STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. R4-2013-XXXX

POSTCLOSURE MAINTENANCE
WASTE DISCHARGE REQUIREMENTS
FOR
CITY OF LOS ANGELES
(Sheldon-Arleta Landfill)

(File No. 60-100)

TENTATIVE

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

BACKGROUND

1. The City of Los Angeles Bureau of Sanitation (Discharger) owns and operates the Sheldon-Arleta Landfill (Landfill), a closed Class III municipal solid wastes (MSW) disposal facility at 12455 Wicks Street, Sun Valley, California. The Landfill is approximately 0.25 miles south of the junction between the 170 and 5 Freeways, bounded by the San Fernando Valley to the north, the Los Angeles River to the north and west, the Verdugo Mountains to the east, and by the Santa Monica Mountains to the south (Figure 1).

2. The Landfill was operated by the Discharger from 1962 to 1974. Subsequently, only inert materials were placed at the site for the purposes of constructing a soil final cover. During its active life, approximately 5.5 million tons of MSW was disposed of at the Landfill.

3. The Landfill is part of a 45-acre site (Site) of which 41 acres are permitted for landfilling. The Site was originally a gravel mine owned and operated by Granite Materials Company. The gravel pit was excavated to approximately 670 feet above mean sea level (AMSL) (160 feet deep) and approximately 1,300 feet by 1,350 feet wide. Clean inert materials were placed from the bottom of the excavation to an elevation of 700 feet AMSL, since predicted groundwater elevations could potentially reach 690 feet AMSL. MSW was placed above the inert materials. The Landfill is not equipped with a liner or leachate collection and removal system. A relatively flat monolithic top deck covers the entire site.

4. There are currently no ancillary structures located on the Site with the exception of a landfill gas (LFG) extraction and recovery system and a maintenance yard. The Discharger has proposed to develop the Site into a recreational park that will include baseball and soccer fields, basketball courts, public parking, public restrooms, an administrative building, and a maintenance yard (Figure 2). The proposed recreational park is expected to be completed in 2015. Trees and shrubs have been planted along the outer edges of the Site.

5. Pursuant to title 27, California Code of Regulations (27 CCR) section 20080(g), persons responsible for discharges at landfills which are closed, abandoned, or inactive may be required to develop and implement a monitoring program. If water quality impairment is found, such

persons may be required to develop and implement a corrective action program based on the provisions of Chapter 3, Subchapter 3, Article 1 (Water Quality Monitoring and Response Programs for Solid Waste Management Units), of 27 CCR section 20080 et seq.

6. The Regional Board adopted Resolution No. 60-57 on August 18, 1960, prescribing waste discharge requirements (WDRs) for the Landfill for the disposal of MSW, greenwaste, and inert materials. After adoption of Resolution No. 60-57 but prior to landfilling, water from adjacent spreading grounds was observed seeping into the sides of the gravel pit. After evaluation of seepage concerns at the site, the Regional Board adopted Resolution No. 61-9 on March 15, 1961, reaffirming Resolution No. 60-57 and adding the requirement that "Adequate and positive measures shall be taken to prevent seepage from any source from entering the disposal pit." On July 28, 1972, the Regional Board issued a Monitoring and Reporting Program (MRP), No. CI-2765, for the reporting of type and volume of wastes disposed of at the Landfill. On May 24, 2001, the Regional Board adopted Order No. 01-070 that includes WDRs to regulate the final closure and postclosure maintenance activities at the Landfill and to include groundwater monitoring.

7. On January 11, 1999, the Discharger submitted a Final Closure and Post Closure Maintenance Plan (FCPCMP), prepared in accordance to 27 CCR, that proposed a final cover system consisted of a monolithic soil layer, which was approved on May 24, 2001, by the Regional Board with the adoption of Order No. 01-070.

8. As part of the FCPCMP, the City submitted "Sheldon-Arleta Landfill Cover Depth Exploration" results. Thirty-six exploratory borings were drilled at the site to evaluate the thickness of the existing soil cover and to evaluate the characteristics of cover soils. Results indicate that the cover soils range from 12 to 53 feet in thickness and range from lean clay, to silty clay, to silt, to silty sand in composition. Results of four tests indicate that the clay materials have a hydraulic conductivity between 5.6×10^{-8} centimeters per second (cm/s) and 2.8×10^{-7} cm/s.

