STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. R4-2009-XXXX

REVISED WASTE DISCHARGE REQUIREMENTS
FOR
WASTE DISPOSAL, ASSESSMENT MONITORING PROGRAM, AND CORRECTIVE ACTION PROGRAM

COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
(CALABASAS LANDFILL)
(FILE NO. 60-118)

TENTATIVE

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), finds:

BACKGROUND

1. The Calabasas Landfill is a municipal solid waste, Class III, landfill located on 505 acres at 5300 Lost Hills Road in an unincorporated area of Los Angeles County (see Figure 1, attached). The Landfill is owned by the County of Los Angeles (County) and operated by the County Sanitation Districts of Los Angeles County (Discharger) under a joint powers agreement (JPA) with the County.

2. The Landfill was operated as a designated waste (Class II) facility from February 14, 1961 through September 14, 1965, as a hazardous waste (Class I) facility through July 31, 1980, and subsequently as a municipal solid waste facility. Following is a chronologic history of the Landfill development.

   A. In 1958 the Los Angeles County Regional Planning Commission first issued a land use permit (Zone Exemption Case No. 3349-(5)) for solid waste disposal on a 300-acre parcel (see Figure 2, attached) at the Landfill.

   B. On December 8, 1960, the Regional Board adopted Order No. 60-75, prescribing waste discharge requirements (WDRs) for the disposal of non-hazardous solid and certain "semi-liquid" wastes, and inert wastes at the Landfill.

   C. On January 30, 1961, the County Engineer issued Industrial Waste Permit No. 2464 to the Calabasas Landfill, and approved by the Regional Board as requirements for the Landfill on April 19, 1961. Industrial Waste Permit No. 2464 was rescinded by the County on June 6, 1961, in accordance with County Ordinance No. 8023.

D. On September 15, 1965, the Regional Board adopted Order No. 65-47, prescribing WDRs for the disposal of liquid, semi-liquid and solid hazardous wastes in addition to non-hazardous solid and certain "semi-liquid" wastes, and inert wastes and superseding Order No. 60-75.

E. In 1966, under the authority of the JPA with the County, the Discharger purchased an additional 80 acres contiguous to the northern boundary of the Landfill (see Figure 2, attached).

F. On July 28, 1972, the Regional Board adopted a monitoring and reporting program (M&RP) for the Landfill, thereby amending Order No. 65-47.

G. In early 1972, under the authority of the JPA with the County, the Discharger purchased an additional 36 acres contiguous to the northern boundary of the Landfill, for the purpose of expanding landfilling operations. The addition of the new parcel increased the size of the Landfill to 416 acres (see Figure 2, attached).

H. Land use designations for the Landfill site were filed prior to the enactment of the California Environmental Quality Act (CEQA) in 1970. As such, no environmental impact report has been filed for the development of the Landfill. On August 9, 1972, the Los Angeles County Regional Planning Commission issued Conditional Use Permit (CUP) Case No 5022-(5) to the Discharger, encompassing all existing 416 acres of the total 505 acres that comprise the Landfill in accordance with a plot plan submitted by the Discharger.

I. On July 31, 1980, the Discharger voluntarily suspended hazardous waste disposal operations and began operating the Landfill as a municipal solid waste facility. Accordingly, on April 27, 1981, the Regional Board adopted Order No. 81-12, revising portions of Order 65-47 and prohibiting disposal of all liquid and solid hazardous wastes effective July 31, 1980, and requiring containment engineering features and groundwater monitoring programs at the Landfill.

J. On August 23, 1982, the Regional Board adopted Order 82-67 and M&RP No. 4992. This Order reclassified the landfill as a municipal solid waste facility, and prescribed WDRs for the disposal of nonhazardous solid and certain "semi-liquid" wastes, and inert wastes. Order 82-67 allowed expansion of waste disposal operations to the then existing 416 acres at the Landfill and superseding all prior requirements and Orders adopted by the Regional Board.

K. In 1983, under the authority of the JPA with the County, the Discharger purchased an additional 89 acres contiguous to the eastern boundary of the Landfill for access purposes, bringing the total acreage of the Landfill property to 505 acres (see Figure 2, attached).

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L. On May 22, 1989, the Regional Board adopted Order No. 89-053, revising the WDRs for the Landfill and superseding Order 82-67.

M. In January 1991, the County of Los Angeles passed Ordinance No. 91-0003 limiting disposal at the Landfill to a wasteshed comprised of the cities of Calabasas, Hidden Hills, Agoura Hills, Westlake Village, and Thousand Oaks, as well as a portion of the City of Los Angeles and certain unincorporated areas of Los Angeles and Ventura counties.

N. The Discharger conducted a solid waste assessment test (SWAT) analysis for the Landfill, consistent with section 13273 of the CWC, in 1987. The SWAT was approved by the Executive Officer on May 13, 1993. Results from the SWAT investigation indicated the presence of low levels of organic compounds emanating from the Landfill consistent with concentrations resulting from contact with landfill gas.

O. While the State Board and Regional Boards are the state agencies designated to protect water quality resulting from solid waste disposal activities, the California Integrated Waste Management Board (Waste Board) regulates all other aspects of solid waste disposal in the state. To remove regulatory overlap, conflict, and duplication between the Waste Board and the State Board/Regional Boards, the California Legislature, under the Solid Waste Disposal Regulatory Reform Act of 1993, streamlined the state's solid waste disposal regulatory process by developing one consolidated set of solid waste disposal facility regulations. The revised regulations, under title 27 of the California Code of Regulations (27 CCR) promulgated on July 18, 1997, clarify the roles and responsibilities of the Waste Board and the State Board/Regional Boards in regulating municipal solid waste disposal sites.

P. Regulations in chapter I, part 6, of title 36 of the Code of Federal Regulations (CFR) are designed to limit the creation of new solid waste disposal sites in units of the National Park System (NPS) and to reduce the potential for adverse effects from existing operations in response to legislation passed by the United States Congress in 1984 (Public Law 98-506) with implementation of the law beginning in January 1995. Because the landfill is located in a northern segment of the Santa Monica Mountains National Recreation Area (see Figure 3, attached), the Discharger was required to apply for an NPS Special Use Permit (SUP) to continue operation. After a process that included an Environmental Assessment under the National Environmental Policy Act and public input, on November 1998, the NPS issued the Discharger a SUP. The SUP required the Discharger to clear the west-facing slope of existing ornamental vegetation and replant it with natives to blend in with surrounding plant communities.

Q. On June 29, 2000, in response to documented releases to groundwater from the Landfill, the Regional Board adopted Order No. 00-077 implementing a corrective action program (CAP) for affected areas of the Landfill.

R. On April 25, 2002, the Executive Director of the SWRCB issued a request for Regional Boards to collect analytical results for radioactive waste constituents in liquid samples from state landfills to establish basic information on radioactivity characteristics of leachate and groundwater beneath active landfills in the state. Radioactivity testing was completed in 50 California landfills, including Calabasas Landfill. At the Landfill, groundwater samples were collected from monitoring wells where a release of volatile organic compounds (VOCs) had previously been detected, from unaffected monitoring wells, and from leachate collection and removal systems (LCRS). The samples were analyzed for specific conductance, gross alpha/beta particle activity, tritium, isotopic uranium (i.e., uranium-234, uranium-235, and uranium-238), radium-226, radium-228, and strontium-90, potassium, potassium-40, and cesium-137. VOC-affected monitoring wells results were within the range of results for unaffected well samples. LCRS samples contained alpha activity, beta activity, and uranium detections that overlapped with, and in some cases slightly exceeded the range of unaffected well samples. The LCRS results for alpha activity and uranium likely resulted from naturally-occurring uranium found in onsite shales used for daily cover. The slightly elevated beta activity results for the LCRS samples indicate that low levels of radioactivity associated with household wastes may be found in landfill LCRS liquids, with a significant portion being likely related to naturally-occurring radioactive potassium-40. Additional beta activity is likely related to beta-emitting daughter products derived from natural uranium-234 and uranium-238 present in LCRS liquids. While uranium and alpha particle activity concentrations in VOC-affected monitoring wells exceeded their respective MCLs for drinking water, these levels likely reflect natural sources rather than a release from the Landfill, since unaffected monitoring well results also exceed MCLs.

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3. The Discharger intends to continue disposal operations as a modified "cut and cover" side hill landfill. Soil, for use as cover, is excavated within the Landfill property, or provided by reclaiming clean dirt loads from the incoming waste stream. Refuse is spread and compacted in cells approximately eighteen to twenty feet in height. On the exterior face of the Landfill, soil is placed at a minimum thickness of seven feet normal to the front face (fifteen feet on the horizontal). An approximately fifteen-foot wide bench is constructed approximately every 40 vertical feet to provide slope stability, drainage and access for maintenance. This design provides for proper grading and drainage of surface water to eliminate ponding of such water on the Landfill.

4. This Order includes the attached definition of terms and acronyms (Attachment 1).

ENVIRONMENTAL SETTING

5. The Landfill is located in the south central portion of the Western Transverse Range in the Santa Monica Mountains, which are characterized by east-west trending mountains of uplifted and folded sedimentary and volcanic rocks formed under intermittent continental and marine conditions. Numerous alluvial valleys and canyons crosscut the area, the most prominent of which is the Malibu Canyon. The Landfill straddles the Palo Comado and Las Virgenes Canyon basins of the Malibu Creek Watershed area (see Figure 4, attached).

6. Alluvium (unconsolidated sediments) in the canyons and valleys of the Malibu Creek Watershed area is thin, generally less than 30 feet thick. Groundwater is present in alluvium along the bottoms of canyons and valleys and in fractured volcanic rocks.

7. The Landfill is underlain by folded and faulted, generally low-permeability, sedimentary marine bedrock units. Unconsolidated surficial deposits, which include alluvium, colluvium, landslide deposits, and artificial fill, can transmit limited amounts of water to any saturated alluvium and weathered bedrock immediately underlying the Landfill. Groundwater in the unconsolidated surficial deposits and in the near-surface bedrock is impeded and extracted at six subsurface barriers located in former surface drainage courses around the Landfill (see Figure 5, attached). Groundwater in the vicinity of the Landfill is limited both in quantity and quality because of high salinity resulting from leaching of native marine bedrock and soils, although historically water wells were drilled in the area, and used for domestic, industrial, municipal and irrigation purposes until the Las Virgenes Water District began importing superior quality water to the area.

8. Prior to the construction of dams and the import of water, Malibu Creek and its tributaries were losing streams, meaning stream water recharged groundwater. The importation of water has raised groundwater levels and increased surface runoff causing perennial flow in Malibu Creek and its larger tributaries. Locally, field investigations conducted by the Discharger indicate that Cheeseboro Creek is a recharging stream.

9. The Landfill is located within the Las Virgenes and Lindero Hydrologic Subareas of the Malibu Creek Hydrologic Area of the Malibu Hydrologic Unit. The Water Quality Control Plan for the Los Angeles Region (Basin Plan) designates beneficial uses for inland surface waters for Las Virgenes Creek and Medea Creek (for which Cheeseboro Creek and Liberty Creek which are adjacent to the Landfill are tributaries). The Basin Plan designates existing beneficial use of water contact recreation, non-contact water recreation, warm freshwater habitat, wildlife habitat, rare, threatened, or endangered species, and wetland habitat for Las Virgenes Creek and wildlife habitat, rare, threatened, or endangered species, and wetland habitat for Medea Creek. In addition, the Basin Plan designates potential beneficial uses of municipal and domestic supply, cold freshwater habitat, migration of aquatic organisms and spawning, reproduction, and/or early development for Las Virgenes Creek, and intermittent

beneficial uses for municipal and domestic supply for Medea Creek. The beneficial uses of surface waters in the unnamed canyons of the Landfill are not individually designated in the Basin Plan; however application of the tributary rule requires the beneficial uses of any specifically designated water body apply to its tributary streams. The requirements in this Order, as they are met, are in conformance with beneficial uses designated in the Basin Plan for canyons/streams at the Landfill that are tributary to the Las Virgenes and Lindero Hydrologic Subareas of the Malibu Creek Hydrologic Area of the Malibu Hydrologic Unit.

10. The Landfill does not directly overlie a groundwater basin, however, surface waters, perched groundwaters, and semi-perched canyon waters, if not collected by on-site Landfill controls could drain into groundwater of the Russell Valley Basin via Cheeseboro Creek (see Figure 6, attached). The Water Quality Control Plan for the Los Angeles Region (Basin Plan) also designates Las Virgenes Canyon as part of the Russell Valley Basin area. The Basin Plan designates municipal and domestic supply as beneficial or potentially beneficial use for groundwater in the Russell Valley Basin and Las Virgenes Canyon areas. Similarly, agricultural supply is designated as beneficial use and industrial service supply is designated as a potential beneficial use for these areas.

11. There are no known active faults within 200 feet of the Landfill. Active faults are defined as Holocene Epoch faults that have exhibited surface movement in the last 11,000 years. The nearest active fault, the Malibu Coast fault, is approximately nine miles to the south.

12. Results of a seismic design investigation performed by the Discharger (GeoSyntec Consultants, 2001) indicate that the seismic sources that govern seismicity at the Landfill are either a moment magnitude 6.9 event on the Northridge Fault for a "near-field" maximum credible earthquake (MCE) design event, or a moment magnitude 7.8 event on the San Andreas Fault for a "far-field" MCE design event. A moment magnitude 6.9 event on the Northridge Fault located as close as 10.6 miles from the Landfill could generate a free-field bedrock peak horizontal ground acceleration (PHGA) of 0.29 g and have a duration of shaking of 13.8 seconds. For the San Andreas Fault, a moment magnitude 7.8 event located as close as 38.5 miles from the Landfill could generate a free-field bedrock PHGA of 0.10 g but have a duration of shaking of 35.6 seconds. The practice of this Regional Board is that all Landfill refuse fill slopes will incorporate MCE design events and will be designed and constructed in a manner that will resist settlement and prevent failure or problems associated with the containment or gas systems during such earthquake events.

13. The Seismic Hazard Zone Map for the Calabasas 7.5 minute quadrangles (released February 1, 1998) produced by the California Division of Mines and Geology Seismic Hazards Mapping Program (incorporated herein by reference) indicate that proposed operational areas at the Landfill are located within identified liquefaction zones. The hazard zone maps also identify areas where the previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions, indicate a potential for permanent ground displacements such that mitigation is required.

14. The Landfill is located within the South Coast Air Basin which is comprised of a coastal plain with broad valleys and low hills whose climate is dominated by the semi-permanent, high-pressure climatic conditions of the eastern Pacific zone. The area is characterized by warm, dry summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes and moderate humidity. Rainfall data recorded using an on-site rain gauge between 1999 through 2008 yielded an average annual precipitation of 15.1 inches with 86% of the rainfall occurring between November and March and little rainfall during summer months. Evaporation data for the region, recorded for the calendar years 1996 and 2008 at the Pacoima Dam weather monitoring station by the Los Angeles County Department of Public Works Water Resources Division indicates a mean annual evaporation rate of approximately 86.2 inches.

15. Land uses within 1000 feet of the Calabasas Landfill (see Figure 7, attached) include R-SF, residential - single family; P, public and semi-public facilities; N20 and N10, Mountains Recreation and Conservation Authority Lands; OS-P, open space parks; and OS-DR open space, deed restricted. The single family residential development consists of the Saratoga Hills housing area to the immediate south of the Landfill. The Heschel West School is permitted on a parcel approximately 1 mile to the southwest of the Landfill.

16. According to the National Flood Insurance Program, administered by the Federal Emergency Management Agency, the Landfill is in an area classified as Zone C, designating the absence of a flood hazard.

17. All known abandoned oil and water wells on the Landfill have been properly decommissioned according to appropriate Division of Oil and Gas (now the Division of Oil, Gas, & Geothermal Resources) guidelines. Some improperly decommissioned wells may exist for which no records exist. This Order specifies that upon discovery of any such wells they will be properly decommissioned according to the appropriate Oil, Gas, & Geothermal Resources requirements.

ENVIRONMENTAL PROTECTION AND MONITORING SYSTEMS

18. Engineered containment features for continued development of the Landfill will be constructed to the prescriptive standards of 27 CCR and/or 40 CFR or equivalent performance standards. This Order specifies that final design and construction methods for proposed engineered systems be reviewed and approved by the Regional Board's Executive Officer (Executive Officer) prior to installation and use.

19. The Landfill is comprised of a number of sequential fill areas, most of whom have some type of modern liner system (see Figure 5, attached). The oldest portion of the Landfill is unlined, but has an operating landfill gas extraction system in addition to Subsurface Barrier Nos. 1, 2, and 5. This area received hazardous wastes (see Figure 8, attached), and is the

subject of an on-going CAP. A release has not been detected for other portions of the Landfill, including the Subsurface Barrier Nos. 3, 4, and 6 areas.

20. Lined areas at the Landfill consist of two clay liner systems and nine composite liner systems (see Figure 5 attached). In order of installation, the composite liners are shown on Figure 5 as the 80-Acre Liner, the P-Cut Liner, the D-Cut Liner, 97-Cut Liner, 99-Cut Liner, Southeastern Cut (SEC) Liner, North Ridge Cut (NRC) Phase 1 Liner, the NRC Phase 2A Liner, the NRC Phase 2B-Stage 1A Liner, and the NRC Phase 2B-Stage 1B. The Discharger is constructing the NRC Phase 2B-Stage 2 composite liner system, which will be completed in mid-2009.

21. The LCRS systems from the P-Cut, 97-Cut, 99-Cut, SEC Cut, NRC Phase 1, NRC Phase 2A, and NRC Phase2B-Stage 1A liner systems have been coupled together and are therefore sampled together (sample location PSLC). The LCRS liquids from the 80-Acre Liner (sample location LCRS) and the D-Cut Liner (sample location DLCS) are sampled separately. The LCRS liquids from the Liner 1 and Liner 2 are combined with seep and underdrain systems and therefore cannot be sampled.

22. Section 20260 of 27 CCR requires a site operator to install a clay liner with a hydraulic conductivity of not more than $1x10^{-6}$ cm/sec when site characteristics alone are not adequate to ensure protection of the quality of groundwater. The Discharger has constructed liner systems under several expansion areas constructed after the approval of CUP No. 5022-(5) that comply with state and federal liner requirements and generally consist of (from bottom to top) a subdrain, a clay liner, a synthetic liner, a blanket LCRS, and a protective layer of soil (see Figure 9, attached).

23. The Discharger has constructed six subsurface are cement-bentonite (slurry trench) barrier systems at the Landfill (see Figure 6, attached), using approved excavation and construction methods. The systems include upgradient groundwater extraction systems, a low permeability cut-off wall or barrier having a design hydraulic conductivity of $1x10^{-6}$ centimeters per second (cm/sec) and a minimum thickness of twelve inches, and downgradient monitoring wells (see Figure 10, attached).

24. The Discharger continues to implement a waste-load-checking program, as managed by the County of Los Angeles Department of Environmental Health, the local enforcement agency, (LEA) for the Waste Board, to prevent the disposal of hazardous wastes, designated wastes, or other unacceptable materials. Hazardous materials are temporarily stored in a dedicated hazardous waste storage area and disposed of at an appropriate hazardous waste facility according to hazardous waste laws.

25. The Discharger initiated groundwater monitoring in 1983 having installed monitoring wells to intercept canyon water in alluvial canyons prior to landfilling in these areas. Subsequently, the Discharger has expanded the groundwater monitoring program at the

Landfill to comply with Chapter 15 and later 27 CCR requirements. The Landfill groundwater monitoring program incorporated monitoring points that are upgradient, sidegradient, and/or downgradient of the Landfill. All existing piezometers, monitoring wells and extraction wells at the Landfill are shown on Figure 11 (attached).

26. In August 1995, in response to requirements of Order 93-062 to implement groundwater monitoring programs compliant with federal Subtitle-D requirements, the Discharger developed the report "*Calabasas Landfill Water Quality Monitoring System Report for Compliance with RWQCB Order No. 93-062*". The Discharger proposed to refine CAP and detection monitoring program (DMP) monitoring networks and to implement intra-well statistical analyses methods to comply with federal Subtitle-D requirements. The proposed modifications to the monitoring programs for the Landfill were approved by Regional Board staff during a June 6, 1995 meeting with the Discharger. The resulting compliance monitoring network focus on monitoring in alluvial canyon areas (as shown in Figures 12-14, attached).

27. Pursuant to 27 CCR section 21769 the Discharger is required to implement an unsaturated zone monitoring program at the Landfill. The intent of an unsaturated zone monitoring program is to monitor unsaturated soils/bedrock between the waste management unit and groundwater to potentially provide an early indication of groundwater quality degradation. The Discharger installed an unsaturated zone monitoring system in 1988 consisting of eleven suction lysimeters. Between 1988 to the present, the unsaturated zone monitoring system proved ineffective in supplementing water quality monitoring because collection of water samples was problematic, the lysimeters consistently failed to yield an adequate volume of water to allow analysis. Because monitoring of shallow alluvial groundwater should allow for early detection of any contaminant release, unsaturated zone monitoring has been discontinued.

28. Landfill gas migration monitoring probes are located along the boundary of the Landfill (see Figure 15, attached). These probes are currently monitored on a monthly basis pursuant to requirements of the Waste Board and their LEA.

29. The Discharger will expand the Landfill gas recovery system to include the proposed waste management facility expansion. Gas is collected through extraction wells and rock-lined trenches, designed in accordance with 27 CCR requirements. The gas is combusted to reduce odor. Electricity is generated from this combusted gas. Excess gas is flared.

30. Proposed landfilling will reach a maximum elevation of 1,350 feet above mean sea level (see Figure 16, attached). Proposed landfilling will slope down-canyon to the surrounding property. The permitted rate of waste disposal is 3,500 tons per day.

31. The Discharger uses recycled water for irrigation and dust control purposes at the Landfill. These uses are in conformance with the goals of the Basin Plan and State statutes and

regulations pertaining to the use of recycled water in California that can be found in the CWC, CCR, and the health and safety code (HSC). State policy promotes the use of recycled water to the maximum extent in order to supplement existing surface and groundwater supplies to help meet water needs (CWC section 13510 to 13512).

32. The Waste Board has approved the Discharger's proposal to use shredded greenwaste as alternative daily cover materials for use at the Landfill. The Discharger may evaluate the use of other materials as alternative cover materials in the future.

REGULATORY REQUIREMENTS

33. The United States Environmental Protection Agency (USEPA) under title 40 of the code of federal regulations (40 CFR) section 257 and section 258 (Subtitle D) revised existing regulations for municipal solid waste disposal facilities in response to the 1984 Hazardous and Solid Waste Amendments of the Resources Conservation and Recovery Act and added new detailed requirements addressing the issues of location restriction, facility operation and design criteria, groundwater monitoring and corrective action, closure and postclosure maintenance, and financial assurance. USEPA delegated the responsibility for implementing these regulations to states with a fully approved landfill regulatory program. As responsible agencies for an approved state, the State Board and the Regional Board adopted the federal Subtitle D regulatory requirements (State Board Resolution No. 93-62 and Regional Board Order No. 93-62, respectively). Regional Board Order No. 93-062 was adopted September 27, 1993.

34. The Discharger is subject to State Board Order No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001, "*Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities*". The Landfill is enrolled under general NPDES permit WDID No. 4B196000293 to regulate surface water discharges and is subject to industrial stormwater permit No. 419S006192.

CORRECTIVE ACTION PROGRAM

35. Order No. 89-053, provision C.6, requires the Discharger to institute a CAP if representative analyses of the groundwater shows a statistically significant increase in any water quality protection standard (WQPS), which are concentration limits for constituents of concern based upon established site-specific background concentrations. In addition, all refuse fill areas are subject to the requirements of Regional Board Order No. 93-062, which implements the provisions of federal Subtitle D requirements, as contained in 40 CFR section 258, as well as state landfilling regulations contained in 27 CCR. These regulations specify that the WQPS for a CAP will not exceed background concentrations, unless the Regional Board finds that it is technologically or economically infeasible to achieve background concentrations.

36. VOCs, consisting of trichloroethylene (TCE), vinyl chloride, cis-1,2-dichloroethylene (cis1,2-DCE), 1,2-dichloroethane (1,2-DCA), perchloroethylene (PCE), p-dichlorobenzene (p-DCB), and 1,1-dichloroethane (1,1-DCA) have been detected in concentrations above drinking water standards (California Department of Health Services' maximum contaminant levels (MCLs)) at Subsurface Barrier No. 5. Vinyl chloride, cis1,2-DCE, 1,2-DCA, and 1,1-DCA have been detected in concentrations above MCLs at Subsurface Barrier No. 1. TCE, vinyl chloride, cis1,2-DCE, 1,2-DCA, and 1,1-DCA have been detected in concentrations above MCLs at Subsurface Barrier No. 2.

37. Following confirmation of a release, the Discharger completed a scan of the constituents listed in appendix II of 40 CFR section 258 (Appendix II) in accordance with 40 CFR section 258.55 requirements. The testing results for the Appendix II constituents scan indicated that there were no constituents of concern (COCs) that had not previously been identified in the VOCs release in the Subsurface Barrier Nos. 1, 2 and 5 areas of the Landfill.

38. The Discharger completed an evaluation monitoring program (EMP) for the VOCs detected in groundwater monitoring wells downgradient of Subsurface Barrier Nos. 1, 2, and 5. The Discharger submitted a final evaluation monitoring program (EMP) report on September 30, 1998, based on numerous subsurface investigations completed by the Discharger that delineated the full lateral and vertical extent of the VOC releases near Subsurface Barrier Nos. 1 2, and 5. The Discharger installed monitoring wells R01A, R01B, R02A, R02B, R03A and R03B (Subsurface Barrier No. 1), R04A, R04B, R05A, R05B, R06A and R06B (Subsurface Barrier No. 2) and R07A, R07B, R08A and R08B (Subsurface Barrier 5) as ground water monitoring points at the Landfill boundary directly in the path of contaminant migration, pursuant to 40 CFR section 258.55(g)(1)(ii) and installed assessment wells M20S, P64S, P67S, P68S, P69S, EMP10 and EMP11 offsite to delineate the three-dimensional nature and extent of the release, pursuant to 40 CFR section 258.55(g)(1)(i) and 27 CCR section 20425(b).

39. The EMP also focused on the relationship between groundwater pollution and Cheeseboro Creek, a perennial creek located within 1,200 feet of Subsurface Barrier No. 5. Laboratory analyses of surface water and sediment samplings from Cheeseboro Creek aid not detect VOCs. Groundwater and creek base elevations indicate that the creek recharges groundwater during all seasons.

40. The Discharger prepared a final engineering feasibility study (EFS) pursuant to 27 CCR section 20425, based upon the findings in the final EMP, exploring eighteen corrective action technologies to mitigate the VOCs at Subsurface Barrier Nos. 1, 2 and 5.

41. Based upon the results of the EFS, the Discharger submitted a ROWD on March 3, 2000,

which proposed a CAP that continues source control through operation of existing Subsurface Barrier Nos. 1, 2 and 5 groundwater extraction systems, enhanced landfill gas control, and allows for natural attenuation to dissipate VOCs in off-site areas. The CAP was adopted the Regional Board on June 29, 2000 (Order No. 00-077). Groundwater monitoring continues to be used to measure the effectiveness of the CAP. In addition, the Discharger performs semi-annual trend analyses on data obtained from key groundwater monitoring wells.

42. Pursuant to 27 CCR, section 21730(c), the Discharger discussed the findings of the final EMP report, the EFS, and the proposed CAP at a public workshop held on April 11, 2000.

43. On May 16 2000, the Discharger submitted a final ROWD and CAP proposal, which incorporated comments received at the public workshop, as well as responses to comments. As stated above, on June 29, 2000, the Regional Board adopted waste discharge requirements (Order No. 00-077) to implement the corrective action response to documented releases to groundwater from the Landfill.

44. The Discharger continues to notify all persons who own the land or reside on the land that directly overlies any part of the contaminant plume about the status of contaminants that have migrated off-site pursuant to 40 CFR section 258.55(g)(1)(iii) requirements.

45. This Order is in conformance with State Board Resolution No. 93-62 because it requires a CAP, for known and any future releases, that implements all applicable 27 CCR CAP requirements and all additional federal requirements under 40 CFR section 258.58, including section 258.58(a)(1)(i-iii), which requires the Discharger to implement an assessment monitoring program (AMP) pursuant to 40 CFR section 258.55 in conjunction with the CAP.

46. This Order places the entire Landfill into a CAP while implementing corrective measures for the known releases meeting applicable state and federal requirements. This approach eliminates needless complexity associated with applying concurrent programs (i.e., running unaffected portions of the Landfill under a DMP and the portions affected by the release under either an EMP or a CAP, or both). The Regional Board chooses to implement this approach by documenting and responding to the compliance status of each monitoring parameter (Mpar) individually at each compliance well separately (i.e., the Discharger will track the compliance status of each such "well/MPar pair" separately).

47. Since landfill gas is the principal source of the release from the Subsurface Barrier Nos. 1, 2 and 5 areas of the Landfill, the Discharger has installed/improved landfill gas collection and extraction systems as interim corrective action measures (interim CAMs). Operation of enhanced landfill gas collection and extraction systems in these areas commenced in approximately January 1999.

48. To further reduce the downgradient migration of contaminants in groundwater, the Discharger has conducted groundwater containment pumping at the subsurface barriers before 1999. VOCs are removed from the extracted groundwater through an air-stripping facility and the treated water is used onsite for dust control pursuant to the Order No. 89-053.

49. Under this Order, at any given time, each well/MPar pair will be in one of two compliance status conditions. Prior to the MPar's exhibiting a measurably significant exceedance at a given well, that well/MPar pair will be in "detection mode" and monitoring will involve statistical or non-statistical data analysis designed to detect a Landfill-related increase at that well for that MPar. Once a well/MPar pair exhibits a measurably significant increase, it will change to "tracking mode" and monitoring will involve concentration-versus-time plotting to document changes in the release. Once in tracking mode, a well/MPar pair can return to detection mode only upon inception of a proof period to demonstrate the successful completion of corrective action.

