOCs, Freons, Total Chromium, & Nitrate as part of the Detection Monitoring Program (DMP) for the Process Wastewater Treatment & Reclamation Facility.

** Well G-15 is part of the City of Sunnyvale's Landfill monitoring network.

⁽¹⁾ Transmissive Zones Beneath the Site:

T1 = Upper Transmissive Zone; 0 to 50 ftgs

T2 = Lower Transmissive Zone; 60 to 200 ftgs

T3 = Deep Aquifer; >200 ftgs

⁽²⁾ Volatile Organic Compounds by EPA Method 8021B or 8260B.

⁽³⁾ Total Petroleum Hydrocarbons as Diesel by EPA Method 8015.

⁽⁴⁾ Total Petroleum Hydrocarbons as Gasoline by EPA Method 8015.

⁽⁵⁾ MtBE by EPA Method 8260B.

⁽⁶⁾ General Chemistry parameters include pH, specific conductance, temperature, turbidity, total suspended solids, total dissolved solids, and total organic carbon.

⁽⁷⁾ Ammonia as Nitrogen (N) by EPA Method 350.1; Unionized Ammonia by EPA Method 300.0; Total Kjeldahl Nitrogen by EPA Method 351.2.

⁽⁸⁾ Nitrate as Nitrogen (N) by EPA Method 300.0.

⁽⁹⁾ Cations and Anions including chloride, sulfate and potassium.

⁽¹⁰⁾ Dissolved geochemical parameters including calcium, magnesium, sodium, and bicarbonate/carbonate alkalinity.

KEY

M = monthly monitoring

Q = quarterly monitoring according to the following schedule:

1st quarter = Jan thru Mar

2nd quarter = Apr thru Jun

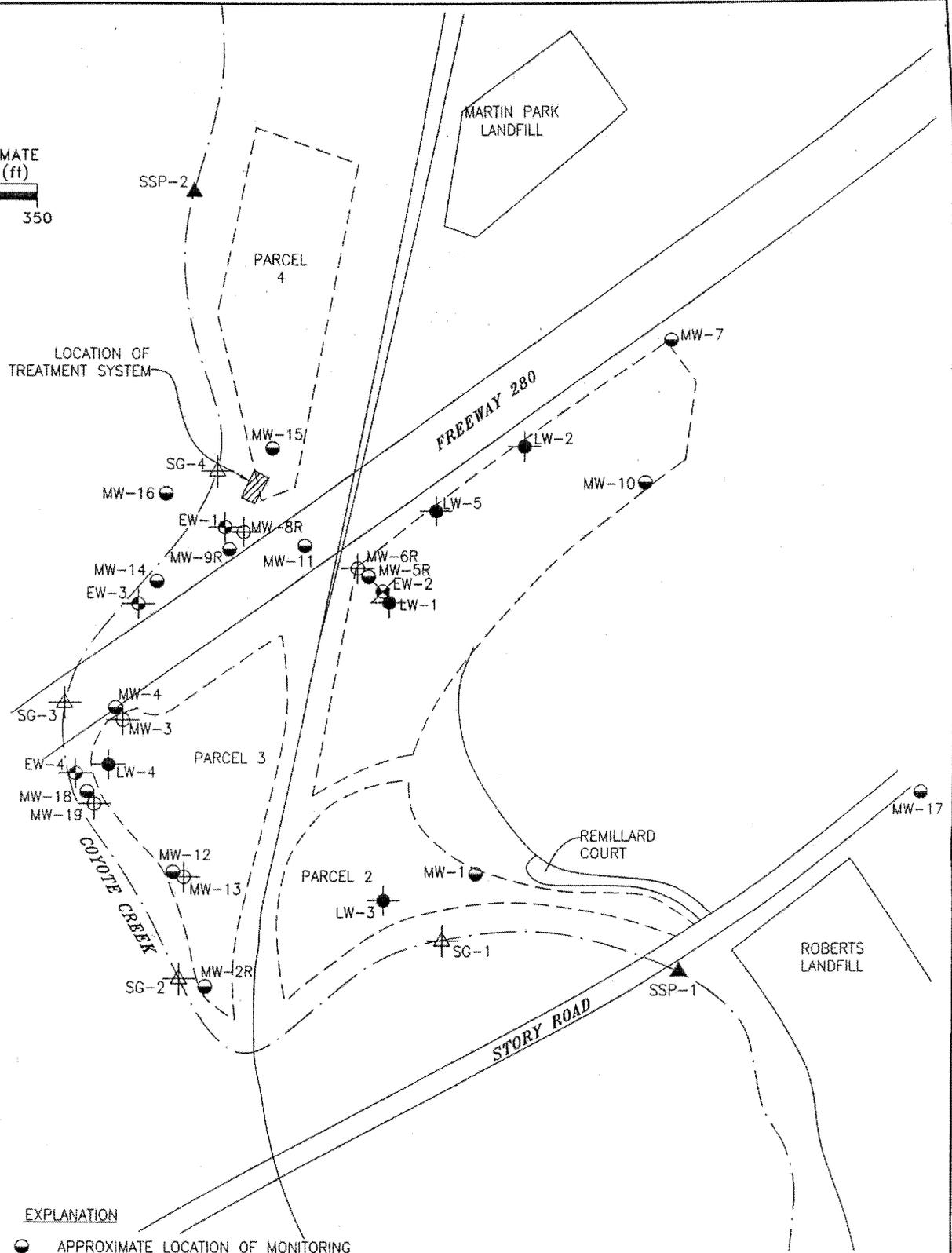
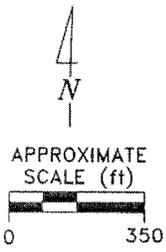
3rd quarter = Jul thru Sep

4th quarter = Oct thru Dec

SA-1,3 = semi-annual monitoring during first and third quarters

A-1 = annual monitoring during first quarter

5A = once every 5 years; 1998/2003/2008



EXPLANATION

- APPROXIMATE LOCATION OF MONITORING WELLS IN FIRST WATER BEARING ZONE
- ⊕ APPROXIMATE LOCATION OF MONITORING WELLS IN SECOND WATER BEARING ZONE
- APPROXIMATE LOCATION OF LEACHATE MONITORING WELLS
- SSP-1 ▲ APPROXIMATE LOCATION OF CREEK SAMPLING POINTS
- SG-1 ▴ APPROXIMATE LOCATION OF STREAM GAGE LOCATIONS
- EW-1 ⊖ APPROXIMATE LOCATION OF GROUNDWATER EXTRACTION WELL
- EW-2 ⊗ APPROXIMATE LOCATION OF LEACHATE EXTRACTION WELL

Figure B-1: SMP Monitoring Locations