9. The FCPCMP proposes the following:

I. CLOSURE

a. Final Cover – the City has proposed an alternative cover in accordance with 27 CCR. The proposed final cover consists of approximately 12 to 53 feet of existing non-engineered cover soils placed at the site during previous closure and grading operations.
b. Final cover on the top deck of the Landfill will be graded at a minimum of 1.5% to provide sufficient slope for storm water runoff and to prevent ponding.
c. Erosion on the top cover will be prevented by a vegetative cover.
d. Five groundwater wells (IT-SA1, IT-SA2, IT-SA3, 4897B, and 4887B) will be monitored during the closure and post-closure maintenance period.

II. POST-CLOSURE MAINTENANCE

The City shall inspect the Landfill for the following:

		Inspection Period
1.	Site Security Inspection and Maintenance (I & M)	Weekly
2.	Landfill Gas Monitoring I & M	Monthly
3.	Landfill Gas Collection I & M	Quarterly

T E N T A T I V E

4.	Off-site Methane Detection and Control I & M	Quarterly
5.	Groundwater System I & M	Semiannual
6.	Final Cover I & M	Semiannual
7.	Drainage System I & M	Semiannual
8.	Vegetative Cover I & M	Semiannual
9.	Final Grading I & M	Yearly
10.	Settlement Analysis	5-Years

10. An amendment to the FCPCMP was submitted February 2005 for the development of the Site into a recreational park. Previously a Mitigated Negative Declaration for the project was approved on May 3, 2004, by the Los Angeles City Council, in accordance with the California Environmental Quality Act requirements.

11. California Water Code (CWC) section 13263 (e) 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. This Order revises the WDRs for the Landfill to include updated requirements for closure and postclosure maintenance for the Landfill.

12. The Discharger has submitted a revised Report of Waste Discharge (ROWD), dated October 24, 2012, to the Regional Board to facilitate the revision of the WDRs.

REGULATORY REQUIREMENTS

13. The State Water Resources Control Board (State Board) and Regional Boards are the state agencies designated to protect water quality that may be impacted by solid waste disposal activities, while the California Department of Resources Recycling and Recovery (CalRecycle, formerly California Integrated Waste Management Board, or CIWMB) regulates all other aspects of solid waste disposal in the state. 27 CCR, Division 2, promulgated on July 18, 1997, clarifies the roles and responsibilities of the State Board/Regional Boards and CIWMB in regulating MSW disposal sites.

14. Pursuant to section 402 (p) of the Clean Water Act and 40 CFR Parts 122, 123, and 124, the State Board adopted a National Pollutant Discharge Elimination System (NPDES) General Permit to regulate stormwater discharges associated with construction activities in California (State Board Order 2009-0009-DWQ). Storm water runoff from the Landfill is regulated under the general NPDES permit (WDID No. 4 19C329691, enrolled on September 2, 2004). The Discharger is implementing a Storm Water Pollution Prevention Plan (SWPPP) at the Landfill as required by the general NPDES permit.

15. 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 the following beneficial uses for groundwater within the San Fernando Valley Basin, where the Landfill is located: municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply. The requirements in this Order, as they are met, are in conformance with the goals of the Basin Plan.

T E N T A T I V E

ENVIRONMENTAL SETTING

16. The Landfill is located within the Bull Canyon Hydrologic Sub-area of the San Fernando Valley Basin near the northeastern tip of the Verdugo Mountains. The local topography around the Landfill is generally flat with an approximate slope from north to south of one percent. The lithology in the Bull Canyon Subarea, from youngest to oldest, consists of Holocene alluvium, Pleistocene alluvium, Miocene sedimentary formations, and Pre-Cretaceous crystalline rocks. The Landfill is underlain by alluvial sediments comprised of uncemented sand, gravel, and boulders.