50. This Order minimizes the occurrence of false-positive indications in two ways:

    a) it includes a non-statistical data analysis method, meeting 27 CCR section 20415(e)(8-9), that collectively analyzes all the Mpars, at a given well, whose background data exceeds its respective method detection limit (MDL) no more than 10% of the time; and

    b) all statistical and non-statistical data analysis methods used on well/MPars in detection mode data analyses under this Order include a discrete retest as described under 27 CCR section 20415(e)(8)(E).

51. To assure compliance with the requirements and considerations under 40 CFR section 258.55 through section 258.57 and 27 CCR section 20425 in the simplest way possible, this Order:

    a. requires statistical or non-statistical data analysis, at any given compliance well, only for those MPars that are in detection mode at that well;

    b. requires concentration-versus-time plotting, at any given compliance well, for all MPars that are in tracking mode at that well;

    c. uses a periodic (five-year) presence/absence screening of all COCs, rather than statistical/non-statistical data analysis, at all appropriate wells to keep the MPar list updated to include all COCs that are detectable in groundwater;

    d. uses annual leachate sampling (Liner 2, 80-acre, D-Cut, P-Cut, 97-Cut, 99-Cut and

SE-Cut areas), for all non-COC Appendix II constituents, to keep the COC list updated to include all Appendix II constituents that could be released from lined areas of the Landfill, and

e. implements an automatic update procedure to assure that the MPar and COC lists remain current.

52. Given that detection mode testing can be compromised by the arrival of a COC at any background well either as a result of the release (e.g., through advective flow, in the unsaturated zone, of gas-phase VOCs in landfill gas) or through the arrival of such a constituent from an upgradient source, this Order implements a simple means for identifying such anomalies which requires the Discharger to investigate their cause, and initiates appropriate adjustments to the monitoring program.

53. Since 1994, the Discharger has been monitoring leachate annually from existing LCRSs for Appendix II constituents, and re-testing for newly discovered ones, in order to create a COC list containing those Appendix II constituents that could be released from these areas of the Landfill. These WDRs narrow the scope of the COC list for the areas downgradient of Subsurface Barriers Nos. 1, 3, 4, 5 and 6 to include, from Appendix II, only those constituents that have been detected and verified in leachate as indicated in Table 1 of M&RP No. CI-4992. By monitoring for detectable COCs, and any foreseeable breakdown products, the Discharger will be monitoring for all Appendix II constituents that could be released from the Subsurface Barriers Nos. 1, 3, 4, 5 and 6 areas of the Landfill. This is the manner in which this Order meets the requirements of 40 CFR section 258.55(b). Because portions of the Landfill are unlined, leachate monitoring is not possible. Thus, for groundwater monitoring wells downgradient of the Subsurface Barriers No. 2 area, the COC list includes all Appendix II constituents.

54. Given that the VOCs in the federal monitoring parameter list, Appendix I to 40 CFR section 258 (Appendix I), are all Appendix II constituents, leachate sampling from the LCRSs for the Subsurface Barriers Nos. 1, 3, 4, 5 and 6 areas also serves as a basis for narrowing the scope of VOCs which the Discharger must monitor in these areas to include only those Appendix I constituents that have ever been detected in leachate, at trace level or above, and verified by retest. This is the manner in which this order implements 40 CFR section 258.54(a)(1).

ADMINISTRATIVE

55. In September 2004, the State Board adopted regulations requiring that dischargers begin electronic submittal of information (ESI) for all groundwater cleanup programs regulated by the Regional Water Quality Control Boards. Effective January 1, 2005, electronic submittal of all technical reports and monitoring reports was extended to include all reports filed by Land Disposal Program dischargers. The requirements in this Order, as they are met, are in

conformance ESI regulations.

56. On June 13, 1994, this Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan). The Basin Plan (including its subsequent amendments) designates beneficial uses and water quality objectives for the area of the Landfill. The requirements in this Order, as they are met, are in conformance with the goals of the Basin Plan.

57. California Water Code (CWC) section 13263 provides that all WDRs shall be reviewed periodically and, upon such review, may be revised by the Regional Board to comply with changing state or federal laws, regulations, policies, or guidelines. The Discharger's WDRs are being revised to update water quality monitoring programs including an ongoing CAP and implementation of an AMP for the Landfill.

58. Revision of the Discharger's WDRs for the Landfill constitutes an existing project as defined in section 15301, chapter 3, title 14 of the CCR and is therefore exempt from the provisions of the CEQA (Public Resources Code section 21000 et seq.).

The Regional Board has notified interested agencies and all known interested parties of its intent to issue requirements for waste disposal, AMP, and CAP for the Landfill.

The Regional Board in a public meeting heard and considered all comments pertaining to waste disposal, CAP, and AMP for the Landfill.

Pursuant to section 13320 of CWC, any aggrieved party may seek review of this Order by filing a petition with the State Board. The petition must be received by the State Water Resources Control Board, P.O. Box 100, Sacramento, CA 95812, within 30 days of the date this Order is adopted.

IT IS HEREBY ORDERED that the Discharger shall comply with the following requirements pertaining to the Landfill:

TENTATIVE

A. PROHIBITIONS

1. Discharges of waste to land as a result of inadequate waste disposal and postclosure maintenance practices, and that have not been specifically described to the Regional Board and for which valid WDRs are not in force, are prohibited.

2. The discharge of waste shall not:

   a. Cause the occurrence of coliform or pathogenic organisms in waters pumped from a groundwater basin;

b. Cause the occurrence of objectionable tastes or odors in waters pumped from a groundwater basin;

c. Cause waters pumped from a groundwater basin to foam;

d. Cause the presence of toxic materials in waters pumped from a groundwater basin;

e. Cause the pH of waters pumped from a groundwater basin to fall below 6.0, or rise above 9.0;

f. Cause the Regional Board's objectives for the groundwaters or surface waters as established in the Basin Plan to be exceeded; and

g. Cause pollution, contamination, or nuisance, as defined in CWC section 13050, or adversely affect beneficial uses of groundwaters or surface waters as established in the Basin Plan.

3. Odors, vectors, and other nuisances of waste origin beyond the limits of the Landfill are prohibited.

4. The discharge of waste to surface drainage courses or to usable groundwater is prohibited.

5. Basin Plan prohibitions shall not be violated.

6. All federal, state, and county sanitary health codes, rules, regulations, and ordinances pertinent to the disposal of wastes on land shall be complied with in the operation and maintenance of the Landfill.

B. REQUIREMENTS FOR ACCEPTABLE MATERIALS

1. The Discharger shall only accept waste for disposal at the Landfill as deemed acceptable for a municipal solid waste facility by the Regional Board through orders or regulations.

2. Wastes disposed of at the Landfill shall be limited to certain non-hazardous solid wastes (as described in section 20220(a) of 27 CCR), inert solid wastes (as described in section 20230 of 27 CCR), water treatment sludge, and treated wood waste (TWW).

3. Non-hazardous solid waste means all putrescible and non-putrescible solid, semi-solid and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes,

industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes, and other discarded waste (whether of solid or semi-solid consistency); provided that such wastes do not contain wastes which must be managed as hazardous wastes, or wastes which contain soluble pollutants in concentrations which exceed applicable water quality objectives, or could cause degradation to waters of the state (i.e., designated waste).

4. Dewatered sewage or water treatment sludge may be discharged under the following conditions:

   a. In areas containing approved liner and LCRS systems, sludge may be discharged provided it contains at least twenty percent solids if primary sludge, or at least fifteen percent solids if secondary sludge, mixtures of primary or secondary sludges, or water treatment sludge.

   b. In areas where no approved liner and LCRS exist, sludge may be discharged if it contains at least 50 percent solids whether primary or secondary sludge, mixtures of primary or secondary sludges, or water treatment sludge.

   c. A minimum solids-to-liquids ratio of 5:1 by weight shall be maintained to ensure that the co-disposal will not exceed the initial moisture-holding capacity of the non-hazardous solid waste.

5. TWW may be disposed of at the Landfill under the following conditions:

   a. Discharge of TWW shall only be to composite-lined portions of the Landfill.

   b. The TWW is managed so as to prevent scavenging.

   c. Any management of the TWW at the Landfill prior to disposal, or in lieu of disposal, complies with applicable HSC requirements.

   d. TWW disposal shall be discontinued if monitoring of the composite-lined portion of the Landfill where TWW disposal has occurred indicates a verified release until corrective action results in cessation of the release.

C. REQUIREMENTS FOR UNACCEPTABLE MATERIALS

1. No hazardous wastes (as defined in 22 CCR section 66261.3 et seq.), designated wastes (as defined in CWC section 13173), or special wastes (as defined in 22 CCR), such as liquids, oils, waxes, tars, soaps, solvents, or readily water-soluble

solids, such as salts, borax, lye, caustic or acids shall be disposed of at the Landfill.

2. No semi-solid wastes shall be disposed of at the Landfill, except sludges under conditions set forth in Provision No. B.4 above, or unless they are first processed in a solidification operation approved by the Executive Officer. Semi-solid waste means waste containing less than 50 percent solids, as described in section 20200 of 27 CCR. In cases of spoiled semi-solid food wastes Regional Board staff are authorized to approve solidification or waste disposal operations at the Landfill on a case-by-case basis.

3. No materials that are of a toxic nature, such as insecticides or poisons, shall be disposed of at the Landfill.

4. No incinerator ash shall be disposed of at the Landfill.

5. No radioactive waste, including low level radioactive waste, as defined by the agency with jurisdictional authority, shall be disposed at the Landfill.

6. No infectious materials or hospital or laboratory wastes, except those authorized for disposal to land by official agencies charged with control of plant, animal and human disease, shall be disposed of at the Landfill.

7. No pesticide containers shall be disposed of at the Landfill, unless they are rendered non-hazardous by triple rinsing. Otherwise, they must be hauled off-site to a legal point of disposal.

8. No septic tank or chemical toilet wastes shall be disposed of at the Landfill.

D. REQUIREMENTS FOR DISPOSAL SITE OPERATIONS

1. Drainage controls, structures, and facilities shall be designed to divert any precipitation or tributary runoff and prevent ponding and percolation of water at the Landfill in compliance with section 20365 and section 21090(b)(1) of 27 CCR. When necessary, temporary structures shall be installed as needed to comply with this requirement.

2. The Landfill shall be graded and maintained to promote runoff of precipitation and to prevent ponding of liquids and surface water. Erosion or washout of refuse or cover materials by surface flow shall be controlled to prevent off-site migration.

3. Wastes deposited at the Landfill shall be confined thereto, and shall not be

permitted to blow, fall, or otherwise migrate off-site, or to enter off-site water drainage facilities or watercourses.

4. The periodic load-checking program shall continue to be implemented to prevent the disposal of hazardous wastes, designated wastes, or other unacceptable wastes.

5. Waste material shall not be discharged on any ground surface that is less than five feet above the highest anticipated groundwater level, including capillary rise.

6. The Discharger shall comply with notification procedures contained in section 13271 of the CWC with regard to the discharge of hazardous wastes. The Discharger shall remove and relocate to a legal point of disposal, any wastes that are discharged at the Landfill in violation of these requirements. The Regional Board shall be informed via semi-annual monitoring reports when relocation of wastes is necessary. The source and final disposition (and location) of the wastes, as well as methods undertaken to prevent future recurrence of such disposal shall also be reported.

7. All wastes shall be covered at least once during each 24-hour period in accordance with section 20680 and section 20705 of 27 CCR. Intermediate cover over wastes discharged to the Landfill shall be designed and constructed to minimize percolation of precipitation through wastes and contact with materials deposited.

8. Alternative daily cover at the Landfill may be used consistent with section 20690 of 27 CCR.

9. The migration of gases from the Landfill shall be controlled as necessary to prevent water pollution, nuisance, or health hazards. The discharge of wastes or waste by-products (i.e., leachate or gas condensate) to off-site surface drainage courses or to groundwater is prohibited.

10. No surface water or stormwater shall leave the Landfill except as permitted by a NPDES permit issued in accordance with the federal CWA and the CCR. The Discharger shall maintain and modify, as necessary, the SWPPP developed for the Landfill.

11. Gas condensate gathered from the gas monitoring and collection system at the Landfill shall not be returned to the Landfill unless approved by the Executive Officer. Any proposed modifications or expansions to this system shall be designed to allow the collection, testing and treatment, or disposal by approved methods, of all gas condensate produced at the Landfill.

12. The Discharger shall intercept and remove any liquid detected in all LCRSs at the

Landfill to a legal point of disposal and leachate shall not be returned back to the Landfill unless it meets the requirements of this Order for onsite reuse as described in Section G, below and satisfies leachate handling requirements contained in 27 CCR section 20340(g). Any leachate determined to be hazardous shall be transported by a licensed hazardous waste hauler to an approved treatment or disposal facility.

13. In any area within the Landfill where a natural spring or seep is observed, provisions shall be made and/or facilities shall be provided to ensure that this water will not come in contact with decomposable refuse. The locations of all springs and seeps found prior to, during, or after placement of waste material that could affect the Landfill shall be reported to the Regional Board

14. The Discharger shall develop/maintain permanent survey monuments at the Landfill throughout the development, closure and postclosure maintenance periods. Benchmarks shall be established and maintained in sufficient numbers to enable reference to key elevations and to permit control of critical grading and compaction operations.

15. The Discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, and adequate laboratory and process controls including appropriate quality assurance procedures.

16. The Discharger shall report any noncompliance or any incident resulting from Landfill operations that are in violation of this Order. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within fourteen days of the time that the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, or prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

E. REQUIREMENTS FOR CONTAINMENT SYSTEMS

1. The Discharger shall install containment structures that are capable of preventing degradation of the waters of the state. Construction standards for containment structures shall comply with 27 CCR requirements. Design specifications are

subject to review and approval by the Executive Officer prior to any construction.

2. All containment structures and erosion and drainage control systems at the Landfill shall be designed and constructed under direct supervision of a California-registered civil engineer or certified engineering geologist, and shall be certified by the individual as meeting the prescriptive standards and/or performance goals of 27 CCR.

3. The Discharger shall submit detailed preliminary plans, specifications, and descriptions for all proposed containment structures and construction features for Executive Officer approval at least 60 days prior to construction. The preliminary plans shall contain detailed quality assurance/quality control for the proposed construction. No disposal shall occur in a new area until the corresponding construction is completed and certified. The Discharger shall also submit a description of, and location data for, ancillary facilities, including roads, waste handling areas, buildings, and equipment cleaning facilities. As-built plans shall be submitted within 60 days after the completion of construction. If the as-builts are virtually identical to the approved preliminary plans and specifications, only change sheets need be submitted in lieu of complete as-built plans. Along with the change sheets or as-builts, the Discharger shall submit a program that will provide for the annual testing of the LCRS to demonstrate its operating efficiency.

4. Cut and subgrade slopes, fill slopes, refuse cells and visual berms shall be designed and excavated or constructed in a manner that will resist settlement and remain stable during the design earthquake event specific to the Landfill in accordance with section 20370 of 27 CCR.

F. REQUIREMENTS FOR GROUNDWATER MONITORING

1. The Discharger shall implement the attached M&RP No. CI-4992 which is incorporated herein by reference and revisions thereto in order to detect, at the earliest opportunity, any unauthorized discharge of waste constituents from the Landfill or any unreasonable impairment of beneficial uses associated with (caused by) discharges of waste to the Landfill and to continue the CAP for areas of the Landfill where releases to groundwater have occurred. M&RP No. CI-4992 is designed to satisfy both federal and state regulatory monitoring requirements.

2. At any time, the Discharger may file a written request, including appropriate supporting documents, with the Executive Officer, proposing modifications to M&RP No. CI-4992. The Discharger shall implement any changes to the revised M&RP approved by the Executive Officer upon receipt of a signed copy of the revised M&RP.

TENTATIVE

3. The Discharger shall furnish, under penalty of perjury, technical or monitoring program reports in accordance with CWC section 13267. Failure or refusal to furnish these reports or falsifying any information provided therein renders the Discharger guilty of a misdemeanor and subject to the penalties stated in CWC section 13268. Monitoring reports shall be submitted in accordance with the provisions contained in the attached M&RP No. CI-4992, as directed by the Executive Officer.

4. The effectiveness of all monitoring wells, monitoring devices, and leachate and gas collection systems shall be maintained throughout the Landfills operational, closure, and postclosure maintenance periods in accordance with acceptable industry standards. The Discharger shall maintain a monitoring well preventative maintenance program (MWPMP) approved by the Executive Officer. Elements of the program should include a minimum of periodic visual inspections of well integrity, pump removal and inspection, and appropriate inspection frequencies. If a well or piezometer is found to be inoperative, the Regional Board and other interested agencies shall be so informed in writing within seven days after such discovery, and this notification shall contain a time schedule for returning the well or piezometer to operating order. Changes to the existing program shall be submitted for Executive Officer approval at least 30 days prior to implementing the change(s).

5. If a well or piezometer is proposed to replace an inoperative well or piezometer identified in the MWPMP, the Discharger shall not delay replacement while waiting for Executive Officer approval. However, a technical report describing the location and construction details shall be submitted to the Executive Officer within 30 days.

6. The Discharger shall provide for proper handling and disposal of water purged from monitoring wells at the Landfill during sampling. Water purged from a monitoring well shall not be returned to that well (or any other Landfill well).

7. Any abandoned wells or bore holes under the control of the Discharger, and situated within the Landfill boundaries, must be located and properly modified or sealed to prevent mixing of any waters between adjacent water-bearing zones. A notice of intent to decommission a well must be filed with the appropriate regulatory agencies prior to decommissioning. Procedures used to decommission these wells, or to modify wells still in use, must conform to the specifications of the local health department or other appropriate agencies.

8. For any monitoring wells installed at the Landfill in the future, the Discharger shall submit technical reports for approval by the Executive Officer prior to installation. These technical reports shall be submitted at least 60 days prior to the anticipated date of installation of the wells. These reports shall be accompanied

by:

a. Maps and cross sections showing the locations of the monitoring points; and

b. Drawings and data showing construction details of the monitoring points. These data shall include:

i. casing and test hole diameter;
ii. casing materials;
iii. depth of each hole;
iv. the means by which the size and position of perforations shall be determined, or verified, if in the field;
v. method of joining sections of casing;
vi. nature of filter materials;
vii. depth and composition of soils; and
viii. method and length of time of well development.

9. The compliance point(s) where WQPSs apply shall be located along downgradient edges of waste management facilities at the Landfill or an alternate location approved by the Executive Officer.

10. The compliance monitoring wells at the Landfill shall consist of those wells listed in Item No. 7 of M&RP No. CI-4992. All monitoring wells shall be monitored pursuant to this Order and as directed by the Executive Officer through future revisions of M&RP No. CI-4992.

11. The MPars and COCs for compliance monitoring wells at the Landfill shall be those described in Item Nos. 10 and 11 of M&RP No. CI-4992.

12. The compliance period for which WQPSs are applicable shall be the entire active life of a waste management facility, and during the closure and postclosure maintenance periods.

13. The Discharger shall install any additional groundwater, soil pore liquid, soil pore gas, or leachate monitoring devices necessary to comply with M&RP No. CI-4992, as adopted or as revised by the Executive Officer.

14. The WQPS for the on-going CAP at Subsurface Barrier Nos. 1, 2 and 5 of the Main Canyon landfill-gas related VOCs will be the Minimum Levels (ML) as defined in Attachment 1 using USEPA method 8260, or an equivalent method approved by the Executive Officer.

15. The Discharger shall submit semi-annual reports to the Regional Board that

describe the effectiveness of the CAP, according to the schedule outlined in revised M&RP No. CI- 4992.

16. If the Discharger determines that the CAP does not satisfy the provisions of 27 CCR, section 20430(i), the Discharger shall, within 90 days of making the determination, submit an amended ROWD to make appropriate changes to the CAP.

17. Groundwater monitoring results from monitoring well EMP11, downgradient of Subsurface Barrier No. 2, routinely indicate the presence of VOCs. In 1995, The Discharger completed an isotopic analysis on methane detected in the headspace of well EMP11. The analysis determined that the methane was related to naturally occurring petroleum hydrocarbon compounds (methane, benzene, toluene, ethyl benzene, and xylenes) present in the underlying Topanga Formation bedrock. To assure that VOC detections in well EMP11 are not related to a Landfill release, within 60-day from the adoption of this Order, the Discharger submit a technical report containing updated isotopic monitoring well EMP11.

G. REQUIREMENTS FOR ON-SITE USE OF WATER

1. No water shall be routinely applied to refuse fill areas except for landscape irrigation, surface dust control, winter deck construction, road construction, final cover construction or non-emergency uses approved by the Executive Officer. Any water used at the Landfill, except for potable water, recycled water, and any other water allowed by the Executive Officer, shall be subject to these WDRs. Water used for these purposes shall be applied only on completed lifts, in quantities not to exceed that necessary to reduce immediate dust hazards, support plant life, or to achieve desired compaction. Overflow or runoff caused by the over-application or improper management of irrigation or dust control water are prohibited.

2. No wastewater shall leave the Landfill except as permitted by an NPDES permit issued in accordance with the federal Clean Water Act (CWA) and CWC. The Discharger shall maintain and modify, as necessary, the NPDES Storm Water Pollution Prevention Plan developed for the Landfill.

3. Wastewater produced at the Landfill shall not be subject to these WDRs, pursuant to Provision No. G.2 above, if it meets applicable requirements of the CWC, CCR, and HSC for recycled water. In order for wastewater to not be subject to WDRs it shall comply with regulatory criteria promulgated by the DHS, currently set forth in title 22, division 4, section 60301 et seq., CCR, which includes specified approved uses of recycled water, numerical limitations and requirements, treatment method requirements and performance standards to be considered equivalent to recycled water. Because the DHS is statutorily required (CWC section 13521) to establish

uniform statewide reclamation criteria for the various uses of recycled water to assure protection of public health where recycled water use is involved, pursuant to CWC section 13523, the Regional Board has consulted with and considered recommendations of the DHS in issuing waste discharge/water recycling requirements. The Discharger shall demonstrate to the Executive Officer compliance with this provision before each Landfill wastewater source is used as an equivalent recycled water as defined above.

4. Requirements for the use of recycled water at the Calabasas Landfill are also controlled by Water Reclamation Requirements for the Tapia Water Reclamation Facility (Regional Board Order No. 87-086), which is the source of recycled water used at the Landfill. (Order No. 87-086 was readopted on May 12, 1997, through General blanket Order No. 97-072). Order No. 87-086 contains recycled water requirements and provisions in accordance with California Code of Regulations Title 22 Water Recycling Criteria. The use of Title 22 tertiary treated recycled water at the Calabasas Landfill includes, but is not limited to landscape irrigation and dust control.

5. Mixing any Landfill wastewater source with recycled or potable water to achieve equivalence to recycled water standards, as described in Provision No. G.3 above, is prohibited unless specifically approved by the Executive Officer.

6. During periods of precipitation, when the use of irrigation or dust control is not necessary for the purpose specified in this Order, all wastewater generated at the Landfill shall be stored, discharged to the sanitary sewer, or hauled to a legal point of disposal.

7. Washing of paved Landfill roads during rainy periods shall only occur when muddy roads create a safety concern. Washing of equipment or vehicles on the Landfill shall be confined to controlled areas where the wastewater is collected for proper disposal.

8. Wastewater used at the Landfill shall not percolate into the disposal areas or native soil, or enter stormwater collection systems, except as specifically permitted by this Order.

9. All uses of potable water, recycled, or wastewater shall be within the boundaries of the Landfill property. During an emergency, this water may be used for fire fighting on the Landfill or on undeveloped areas off and adjacent to the Landfill.

H. REQUIREMENTS FOR REPORTING SCHEDULED ACTIVITIES

1. The Discharger shall notify Regional Board staff at least 30 days prior to any

maintenance activities, for approval by the Executive Officer, which could alter existing surface drainage patterns or change existing slope configurations. These activities may include, but not be limited to, significant grading activities, the importation of fill material, the design and installation of soil borings, groundwater monitoring wells and other devices for Landfill investigation purposes.

2. The Discharger shall furnish, within a reasonable time, any information the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.

3. If the Discharger becomes aware that it failed to submit any relevant facts in any report to the Regional Board, it shall submit such facts or information within seven days of its discovery of the omission.

4. The Regional Board shall be notified of any incident resulting from Landfill operations that may endanger the environment, by telephone within 24 hours, and in writing within fourteen days. The written notification shall fully describe the incident including what occurred, when it occurred, the duration of the incident, when correction occurred (or when correction will occur if it is a continuing incident), and the steps taken or planned to reduce, eliminate, and/or prevent recurrence. All instances of noncompliance with this Order shall also be reported to the Regional Board in the same manner as stated above.

5. The Discharger shall notify the Executive Officer, in writing, at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage between the Discharger and a new owner of the Landfill. Any transfer agreement between the Discharger and a new owner or operator shall include an acknowledgement that the Discharger is liable for violations up to the transfer date and that the new owner is liable from the transfer date on. The agreement shall include an acknowledgement that the new owners accept responsibility for compliance with this Order.

6. The Discharger shall notify the Regional Board in writing within seven days, if fluid is detected in a previously dry LCRS.

7. The Discharger shall submit or update an existing "Operations Plan" for the Landfill within 90 days after adoption of this Order, to be approved by the Executive Officer, describing Landfill operations which shall include:

    a. A description of proposed treatment, storage, and disposal methods.

b. Contingency plans for the failure or breakdown of waste handling facilities which could potentially have water quality effects, including notice of any such failure, or any detection of waste or leachate in monitoring facilities, to the Regional Board, appropriate local governments, and water users downgradient of the Landfill.

c. A description of inspection and maintenance programs which will be undertaken regularly during disposal operations, the closure, and the postclosure maintenance period of facilities or equipment, which could have potential water quality effects.

8. The Discharger shall notify the Regional Board of changes in information submitted in the JTD and supplementary information, including any material change in the types, quantities, or concentrations of wastes discharged; or Landfill operations and features. The Discharger shall notify the Regional Board at least 120 days before any material change is made at the Landfill.

9. The Discharger shall comply with the closure and postclosure maintenance requirements and notification requirements contained in 27 CCR section 21769. Closure must be in accordance with a closure plan and postclosure maintenance plan approved by the Executive Officer and the Waste Board.

10. Reports of the quality and quantity of sludge disposed of at the Landfill shall be filed for each monitoring period.

11. The Discharger shall report (on a semi-annual basis) the total volume of all irrigation water used at the Landfill each month and the area(s) where it is applied.

12. All applications, reports, or information submitted to the Executive Officer shall be signed and certified as follows:

a. The applications, reports, or information shall be signed as follows:

i. For a corporation - by a principal executive officer of at least the level of vice-president.

ii. For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.

iii. For a municipality, state, federal or other public agency - by either a principal executive officer or ranking elected official.

iv. For a military installation - by the base commander or the person

with overall responsibility for environmental matters in that branch of the military.

b. All other reports required by this Order and other information required by the Executive Officer shall be signed by a person designated in paragraph [a] of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if:

i. The authorization is made in writing by a person described in paragraph [a] of this provision;

ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity; and

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

c. Any person signing a document under this section shall make the following certification:

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

I. GENERAL PROVISIONS

1. This Order does not authorize violation of any federal, state, or local laws or regulations.

2. Beneficial uses of surface waters in the canyons/streams at the Landfill are not specifically designated in the Basin Plan. However, since these canyon/streams are tributary to the Las Virgenes and Lindero Hydrologic Subareas of the Malibu Creek Hydrologic Area of the Malibu Hydrologic Unit, the Regional Board finds that the beneficial uses designated in the Basin Plan for the Las Virgenes and Lindero Hydrologic Subareas apply to these tributary canyons/streams.

3. The Discharger shall comply with all the other applicable provisions, requirements, and procedures contained in the most recent version of 27 CCR and any future amendments.

4. The Discharger has a continuing responsibility for correcting any problems which may arise in the future as a result of waste discharged at the Landfill, and from gases and leachate that may be caused by infiltration or precipitation of drainage waters into the waste disposal units, or by infiltration of water applied to this property during subsequent use of the land or other purposes.

5. The Discharger shall allow the Regional Board, or an authorized representative, upon 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 shall 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 purpose of assuring compliance with this Order or as otherwise authorized by the CWC, any substances or parameters at this location.

6. The Discharger shall maintain a copy of this Order at the Landfill so as to be available at all times to Landfill operating personnel.

7. These requirements do not exempt the Discharger from compliance with any other current or future law that may be applicable. They do not legalize this waste management facility, and they leave unaffected any further restraints on the disposal of wastes at this waste management facility that may be contained in other statutes.

8. This Order includes the attached *"Standard Provisions Applicable to Waste Discharge Requirements*", adopted November 7, 1990 (Attachment 2) which is incorporated herein by reference. The Landfill continues to be subject to Regional Board Order No. 93-062 incorporating federal Resource Conservation and Recovery Act (42 USC section 6901, et seq.) regulations, which are also incorporated herein by reference. If there is any conflict between provisions stated herein and the standard provisions, Regional Board Order No. 93-062, or federal regulations, the provisions stated herein will prevail.

9. The requirements adopted herein do not authorize the commission of any act causing injury to the property of another, nor protect the Discharger from liabilities

under federal, state, or local laws.

10. The filing of a request by the Discharger for a modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any condition, provision, or requirements of this Order.

11. This Order does not convey any property rights of any sort, or any exclusive privilege.

12. The Discharger is the responsible party for these WDRs and any M&RP for the Landfill. The Discharger shall comply with all conditions of these WDRs. 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 WDRs by the Regional Board.

13. The Discharger shall within 48 hours of a significant earthquake event, provide an initial verbal assessment to the Regional Board of any earthquake damage at the Landfill. A detailed post-earthquake report describing any physical damages to the containment features, groundwater monitoring and/or leachate control facilities and a corrective action plan to be implemented at the Landfill shall be submitted to the Regional Board with thirty days of the earthquake event. A significant earthquake is herein defined as an earthquake event above Richter Magnitude 5.0 within a 100 kilometer radius of the property boundaries of the Landfill site, or as measured as a VI on the Modified Mercalli Scale.

14. The Discharger shall immediately notify the Regional Board of any flooding, slope failure or other change in Landfill conditions which could impair the integrity of waste containment facilities or of precipitation and drainage control structures.

15. The Discharger shall submit to the Regional Board and to the Waste Board evidence of financial assurance for postclosure maintenance, pursuant to 27 CCR, division 2, chapter 6. The postclosure period shall be at least 30 years. However, the postclosure shall extend as long as wastes pose a threat to water quality.

16. Within 90 days of the adoption of this Order, the Discharger shall submit to the Waste Board, in accordance with 27 CCR section 22222, assurance of financial responsibility in an amount acceptable to the Executive Officer for initiating and completing corrective action for all known or reasonably foreseeable releases from the Landfill.

17. The Discharger shall comply with all conditions of this Order and any additional conditions prescribed by the Regional Board in addenda thereto. Noncompliance

with this Order constitutes a violation of the CWC and is grounds for:

a. enforcement action;

b. termination, revocation and reissuance, or modification of this Order; or

c. denial of a ROWD in application for new or revised WDRs.

18. The Discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

19. This Order is not transferable to any person except after notice to the Executive Officer. The Regional Board may require modification or revocation and reissuance of this Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWC. The Discharger shall submit notice of any proposed transfer of this Order's responsibility and coverage as described under Provision No. H.5 of this Order.

20. In accordance with CWC section 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to supercision or modification. All discharges of waste into the waters of the state are privileges, not rights.

21. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.

22. This Order becomes effective on the date of adoption by the Regional Board.

23. This Order may be terminated or modified for cause, including, but not limited to:

a. Violation of any term or condition contained in this Order;

b. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;

c. A change in any condition that required either a temporary or permanent reduction or elimination of the authorized waste discharge.

24. This Order in no way limits the authority of the Regional Board, as contained in the CWC, to require additional investigations and cleanups pertinent to this project.

This Order may be revised by the Executive Officer as additional information from the project becomes available.

25. Failure to comply with the terms and conditions of this Order may result in imposition of civil liability against the Discharger by the Regional Board, either by the Regional Board or judicially by the Superior Court, in accordance with CWC section 13350 et. seq. and/or referral to the Attorney General of the State of California for such legal action as may be deemed appropriate.

26. Except for violation enforcement purposes, Regional Board Order No. 89-053, adopted May 22, 1989, and Order No. 00-077, adopted May 30, 2000, are hereby superseded. Because Order No. 93-062 also applies to other municipal waste landfills in the region, incorporating federal regulations, it is not superceded.

I, Tracy J. Egoscue, Executive Officer, do certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on April 2, 2009.

_____

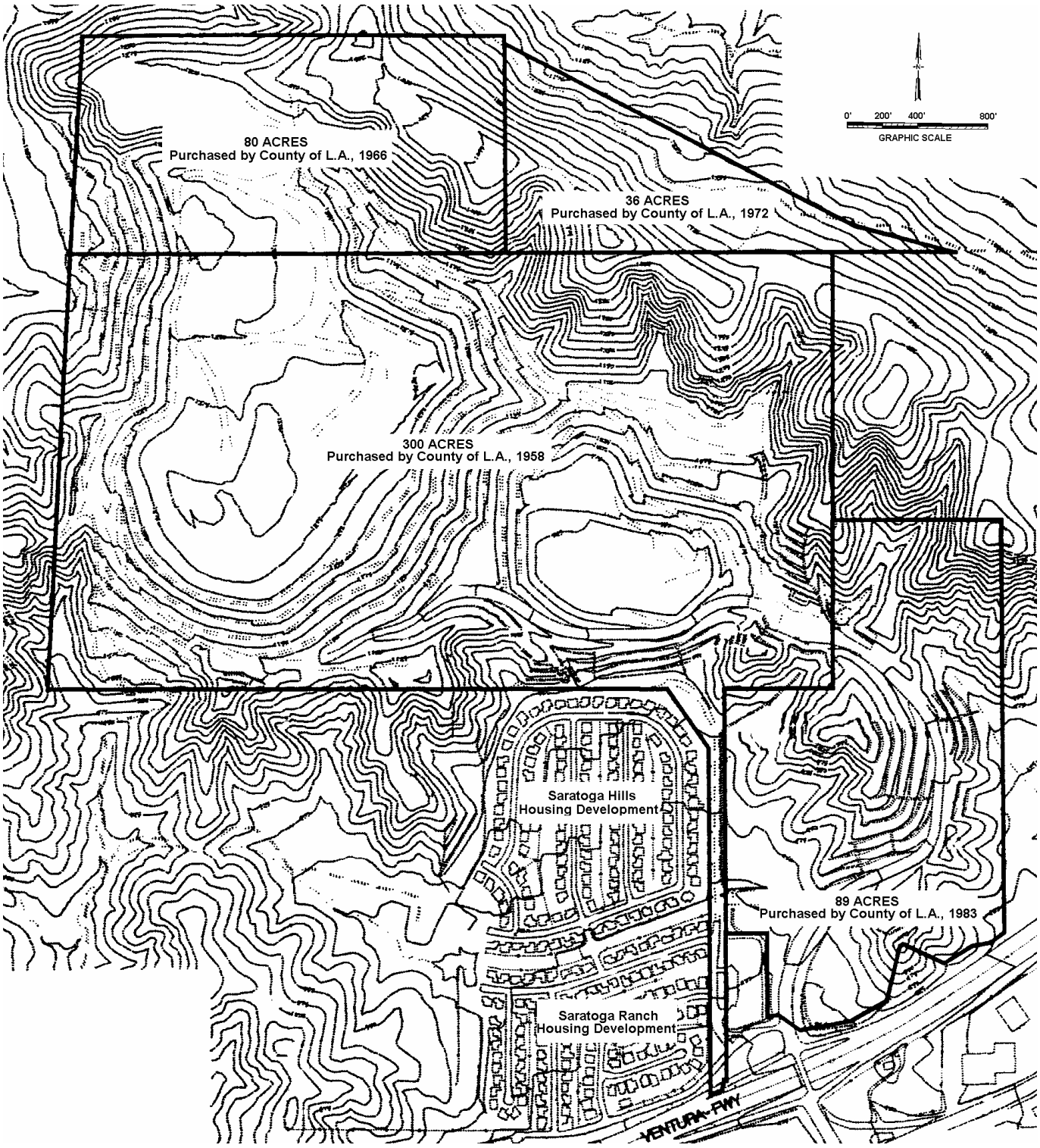
Tracy J. Egoscue
Executive Officer

TENTATIVE

FIGURE 1:
LOCATION MAP

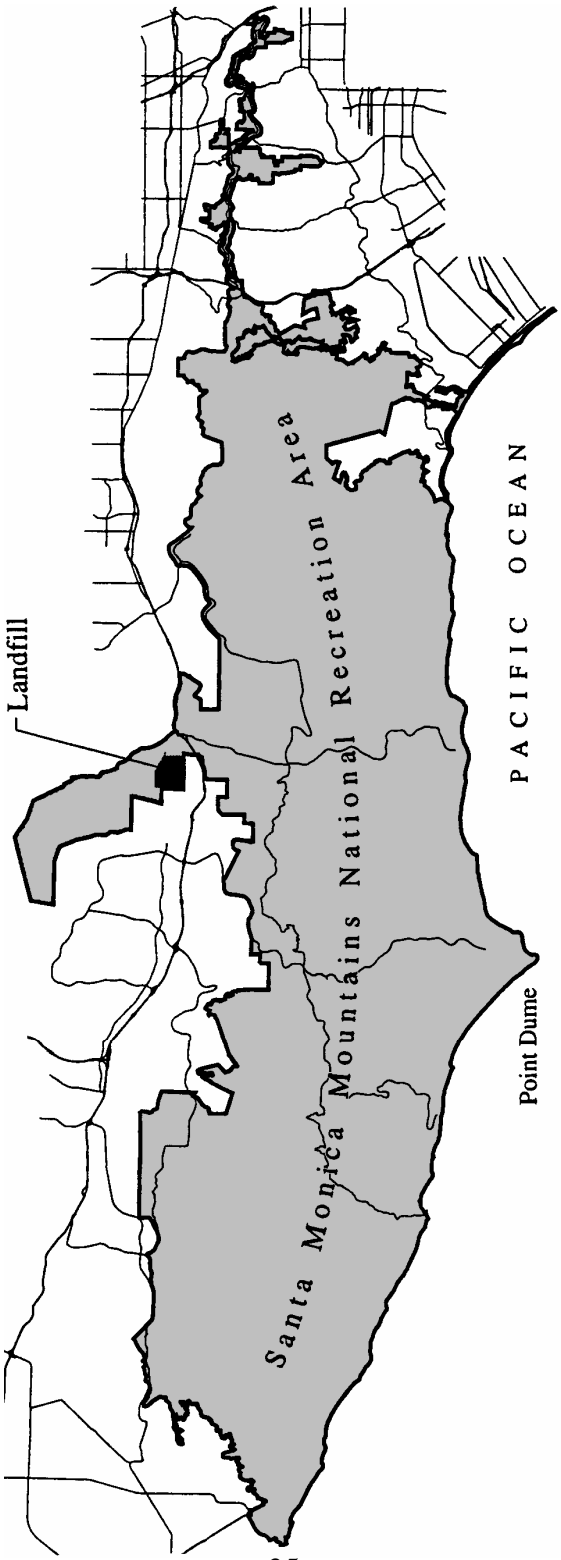
TENTATIVE

FIGURE 2:
PROPERTY PARCELS



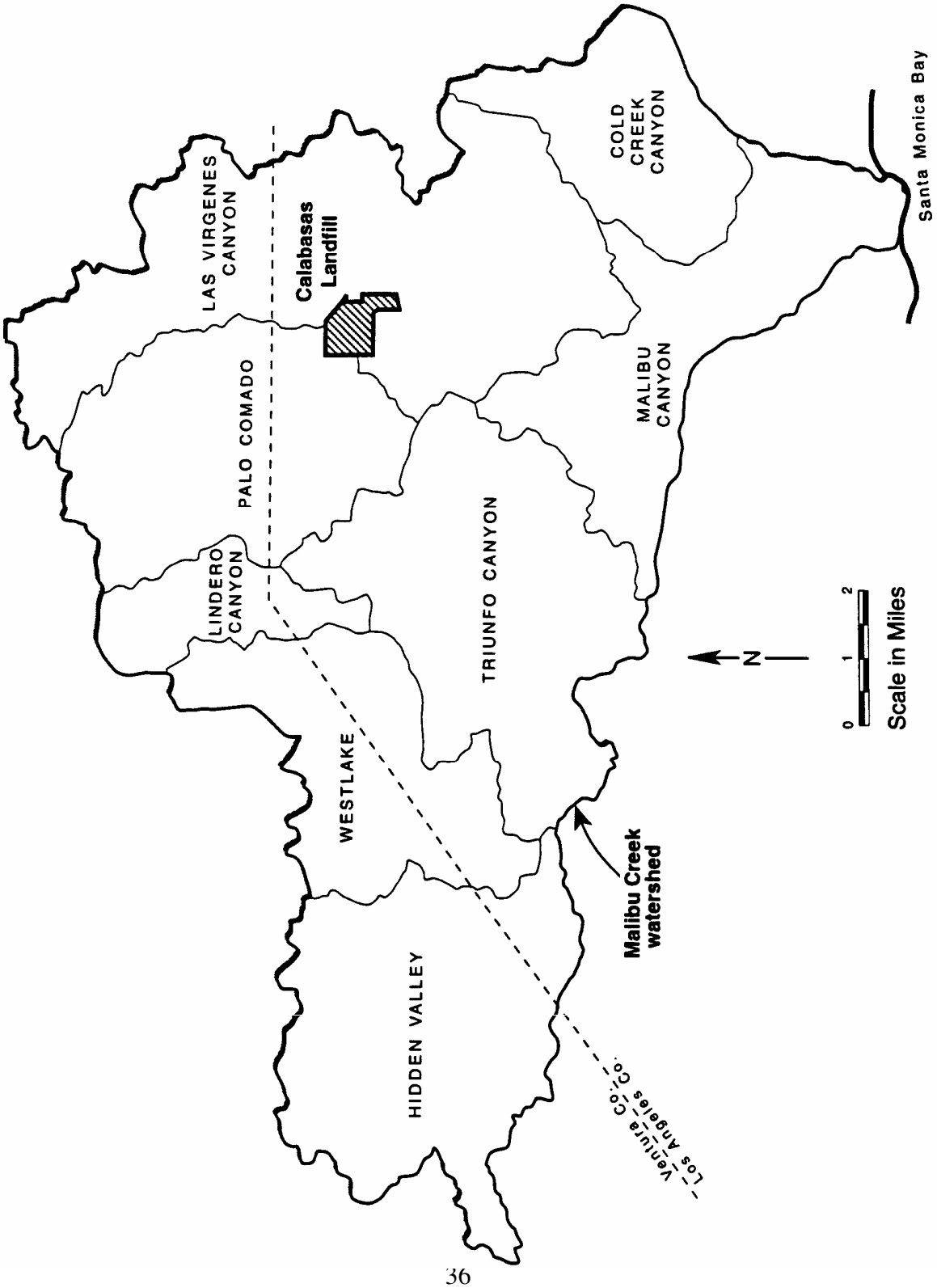
TENTATIVE

FIGURE 3:
SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA



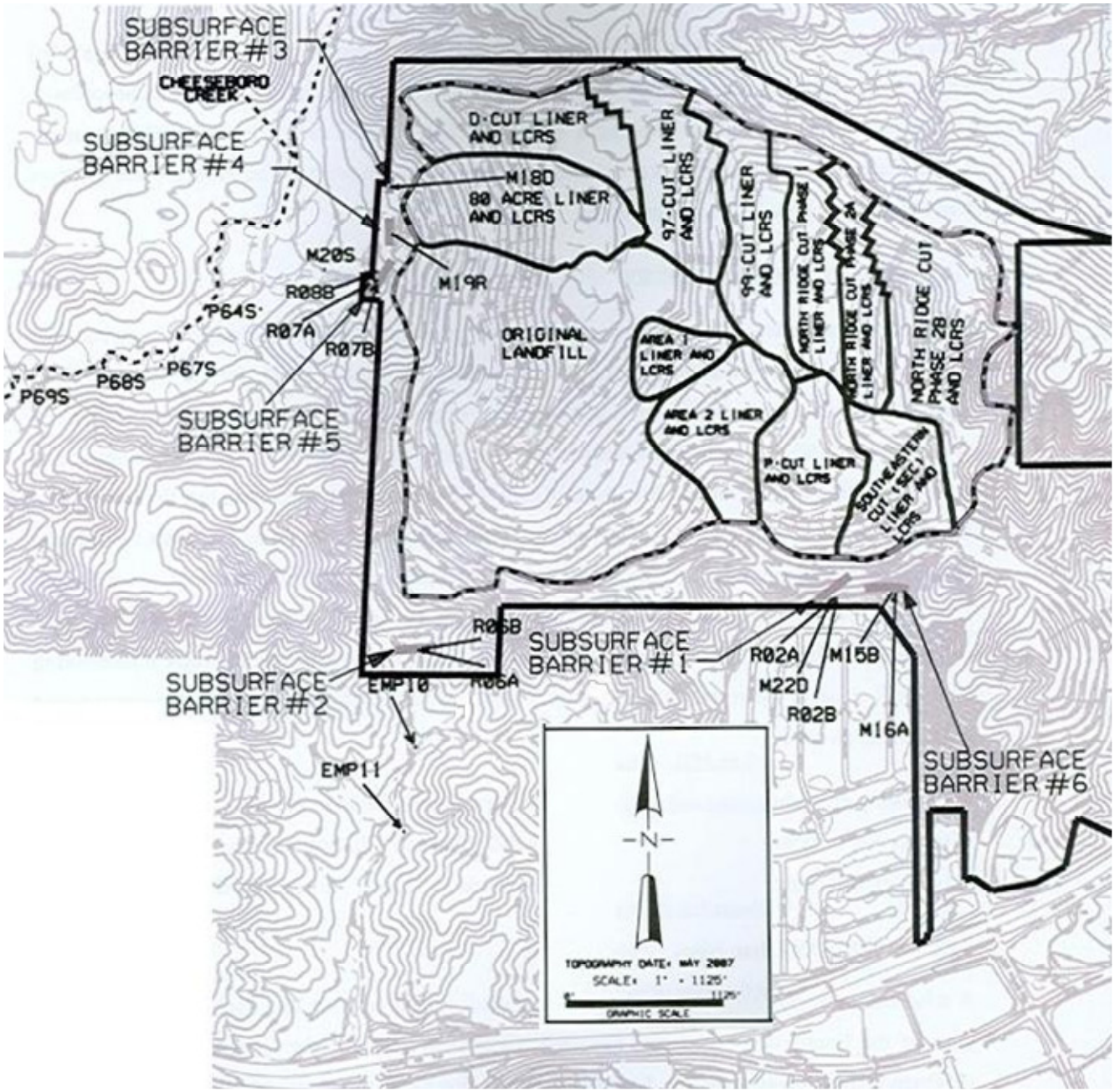
TENTATIVE

FIGURE 4:
WATERSHED AREAS



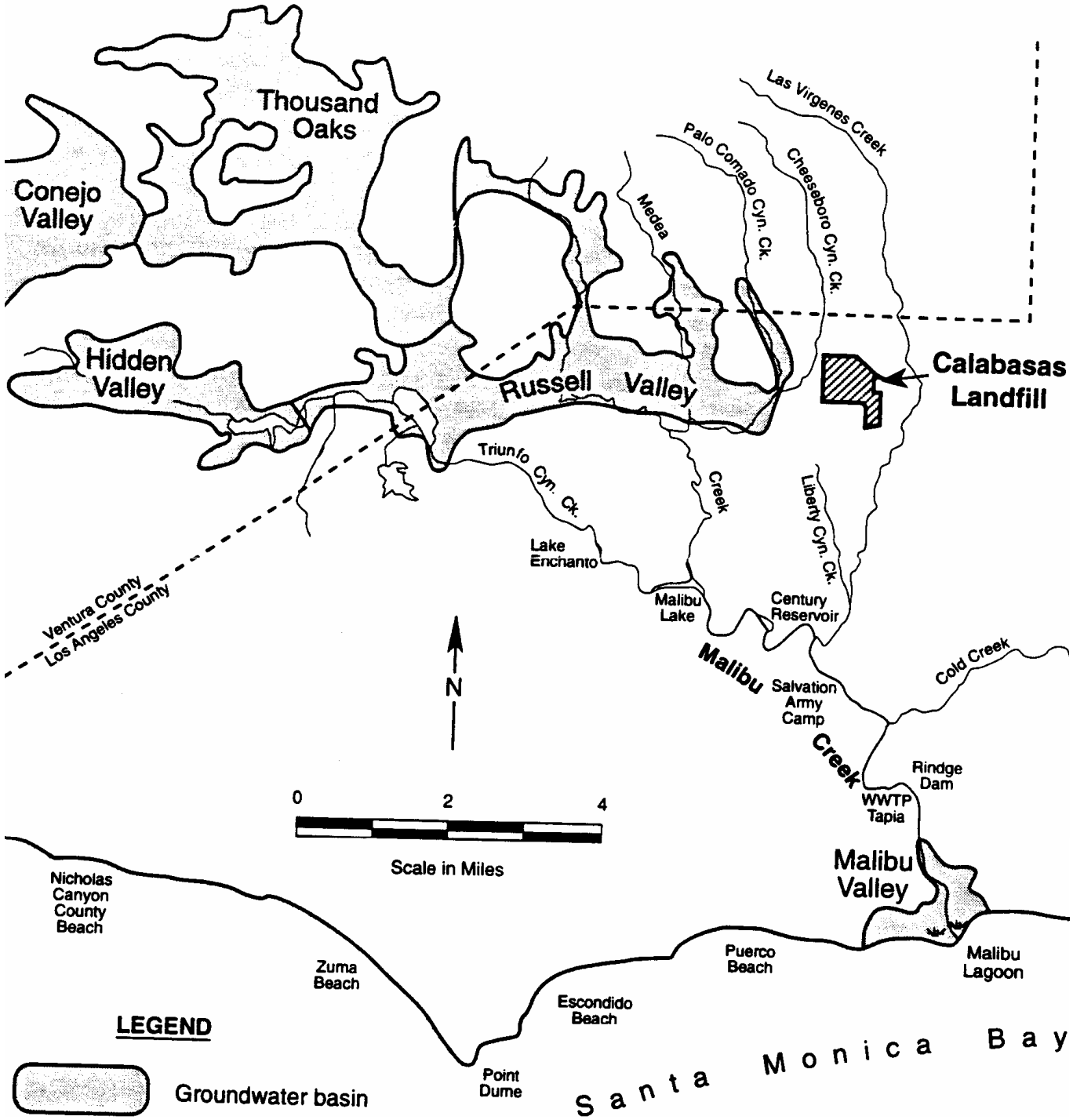
TENTATIVE

FIGURE 5:
SUBSURFACE BARRIERS, COMPLIANCE GROUNDWATER MONITORING LOCATIONS, LINER AREAS, AND LCRSs



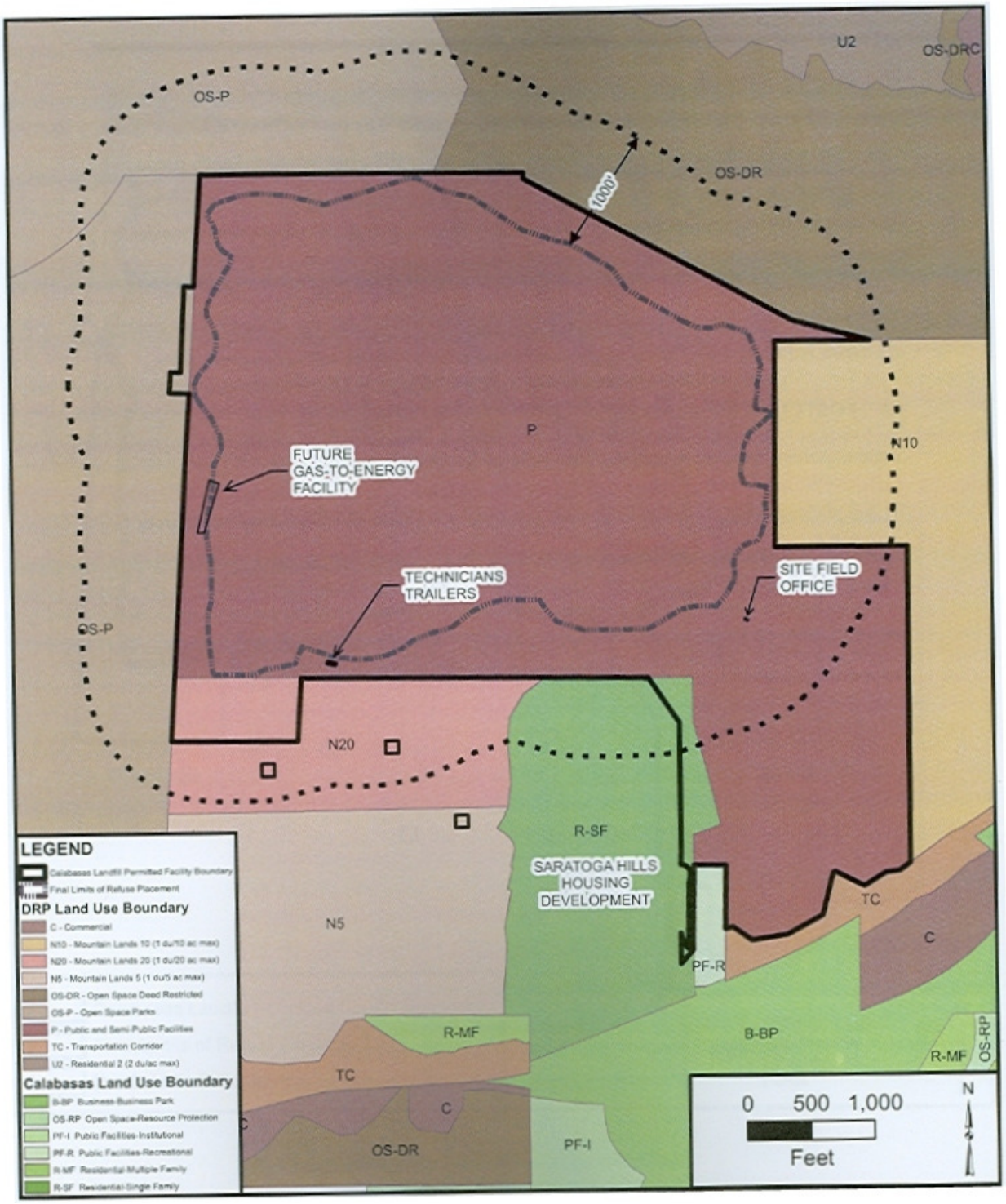
TENTATIVE

FIGURE 6:
GROUNDWATER BASINS



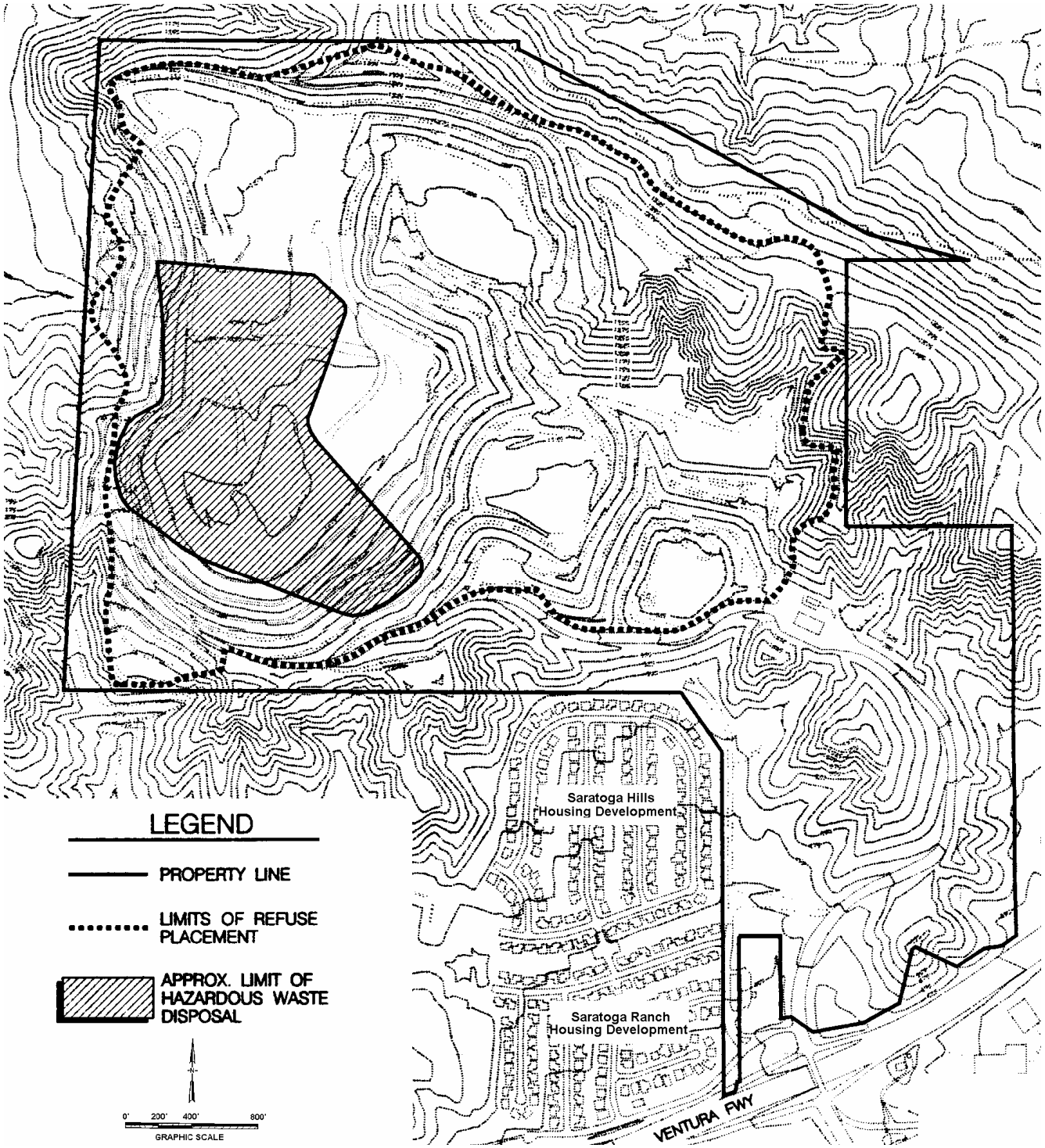
TENTATIVE

FIGURE 7:
SURROUNDING LAND USES



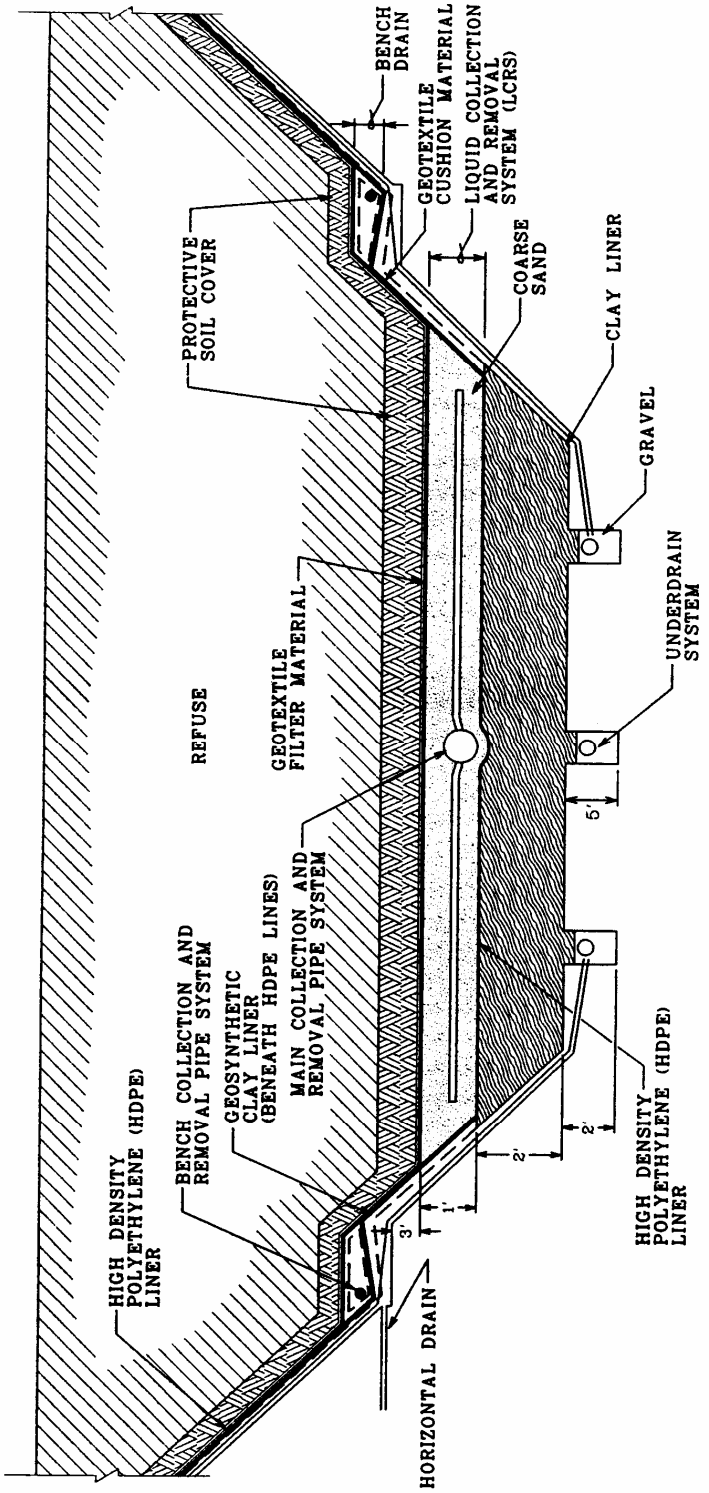
TENTATIVE

FIGURE 8:
HAZARDOUS WASTE DISPOSAL AREA



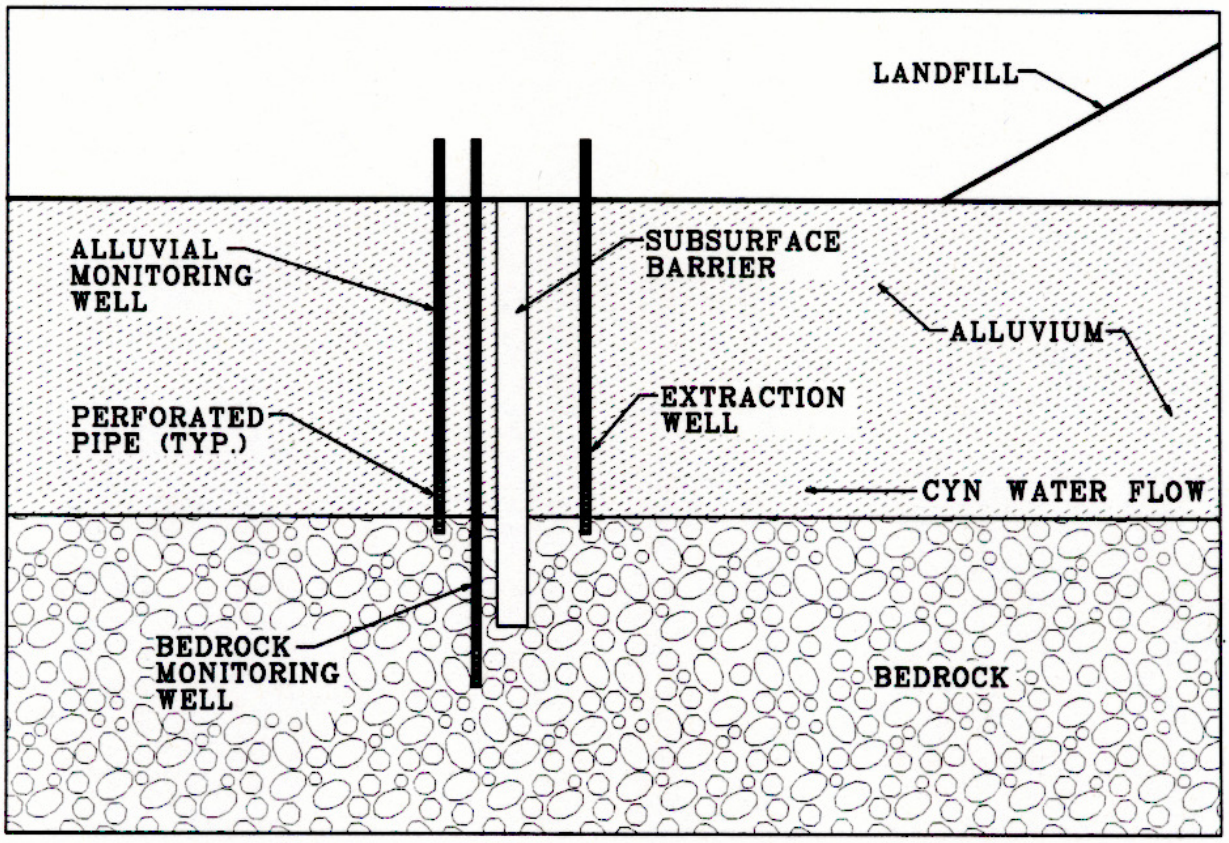
TENTATIVE

FIGURE 9:
COMPOSITE LINER SYSTEMS



TENTATIVE

FIGURE 10:
SUBSURFACE BARRIERS



TENTATIVE

FIGURE 11:
EXISTING ENVIRONMENTAL CONTROL MONITORING LOCATIONS

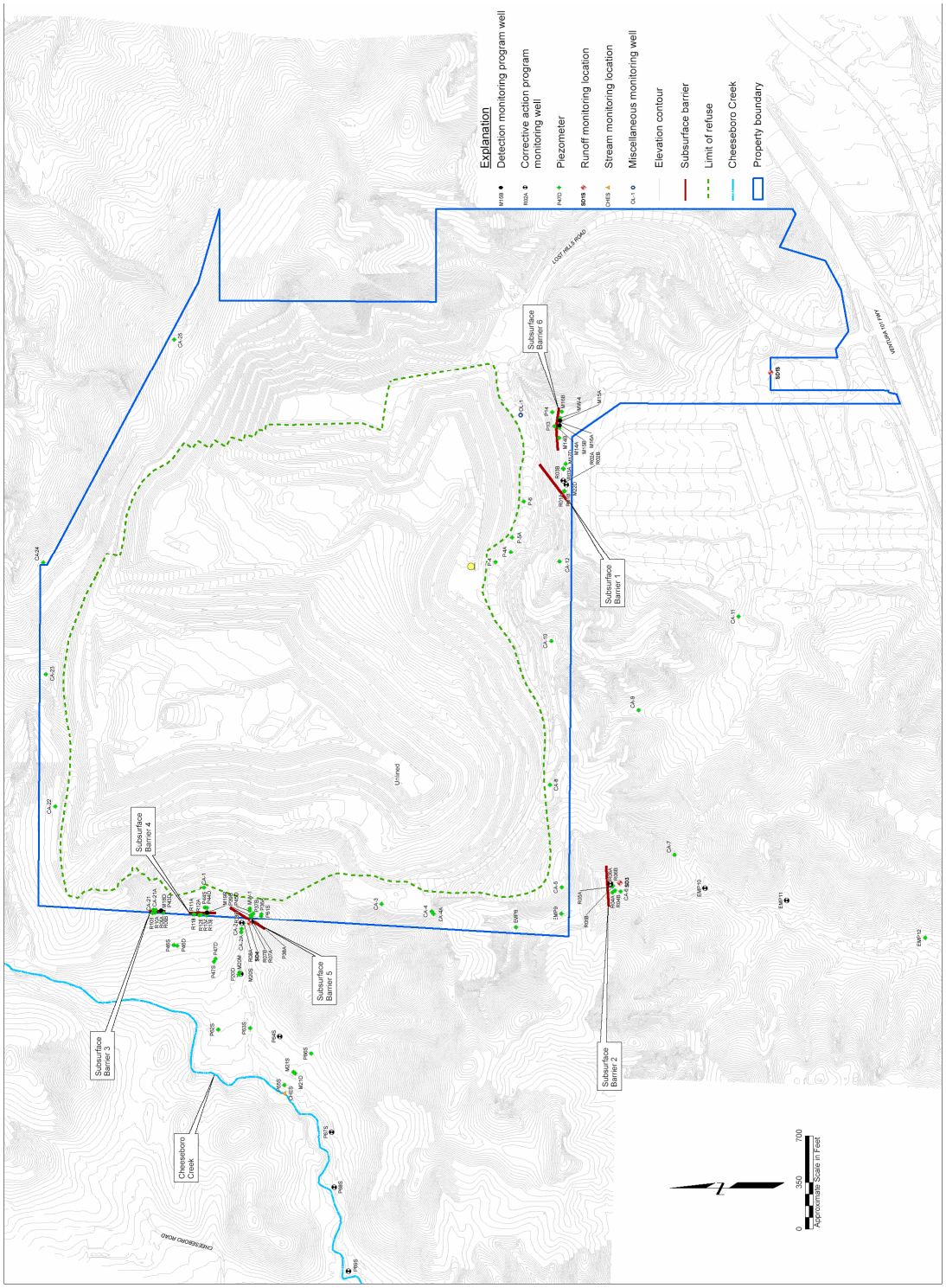


FIGURE 12:
BARRIER 1 AND 6 COMPLIANCE MONITORING LOCATIONS

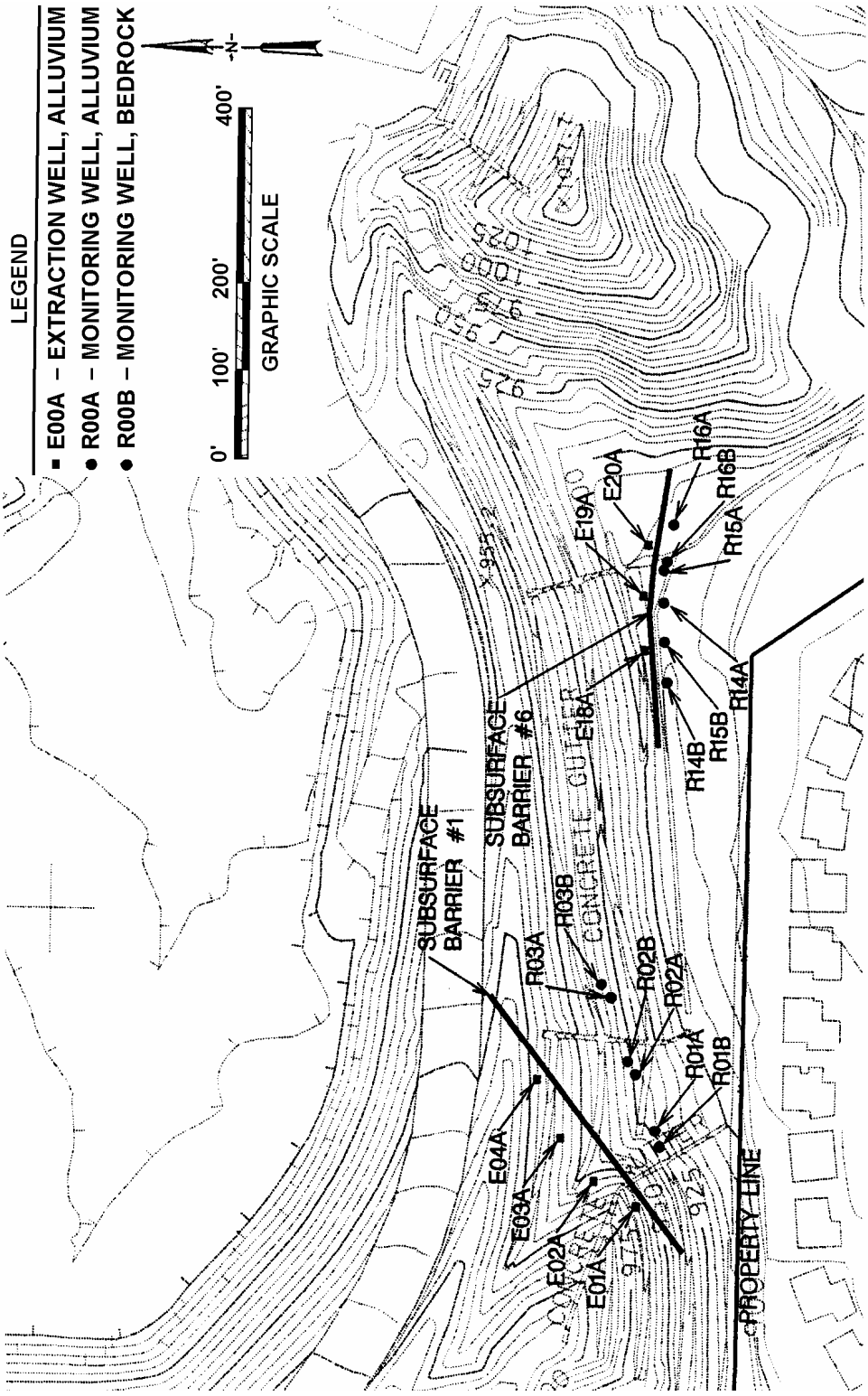
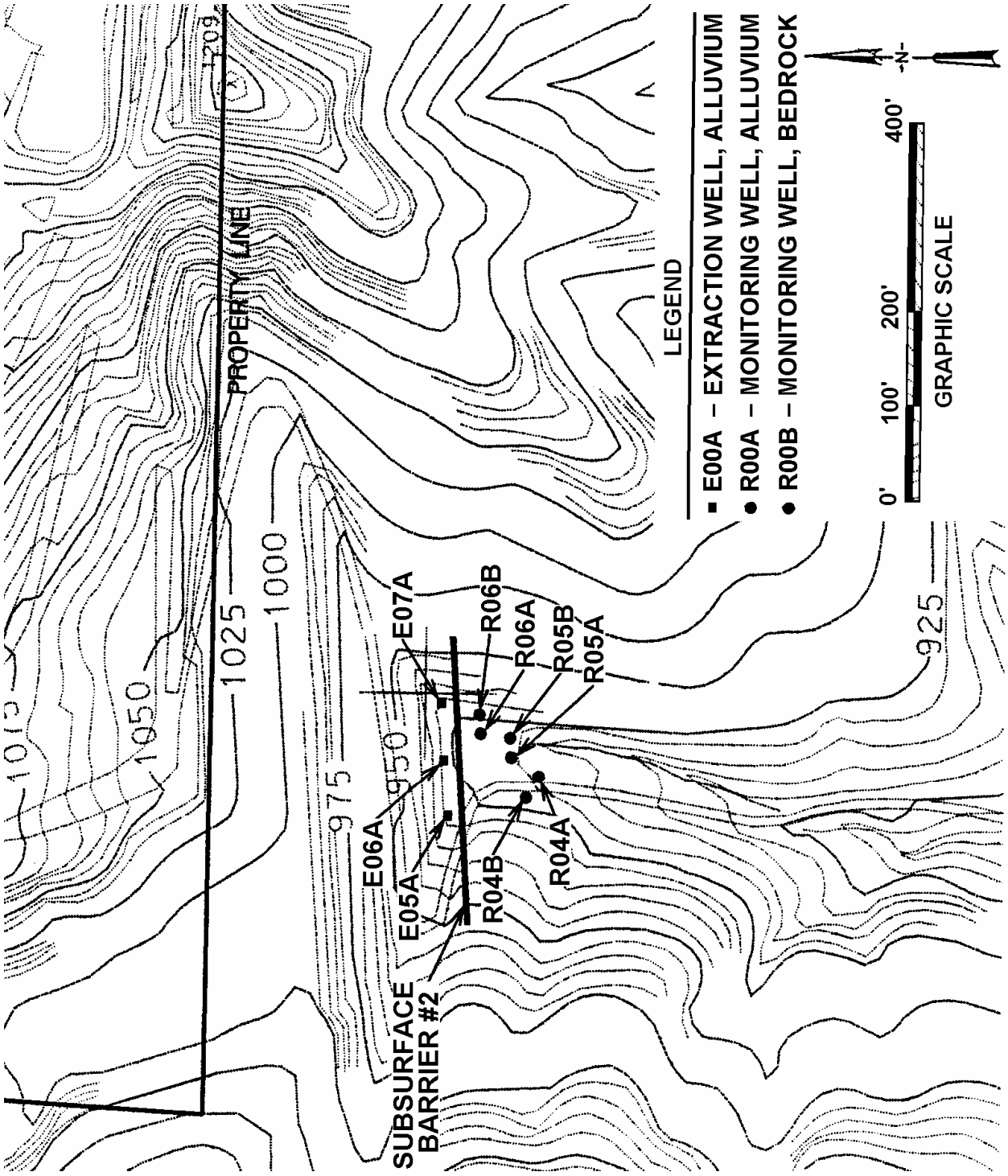
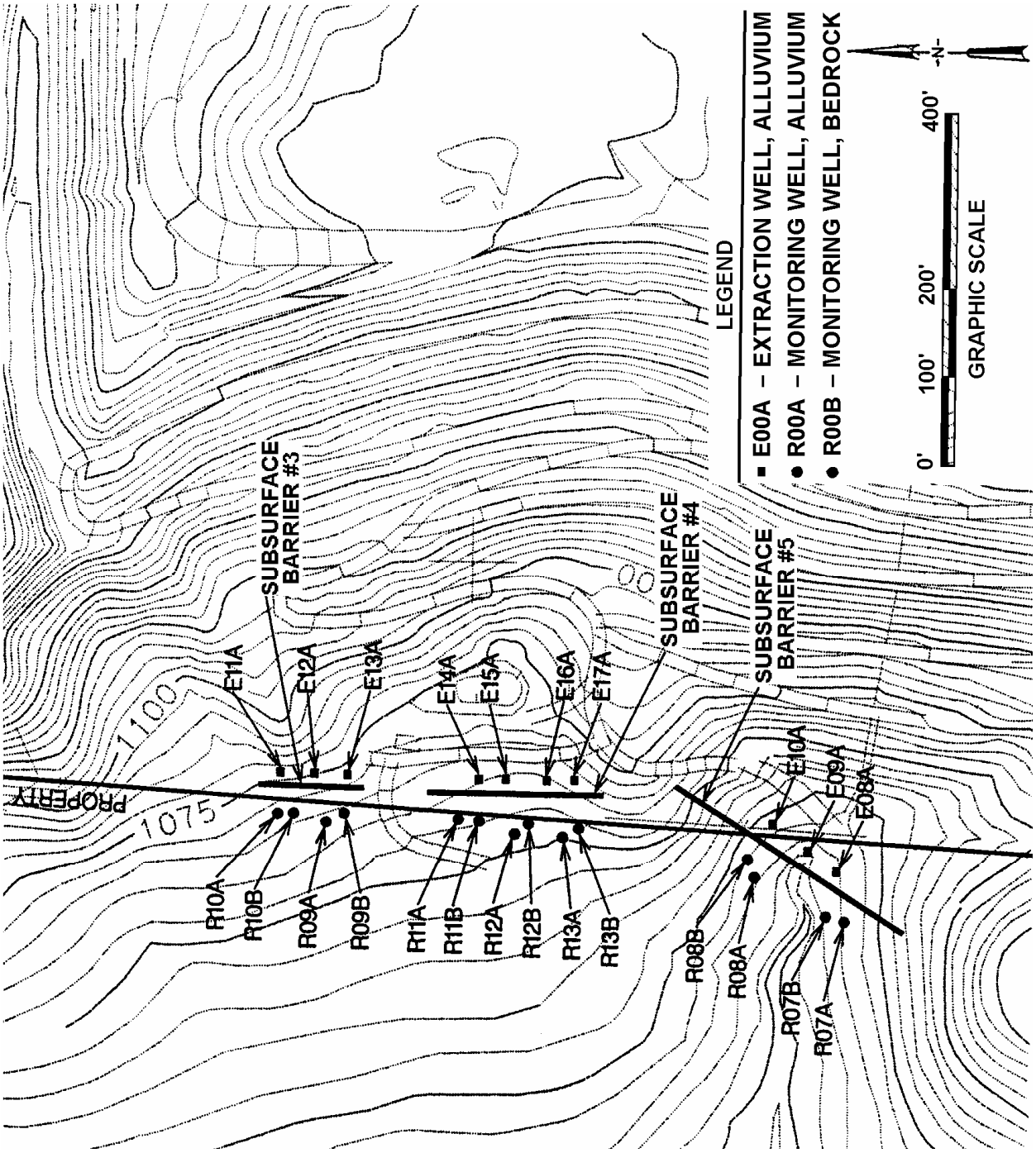


FIGURE 13
BARRIER 2 COMPLIANCE MONITORING LOCATIONS



TENTATIVE

FIGURE 14:
BARRIERS 3, 4 AND 5 COMPLIANCE MONITORING LOCATIONS



TENTATIVE

FIGURE 15:
GAS MONITORING PROBE LOCATIONS

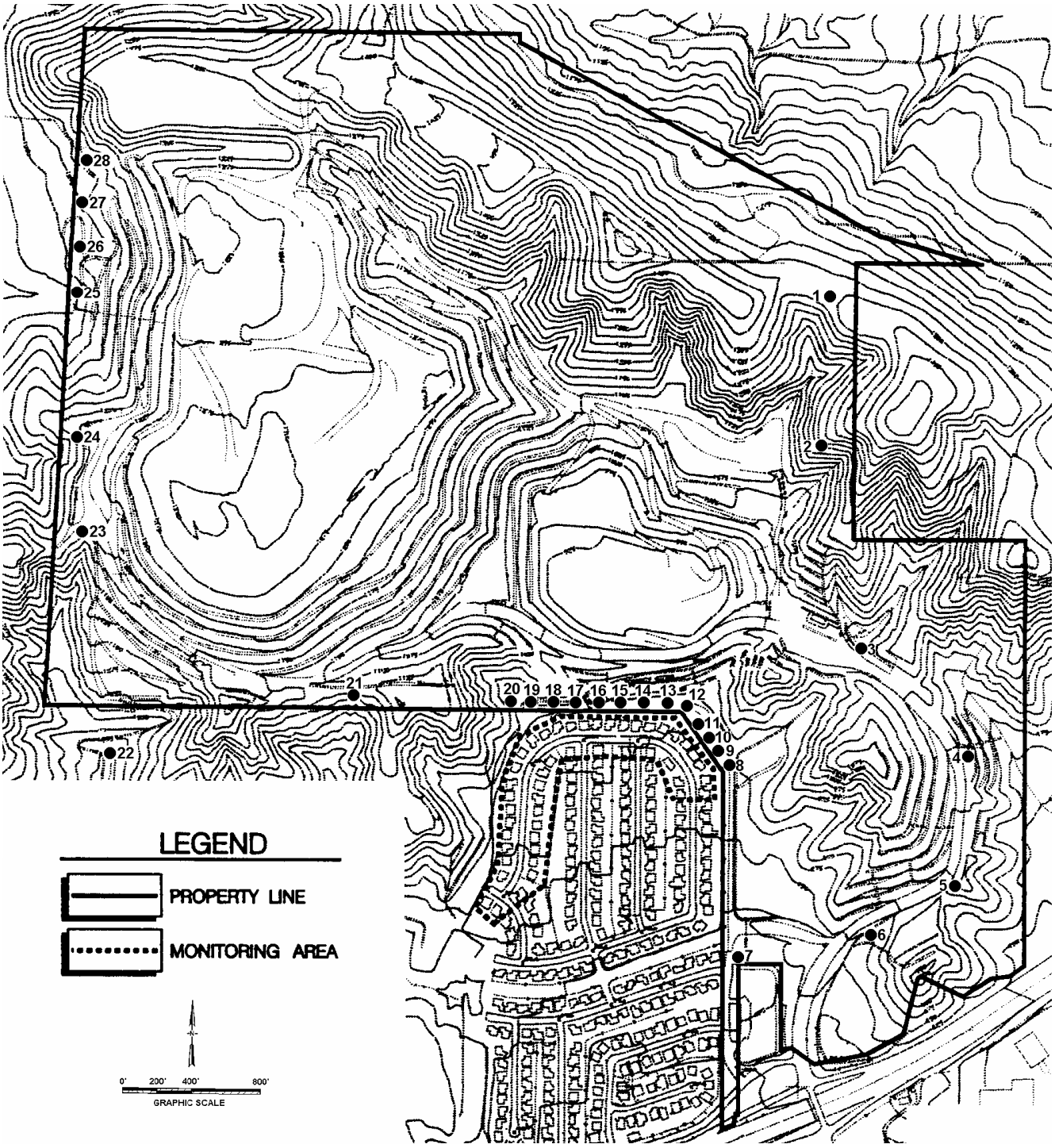
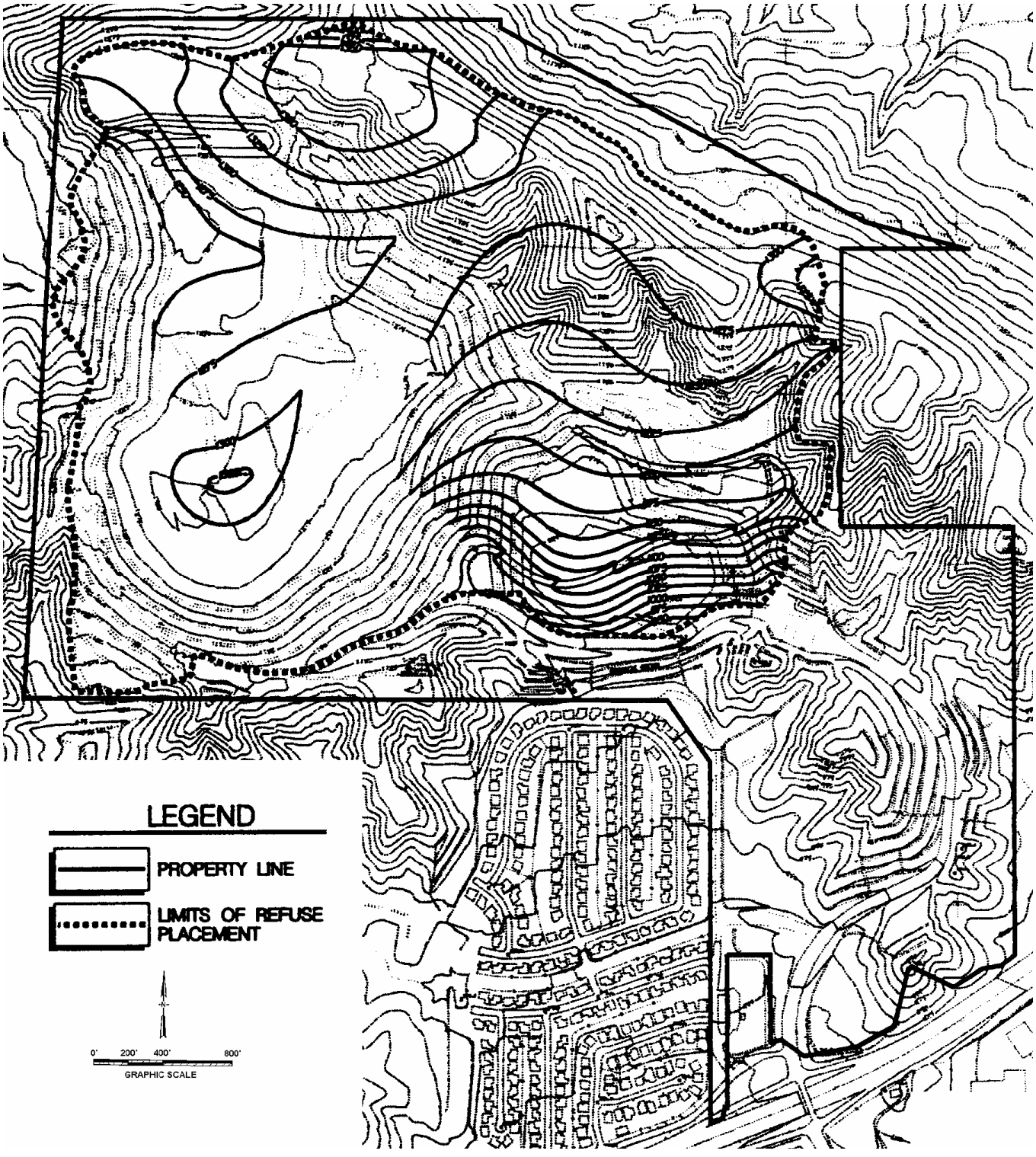


FIGURE 16:
FINAL FILL PLAN



TENTATIVE

TENTATIVE

ATTACHMENT 1:
DEFINITION OF TERMS AND ACRONYMS

"**27 CCR**" means the State Water Resources Control Board's regulations, in Division 2 of Title 27 of the California Code of Regulations, applicable to the discharge to land of waste that is not hazardous waste.

"**40 CFR 258**" means the regulations under Part 258 of Title 40 of the Code of Federal Regulations that apply to municipal solid waste landfills.

"**ACM**" means the federal Assessment of Corrective Measures process, under 40 Code of Federal Regulations section 258.56, which applies to any municipal solid waste landfill that has exhibited a measurably significant release over the applicable Water Quality Protection Standard at any well along the point of compliance for any Appendix II constituent. In California, this process is one in which the discharger determines the nature and extent of the release, implements interim corrective action measures, and develops a broad suite of possible measures, including a subset thereof which the discharger will propose for Regional Water Quality Control Board adoption under the Selection of Remedy process. Generally speaking, the federal Assessment of Corrective Measures and Selection of Remedy processes serve the same function, under the federal approach, as the Evaluation Monitoring Program does under the State approach.

"**Affected parties**" means all people who own, or reside upon, land outside the facility boundary that is underlain by any portion of the release from the landfill. Under Title 40 of the Code of Federal Regulations section 258.55(g)(1)(iii), the discharger must keep an up-to-date list of all such people and must assure that they are invited to the discussion of proposed corrective action measures, pursuant to Title 40 of the Code of Federal Regulations section 258.56(d).

"**AMP**" means a federal Assessment Monitoring Program, under Title 40 of the Code of Federal Regulations section 258.55, which applies to any municipal solid waste landfill that, under Title 40 of the Code of Federal Regulations section 258.54(c), has exhibited a measurably significant increase over the background value for any Monitoring Parameter. In California, given that a municipal solid waste landfill will have established background as the Concentration Limit for each Monitoring Parameter, the exceedance of the background value for a monitored constituent at any monitoring point also constitutes a violation of the Water Quality Protection Standard, thereby, in most instances, triggering the federal Assessment of Corrective Measures and Selection of Remedy studies. The term also describes the federal program that: 1) is ongoing during the Assessment of Corrective Measures and Selection of Remedy studies and under the Corrective Action Program; and 2) constitutes the federal monitoring program that continues after successful completion of the Corrective Action Program.

"**Appendix I**" (to Title 40 of the Code of Federal Regulations Part 258) means the suite of Volatile Organic Compounds and metals used as the default Monitoring Parameter list under the federal municipal solid waste landfill regulations (Title 40 of the Code of Federal Regulations section 258.1 through section 258.75). The listed constituents are a subset of those listed in

Appendix II and are subject to monitoring and data analysis every six months. The Regional Water Quality Control Board can adopt surrogates for the metals, and can eliminate from the entire suite any constituent that it finds could not be released from the landfill or derived from such a release.

"**Appendix II**" (to Title 40 of the Code of Federal Regulations Part 258) means the suite of hazardous constituents used as the default Constituent of Concern list under the federal municipal solid waste landfill regulations (Title 40 of the Code of Federal Regulations section 258.1 through section 258.75). The listed constituents are subject to periodic scans, at selected compliance and background wells, either annually or, as adopted for this landfill, every five years. Constituents detected (trace level or higher) and verified in a retest sample become Monitoring Parameters. The Regional Water Quality Control Board can eliminate from the entire suite any constituent that it finds could not be released from the landfill or derived from such a release.

"**Background**," when applied to a reference data set used in testing for a measurably significant indication of a release for a given well / Monitoring Parameter pair, means a suite of data which comes as close as possible to representing the data one would get, for that Monitoring Parameter at that well, if there were no release from the landfill.

"**Background well**" means a monitoring well whose purpose is to provide an indication, for each Monitoring Parameter and monitored ground water body, of the mean (or median) and variability one would expect in the Monitoring Parameter's concentration in that ground water body in the absence of a release from the landfill. Such wells can be upgradient, side-gradient, or (in rare instances) far-downgradient of the landfill. Due to the nearly ubiquitous presence of geographic variation, intra-well comparisons have a greater statistical power than inter-well comparisons. Therefore, the purpose of this type of well is three-fold: 1) to validate that a compliance well's historical data, for a given Monitoring Parameter, can be used as the background data set for that well / Monitoring Parameter pair, because the compliance well's historical data does not appear to reflect the presence of a release; 2) to identify the need to adjust the monitoring approach because of the arrival of waters affected by a release of that Monitoring Parameter from a source other than the landfill; and 3) to identify a condition in which a Monitoring Parameter is released from the landfill and migrates to this well in the unsaturated zone (e.g., Volatile Organic Compounds carried by an expanding landfill gas release in the unsaturated zone).

"**Box and Whiskers Plot**" is a quick way to visualize the distribution of data at a given monitoring location. The basic box plot graphically locates the median, 25^{th} and 75^{th} percentiles of the data set; the "whiskers" extend to the minimum and maximum values of the data set. The range between the ends of a box plot represents the Interquartile Range, which can be used as a quick estimate of spread or variability. When comparing multiple monitoring locations, box plots for each monitoring location can be lined up on the same axes to roughly compare the variability in each monitoring location. This may be used as a quick exploratory screening for the test of

homogeneity of variance across multiple monitoring locations. If two or more boxes are very different in length, the variances in those monitoring location groups may be significantly different.

"**California Non-statistical Data Analysis Method** (**CNSDAM**)" means the test described in the Monitoring and Reporting Program for this landfill, for use jointly on all those Monitoring Parameters, at a given compliance well, whose applicable background data set exhibits trace level or higher concentrations in less than 10% of the data.

"**CAO**" means a Cleanup and Abatement Order.

"**CAP**" means a Corrective Action Program that implements the State Water Resource Control Board's requirements under Title 27 of the California Code of Regulations section 20430 and under State Water Resource Control Board Policy No. 93-62 which, regarding a municipal solid waste landfill, requires the Regional Water Quality Control Board to apply any federal requirements, under Title 40 of the Code of Federal Regulations section 258.58 (federal Corrective Action Program), that are additional to, or are broader in scope than, the Title 27 California Code of Regulations requirements.

"**CLGB**" — see "concentration limit"

"**Compliance well**" means any monitoring well named in the Monitoring and Reporting Program as a ground water monitoring point to be used in detecting, or tracking, the release. The term does not include assessment wells that are used [under Title 27 of the California Code of Regulations section 20425(b) and Title 40 of the Code of Federal Regulations section 258.55(g)] to delineate the nature and extent of the release, unless the Regional Water Quality Control Board specifically names such a well as a ground water monitoring point in the Monitoring and Reporting Program.

"**Concentration limit**" is a part of the landfill's Water Quality Protection Standard and means the reference background data set, or reference concentration value, for a given constituent against which one compares current compliance well data to identify, in detection mode, the arrival of the release at a given well and to identify, in tracking mode, if the corrective action measures are bringing the landfill back into compliance with the Water Quality Protection Standard [for that Monitoring Parameter), in the portion of the aquifer sampled by that compliance well]. For compliance wells within the area affected by the release, this limit can be a single number, adopted by the Regional Water Quality Control Board as a Concentration Limit Greater than Background under Title 27 of the California Code of Regulations section 20400(a)(3) through (h) and Title 40 of the Code of Federal Regulation section 258.55(i) for a given Monitoring Parameter involved in the release. Otherwise, this limit will be either the applicable background data set, for Monitoring Parameters that are readily detectable, or will be the Method Detection Limit, for a constituent that exhibits trace level or higher values in less

than 10% of the background data (i.e., a Monitoring Parameter that is subject to the California Nonstatistical Data Analysis Method at that compliance well).

"**Constituent of concern** (**COC**)" is a part of the landfill's Water Quality Protection Standard and means the list of constituents that could be released from the landfill, including the foreseeable breakdown products of all such constituents. For the ground water medium at an municipal solid waste landfill, this list must include all Appendix II constituents except for those that the discharger can show are not being mobilized in the landfill's leachate or, for Volatile Organic Compounds only, in its produced landfill gases. A constituent on this list becomes a Monitoring Parameter only after being detected (at trace level or above) and then verified by a well-specific retest in a periodic scan of compliance wells affected by the release.

"**Corrective action measure** (**CAM**)" means an active or passive process (or installation) that the discharger implements or constructs to constrain a release, to eliminate its effects, or to prevent or minimize the release of additional waste from the landfill. The scope of the term includes "interim Corrective Action Measures," which is applied before the adoption of the Corrective Action Program, and includes "active Corrective Action Measures," which involves the induced movement of polluted water within the impacted aquifer (e.g., a pump-and-treat operation).

"**CWC**" means the statutes in the California Water Code.

"**Detect**," when applied to a scan of leachate or ground water, means that the constituent for which the scan is conducted shows up at trace level or higher. For Constituents of Concern and Monitoring Parameters that are rarely detected in background, the term means analyses done using a laboratory analytical method that complies with Title 27 of the California Code of Regulations section 20415(e)(7).

"**Discrete retest**" means a particular means of validating a preliminary indication of a release, for a given compliance well / Monitoring Parameter pair, whereby the discharger applies an approved data analysis method to two new samples for that well / Monitoring Parameter pair. The retest validates the preliminary indication if either or both of the retest samples triggers a measurably significant increase indication. The scope of the retest, at any given compliance well, is limited to only those Monitoring Parameters that gave a preliminary indication at that monitoring point.

"**Detection mode**," for a given compliance well / Monitoring Parameter pair, means a state in which one tests for a measurably significant increase, for that Monitoring Parameter at that well, using an appropriate statistical or nonstatistical data analysis method. Once that well / Monitoring Parameter pair exhibits a measurably significant increase (including an initial indication verified by a discrete retest), it is monitored, thereafter, in "tracking mode" until the inception of the proof period, following successful completion of corrective action.

"**DMP**" means a Detection Monitoring Program that implements the State Water Resources Control Board's requirements, under Title 27 of the California Code of Regulations section 20420 and under State Water Resources Control Board Policy No. 93-62, which policy requires the Regional Water Quality Control Board to apply any federal municipal solid waste landfill requirements, under Title 40 of the Code of Federal Regulations section 258.54, that are additional to, or are broader in scope than, the Title 27 California Code of Regulations requirements.

"**EMP**" means an Evaluation Monitoring Program that implements the requirements under Title 27 of the California Code of Regulations section 20425 and under State Water Resources Control Board Policy No. 93-62, which requires the Regional Water Quality Control Board to apply any applicable federal municipal solid waste landfill requirements, under Title 40 of the Code of Federal Regulations section 258.55 through section 258.57, that are additional to, or are broader in scope than, the Title 27 California Code of Regulations requirements. This state program constitutes a stepping stone to a corrective action program, in response to the landfill exhibiting a measurably significant increase of a release or to its having exhibited physical evidence of a release [see Title 27 of the California Code of Regulations section 20385(a)(2 and 3)].

"**Existing Footprint**" (as capitalized) means the area of land, at an municipal solid waste landfill, that is covered by waste as of the date that landfill became subject to the federal regulations of Title 40 of the Code of Federal Regulations Part 258, pursuant to section 258.1 of that part.

"**Geographic variation**" means the random change in the mean, or median, concentration of a given Monitoring Parameter between different locations in a given ground water body, in the absence of a release.

"**Indicator parameter**" means all MPars that are deemed most capable of providing for a reliable indication of a Landfill release. These include common leachate indicator parameters (total dissolved solids, chloride, sulfate, and nitrate-nitrogen), all Appendix I VOCs, and all MPars for which a successful demonstration has not been made based on LCRS leachate monitoring data that the constituent cannot reliably be differentiated between LCRS leachate and groundwater. Only indicator parameters will generally be subjected to routine statistical analysis.

"**Inter-well comparison**" means a type of statistical or nonstatistical data analysis, applied to a given detection mode compliance well / Monitoring Parameter pair, in which one compares current concentration data, for that Monitoring Parameter and well, with a suite of background data from the appropriate upgradient well(s) to determine if that Monitoring Parameter has produced a measurably significant increase at that well. Generally speaking, the use of upgradient background data tends to produce higher false-positive and false-negative rates than the intra-well comparison approach, but is appropriate in those cases where it is not feasible to validate that a compliance well's own historical data reflects water quality in the absence of a

release.

"**Intra-well comparison**" means a type of statistical or nonstatistical data analysis, applied to a given detection mode compliance well / Monitoring Parameter pair, in which one compares current concentration data, for that Monitoring Parameter, with a suite of background data consisting of selected historical data from that same well to determine if that Monitoring Parameter has produced a measurably significant increase at that well. Typically, the use of a compliance well's own historical data, for a Monitoring Parameter, provides better statistical power (to identify a real release and to avoid producing false-positive indications) than does the inter-well comparison approach, but only in a case where it is reasonable to assume that the compliance well's own historical data does not reflect the presence of a release for that Monitoring Parameter.

"**LCRS**" means a functioning Leachate Collection and Removal System (i.e., one that produces leachate).

"**LFG**" means landfill gas, including any Volatile Organic Compounds.

"**LEA**" means local enforcement agency for the California Integrated Waste Managementment Board responsible for management of Waste Board regulations of 27 CCR and 40 CFR. For this Landfill the LEA is the Los Angeles County Department of Health Services, Solid Waste Program.

"**M&RP**" means the Monitoring and Reporting Program that is an attachment to the Waste Discharge Requirements (or other order) and that is incorporated by reference by the Waste Discharge Requirements.

"**Matrix effect**" means any increase in the Method Detection Limit or Peak Quantitation Limit for a given constituent as a result of the presence of other constituents, either of natural origin or introduced through a release, that are present in the sample of water or soil-pore gas being analyzed.

"**Measurably significant increase**" means a condition in which an appropriate data analysis method shows an initial indication of a release, for a given detection mode compliance well / Monitoring Parameter pair, that is verified by a discrete retest (for that well and Monitoring Parameter).

"**Method detection limit** (**MDL**)" means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte's concentration is greater than zero, as defined in Title 40 of the Code of Federal Regulations section 136, Appendix B.

"**Minimum Level**" represents the lowest quantifiable concentration in a sample based upon the

proper application of analytical procedures and the absence of any matrix interference. MLs also represent the lowest standard concentration on the calibration curve for a specific analytical technique after the application of appropriate method-specific factors.

"**Monitored media**" means those water and/or gas-bearing media (if applicable) that are monitored pursuant to a monitoring and reporting program. The monitored media may include:

a. groundwater in the uppermost aquifer or in any other portion of the zone of saturation [section 20164 of Title 27 of the California Code of Regulations], in which it would be reasonable to anticipate that waste constituents migrating from the landfill could be detected, and in any perched zones underlying the landfill,

b. any bodies of surface water that could be measurably affected by a release,

c. soil-pore liquid beneath and/or adjacent to the landfill, and

d. soil-pore gas beneath and/or adjacent to the landfill.

"**Monitoring parameter** (**MPar**)" is a part of the landfill's Water Quality Protection Standard and means a list consisting of those Constituents of Concern that are present at a detectable level (trace level or above) in ground or surface water affected by the release. This is the subset of the Constituents of Concern that is subject to testing for a measurably significant increase, in detection mode, at all compliance wells. For ground water, at a landfill with a functioning Leachate Collection and Removal System, this suite includes all Appendix II constituents that have been detected (at trace level or above) and verified in leachate and, subsequently, have been detected (at trace level or above) and verified in a Constituents of Concern scan of ground water at compliance wells affected by the release. For ground water, at a landfill without a functioning Leachate Collection and Removal System, this suite includes all Appendix II constituents that have been detected (at trace level or above) and verified in a Constituents of Concern scan of ground water at any compliance well affected by the release.

"**Monitoring point**," for any given monitored medium (surface water, ground water, or the unsaturated zone), means a location, including any installed access device (e.g., well or lysimeter), that is named in the Monitoring and Reporting Program as a place where the discharger monitors that medium: 1) to detect the arrival of the release front for each Monitoring Parameter that is in detection mode at that location; 2) to detect changes in the concentration of each Monitoring Parameter that is in tracking mode at that location; and 3) in a case where the location that is in tracking mode for most Monitoring Parameters that are involved in the release, to detect the presence, at trace level or above, of any Constituents of Concern that have not previously been detected in that medium (Constituents of Concern newly detected and verified in that medium become Monitoring Parameters for that medium).

"**MSW landfill**" means any landfill that is subject to any portion of the federal regulations under Title 40 of the Code of Federal Regulations Part 258 by virtue of having received municipal solid waste (household waste) at any time and having received any waste after October 9, 1991.

"**Operating record**" means the organized compendium of information about the landfill and facility that the discharger maintains and makes available to the public at a site approved by the Regional Water Quality Control Board and/or the Enforcement Agency and that contains a copy of each document submitted to, or received from, any State or local regulatory agency for purposes of obtaining or updating either the Facility Permit or the Waste Discharge Requirements, demonstrating compliance with the California Environmental Quality Act, or complying (or demonstrating compliance) with any applicable requirement under Title 40 of the Code of Federal Regulations Part 258.

"**Point of compliance** (**POC**)" is, for the ground water medium, a part of the landfill's Water Quality Protection Standard and means a conceptual vertical surface that is located, in map view, along the hydraulically downgradient limit of waste placement at the landfill and that extends downward through the uppermost aquifer underlying the Unit. The federal municipal solid waste regulations require one or more ground water monitoring points along this vertical surface to monitor the quality of ground water passing it (see Title 40 of the Code of Federal Regulations section 258.51), whereas the Regional Water Quality Control Board will name other ground water monitoring points (not along this vertical surface) as needed to provide the earliest possible detection and measurement of a release [see Title 27 of the California Code of Regulations section 20415(b)(1)].

"**Practical quantitation limit** (**PQL**)" means the value established as a target value by the United States Environmental Protection Agency that is the lowest concentration of a substance that can be consistently determined within +/- 20% of the true concentration by 75% of the laboratories tested in a performance evaluation study. Alternatively, if performance data are not available, the Practical Quantitation Limit for carcinogens is the Method Detection Limit multiplied by 5, and for noncarcinogens is the Method Detection Limit multiplied by 10. These estimated Practical Quantitation Limits are listed in Appendix II to Title 40 of the Code of Federal Regulations Part 258. Generally, these are target values that may not reflect the constraints of matrix effects; therefore, the Regional Water Quality Control Board requires the discharger to keep an up-to-date listing of the applicable laboratory-specific Practical Quantitation Limit and Method Detection Limit estimates for each analyte on the Constituent of Concern list.

"Recycled water" refers to "disinfected tertiary recycled water" as defined in California Code of Regulations, Title 22, Section 60301.230.

"**Release**" means the three-dimensional portion of the monitored medium (ground water, surface water, or the unsaturated zone) comprised of all locations therein that are affected by one or

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more Monitoring Parameters that have migrated from the landfill to such an extent that a properly constructed monitoring point, at that location, would trigger a measurably significant increase over the applicable concentration limit, using an appropriate data analysis method meeting the requirements of Title 27 of the California Code of Regulations section 20415(e)(9) and a background data set sample size of 16 or more data points.

"**Reporting limit**" is the same as Minimum Level when there have been no modifications, such as dilution or concentration to the standard analytical procedure during sample preparation.

"**Reporting period**" means the duration separating the submittal of a given type of monitoring report from the time the next iteration of that report is scheduled for submittal.

"**Retest**," when applied to a scan to detect the presence of an appropriate list of analytes in leachate, landfill gas, or ground water (at an affected monitoring point), means taking a single additional sample from the indicating medium (or, for ground water, the indicating monitoring point) to determine whether the initial detection, for that analyte, is valid. When applied to the six-monthly monitoring effort for a given compliance well / Monitoring Parameter pair in detection mode, see "discrete retest."

"**RWQCB**" or "**Regional Board**" means the appropriate California Regional Water Quality Control Board.

"**Sample size**," for a given compliance well / Monitoring Parameter pair in detection mode, means the number of data points used to represent the variability of the background population or to represent the present compliance status of the Monitoring Parameter at that well, when applying an appropriate data analysis method.

"**Scan**" means a determination as to whether any of a given list of constituents are detectable (at the trace level or above) in the monitored medium (typically leachate, ground water, or landfill gas). The term includes both the initial measurement and, for a newly detected constituent, the results of the single retest sample. To identify a newly detected constituent, the constituent must be detected (at trace level or above) and then verified by being detected in the single sample retest. When applied to leachate or landfill gas, the term indicates a way of determining which Appendix II constituents should be included in the landfill's the Constituents of Concern list (once detected and verified, a constituent is added permanently to the Constituents of Concern list). When applied to ground water, the term indicates a way of determining which Appendix II constituents should be included in the landfill's Monitoring Parameter list (once detected and verified at any given compliance well or background well, a constituent is added permanently to the Monitoring Parameter list).

"**SOR**" means a federal Selection of Remedy study, under Title 40 of the Code of Federal Regulations section 258.57, which applies to any municipal solid waste landfill that has

exhibited a measurably significant release over the applicable Water Quality Protection Standard at any well along the Point Of Compliance for any Appendix II constituent. In California, this process is one in which the Regional Water Quality Control Board, in the presence of any affected persons and other interested parties, considers all relevant factors and adopts a suite of corrective action measures — developed during the Assessment of Corrective Measures study — which the discharger will apply during the Corrective Action Program to remediate the effects of the release. Generally speaking, the studies serve the same function, under the federal approach, as the Evaluation Monitoring Program does under the State approach.

"**Standard observations**" refers to:

a. For receiving waters:

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

   ii. Discoloration and turbidity: description of color, source, and size of affected area;

   iii. Evidence of odors: presence or absence, characterization, source, and distance of travel from source;

   iv. Evidence of beneficial use: presence of water-associated wildlife;

   v. Flow rate; and

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

b. Along the perimeter of the landfill:

   i. Evidence of liquid leaving or entering the landfill, estimated size of affected area, and flow rate;

   ii. Evidence of odors: presence or absence, characterization, source, and distance of travel from source; and

   iii. Evidence of erosion and/or of exposed refuse.

c. For the landfill:

   i. Evidence of ponded water at any point on the waste management facility;

ii. Evidence of odors: presence or absence, characterization, source, and distance of travel from source;

iii. Evidence of erosion and/or of daylighted refuse; and

iv. Standard Analysis and Measurements, which refers to:

A. Turbidity (only for water samples) in NTU:

B. Water elevation to the nearest 1/100th foot above mean sea level (only for groundwater monitoring); and

C. Sampling and statistical/non-statistical analysis of the Monitoring Parameters.

"**SW-846**" means the laboratory analytical guidance document published by the United States Environmental Protection Agency.

"**SWRCB**" means the California State Water Resources Control Board.

"**SWRCB Resolution No. 93-62**" means the order the State Water Resources Control Board adopted in 1993 as State Policy For Water Quality Control (has the force of regulation) that applies to all municipal solid waste landfills and requires a composite liner for all portions of the landfill outside of its Existing Footprint, with rare exceptions, and requires the Regional Water Quality Control Board to apply any requirement of Title 40 of the Code of Federal Regulations Part 258 that is missing from, or broader in scope than, the State Water Resources Control Boards' landfill requirements under Title 27 of the California Code of Regulations.

"**Tracking mode**," for a given compliance well / Monitoring Parameter pair, means a state in which there has already been a measurably significant increase (for that Monitoring Parameter at that well) such that the focus has changed from detecting the release to tracking it. In this mode, one keeps an up-to-date concentration versus time plot used in the six-monthly report validating the effectiveness of the Corrective Action Measures — required under Title 27 of the California Code of Regulations section 20430(h) — to demonstrate either that current Corrective Action Measures are effectively remediating the release or to identify the need for proposing additional/changed Corrective Action Measures under Title 27 of the California Code of Regulations section 20430(i or j) and Title 40 of the Code of Federal Regulations section 258.58(b). A well / Monitoring Parameter pair in this mode remains in this mode until the inception of the proof period following successful completion of corrective action.

"**Time Schedule Order** (**TSO**)" is an enforceable schedule of compliance for achieving listed

milestones in the cleanup.

"**Time-Versus-Concentration Plot**" provides a graphical method to view changes in concentration levels at a particular monitoring location(s) over time. More than one monitoring location can be compared on the same plot to look for differences between monitoring locations. They can also be used to examine the data for indications of trends.

"**VOC**" means any of the Volatile Organic Compounds that can be identified in a water or leachate sample under United States Environmental Protection Agency Method 8260 (see SW-846). The United States Environmental Protection Agency lists a subset of 47 such constituents in its Appendix I default Monitoring Parameter list (see Appendix I to Title 40 of the Code of Federal Regulations Part 258).

"**VSRLF**" means a "*very small rural landfill*" that has demonstrated to the satisfaction of the Regional Water Quality Control Board that it meets, and continues to meet, the qualifying preconditions, under Title 40 of the Code of Federal Regulations section 258.1(f), for being exempt from the federal design criteria (see Title 40 of the Code of Federal Regulations Part 258 Subpart D) and the federal monitoring requirements (see Title 40 of the Code of Federal Regulations Part 258 Subpart E). In California, to qualify as being such a landfill, the Operating Record must include the Regional Water Quality Control Board's concurrence with the discharger's demonstration under Title 40 of the Code of Federal Regulations section 258.1(f). Such a landfill is still required to monitor pursuant to the Title 27 California Code of Regulations requirements and the federal exemptions cease to apply as soon as the landfill exhibits evidence of a release.

"**Water quality protection standard** (**Water Standard**)" means the multi-part system by which the discharger determines the compliance status of the landfill, with respect to the release of waste constituents. For each monitored medium, the term includes: the Constituent of Concern list and the Monitoring Parameter list (i.e., the subset of Constituents of Concern that are detectable in the that medium); the concentration limit for each Monitoring Parameter at each monitoring point; the monitoring points (for the ground water medium, these are the compliance wells); and, for the ground water medium, the point of compliance. A violation of this standard occurs whenever a Constituent of Concern that is detectable in that medium (i.e., an Monitoring Parameter) produces a measurably significant increase over its applicable concentration limit at any monitoring point, as indicated by an appropriate statistical or nonstatistical data analysis method meeting the requirements of Title 27 of the California Code of Regulations section 20415(e)(9). Such a violation triggers a change from detection mode to tracking mode for that well / Monitoring Parameter pair.

"**Well / Monitoring Parameter** (**Well/MPar**) **pair**" means a given Monitoring Parameter at a given well (typically a compliance well, unless a release is detected at a background well). The discharger tracks compliance with the Water Quality Protection Standard for each such pair;

therefore, the minimum number of such pairs for the ground water medium is equal to the number of compliance wells times the number of Monitoring Parameters. At any given time, such a well and constituent combination will be either in detection mode or in tracking mode.

"**WDRs**" means Waste Discharge Requirements.

County Sanitation District of Los Angeles County **File No. 68-118**
Calabasas Landfill
Order No. R4-2009-XXXX

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ATTACHMENT 2:
STANDARD PROVISIONS APPLICABLE TO WASTE DISCHARGE REQUIREMENTS

STANDARD PROVISIONS
APPLICABLE TO WASTE DISCHARGE REQUIREMENTS

1. DUTY TO COMPLY

The discharger must comply with all conditions of these waste discharge requirements. A responsible party has been designated in the Order for this project, and is legally bound to maintain the monitoring program and permit. 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]

2. GENERAL PROHIBITION

Neither the treatment nor the discharge of waste shall create a pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code (CWC). [H&SC Section 5411, CWC Section 13263]

3. AVAILABILITY

A copy of these waste discharge requirements shall be maintained at the discharge facility and be available at all times to operating personnel. [CWC Section 13263]

4. CHANGE IN OWNERSHIP

The discharger must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger. The notice must include a written agreement between the existing and new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current discharger and the new discharger. This agreement shall include an acknowledgement that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable from the transfer date on. [CWC Sections 13267 and 13263]

5. CHANGE IN DISCHARGE

In the event of a material change in the character, location, or volume of a discharge, the discharger shall file with this Regional Board a new Report of Waste Discharge. [CWC Section 13260(c)]. A material change includes, but is not limited to, the following:

(a) Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the Waste.

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(b) Significant change in disposal method, e.g., change from a land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.

(c) Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems.

(d) Increase in flow beyond that specified in the waste discharge requirements.

(e) Increase in area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements. [CCR Title 23 Section 2210]

6. REVISION

These waste discharge requirements are subject to review and revision by the Regional Board. [CCR Section 13263]

7. TERMINATION

Where the 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]

8. 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 discharger from his liability under Federal, State or local laws, nor do they create a vested right for the discharger to continue the waste discharge. [CWC Section 13263(g)]

9. SEVERABILITY

Provisions of these waste discharge requirements are severable. If any provision of these requirements are found invalid, the remainder of these requirements shall not be affected. [CWC Section 921]

10. OPERATION AND MAINTENANCE

The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate 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)]

11. HAZARDOUS RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be 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, shall, as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of Section 13271 of the Water Code unless the discharger is in violation of a prohibition in the applicable Water Quality Control plan. [CWC Section 13271(a)]

12. PETROLEUM RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be 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, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Article 3.5 (commencing with Section 8574.1) of Chapter 7 of Division 1 of Title 2 of the Government Code. This provision does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Section 311 of the Clean Water Act or the discharge is in violation of a prohibition in the applicable Water Quality Control Plan. [CWC Section 13272]

13. ENTRY AND INSPECTION

The discharger shall allow the Regional Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

(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 PROGRAM AND DEVICES

The discharger shall furnish, under penalty of perjury, technical monitoring program reports; such reports shall be submitted in accordance with specifications prepared by the Executive Officer, which specifications are subject to periodic revisions as may be warranted. [CWC Section 13267]

All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. Annually, the discharger 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.

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]

15. TREATMENT FAILURE

In an enforcement action, it shall not be a defense for the discharger that it would have been necessary to halt or to reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced, or is lost. [CWC Section 13263(f)]

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 22357]

17. ENDANGERMENT TO HEALTH AND ENVIRONMENT

The discharger shall report any noncompliance which may endanger health or the environment. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain adescription 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 occurrence(s) 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 which causes the effluent limitation of this Order to be exceeded. [CWC Sections 13263 and 13267]

18. MAINTENANCE OF RECORDS

The discharger shall retain records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used

to complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Records of monitoring information shall include:

(a) The date, exact place, and time of sampling or measurements;

(b) The individual(s) who performed the sampling or measurements;

(c) The date(s) analyses were performed;

(d) The individual(s) who performed the analyses;

(e) The analytical techniques or method used; and

(f) The results of such analyses.

19. (a) All application reports or information to be submitted to the Executive Officer shall be signed and certified as follows:

(1) For a corporation -- by a principal executive officer or at least the level of vice president.

(2) For a partnership or sole proprietorship -- by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency -- by either a principal executive officer or ranking elected official.

(b) A duly authorized representative of a person designated in paragraph (a) of this provision may sign documents if:

(1) The authorization is made in writing by a person described in paragraph (a) of this provision.

(2) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and

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

Any person signing a document under this Section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. [CWC Sections 13263, 13267, and 13268]"

20. OPERATOR CERTIFICATION

Supervisors and operators of municipal wastewater treatment plants and privately owned facilities regulated by the PUC, used in the treatment or reclamation of sewage and industrial waste shall possess a certificate of appropriate grade in accordance with Title 23, California Code of Regulations Section 3680. State Boards may accept experience in lieu of qualification training. In lieu of a properly certified wastewater treatment plant operator, the State Board may approve use of a water treatment plant operator of appropriate grade certified by the State Department of Health Services where reclamation is involved.

Each plant shall be operated and maintained in accordance with the operation and maintenance manual prepared by the municipality through the Clean Water Grant Program. [CWC Title 23, Section 2233(d)]

ADDITIONAL PROVISIONS APPLICABLE TO
PUBLICLY OWNED TREATMENT WORKS' ADEQUATE CAPACITY

21. Whenever a publicly owned wastewater treatment plant will reach capacity within four years the discharger shall notify the Regional Board. A copy of such notification shall be sent to appropriate local elected officials, local permitting agencies and the press. The discharger must demonstrate that adequate steps are being taken to address the capacity problem. The discharger shall submit a technical report to the Regional Board showing flow volumes will be prevented from exceeding capacity, or how capacity will be increased, within 120 days after providing notification to the Regional Board, or within 120 days after receipt of notification from the Regional Board, of a finding that the treatment plant will reach capacity within four years. The time for filing the required technical report may be extended by the Regional Board. An extension of 30 days may be granted by the Executive Officer, and longer extensions may be granted by the Regional Board itself. [CCR Title 23, Section 2232]

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. CI-4992
FOR
COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY
(CALABASAS LANDFILL)

(File No. 60-118)

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General

1. Monitoring responsibilities of the Sanitation Districts of Los Angeles County (Discharger) for the Calabasas Landfill (Landfill) are specified in California Water Code (CWC) section 13225(a), section 13267(b) and section 13387(b), and State Water Resources Control Board (SWRCB) Resolution No. 93-62. This self-monitoring program is issued pursuant to California Regional Water Quality Control Board, Los Angeles Region (Regional Board) Order No. R4-2009-XXXX. The principal purposes of a self-monitoring program by a waste discharger are:

   a. To document compliance with discharge requirements and prohibitions established by the Regional Board;

   b. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge; and

   c. To prepare water quality analyses.

2. The Discharger shall implement this monitoring and reporting program (M&RP), as described in section F (Requirements for Groundwater Monitoring) of Regional Board Order No. R4-2009-XXXX. The Discharger shall implement this M&RP during the first monitoring period immediately following adoption of this Order.

3. The Discharger shall submit any reports required by this Order electronically, in accordance with section 3890 et. seq. of the 23 CCR, division 3. In addition, complete paper copies of any Joint Technical Document (or addenda thereto), Closure/Post-Closure Plan, Final Design Report or Construction Quality Assurance Report, shall be submitted to this Regional Board office by the required electronic submittal date.

4. The Discharger shall comply with the requirements of 27 CCR section 20415 for any water quality monitoring program developed to satisfy 27 CCR section 20420, section 20425, or section 20430 and the requirements of this Order.

   a. Groundwater monitoring shall meet the requirements of 27 CCR section 20415(b) and 40 CFR section 258.51 (a, c, and d);

b. Surface water monitoring shall meet the requirements of 27 CCR section 20415(c) and shall be conducted in accordance with Item No. 16(b) of this M&RP. In addition, whenever possible, the Discharger shall measure volumetric flow or, at a minimum, visually estimate the flow rate for all surface water monitoring points with flowing water (i.e. any flowing seeps or springs that develop during the development or operation of the Landfill);

c. An unsaturated zone monitoring program is required by 27 CCR section 21769. However, as described in Finding No. 27 of Order No. R4-2009-XXXX, unsaturated zone monitoring attempted at the Landfill has proved ineffective. Through adoption of this Order the Regional Board approves that an unsaturated zone monitoring program is not required for continued operation of the Landfill.

Monitoring Program

5. For the purposes of this monitoring program the terms "monitoring well", "extraction well", "observation well", "piezometer", and "sump" are synonymous.

6. Annual Appendix II Leachate Scan - Pursuant to 40 CFR section 258.55(b), the Discharger shall sample leachate in October from the LCRSs from the 80-Acre Liner, D-Cut Liner, and combined P-Cut/97-Cut/99-Cut/Southeastern Cut/North Ridge Cut Liners and shall analyze the samples for all constituents of 40 CFR Appendix II (Appendix II) that have not, to date, been detected in the Landfill's leachate and verified by re-sampling as well as any other constituent directed by the Regional Board's Executive Officer (Executive Officer). If the October leachate testing identifies any previously undetected Appendix II constituent(s), the Discharger shall obtain a single leachate retest sample the following April and analyze it for all such new constituents. Any constituents verified in the April retest shall become part of the COC list for corresponding downgradient monitoring wells. The Discharger shall include a prominent notification of these new COCs in the next scheduled monitoring report. The current COC list compiled from annual leachate monitoring from the 80-Acre Liner, D-Cut Liner, and combined P-Cut/97-Cut/99-Cut/Southeastern Cut/North Ridge Cut Liners LCRSs are indicated in Table 1 of this M&RP.

7. The existing compliance groundwater monitoring system at the Landfill (see Figure 1, attached)includes three monitoring wells (R02A, R02B, M22B) for the Barrier 1 area, four monitoring wells (R06A, R06B, EMP10, EMP11) for the Barrier 2 area, one monitoring well (M18D) for the Barrier 3 area, one monitoring well (M19R) for the Barrier 4 area , eight monitoring wells (R07A, R07B, R08B, M20S, P64S, P67S, P68S, P69S) for the Barrier 5 area, and two monitoring wells (M15B, M16A) for the Barrier 6 area. Because the Discharger has established ranges of background groundwater quality at the Landfill and documented the heterogeneous nature of the groundwater quality at the Landfill, the Executive Officer finds that no concurrent background groundwater monitoring point are likely representative of any single downgradient monitoring well.

Therefore, inter-well background water quality monitoring for this M&RP are not required unless directed by the Executive Officer. Monitoring elements include the validating of intra-well background data sets (Item No. 13, below); detection of man-made constituents in background wells (Item No. 17); and ongoing background well testing (Item No. 18).

8. Existing piezometers, monitoring wells and extraction wells at the Landfill are shown on Figures 2-4 (attached).

Sampling and Analytical Methods

9. Groundwater monitoring shall be conducted on a quarterly basis as shown in the following schedule:

Period	Sampling Period
January – March	February
April - June	May
July – September	August
October – December	November

10. MPar List - At any given time, the MPar list for the Landfill shall include all constituents listed for the compliance monitoring wells in Table 2 of this M&RP. The attached list is the MPar list as of the effective date of Order No. R4-2009-XXXX. Any time a new constituent is added to the MPar list, as discussed below, the Discharger shall provide the Regional Board with an updated list of this table. MPars vary for unlined versus lined portions of the Landfill. For the unlined areas (Subsurface Barriers 1, 2 and 5) of the Landfill the MPars consist of general organic and inorganic indicators of concern, all Appendix I VOCs, any anthropogenic Appendix II constituents detected in groundwater, and any COCs detected and verified in groundwater samples obtained as part of the five-year scans under Item No. 12(b) of this M&RP. For lined areas (Barriers 3, 4, and 6) the MPars consist of general organic and inorganic indicators of concern, and any anthropogenic Appendix II constituents previously detected in groundwater, and any COCs detected and verified in the five-year scans under Item No. 12(b) of this M&RP.

11. COC List - As of the effective date of Order No. R4-2009-XXXX, the list of potential COCs consists of those constituents listed in Table 3 of this M&RP. As above, COCs vary for unlined versus lined portions of the Landfill. For the unlined areas (Subsurface Barriers 1, 2 and 5) the COCs include all Appendix II constituents not identified as Mpars as well as any other constituent directed by the Executive Officer. For lined areas (Subsurface Barriers 3, 4, and 6), the COC list includes all Appendix II constituents detected and verified in the annual leachate testing under Item No. 6 of this M&RP as well as any other constituent directed by the Executive Officer. Subsequently, the Discharger shall note prominently the constituent(s) added to the COC list in the next scheduled monitoring report.

12. This Order recognizes that there has been a release from the Barriers 1, 2, and 5 areas of the Landfill. Therefore, the Discharger shall continue to comply with a federal AMP and state CAP requirements for the known releases by incorporating the following monitoring and analysis requirements.

    a. COC scans for the releases have previously been completed.

    b. Five-Yearly COC Scan - Every five years, the Discharger shall analyze a sample from each compliance groundwater monitoring point known to be within the release ["affected well," as described in Item No. 12(c) of this M&RP] for the detectable presence (including trace determinations) of all COCs that are not yet on the MPar list. This constitutes the means by which the Discharger continues to meet the requirements of 40 CFR section 258.55(b-d).

        i. During each such COC scanning event, the Discharger shall obtain and analyze a minimum of one sample from each required well (sufficient to obtain a datum for each COC that is subject to the scan). Upon detecting a COC that is not yet on the MPar list, the Discharger shall, within 30 days, take a single resample from the indicating affected well(s) and reanalyze it only for the newly-detected constituent(s).

        ii. Any COC detected in samples collected from a groundwater monitoring well, and verified by a retest, automatically becomes part of the MPar list for the Landfill. The Discharger shall notify Regional Board staff of any such change immediately via phone followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall note prominently the constituent(s) added to the MPar list in the next scheduled monitoring report, along with a listing of which well(s) were involved in this detection and verification. This constitutes the means by which the Discharger shall meet the requirements of 40 CFR section 258.55(d)(2).

    c. Five-Year COC Scans only at Affected Point of Compliance (POC) Wells - Pursuant to 40 CFR section 258.55(b), the Regional Board hereby limits the scope of five-yearly COC list scans, under Item No. 12(b) of this M&RP, to "affected wells" (those groundwater monitoring points that are within the plume, as indicated by their having at least one MPar that is in tracking mode (see Item No. 13(f)(ii)) that are along the Landfill's POC. Nevertheless, the Executive Officer can, at any time, increase the scope of the affected wells that shall be subject to COC scanning to include selected groundwater monitoring points, whether or not they are located along the POC, that provide a strong indication of a release.

13. Statistical Data Analysis Methodology

a. For the purposes of this M&RP, Minimum Level (ML) and Reporting Limit (RL), as described in Attachment 1, are functionally equivalent to method detection limit (MDL) and practical quantitation limit (PQL) with regard to reporting and statistical evaluation requirements. For this purpose, MLs and RLs shall be derived by the laboratory for each analytical procedure, according to the SWRCB's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the State Implementation Policy or SIP) and the State of California's laboratory accreditation procedures. Sample results greater than or equal to the ML/RL shall be reported "as measured" by the laboratory. Sample results less than the ML/RL shall be reported as less than the numeric values of the ML/RL. Nominal ML and RL values shall be reported with all data. Correspondingly, any reference to "detections at or above the trace level" shall be substituted with "detections at or above the Minimum Level"

b. Intra-Well Comparisons are Standard **-** The Mpars for each compliance well that are subject to routine data analysis are indicated in the attached Table 2. Except as otherwise provided in Item Nos. 13(b)(i)(B & C) and 12(g)(ii) of this M&RP, intra-well comparison methods shall be used at all compliance wells for all MPars that are subject to data analysis under this Order and shall be used to test individual "background" (e.g., upgradient) wells regarding unexpected increases in man-made constituents (e.g., VOCs), as follows:

i. Pre-Detection Background Data Set **-** Initially, except as otherwise provided in Item Nos. 13(b)(i)(C & D) or 17, for each given MPar at a given downgradient monitoring well (well/MPar pair), the proposed background data set shall consist of all validated data from that compliance well and parameter, from the previous five-year period. Every two years, following the adoption of this Order, as part of the annual monitoring summary report (see 27 CCR section 20415(e)(14) and Item No. 42 of this M&RP), the Discharger shall add the newer data to the background data set for each well/MPar pair after validating (via a method approved by the Executive Officer) that the new data does not contain data indicating an increase over the existing background data. At that time, the Discharger shall also retire the oldest two years of background data for the well/MPar, thereby producing a data set covering the then-previous five years. The Discharger shall validate the proposed intra-well background data set as follows for each MPar at each well (initially) or, subsequently, at a new well or for a new MPar at an existing well. The Discharger shall report the validated or updated background data set, for each affected well/MPar pair, in the next scheduled monitoring report. Initial background data validation shall be as follows:

A. Accelerated Background Data Procurement **-** if there are less than ten post-1997 data points available, for a given MPar at any background or compliance well, the Discharger shall implement the accelerated data procurement effort described in Item No. 15 of this M&RP to achieve a minimum background sample size. A minimum background sample size of 10 data points per well shall be acquired prior to initiating the intra-well background data set validation procedure described below unless the Discharger makes a technical submittal that is approved by the Executive Officer for a smaller minimum background sample size;

B. Validate Upgradient Data for Man-Made MPars **-** for any MPar that is a non-metallic Appendix II constituent (i.e., that is man-made), the initial intra-well data validation under Item No. 13(b)(i)(C) shall utilize only data from those upgradient (or sidegradient) background wells whose data from the previous five years, for that constituent, exceeds the constituent's MDL in less than 10% of the well's data. Such man-made constituents should not be detectable at background wells except in error (around 1% of the time) or because the constituent comes either from the Landfill or from another source. Therefore, for any background well rejected pursuant to this item, for a given MPar, if the Discharger has not already explained the constituent's presence at that well to the satisfaction of the Executive Officer, the Discharger shall conduct an investigation under Item No. 17 of this M&RP. If there are one or more non-rejected background wells, the Discharger shall use their data to validate each well/MPar pair's proposed intra-well background data set, under Item No. 13(b)(i)(C); and

C. Intra-Well Background Validation for New Well/MPar Pairs **-** for all compliance wells initially and, subsequently, for new wells or a new MPar at an existing well, to determine whether the existing data for that MPar at that well can be used as its intra-well comparison background data set:

1. Commonly Quantified Constituents **-** for any MPar that, absent the existence of the Landfill, would usually be detected in groundwater at concentrations exceeding the constituent's PQL, the Discharger shall validate the proposed intra-well background data at each compliance well by comparing it to a pooled box-and-whiskers plot, for that MPar, from all "background" (upgradient or sidegradient background) wells completed in the same

groundwater body. If any such constituent's median concentration (for a downgradient well) exceeds the pooled background plot's 75th percentile (upper boundary of the box, in a box-and-whisker plot), then that compliance well's existing data cannot be used as the intra-well comparison background data set for that well/MPar pair. Such a well/MPar pair shall be tested, beginning no later than the next scheduled reporting period, using an inter-well comparison data analysis method (against the applicable background well(s)) that the Executive Officer agrees meets the requirements of 27 CCR section 20415(e)(9). Otherwise (i.e., for a well/MPar pair whose existing data's median is less than the pooled background plot's 75th percentile), that existing data shall be used as the initial background data set for intra-well comparisons for that well/MPar pair; or

2. Rarely Quantified Constituents **-** for an MPar that, absent the existence of the Landfill, would seldom be detected in groundwater (e.g., non-metallic Appendix II constituents), the Discharger shall identify the highest value from the pooled data set from all background wells that have passed validation under Item No. 13(b)(i)(B) or, in a case where all applicable upgradient well data is non-detect, the MDL. The Discharger shall use this value as a basis of comparison to validate the data points in the proposed intra-well background data set. The initial intra-well background data set for that downgradient well shall consist of all data points in the proposed intra-well background data set that are less than this value.

ii. Post-Detection Background Data Set **-** For any constituent that is in "tracking mode" (see Item No. 13(f)(ii) of this M&RP), at a given well, its background data set shall be the background data set that was in effect when the well/MPar pair exhibited a measurably significant increase.

c. Performance Standards **-** All data analysis methods (statistical or non-statistical) shall meet the requirements of 27 CCR section 20415(e)(9).

d. Retest is Part of the Method **-** In the event that an approved data analysis method provides a preliminary indication that a given MPar has exhibited a measurably significant increase at a given well, the Discharger shall conduct a verification procedure in the form of a discrete retest, in accordance with 27 CCR section 20415(e)(8)(E). The retest is part of the data analysis method, therefore, a

measurably significant increase exists only if either or both of the retest samples validates the preliminary indication. The Discharger has the discretion to accept that the preliminary indication confirms a measurably significant increase at a given monitoring well and forgo verification retesting procedures.

e. Limited Retest Scope **-** For any given groundwater monitoring point, the Discharger shall perform the verification procedure only for those MPars that have shown a preliminary indication at that well during that reporting period. At any time, the Discharger may demonstrate, in accordance with 27 CCR section 20420(k)(7), that a source other than the Landfill caused an MPar to produce a measurably significant increase at a given well or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation, or by natural variation in the ground water.

f. Water Quality Monitoring Approach **-** The monitoring approach used for each well/MPar pair shall be controlled by whether that MPar has exhibited a measurably significant increase at that well. Therefore, the Discharger shall monitor each well/MPar pair in one of two modes, as follows:

i. Detection Mode **-** For an MPar that has not produced a measurably significant increase at that well, the purpose of monitoring, for that well/MPar pair, is to watch for the MPar arrival at that well at a concentration strong enough to trigger a measurably significant indication using an appropriate statistical or non-statistical data analysis method; or

ii. Tracking Mode **-** For an MPar that has produced a measurably significant increase at a given well, the purpose of the monitoring, for that well/MPar pair, is to verify the suitability and effectiveness of the existing or proposed corrective measures by tracking changes in the MPar concentration at that location via an evolving concentration-versus-time plot.

g. Detection Mode Data Analyses **-** The following applies to all detection mode data analyses (i.e., this provision does not apply to the scans under Item Nos. 12(b) or 6 of this M&RP, or to well/MPar pairs that are in tracking mode):

i. MPars Readily Detectable in Background **-** At any given groundwater monitoring point, the Discharger shall apply an approved statistical analysis method for each detection mode MPar that exceeds its respective MDL in 10% or more of the applicable background data set. For each well/MPar pair (separately), an approved statistical analysis is a method, other than analysis of variance (ANOVA), that is either validated and analyzed by the SANITAS® water quality data analysis software (distributed by Intelligent Decisions Technology, Inc., 203 South Main

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Street, Longmont, CO 80501, Tel: 303-774-9120) or that the Executive Officer agrees meets the performance standards of 27 CCR section 20415(e)(9). If using SANITAS®, the Discharger shall use the "CA Standards" and "CA Retest" settings (under the "Options" pull-down menu). Otherwise:

A. For any such well/MPar pair that, as of the effective date of this Order, does not have an approved statistical analysis method, the Discharger shall propose and substantiate an appropriate statistical method within 90 days of the adoption of this Order;

B. After the adoption of this Order, for any new MPar that qualifies for statistical analysis by meeting the above 10% rule at a given well, the Discharger shall propose and substantiate an appropriate statistical method for that well/MPar pair as part of the background data validation under Item No. 13(b)(i)(C).

ii. MPars not Readily Detectable in Background **-** For any monitoring point at which one or more detection mode MPars exceed their respective MDL in less than 10% of the applicable background data set, the Discharger shall analyze the data for these MPars via the California Non-statistical Data Analysis Method (CNSDAM) test described in Item No. 14 of this M&RP.

14. California Non-statistical Data Analysis Method

a. Non-Statistical Method for Detection Mode for MPars Seldom Found in Background - For any given compliance (downgradient) well, regardless of the monitoring program (Detection Monitoring Program [DMP], Evaluation Monitoring Program [EMP], Assessment Monitoring Program [AMP], or Corrective Action Program [CAP]), the Discharger shall use this data analysis method, jointly, for all constituents on the "scope list" of Item No. 14(a)(i) of this M&RP (or, for each retest sample, the modified scope list of Item No. 14(b)(ii)).

i. Scope List – Within 90 days of the effective date of this Order, the Discharger shall create a current "scope list" showing each detection mode MPar, at that well, that exceeds its MDL in less than 10% of its background data.

ii. Two Triggers - From the scope list made under Item No. 14(a)(i), above, for an initial test (or, for a retest, the modified scope list under Item No. 14(b) below), the Discharger shall identify each MPar in the current sample from that well that exceeds either its respective MDL or PQL. The Discharger shall conclude that these exceeding MPars provide a

preliminary indication (or, for a retest, provide a measurably significant indication) of a change in the nature or extent of the release, at that well, if either:

A. Two or more of the MPars on a monitoring well's scope list exceed their respective MDL; or

B. At least one of the MPars on a monitoring well's scope list equals or exceeds its respective PQL.

b. Discrete Retest:

i. In the event that the Discharger concludes (pursuant to Item No. 14(a)(ii) above) that there is a preliminary indication, then the Discharger shall immediately notify Regional Board staff by phone, followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall, within 30 days of such indication, collect two new (retest) samples from the indicating compliance well.

ii. For any given compliance well, the Discharger shall analyze the retest samples only for those constituents indicated in that well's original test, under Item No. 14(a)(ii) of this M&RP, and these indicated constituents shall comprise the well's "modified scope list." As soon as the retest data are available, the Discharger shall apply the same test (under Item No. 14(a)(ii) above, but using this modified scope list) to separately analyze each of the two suites of retest data at that compliance well.

iii. If either (or both) of the retest samples trip either (or both) of the triggers under Item No. 13(a)(ii), then the Discharger shall conclude that there is a measurably significant increase at that well for the constituent(s) indicated in the validating retest sample(s). Furthermore, thereafter, the Discharger shall monitor the indicated constituent(s) in tracking mode (instead of detection mode; see Item No. 13(f)(ii) of this M&RP) at that well, shall remove the constituent(s) from the scope list created (under Item No. 14(a)(i) of this M&RP) for that well, notify the Regional Board by phone, followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall highlight this conclusion and these changes in the next scheduled monitoring report.

c. The Discharger may propose alternative non-statistical methods for MPars seldom found in background to be approved by the Executive Officer.

15. Establishing Initial COC Data:

For any COC that does not have the minimum background sample size required at any given background and compliance well, the Discharger shall establish the prevailing concentration of that constituent at each such data-deficient well by taking and analyzing one sample monthly at each data-deficient background and downgradient monitoring point until each such well has at least ten data points, or fewer if approved by the Executive Officer. For any background or compliance well installed after the effective date of this Order, the Discharger shall establish the prevailing concentration for each COC by using this accelerated sampling schedule for up to ten months. These data shall be used, as described in Item No. 13(b)(i)(A-C) of this Order, in the event that the COC becomes an MPar. For any constituent for which monthly sampling would be too frequent to obtain reasonably independent data, even using the post-sampling purge approach described in 27 CCR section 20415(e)(12)(B), the Discharger shall include, for approval by the Executive Officer, a proposed date for completion of data procurement and a well-specific and constituent-specific technical validation for any wait of more than one month between successive sampling dates.

16. Other Monitoring

a. Unsaturated zone monitoring is not required at the Landfill.

b. The Discharger shall satisfy all stormwater monitoring requirements pursuant Order No. R4-2009-XXXX regulating surface water discharges. Specifically, the Discharger shall satisfy requirements of NPDES permit WDID No. 4B196000294, industrial stormwater permit WDID No. 4 19I006192, and any revisions to the permit.

17. Frequent Detection of a Man-Made Constituent in a Background Well - Any time a (upgradient or sidegradient) background well exhibits an excessive frequency or proportion of trace-level or numerical concentration data for any MPar (under Items Nos. 13 or 18) or COC (under Item Nos. 15 or 18) that is a non-metallic Appendix II constituent, the Discharger shall conduct an investigation under this paragraph. For such a constituent: an "excessive proportion" constitutes a condition, under Item No. 13(b)(i)(A), where 10% or more of the data from that background well exceeds the MPar MDL; and an "excessive frequency" constitutes a condition, under Item No. 18, in which new data at that background well exceeds the constituent's MDL for two successive samples. Given either condition, the Discharger shall notify the Regional Board immediately by phone followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall, within 180 days thereafter, submit a report, acceptable to the Executive Officer, that examines the possibility that this constituent originated from the Landfill (e.g., using a concentration gradient analysis) and that proposes appropriate changes to the monitoring program. If, after reviewing this report, the Executive Officer:

a. Concludes that the evidence indicates the man-made constituent originated from a source other than the Landfill, then the Executive Officer will make appropriate changes to the monitoring program, including switching to an appropriate statistical inter-well comparison procedure, for that constituent, for all detection-mode analyses at the Landfill, using a suite of background data that reflects the expected concentration for that constituent; or

b. Is unable to conclude that the evidence indicates the detected man-made constituent came from a source other than the Landfill, then the Discharger shall:

i. List this constituent as an MPar, if it is not already so listed, in the next scheduled monitoring report and shall note this change prominently in the report's synopsis;

ii. Shall include this background well as part of the release, for that MPar and, thereafter, shall address this well/MPar pair in tracking mode (i.e., as part of the release), in spite of the well's being a background well, beginning with the next scheduled monitoring report; and

iii. If there is not at least one other background well unaffected by this constituent, shall, within 90 days, install a new upgradient or sidegradient background well in a portion of the aquifer that will provide data representative of background conditions for the Landfill's compliance wells, and shall carry out an accelerated sampling schedule, for that constituent, under Item No. 15, to provide representative background data for validating the use of intra-well comparison testing under Item No. 13 above.

18. Ongoing Background Well Testing - Even though most data analysis will be via intra-well comparisons, the Discharger shall continue to monitor background wells, for each MPar and COC, each time that MPar or COC is monitored at downgradient wells. Each year in which there is new background well data for a constituent (i.e., quarterly for MPars and every five years for non-MPar COCs), the Discharger shall include the new data in the annual monitoring summary report (see 27 CCR section 20415(e)(14) and Item No. 42 of this M&RP) as a time-versus-concentration plot for that background well and constituent. Any time such a plot (for a given well and constituent) shows two successive data points in excess of the MDL for any non-metallic Appendix II constituent that has not already been investigated at that well, under Item No. 17, the Discharger shall notify the Regional Board immediately by phone followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall initiate an investigation under Item No. 17 within 30 days of noting this condition.

19. Monitoring Data Information **-** For each MPar addressed during a given reporting period, the Discharger shall include in the monitoring report a listing of the prevailing MDL and PQL for that MPar, together with an indication as to whether the MDL, PQL, or both have changed since the prior reporting period. The Discharger shall require the analytical laboratory to report all applicable censored data (trace level and non-detect determinations). In the event that an MDL and/or PQL for an Mpar changes, the Discharger shall highlight that change in the report's summary and the report shall include an explanation for the change that is approved by the owner/director of the analytical laboratory.

20. WQPS **-** Under this Order, pursuant to 27 CCR section 20415(e)(7), the Landfill is in violation of its WQPS any time a given detection mode well/MPar pair exhibits a measurably significant increase over the applicable background data set (and changes to tracking mode), as determined by an appropriate statistical or non-statistical data analysis method. All well/MPar pairs in tracking mode remain in violation of the WQPS until completion of a successful proof period that ends the CAP (see 27 CCR section 20430(g) and 40 CFR section 258.58(e)). Pursuant to 27 CCR section 20390, the WQPS for groundwater at the Landfill consists of the following components:

    a. COCs (see 27 CCR section 20395) **-** At any given time, the COCs are those listed in Table 3 of this M&RP, including any updates made pursuant to Item No. 11 of this M&RP. Nevertheless, under this Order, statistical and non-statistical data analysis is limited to those COCs that are on the current MPar list by virtue of their being present in detectable levels either in groundwater or in that portion of the groundwater that is affected by the release;

    b. Concentration Limits **-** At any given time, the concentration limit of a given well/MPar pair is its applicable background data set, as determined or updated pursuant to Item Nos. 13(b) or 17 of this M&RP (see 27 CCR section 20400(b)(2)). Nevertheless, during a CAP, the concentration limits may also include, for a given MPar, a numerical concentration limit greater than background adopted by the Regional Board pursuant to 27 CCR section 20400(b)(3)-(d) for application only to those monitoring points that are within the plume;

    c. POC and Monitoring Wells **-** The POC consists of an imaginary vertical surface that is located, in map view, along the hydraulically downgradient limit of waste placement at the Landfill and that extends downward through the uppermost aquifer underlying the Landfill (i.e. the line indicated as "Landfill Area" in Figure 4, attached). At the Landfill there are no POC monitoring wells at this time so that for the purposes of this M&RP POC monitoring points shall consist of the current compliance monitoring wells listed in Item No. 7.

    d. Compliance Period **-** The compliance period for the Landfill is six years (see 27

CCR section 20410). Each time the standard is not met (i.e. releases discovered), the Landfill shall begin a compliance period on the date the Regional Board directs the Discharger to begin an EMP. If the CAP has not achieved compliance with the standard by the scheduled end of the compliance period, the compliance period is automatically extended until the Landfill has been in continuous compliance for at least three consecutive years.

21. Unless otherwise approved by the Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the DHS. All analyses shall be conducted in accordance with the latest edition of "*Test Methods for Evaluating Physical/Chemical Methods*" (SW-846) promulgated by the USEPA (or equivalent standard methods as approved by the Executive Officer) 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. Specific methods of analysis must be identified. If methods other than USEPA-approved methods or standard methods are used, the exact methodology must be submitted for review and must be approved by the Executive Officer prior to use. For any analyses performed for which no procedures are specified in the EPA guidelines or in this M&RP, the constituent or parameter analyzed, and the method or procedure used, must be specified in the corresponding monitoring report. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall approve 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. In addition, the Discharger is responsible for seeing that the laboratory analysis of all samples meet the following restrictions:

    a. The methods and analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e. "trace" or "ND") in data from background monitoring points for that medium, the analytical methods having the lowest facility-specific MDL shall be selected from among those methods which would provide valid results in light of any matrix effects involved.

    b. Trace results falling between the MDL and the facility-specific practical quantitation limit (PQL), shall be reported as such, and shall be accompanied both by the estimated MDL and PQL values for that analytical run and by an estimate of the constituent's concentration.

    c. MDLs and PQLs shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. These MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab, rather than simply being quoted from USEPA analytical method manuals. If the lab suspects that, due to a

change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived MDL/PQL values, the results shall be flagged accordingly, along with an estimate of the detection limit and quantitation limit actually achieved.

d. All quality assurance / quality control (QA/QC) data shall be reported, along with the sample results to which it applies, including the method, equipment, and analytical detection limits, the recovery rates, an explanation (corrective action) of any QA/QC measure that is outside the laboratory control limits, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name and qualifications of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recovery.

e. Upon receiving written approval from the Executive Officer, an alternative statistical or non-statistical procedure can be used for determining the significance of analytical results for a constituent that is a common laboratory contaminant (i.e., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate) during any given reporting period in which QA/QC samples show evidence of laboratory contamination for that constituent. Nevertheless, analytical results involving detection of these analytes in any sample shall be reported and flagged for easy reference by Regional Board staff.

f. Within 90 days of the adoption of Order No. R4-2009-XXXX, the discharger shall submit a technical report for approval by the Executive Officer for an analytical methodology to report unknown chromatographic peaks, along with an estimate of the concentration of the unknown analyte.

g. In cases where contaminants are detected in QA/QC samples (i.e. field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged.

22. Proper chain of custody procedures shall be used.

23. All compliance groundwater monitoring system wells shall be equipped with dedicated sampling pumps.

24. All metals analyses shall be for total metals using unfiltered samples. Metals samples must be preserved in accordance with the specified laboratory methods, however care shall be taken that the dissolved metals samples are not exposed to acids until after filtering. The Discharger may elect to also obtain filtered metals representative of the dissolved phase. If so the Discharger must report the results of both the filtered and unfiltered.

25. No filtering of samples taken for organics analyses shall be permitted. Samples for

organic analyses shall be taken with a sampling method that minimizes volatilization and degradation of potential constituents.

26. The Discharger may submit additional data to the Regional Board not required by this program in order to simplify reporting to other regulatory agencies.

27. If the Discharger performs analyses for any parameter more frequently than required by this M&RP using approved analytical methods, the results of those analyses shall be included in the monitoring program.

28. Thirty-Day Sample Procurement Limitation:
For any given monitored medium, the samples taken from all monitoring points to satisfy the data analysis requirements for a given reporting period shall all be taken within a span of 30 days, and shall be taken in a manner that insures sample independence to the greatest extent feasible [27 CCR section 20415(e)(12)(B)]. Groundwater sampling shall also include an accurate determination of the groundwater surface elevation and field parameters (temperature, pH, electrical conductivity, turbidity) for that monitoring point [27 CCR section 20415(e)(13)]; groundwater elevations taken prior to purging the well and sampling for monitoring parameters shall be used to fulfill groundwater flow rate/direction analyses required under Item No. 40(b)(i) of this M&RP. Statistical or non-statistical analysis shall be carried out as soon as the data is available, in accordance with statistical and non-statistical analyses requirements described in this M&RP.

29. The groundwater monitoring program must be carried out during the active life of the Landfill, during the closure and postclosure maintenance period, and during any interim periods when no wastes are deposited at the Landfill.

30. The Discharger shall describe the effectiveness of the CAP in the semi-annual groundwater monitoring reports due every February 15 and August 15.

31. Quarterly observations and measurements of the static groundwater levels shall be made on all compliance monitoring wells, and records of such observations shall be submitted with the quarterly monitoring reports. Compliance wells affected by pumping shall be measured prior to pumping insofar as is possible. All compliance monitoring wells shall be sounded annually during the fourth quarter to determine total depth.

32. Pumping data regarding fluid pumped from each monitoring well (other than for analytical samples) shall be reported to the Regional Board each month in the monthly waste disposal report and shall include:

    a. Date and quantity of fluid pumped, and the method of disposal or reuse purpose, if reused.

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b. If no fluid was pumped during the month from any monitoring well, a statement to that effect shall be submitted.

Waste Disposal Reporting Requirements

33. The results of the waste-load-checking program shall be submitted in quarterly monitoring reports. The Discharger shall report all hazardous or unacceptable (to this site) wastes inadvertently received at this site and their disposition. The following details shall be included:

a. The source (if known), including the hauler, of the unacceptable wastes and dated received and/or discovered.

b. Identification of waste (if known) and the amount of waste.

c. The name and address of the hauler who removed the waste from this site.

d. The ultimate point of disposal for the waste.

e. Actions by the Discharger to prevent recurrence of the attempted depositing of unacceptable wastes by this source or individual (if applicable).

f. If no unacceptable wastes were received (or discovered) during the month, the report shall so state.

34. The results of dewatered sewage sludge testing shall be submitted in the quarterly monitoring reports. In addition to reporting the quantity of dewatered sewage sludge deposited each month, quarterly samples of incoming sludge shall be obtained and analyzed as follows:

a. A time-composite sludge sample shall be collected during a 24-hour period. The composite sample shall consist of 12 sub-samples taken at two-hour intervals. The sub-samples shall be mixed as completely as possible into a single sample. The total percent solids of the sample shall be reported.

b. An extraction solution of the sludge shall be prepared for analyses using the WET method as contained in 22 CCR, division 4.5, chapter 11, appendix II. All testing shall be done on 48-hour extracts. The extracts shall be analyzed for the soluble threshold limit concentration (STLC) for the following metals: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc. The digested

sludge shall also be analyzed quarterly for following parameters: polychlorinated biphenyls (PCBs), trichloroethylene (TCE), perchloroethylene (PCE), carbon tetrachloride, DDT DDE, DDD, Endrin, Lindane, Methoxychlor, Toxaphene, 2,4-D and 2,4,5-TP (Silvex).

c. These results shall be reported in the corresponding quarterly report.

d. If the Discharger performs sludge analyses more frequently than required by this program, the results of those analyses shall be included in the corresponding quarterly report.

35. Wastewater reuse reporting shall accompany quarterly monitoring reports and include the following:

a. A statement that, during the reporting period, all wastewater was used only as specified, and for the uses specified in Order No. R4-2009-XXXX.

b. Approximate acreage and locations receiving reused water for irrigation.

c. Analytical results for wastewater shall be submitted with the corresponding quarterly monitoring report. If a wastewater source was not sampled or measured during the reporting period, the reason for the omission shall be given. If no wastewater was reused from a source, a statement to that effect shall be provided in lieu of analyses.

d. Records of operational problems, mechanical breakdowns, and diversions to emergency storage or disposal associated with any violations, or potential violations of Order No. R4-2009-XXXX.

e. Any corrective actions taken.

f. If all or a portion of the wastewater was not reused because of a failure to meet the limits specified in Order No. R4-2009-XXXX, the report shall so state and identify the disposition of the effluent.

36. Waste disposal reporting of the following information shall be filed with this Regional Board each month:

a. A tabular list of the estimated average monthly quantities (in cubic yards and tons) and types of materials deposited each month.

b. An estimate of the remaining capacity (in cubic yards and tons), and the remaining life of the site in years and months.

c. A certification that all wastes were deposited in compliance with the Regional Board's requirements, and that no wastes were deposited outside of the boundaries of the landfill as specified in Order No. R4-2009-XXXX.

37. Waste disposal information for the following items shall be compiled on a monthly basis and shall accompany quarterly monitoring reports**:**

a. A description of the location and estimate of the seepage rate or flow of all known seeps and springs at the site.

b. The estimated amount of water used at the landfill for landscape irrigation, compaction, dust control, etc., during the month. (If a source other than potable water is used, the source and amount of water from each source shall also be reported).

c. Quantities of liquid pumped from the leachate monitoring sumps and/or extraction wells, including dates or removal, and the ultimate point of disposal, if other than an onsite leachate treatment plant. If no liquid was detected or pumped during the reporting period, a statement to that effect shall be submitted.

d. A map of the site that indicates the area(s) where disposal is taking place or will begin. The map shall be submitted with the annual report. If a new area is landfilled, it shall be identified in the corresponding quarterly report.

Records to be Maintained

38. Written reports shall be maintained by the Discharger or its 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 Regional Board. Such records shall show the following for each sample:

a. Identity of sample and of the monitoring point from which it was taken, along with the identity of the individual who obtained the sample;

b. Date and time of sampling;

c. Date and time that analyses were started and completed, and the name of the personnel performing each analysis;

d. Complete procedures used, including method of preserving the sample, and the identity and volumes of reagents used;

e. Calculations of results; and

f. Results of analyses, and the MDL and PQL for each analysis.

Reports to be Filed with the Board

39. Electronic quarterly and annual monitoring reports shall be submitted pursuant the following schedule. Every five years, the Discharger shall also submit a report concerning the direct analysis of all COCs (COC report), alternating between the monitoring periods. The COC report may be included in a corresponding quarterly report.

Period	Sampling Period	Reporting Date
January – March	March	May 15th
April - June	June	August 15
July – September	September	November 15th
October – December	December	February 15
January – December		May 15(Annual Report)

The Discharger can combine the annual report with the May 15 quarterly report but all required information must be included in the combined report. In the event monitoring is not performed as above because of unforeseen circumstances, substitute monitoring shall be performed as soon as possible after these times, and the reason for the delay shall be given.

40. The quarterly monitoring reports shall be comprised of at least the following:

a. Letter of Transmittal:
A letter detailing the essential points of the monitoring program shall accompany each report. Such a letter shall include a discussion of any requirement violations found since the last such report was submitted, and shall describe actions taken or planned for correcting those violations. If the Discharger has previously submitted a detailed time schedule for correcting said requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred since the last submittal, 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 above, or by his/her 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 report shall include a compliance evaluation summary. The summary shall contain at least:

i. For each monitored groundwater body, a description and graphical

presentation of the velocity and direction of the groundwater flow under/around the Landfill, based upon water level elevations taken during the collection of the water quality data submitted in the report. In the case where this cannot be determined with meaningful results, a statement to the nature of the groundwater flow and general flow characteristics will suffice.

ii. Pre-Sampling Purge for Samples Obtained from Wells:
For each monitoring point addressed by the report, a description of the method and time of water level measurement, of the type of pump used for purging and the placement of the pump in the well, and of the method of purging (the pumping rate, the equipment and methods used to monitor field pH, temperature, electrical conductivity and turbidity during purging, the calibration of the field equipment, results of the pH, temperature, electrical conductivity, and turbidity testing, and the method of disposing of the purge water).

iii. Sampling:
For each monitoring point addressed by the report, a description of the sampling procedure (number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the date and time of sampling, the name of the person taking the samples, and any other observations).

iv. A separate section titled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the Discharger into full compliance with waste discharge requirements. This section shall be located at the front of the report and shall clearly list all non-compliance with discharge requirements.

c. Unless otherwise approved by the Executive Officer, monitoring reports shall be submitted in PDF or JPEG format (tabular laboratory analytical data may be submitted in MS Excel or Access format). The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with Order No. R4-2009-XXXX. The cover letter, the main report text, and any tables and/or figures that are directly quoted in the main report, shall be submitted. The submittal shall be signed by a responsible officer(s) of the Discharger. All original laboratory reports, quality assurance and quality control (QA/QC) data, and filed records that are used to prepare the reports must be kept in the Landfill's operating record, as required in 27 CCR section 20415(e)(16). These data must be available for Regional Board staff review, if required.

d. A map or aerial photograph showing the locations of observation stations and monitoring points;

e. Laboratory results for groundwater, surface water, LCRS, reuse water, and dewatered sludge shall be summarized in the report. For each report, include laboratory statements of results of all analyses demonstrating compliance with Item No. 21 of this M&RP;

f. An evaluation of the effectiveness of the run-off/run-on control facilities;

g. A summary and certification of completion of all standard observations listed below for the Landfill and the perimeter of the Landfill.

i. Along the perimeter of the Landfill:

A. Evidence of liquid leaving or entering the Landfill, estimated size of affected area, and flow rate;

B. Evidence of odors: presence or absence, characterization, source, and distance of travel from source; and

C. Evidence of erosion and/or of exposed refuse.

ii. For the Landfill:

A. Evidence of ponded water at any point on the waste management facility;

B. Evidence of odors: presence or absence, characterization, source, and distance of travel from source;

C. Evidence of erosion and/or of exposed refuse; and

41. Contingency Reporting

a. The Discharger shall report by telephone to Regional Board staff any seepage from the disposal area immediately after it is discovered. A written report shall be filed with the Regional Board within seven days of the verbal report, containing at least the following information:

i. A map showing the location(s) of seepage;

ii. An estimate of the flow rate;

iii. A description of the nature of the discharge (e.g., all pertinent observations and analyses); and

iv. Corrective measures underway or proposed.

42. The Discharger shall submit an annual summary report to the Regional Board covering the previous monitoring year. The annual report shall be submitted no later than May 15 of each year. This report shall contain:

a. A graphical presentation of analytical data [27 CCR section 20415(e)(14)]:
For each monitoring point, submit in graphical format the laboratory analytical data for all samples taken within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents over time for a given monitoring point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. For any given constituent or parameter, the scale for background plots shall be the same as that used to plot downgradient data. On the basis of any aberrations noted in the plotted date, the Executive Officer may direct the Discharger to carry out a preliminary investigation [27 CCR section 20080(d)(2)], the results of which will determine whether or not a release is indicated;

b. A comprehensive discussion of the compliance record, and the result of any corrective actions taken, or planned, which may be needed to bring the Discharger into full compliance with the WDRs;

c. A written summary of the groundwater analyses, indicating any changes made since the previous annual report;

d. A discussion of any routinely-revised intra-well background monitoring data; and

e. An evaluation of the effectiveness of the run on/run-off control facilities, pursuant to 27 CCR section 20340 (b-d).

43. Reporting

a. Each monitoring report shall contain the following statement:

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

b. A duly authorized representative of the Discharger may sign the documents if:

i. The authorization is made in writing by the person described above;

ii. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and

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

c. Submit monitoring reports to:

California Regional Water Quality Control Board
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, California 90013
ATTN: Information Technology Unit

Ordered by _____

Tracy J. Egoscue
Executive Officer
April 2, 2009

TENTATIVE

TABLE 1 – CONSTITUENTS DETECTED AND CONFIRMED DURING ANNUAL LEACHATE MONITORING (April 2, 2009)

Constituent	COC Lists[1]		
	LCRS[2]	DLCS[2]	PSLC[2]
General Parameters			
Ammonia Nitrogen	✔	✔	✔
Boron	✔	✔	✔
Electrical Conductivity	✔	✔	✔
pH	✔	✔	✔
Total Alkalinity	✔	✔	✔
Total Dissolved Solids	✔	✔	✔
Total Hardness	✔	✔	✔
Anions			
Bicarbonate Alkalinity	✔	✔	✔
Chloride	✔	✔	✔
Fluoride	✔	✔	✔
Nitrate Nitrogen	✔	✔	---
Sulfate	✔	✔	✔
Cations			
Calcium Hardness	✔	✔	✔
Iron	✔ T&S[3]	✔ T&S	✔ T&S
Magnesium Hardness	✔	✔	✔
Manganese	✔ T&S	✔ T&S	✔ T&S
Potassium	✔	✔	✔
Sodium	✔	✔	✔
Organics			
Soluble Biochemical Oxygen Demand	✔ T&S	✔ T&S	✔ T&S
Soluble Chemical Oxygen Demand	✔ T&S	✔ T&S	✔ T&S
Total Organic Carbon	✔	✔	✔
Total Organic Halogen (Tox)	✔	✔	✔

1. ✔ = On confirmed COC List; "---" = Not on COC List.
2. LCRS = 80-acre liquid collection and removal system;
   PSLC = liquids in Liner 1-, Liner 2-, P-, 97-, 99-, Southeastern-, and North Ridge (Phase 1 and 2a) Cut Liner and LCRS collection systems;
   DLCS = liquids in the D-Cut collection systems
3. T = Total portion of constituent (Unfiltered);
   S = Soluble portion of constituent (Filtered).

TABLE 1 (Cont.) – CONSTITUENTS DETECTED AND CONFIRMED DURING ANNUAL LEACHATE MONITORING (April 2, 2009)

Constituent	COC Lists[1]		
	LCRS[2]	DLCS[2]	PSLC[2]
General Parameters			
Ammonia Nitrogen	✔	✔	✔
Boron	✔	✔	✔
Electrical Conductivity	✔	✔	✔
pH	✔	✔	✔
Total Alkalinity	✔	✔	✔
Total Dissolved Solids	✔	✔	✔
Total Hardness	✔	✔	✔
Anions			
Bicarbonate Alkalinity	✔	✔	✔
Chloride	✔	✔	✔
Fluoride	✔	✔	✔
Nitrate Nitrogen	✔	✔	---
Sulfate	✔	✔	✔
Cations			
Calcium Hardness	✔	✔	✔
Iron	✔ T&S[3]	✔ T&S	✔ T&S
Magnesium Hardness	✔	✔	✔
Manganese	✔ T&S	✔ T&S	✔ T&S
Potassium	✔	✔	✔
Sodium	✔	✔	✔
Organics			
Soluble Biochemical Oxygen Demand	✔ T&S	✔ T&S	✔ T&S
Soluble Chemical Oxygen Demand	✔ T&S	✔ T&S	✔ T&S
Total Organic Carbon	✔	✔	✔
Total Organic Halogen (Tox)	✔	✔	✔

1. ✔ = On confirmed COC List; "---" = Not on COC List.
2. LCRS = 80-acre liquid collection and removal system;
   PSLC = liquids in Liner 1-, Liner 2-, P-, 97-, 99-, Southeastern-, and North Ridge (Phase 1 and 2a) Cut Liner and LCRS collection systems;
   DLCS = liquids in the D-Cut collection systems
3. T = Total portion of constituent (Unfiltered);
   S = Soluble portion of constituent (Filtered).

TABLE 2 – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well R02A

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	TM
VOC	Acrylonitrile	ND
VOC	Benzene	TM
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	TM
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	TM
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	TM
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	TM
VOC	cis-1,2-Dichloroethylene	TM
VOC	trans-1,2-Dichloroethylene	TM
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	TM
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	TM
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	TM
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	TM
VOC	Xylenes, m- & o+p	ND

TENTATIVE

The units for concentration limits indicated are mg/L.

✔ = MPar not subject to routine statistical analysis.
ND = The concentration limit for man-made constituents is the laboratory detection limit.
– = Constituent not required to be monitored based on LCRS monitoring results.
TM = Tracking mode; MPar concentration versus time plot required.
TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well M02B

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	ND
VOC	Acrylonitrile	ND
VOC	Benzene	ND
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	ND
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	ND
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	TM
VOC	Toluene	TM
VOC	1,1,1,-Trichloroethane	TM
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	ND

TENTATIVE

The units for concentration limits indicated are mg/L.

✔ = MPar not subject to routine statistical analysis.
ND = The concentration limit for man-made constituents is the laboratory detection limit.
- = Constituent not required to be monitored based on LCRS monitoring results.
TM = Tracking mode; MPar concentration versus time plot required.
TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well M22B

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	ND
VOC	Acrylonitrile	ND
VOC	Benzene	ND
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	ND
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	TM
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	TM
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	TM
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	TM
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	ND
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	TM
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	TM
VOC	Xylenes, m- & o+p	ND

TENTATIVE

The units for concentration limits indicated are mg/L.

✔ = MPar not subject to routine statistical analysis.
ND = The concentration limit for man-made constituents is the laboratory detection limit.
- = Constituent not required to be monitored based on LCRS monitoring results.
TM = Tracking mode; MPar concentration versus time plot required.
TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well R06A

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	TM
VOC	Acrylonitrile	ND
VOC	Benzene	TM
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	TM
VOC	Chlorobenzene	ND
VOC	Chloroethane	TM
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	TM
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	TM
VOC	cis-1,2-Dichloroethylene	TM
VOC	trans-1,2-Dichloroethylene	TM
VOC	1,2-Dichloropropane	TM
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	TM
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	TM
VOC	Toluene	TM
VOC	1,1,1,-Trichloroethane	TM
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	TM
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	TM
VOC	Xylenes, m- & o+p	ND

TENTATIVE

The units for concentration limits indicated are mg/L.

✔ = MPar not subject to routine statistical analysis.
ND = The concentration limit for man-made constituents is the laboratory detection limit.
- = Constituent not required to be monitored based on LCRS monitoring results.
TM = Tracking mode; MPar concentration versus time plot required.
TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well R06B

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	TM
VOC	Acrylonitrile	ND
VOC	Benzene	TM
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	TM
VOC	Chlorobenzene	ND
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	TM
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	TM
VOC	cis-1,2-Dichloroethylene	TM
VOC	trans-1,2-Dichloroethylene	TM
VOC	1,2-Dichloropropane	TM
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	TM
VOC	Toluene	TM
VOC	1,1,1,-Trichloroethane	TM
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	TM
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	TM
VOC	Xylenes, m- & o+p	ND

TENTATIVE

The units for concentration limits indicated are mg/L.

✔ = MPar not subject to routine statistical analysis.
ND = The concentration limit for man-made constituents is the laboratory detection limit.
\- = Constituent not required to be monitored based on LCRS monitoring results.
TM = Tracking mode; MPar concentration versus time plot required.
TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well EMP-10

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	TM
VOC	Acrylonitrile	ND
VOC	Benzene	ND
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	ND
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	ND
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	ND

TENTATIVE

The units for concentration limits indicated are mg/L.

✔ = MPar not subject to routine statistical analysis.
ND = The concentration limit for man-made constituents is the laboratory detection limit.
- = Constituent not required to be monitored based on LCRS monitoring results.
TM = Tracking mode; MPar concentration versus time plot required.
TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)
MPars for Monitoring Well EMP-11

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	ND
VOC	Acrylonitrile	ND
VOC	Benzene	✔ a
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	ND
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	✔ a
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	TM
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	ND
VOC	Toluene	✔ a
VOC	1,1,1,-Trichloroethane	ND
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	✔ a

TENTATIVE

The units for concentration limits indicated are mg/L.

✔ = MPar not subject to routine statistical analysis.
ND = The concentration limit for man-made constituents is the laboratory detection limit.
- = Constituent not required to be monitored based on LCRS monitoring results.
TM = Tracking mode; MPar concentration versus time plot required.
TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.
a = This constituent is naturally occuring in this well.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well M18D

Group	Constituent	
General	pH	6.84
General	TDS	706.3
General	Chloride	44.1
General	Sulfate	175
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	9.87
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	-
Metal	Mercury	-
Metal	Lead	-
VOC	Acetone	-
VOC	Acrylonitrile	-
VOC	Benzene	ND
VOC	Bromochloromethane	-
VOC	Bromodichloromethane	-
VOC	Bromoform	-
VOC	Carbon disulfide	-
VOC	Carbon tetrachloride	-
VOC	Chlorobenzene	ND
VOC	Chloroethane	-
VOC	Chloroform	-
VOC	Dibromochloromethane	-
VOC	1,2-Dibromo-3-Chloropropane	-

Group	Constituent	
VOC	1,2-Dibromoethane	-
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	-
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	ND
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	-
VOC	trans-1,3-Dichloropropene	-
VOC	Ethyl benzene	ND
VOC	2-Hexanone	-
VOC	Methyl bromide	-
VOC	Methyl chloride	-
VOC	Methyl Ethyl Ketone	-
VOC	Methyl iodide	-
VOC	4-Methyl-2-pentanone	-
VOC	Methylene bromide	-
VOC	Methylene chloride	-
VOC	Styrene	-
VOC	1,1,1,2-Tetrachloroethane	-
VOC	1,1,2,2-Tetrachloroethane	-
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	-
VOC	1,1,2,-Trichloroethane	-
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	-
VOC	Vinyl acetate	-
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	-

TENTATIVE

The units for concentration limits indicated are mg/L.

✔ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

\- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well M19R

Group	Constituent	
General	pH	5.86
General	TDS	3,286
General	Chloride	98.7
General	Sulfate	2,029
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	0.451
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	-
Metal	Mercury	-
Metal	Lead	-
VOC	Acetone	-
VOC	Acrylonitrile	-
VOC	Benzene	ND
VOC	Bromochloromethane	-
VOC	Bromodichloromethane	-
VOC	Bromoform	-
VOC	Carbon disulfide	-
VOC	Carbon tetrachloride	-
VOC	Chlorobenzene	ND
VOC	Chloroethane	-
VOC	Chloroform	-
VOC	Dibromochloromethane	-
VOC	1,2-Dibromo-3-Chloropropane	-

Group	Constituent	
VOC	1,2-Dibromoethane	-
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	-
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	ND
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	-
VOC	trans-1,3-Dichloropropene	-
VOC	Ethyl benzene	ND
VOC	2-Hexanone	-
VOC	Methyl bromide	-
VOC	Methyl chloride	-
VOC	Methyl Ethyl Ketone	-
VOC	Methyl iodide	-
VOC	4-Methyl-2-pentanone	-
VOC	Methylene bromide	-
VOC	Methylene chloride	-
VOC	Styrene	-
VOC	1,1,1,2-Tetrachloroethane	-
VOC	1,1,2,2-Tetrachloroethane	-
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	-
VOC	1,1,2,-Trichloroethane	-
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	-
VOC	Vinyl acetate	-
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	-

TENTATIVE

The units for concentration limits indicated are mg/L.

✔ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

\- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well R07A

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	ND
VOC	Acrylonitrile	ND
VOC	Benzene	TM
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	TM
VOC	Chloroethane	TM
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	TM
VOC	p-Dichlorobenzene	TM
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	TM
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	TM
VOC	cis-1,2-Dichloroethylene	TM
VOC	trans-1,2-Dichloroethylene	TM
VOC	1,2-Dichloropropane	TM
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	TM
VOC	Tetrachloroethylene	TM
VOC	Toluene	TM
VOC	1,1,1,-Trichloroethane	ND
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	TM
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	TM
VOC	Xylenes, m- & o+p	ND

TENTATIVE

The units for concentration limits indicated are mg/L.

✔ = MPar not subject to routine statistical analysis.
ND = The concentration limit for man-made constituents is the laboratory detection limit.
\- = Constituent not required to be monitored based on LCRS monitoring results.
TM = Tracking mode; MPar concentration versus time plot required.
TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well M07B

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	TM
VOC	Acrylonitrile	ND
VOC	Benzene	ND
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	ND
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	TM
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	TM
VOC	trans-1,2-Dichloroethylene	TM
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	TM
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	ND
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	TM
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	TM
VOC	Xylenes, m- & o+p	ND

TENTATIVE

The units for concentration limits indicated are mg/L.

✔ = MPar not subject to routine statistical analysis.
ND = The concentration limit for man-made constituents is the laboratory detection limit.
\- = Constituent not required to be monitored based on LCRS monitoring results.
TM = Tracking mode; MPar concentration versus time plot required.
TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well M08B

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	TM
VOC	Acrylonitrile	ND
VOC	Benzene	ND
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	ND
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	TM
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	TM
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	TM
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	TM
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	TM
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	ND
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	TM
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	TM
VOC	Xylenes, m- & o+p	ND

TENTATIVE

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\- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well M20S

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	ND
VOC	Acrylonitrile	ND
VOC	Benzene	TM
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	TM
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	TM
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	TM
VOC	trans-1,2-Dichloroethylene	TM
VOC	1,2-Dichloropropane	TM
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	TM
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	TM
VOC	Toluene	TM
VOC	1,1,1,-Trichloroethane	ND
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	TM
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	TM
VOC	Xylenes, m- & o+p	ND

TENTATIVE

The units for concentration limits indicated are mg/L.

✔ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

\- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well P64S

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	ND
VOC	Acrylonitrile	ND
VOC	Benzene	ND
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	TM
VOC	Chloroethane	TM
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	TM
VOC	p-Dichlorobenzene	TM
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	TM
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	TM
VOC	trans-1,2-Dichloroethylene	TM
VOC	1,2-Dichloropropane	TM
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	ND
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	TM
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	ND
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	TM
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	TM
VOC	Xylenes, m- & o+p	ND

TENTATIVE

The units for concentration limits indicated are mg/L.

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\- = Constituent not required to be monitored based on LCRS monitoring results.
TM = Tracking mode; MPar concentration versus time plot required.
TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well P67S

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	TM
VOC	Acrylonitrile	ND
VOC	Benzene	ND
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	ND
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	ND
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	ND
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	ND

TENTATIVE

The units for concentration limits indicated are mg/L.

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TM = Tracking mode; MPar concentration versus time plot required.
TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well P68S

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	TM
VOC	Acrylonitrile	ND
VOC	Benzene	TM
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	ND
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	TM
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	ND
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	ND
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	ND

TENTATIVE

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TM = Tracking mode; MPar concentration versus time plot required.
TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well P69S

Group	Constituent	
General	pH	✔
General	TDS	TBD
General	Chloride	TBD
General	Sulfate	TBD
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	TBD
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	TBD
Metal	Mercury	TBD
Metal	Lead	TBD
VOC	Acetone	ND
VOC	Acrylonitrile	ND
VOC	Benzene	ND
VOC	Bromochloromethane	ND
VOC	Bromodichloromethane	ND
VOC	Bromoform	ND
VOC	Carbon disulfide	ND
VOC	Carbon tetrachloride	ND
VOC	Chlorobenzene	ND
VOC	Chloroethane	ND
VOC	Chloroform	ND
VOC	Dibromochloromethane	ND
VOC	1,2-Dibromo-3-Chloropropane	ND

Group	Constituent	
VOC	1,2-Dibromoethane	ND
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	ND
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	ND
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	ND
VOC	trans-1,3-Dichloropropene	ND
VOC	Ethyl benzene	ND
VOC	2-Hexanone	ND
VOC	Methyl bromide	ND
VOC	Methyl chloride	ND
VOC	Methyl Ethyl Ketone	ND
VOC	Methyl iodide	ND
VOC	4-Methyl-2-pentanone	ND
VOC	Methylene bromide	ND
VOC	Methylene chloride	ND
VOC	Styrene	ND
VOC	1,1,1,2-Tetrachloroethane	ND
VOC	1,1,2,2-Tetrachloroethane	ND
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	ND
VOC	1,1,2,-Trichloroethane	ND
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	ND
VOC	Vinyl acetate	ND
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	ND

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TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well P69S

Group	Constituent	
General	pH	6.87
General	TDS	4,338
General	Chloride	573.3
General	Sulfate	1,893
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	0.171
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	-
Metal	Mercury	-
Metal	Lead	-
VOC	Acetone	-
VOC	Acrylonitrile	-
VOC	Benzene	ND
VOC	Bromochloromethane	-
VOC	Bromodichloromethane	-
VOC	Bromoform	-
VOC	Carbon disulfide	-
VOC	Carbon tetrachloride	-
VOC	Chlorobenzene	ND
VOC	Chloroethane	-
VOC	Chloroform	-
VOC	Dibromochloromethane	-
VOC	1,2-Dibromo-3-Chloropropane	-

Group	Constituent	
VOC	1,2-Dibromoethane	-
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	-
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	ND
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	-
VOC	trans-1,3-Dichloropropene	-
VOC	Ethyl benzene	ND
VOC	2-Hexanone	-
VOC	Methyl bromide	-
VOC	Methyl chloride	-
VOC	Methyl Ethyl Ketone	-
VOC	Methyl iodide	-
VOC	4-Methyl-2-pentanone	-
VOC	Methylene bromide	-
VOC	Methylene chloride	-
VOC	Styrene	-
VOC	1,1,1,2-Tetrachloroethane	-
VOC	1,1,2,2-Tetrachloroethane	-
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	-
VOC	1,1,2,-Trichloroethane	-
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	-
VOC	Vinyl acetate	-
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	-

TENTATIVE

The units for concentration limits indicated are mg/L.

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\- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 2 (CONT.) – MPars FOR MONTORING PROGRAM WELLS (April 2, 2009)

MPars for Monitoring Well P69S

Group	Constituent	
General	pH	6.78
General	TDS	4,898
General	Chloride	403.9
General	Sulfate	2,532
General	Ammonia, Nitrogen	TBD
General	Nitrate Nitrogen	4.06
General	Boron	✔
General	TOX	TBD
General	Calcium Hardness	✔
General	Magnesium Hardness	✔
General	Sodium	✔
General	Potassium	✔
General	Total Alkalinity	✔
General	Bicarbonate Alkalinity	✔
General	BOD	TBD
General	COD	TBD
General	TOC	TBD
General	nitrite	TBD
Metal	Chromium	-
Metal	Mercury	-
Metal	Lead	-
VOC	Acetone	-
VOC	Acrylonitrile	-
VOC	Benzene	ND
VOC	Bromochloromethane	-
VOC	Bromodichloromethane	-
VOC	Bromoform	-
VOC	Carbon disulfide	-
VOC	Carbon tetrachloride	-
VOC	Chlorobenzene	ND
VOC	Chloroethane	-
VOC	Chloroform	-
VOC	Dibromochloromethane	-
VOC	1,2-Dibromo-3-Chloropropane	-

Group	Constituent	
VOC	1,2-Dibromoethane	-
VOC	o-Dichlorobenzene	ND
VOC	p-Dichlorobenzene	ND
VOC	trans-1,4-Dichloro-2-butene	-
VOC	1,1-Dichloroethane	ND
VOC	1,2-Dichloroethane	ND
VOC	1,1-Dichloroethylene	ND
VOC	cis-1,2-Dichloroethylene	ND
VOC	trans-1,2-Dichloroethylene	ND
VOC	1,2-Dichloropropane	ND
VOC	cis-1,3-Dichloropropene	-
VOC	trans-1,3-Dichloropropene	-
VOC	Ethyl benzene	ND
VOC	2-Hexanone	-
VOC	Methyl bromide	-
VOC	Methyl chloride	-
VOC	Methyl Ethyl Ketone	-
VOC	Methyl iodide	-
VOC	4-Methyl-2-pentanone	-
VOC	Methylene bromide	-
VOC	Methylene chloride	-
VOC	Styrene	-
VOC	1,1,1,2-Tetrachloroethane	-
VOC	1,1,2,2-Tetrachloroethane	-
VOC	Tetrachloroethylene	ND
VOC	Toluene	ND
VOC	1,1,1,-Trichloroethane	-
VOC	1,1,2,-Trichloroethane	-
VOC	Trichloroethylene	ND
VOC	Trichlorofluoromethane (CFC11)	ND
VOC	1,2,3-Trichloropropane	-
VOC	Vinyl acetate	-
VOC	Vinyl Chloride	ND
VOC	Xylenes, m- & o+p	-

TENTATIVE

The units for concentration limits indicated are mg/L.

✔ = MPar not subject to routine statistical analysis.

ND = The concentration limit for man-made constituents is the laboratory detection limit.

\- = Constituent not required to be monitored based on LCRS monitoring results.

TM = Tracking mode; MPar concentration versus time plot required.

TBD = Concentration Limit to be determined using Statistical Data Analysis Methodology.

TABLE 3 – CONSTITUENTS OF CONCERN FOR MONTORING PROGRAM WELLS (April 2, 2009)

Group	Constituent
VOC	Acetone
VOC	Acrylonitrile
VOC	Benzene
VOC	Bromochloromethane
VOC	Bromodichloromethane
VOC	Bromoform
VOC	Carbon disulfide
VOC	Carbon tetrachloride
VOC	Chlorobenzene
VOC	Chloroethane
VOC	Chloroform
VOC	Dibromochloromethane
VOC	1,2-Dibromo-3-Chloropropane
VOC	1,2-Dibromoethane
VOC	o-Dichlorobenzene
VOC	p-Dichlorobenzene
VOC	trans-1,4-Dichloro-2-butene
VOC	1,1-Dichloroethane
VOC	1,2-Dichloroethane
VOC	1,1-Dichloroethylene
VOC	cis-1,2-Dichloroethylene
VOC	trans-1,2-Dichloroethylene
VOC	1,2-Dichloropropane
VOC	cis-1,3-Dichloropropene
VOC	trans-1,3-Dichloropropene
VOC	Ethyl benzene
VOC	2-Hexanone
VOC	Methyl bromide
VOC	Methyl chloride
VOC	Methyl Ethyl Ketone
VOC	Methyl iodide
VOC	4-Methyl-2-pentanone
VOC	Methylene bromide
VOC	Methylene chloride
VOC	Styrene
VOC	1,1,1,2-Tetrachloroethane
VOC	1,1,2,2-Tetrachloroethane
VOC	Tetrachloroethylene
VOC	Toluene
VOC	1,1,1,-Trichloroethane
VOC	1,1,2,-Trichloroethane
VOC	Trichloroethylene
VOC	Trichlorofluoromethane (CFC11)
VOC	1,2,3-Trichloropropane
VOC	Vinyl acetate
VOC	Vinyl Chloride
VOC	Xylenes, m- & o+p
VOC	Acetonitrile
VOC	Acrolein
VOC	Allyl chloride
VOC	Chloroprene
VOC	m-Dichlorobenzene
VOC	Dichlorodifluoromethane (CFC12)
VOC	1,3-Dichloropropane
VOC	2,2-Dichloropropane
VOC	1,1-Dichloropropene
VOC	Ethyl methacrylate
VOC	Isobutyl alcohol
VOC	Methacrylontrile
VOC	Methyl methacrylate
VOC	Propionitrile
BNA	Acenaphthene
BNA	Acenaphthylene
BNA	Acetophenone
BNA	2-Acetylaminoflourene
BNA	4-Aminobiphenyl
BNA	Anthracene
BNA	Benzo(a)anthrancene
BNA	Benzo(b)fluoranthene
BNA	Benzo(k)fluoranthene
BNA	Benzo(ghi)perylene
BNA	Benzo(a)pyrene
BNA	Benzyl alcohol

Group	Constituent
BNA	Bis(2-chloroethoxy) methane
BNA	Bis(2-chloroethyl) ether
BNA	Bis(2-chloro-1-methylethyl) ether
BNA	Bis(2-ethylhexyl) phthalate
BNA	4-Bromophenyl phenyl ether
BNA	Butyl benzyl phthalate
BNA	p-Chloroaniline
BNA	Chlorobenzilate
BNA	p-Chloro-m-cresol
BNA	2-Chloronaphthalane
BNA	2-Chlorophenol
BNA	4-Chlorophenyl phenyl ether
BNA	Chrysene
BNA	M+p Cresol
BNA	o- Cresol
BNA	Diallate
BNA	Dibenz(a,h)anthracene
BNA	Dibenzofuran
BNA	Di-n-butyl phthalate
BNA	3,3'-Dichlorobenzidine
BNA	2,4-Dichlorophenol
BNA	2-6- Dichlorophenol
BNA	Diethyl phthalate
BNA	p-(Dimethylamino)azobenzene
BNA	7,12-Dimethylbenz(a)anthracene
BNA	3,3'-Dimethylbenzidine
BNA	2,4-Dimethylphenol
BNA	Dimethyl phthalate
BNA	m-Dinitrobenzene
BNA	4,6-Dinitro-o-cresol
BNA	2,4-Dinitrophenol
BNA	2,4-Dinitrotoluene
BNA	2,6-Dinitrotoluene
BNA	Di-n-octyl phthalate
BNA	Diphenyamine
BNA	Ethyl methansulfonate
BNA	Famphur
BNA	Fluoranthene
BNA	Fluorene
BNA	Hexachlorobenzene
BNA	Hexachlorobutadiene
BNA	Hexachlorocycopentadiene
BNA	Hexachloroethane
BNA	Hexachloropropene
BNA	Indeno(1,2,3-c,d)pyrene
BNA	Isodrin
BNA	Isophorone
BNA	Isosafrole
BNA	Kepone
BNA	Methapyrilene
BNA	3-Methylcholanthrene
BNA	Methyl methanesulfonate
BNA	2-Methylnaphthalene
BNA	Naphthalene
BNA	1,4-Naphthoquinone
BNA	1-Naphthylamine
BNA	2-Naphthylamine
BNA	o-Nitroaniline
BNA	m-Nitroaniline
BNA	p- Nitroaniline
BNA	Nitrobenzene
BNA	2-Nitrophenol
BNA	4-Nitrophenol
BNA	N-Nitrosodi-n-butylamine
BNA	N-Nitrosodiethylamine
BNA	N-Nitrosodimethylamine
BNA	N-Nitrosodiphenylamine
BNA	N-Nitrosodipropylamine
BNA	N-Nitrosomethylethylamine
BNA	N-Nitrosopiperidine
BNA	N-Nitrosopyrrolidine
BNA	5-Nitro-o-toluidine

Group	Constituent
BNA	Pentachlorobenzene
BNA	Pentachloronitrobenzene
BNA	Pentachlorophenol
BNA	Phenacetin
BNA	Phenanthrene
BNA	Phenol
BNA	p-Phenylenediamine
BNA	Pronamide
BNA	Pyrene
BNA	Safrole
BNA	1,2,4,5-Tetrachlorobenzene
BNA	2,3,4,6-Tetrachlorophenol
BNA	o-Toluidine
BNA	1,2,4-Trichlorobenzene
BNA	2,4,5-Trichlorophenol
BNA	2,4,6-Trichlorophenol
BNA	0,0,0-Triethyl Phosphorothioate
BNA	sym-Trinitrobenzene
Pesticide	Aldrin
Pesticide	alpha-BHC
Pesticide	beta-BHC
Pesticide	delta-BHC
Pesticide	gamma-BHC (Lindane)
Pesticide	Chlordane
Pesticide	4,4'-DDD
Pesticide	4,4'-DDE
Pesticide	4,4'-DDT
Pesticide	Dieldrin
Pesticide	Endosulfan I
Pesticide	Endosulfan II
Pesticide	Endosulfan sulfate
Pesticide	Endrin
Pesticide	Endrin aldehyde
Pesticide	Heptachlor
Pesticide	Heptachlor epoxide
Pesticide	Aroclor 1016
Pesticide	Aroclor 1221
Pesticide	Aroclor 1232
Pesticide	Aroclor 1242
Pesticide	Aroclor 1248
Pesticide	Aroclor 1254
Pesticide	Aroclor 1260
Pesticide	Methoxyclor
Pesticide	Toxaphene
Herbicide	2,4-D
Herbicide	Dinoseb
Herbicide	Silvex
Herbicide	2,4,5-Trichlorophenoxyacetic acid
Organophosphorus	Thionazin
Organophosphorus	Dimethoate
Organophosphorus	Disulfoton
Organophosphorus	Methyl parathion
Organophosphorus	Parathion
Organophosphorus	Phorate
Metal	Iron
Metal	Antimony
Metal	Arsenic
Metal	Barium
Metal	Beryllium
Metal	Cadmium
Metal	Chromium
Metal	Cobalt
Metal	Copper
Metal	Lead
Metal	Mercury
Metal	Nickel
Metal	Selenium
Metal	Silver
Metal	Thallium
Metal	Tin
Metal	Vanadium
Metal	Zinc

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The shaded constituents are those that have been detected and verified in the annual leachate testing.

FIGURE 1:
EXISTING COMPLIANCE MONITORING WELLS

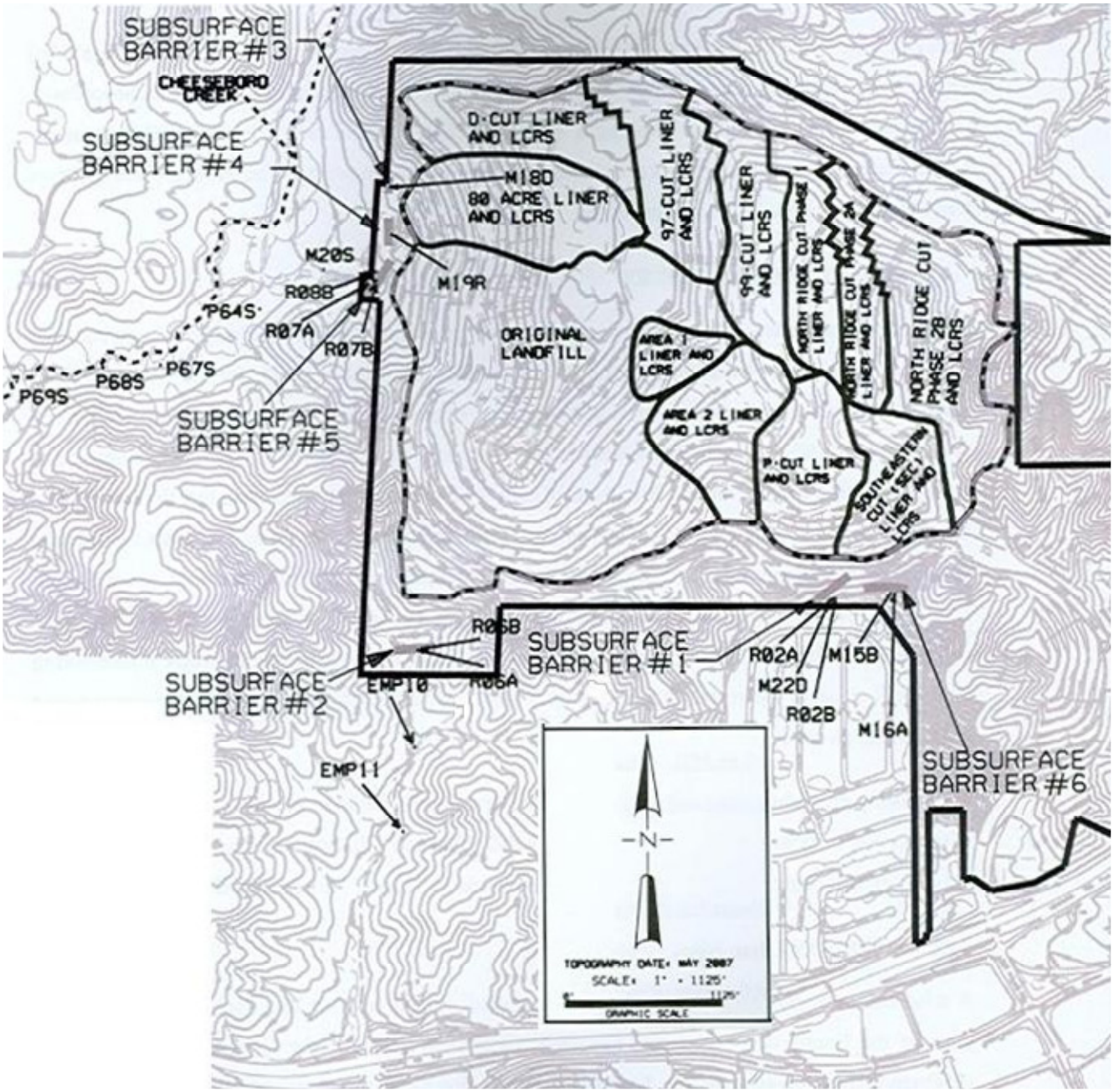

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FIGURE 2:
BARRIERS 1 AND 6 AREA EXISTING MONITORING WELLS, PIEZOMETERS, AND EXTRACTION WELLS

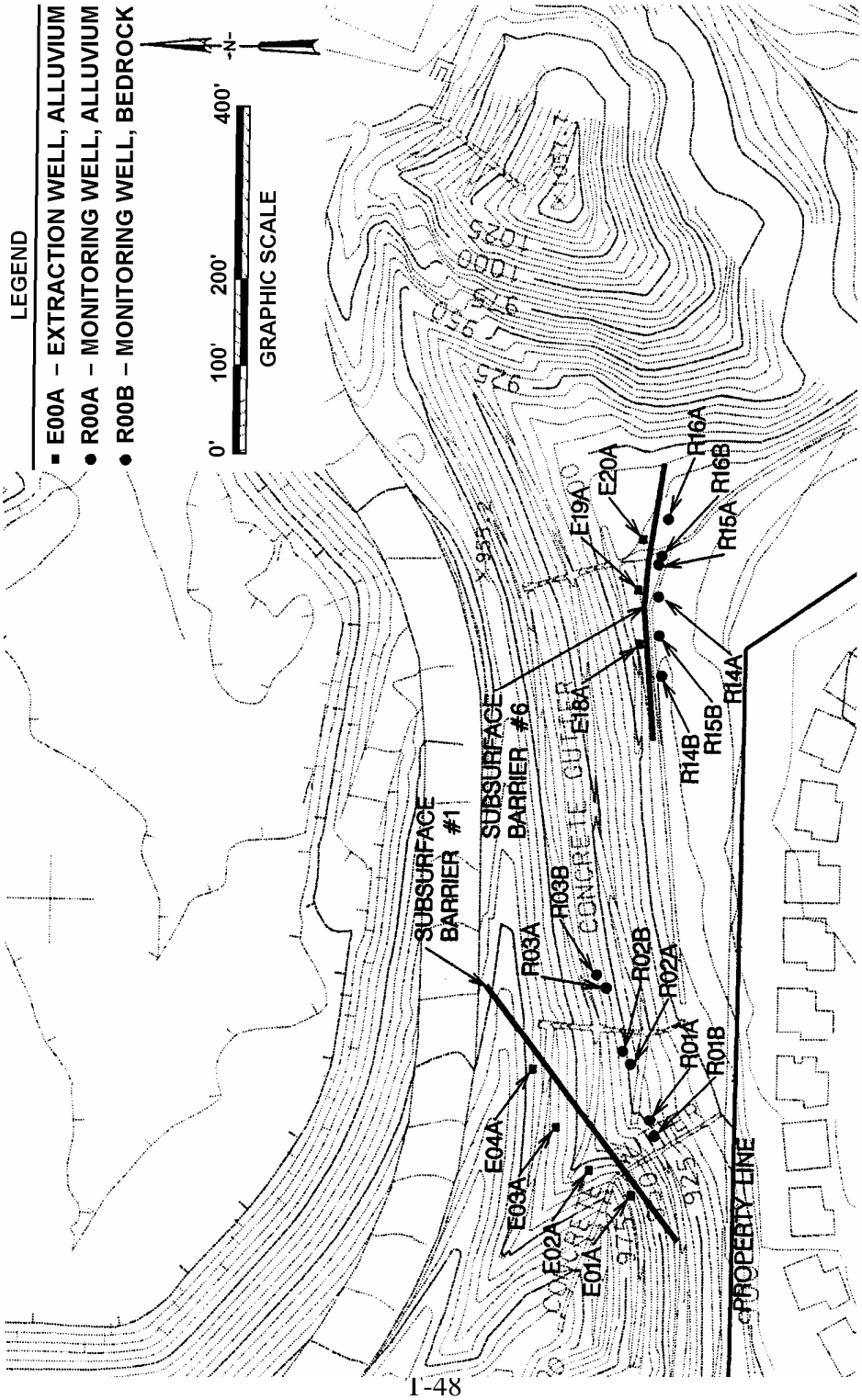

FIGURE 3:
BARRIER 2AREA EXISTING MONITORING WELLS, PIEZOMETERS, AND EXTRACTION WELLS

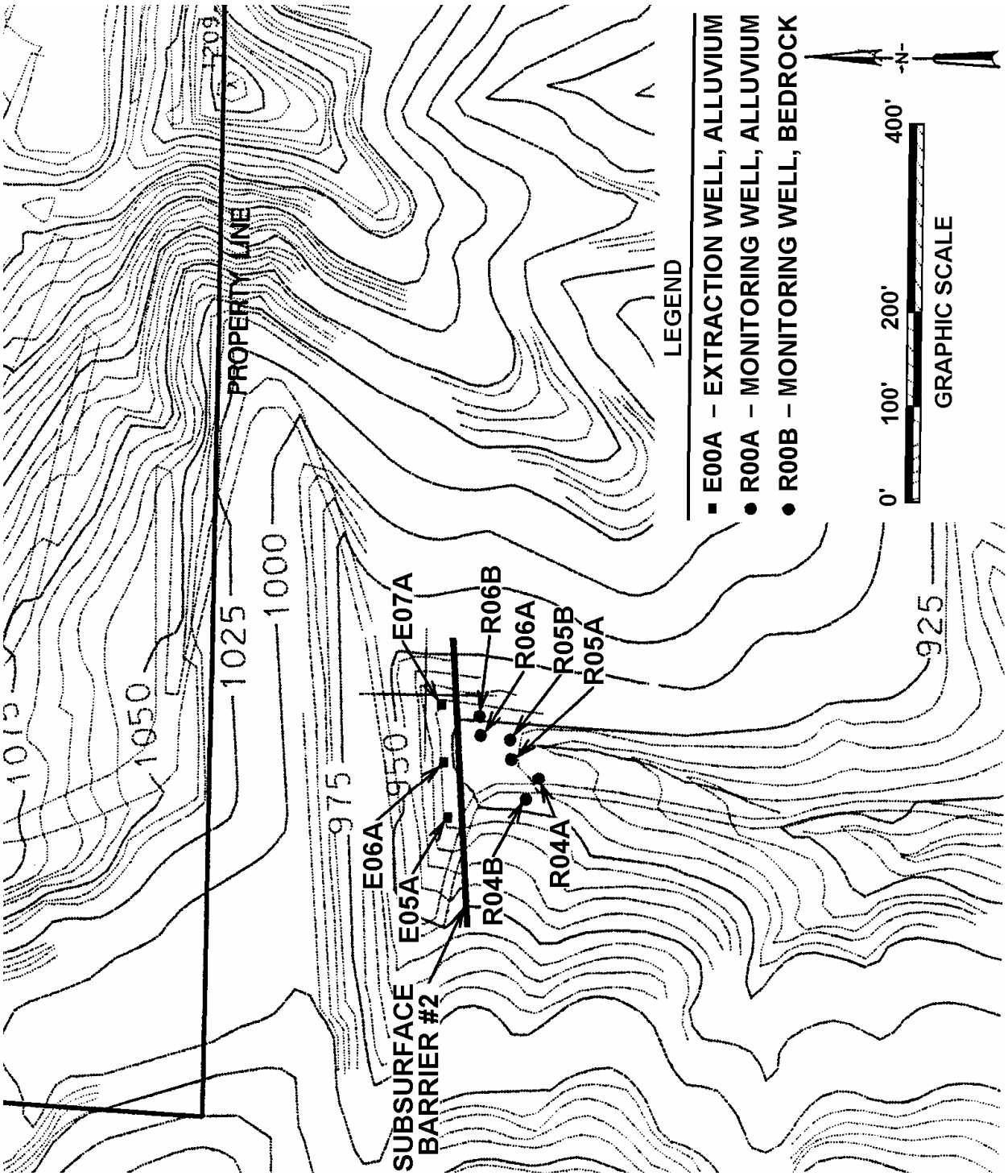

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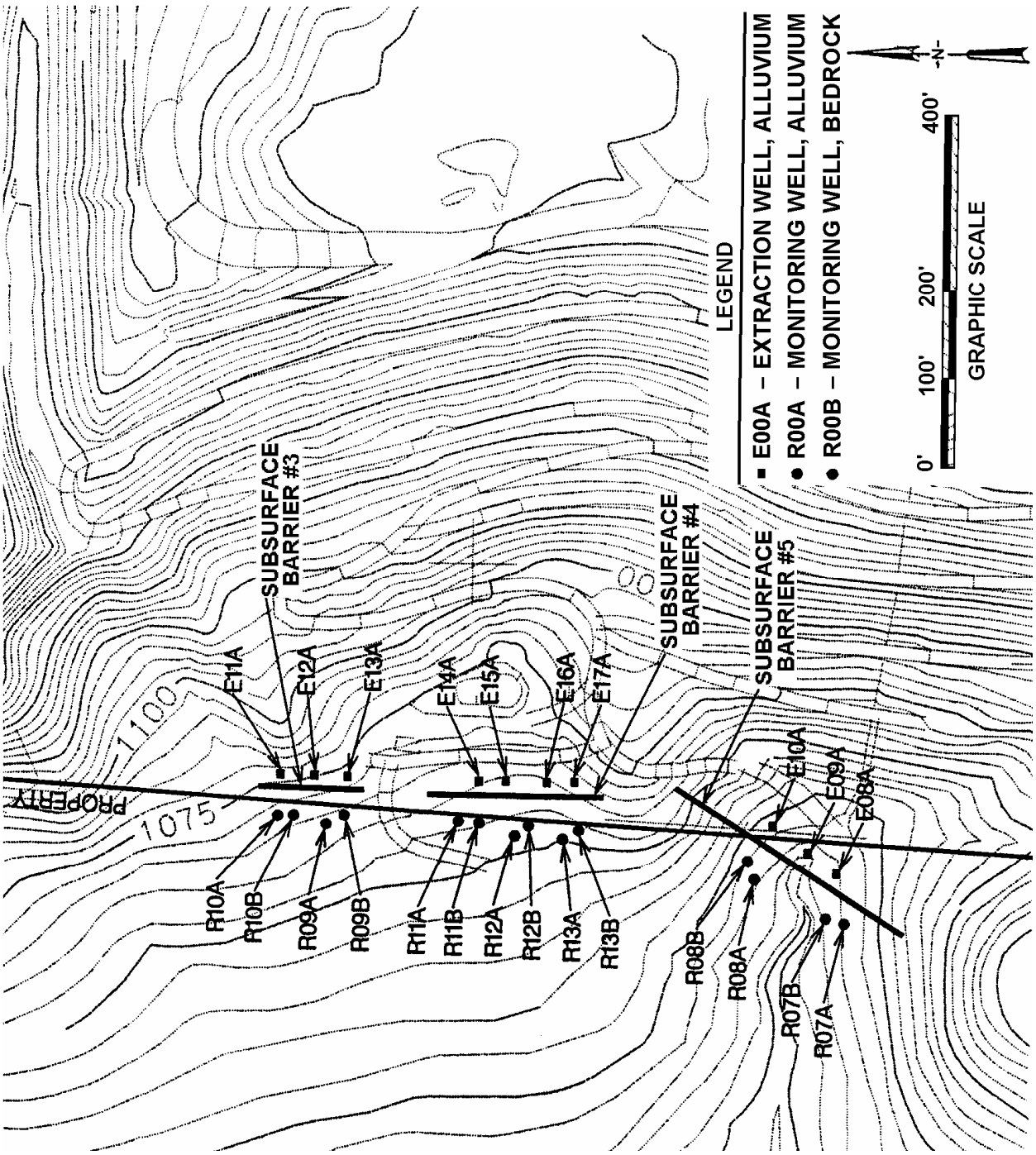
FIGURE 4:
BARRIER 3, 4, 5 AREA EXISTING MONITORING WELLS, PIEZOMETERS, AND EXTRACTION WELLS



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