17. The Tujunga Wash, which passes to the west of the Landfill is an intermittent stream flowing southerly, is one of the principal sources of recharge to the San Fernando Groundwater Basin. The Tujunga Wash flows into several shallow basins adjacent to the Landfill, to the north, west and south west, and are referred to as the Tujunga Spreading Grounds (Figure 1) owned and maintained by the Los Angeles Department of Water and Power (LADWP). Flood flows in the Tujunga Wash are regulated by the Hansen Dam that is located approximately 2.5 miles to the north east. The Tujunga Wash has a 100-year flood stage that is below the base elevation of the Landfill, indicating that the site is reasonably safe from flood damage caused by overtopping of the Tujunga Wash. The Site is not within a 100-year floodplain.

18. Groundwater at the Landfill occurs within alluvial deposits with a hydraulic conductivity up to 4.2 X 10^{-2} cm/s. Groundwater flows east south-east, away from the Tujunga Spreading Grounds.

19. There have been no identified active faults within one mile of the site. Active faults are defined as Holocene epoch faults that have exhibited movement in the last 11,000 years.

20. The closed Landfill is zoned for public use facilities, intended for open active outdoor recreational activities as the postclosure land use. Ancillary structures at the Site will include public restrooms, LFG recovery system, gas collection maintenance area, and flare station.

ENVIRONMENTAL MONITORING SYSTEMS AND KNOWN POLLUTION

21. In response to Resolution 61-9 that required adequate and positive measures to prevent seepage from entering the pit, an eight foot thick layer of clay was placed along the entire sides of the Landfill facing Sheldon Street and Arleta Avenue, as-well-as approximately half of the side facing Wicks Street (from the corner of Wicks and Arleta). The clay wall extends from the bottom of waste, elevation 700 feet AMSL, to ground surface, elevation 830 feet AMSL, on these sides (Figure 3).

22. In 1979, a LFG extraction and recovery system was activated to control the migration of LFG and reclaim the gas for energy generation. The on-site gas control system consists of a network of 34 wells operated in extraction mode and piped off-site to an energy conversion plant owned by Covanta Power Pacific, Inc., a third party contractor. The LFG collection system helps to control lateral off-site migration of LFG, which could cause vapor phase contamination to groundwater. Current methane gas production from the Landfill is 90,000 cubic feet per day.

23. Section 13273 of the CWC requires the operator of each solid waste disposal site on a ranked list to conduct and submit to the appropriate Regional Board the results of a solid waste assessment test (SWAT) report to determine if the site is leaking hazardous waste. The Discharger submitted a SWAT report in June 1987 for the Landfill to the Regional Board. The report

TENTATIVE

concluded that the Landfill had no notable impact on groundwater quality. On February 9, 1990, Regional Board staff conditionally approved the SWAT with the recommendation of two additional quarters of groundwater monitoring and sampling. However, due to decreasing groundwater levels, the Discharger has not been able to sample the groundwater monitoring wells.

24. Following the SWAT, groundwater monitoring has been continued at the Landfill, however the wells typically have been dry. Volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) that have been detected in groundwater at the impacted monitoring wells include 1,1-dichloroethene, cis-1,2-dichloroethene, chloroform, dibromochloromethane, dichlorodifluoromethane, tetrachloroethylene, trichloroethene, trichlorofluoromethane, 1,4-dichlorobenzene, and methylene chloride. The VOCs, when present, have been at low concentrations, generally below the maximum contaminant~~tion limit~~ level (MCL) for drinking water of each constituent.

25. In 1993, the Discharger developed an "Interim Action Plan (Plan)" to control LFG (methane) migration which is exacerbated by fluctuating groundwater levels caused by spreading of water at the Tujunga Spreading Grounds. As part of the Plan, a gas extraction probe and blower system was installed at the Boys and Girls Gymnasium at Francis Polytechnic High School located southeast of the Landfill (Figure 4). This system is electronically connected to a methane alarm system that automatically turns on the blower system if methane concentrations reach 15% of the lower explosive limit (LEL) at any sensor. The blower remains operating until all sensors register below the 15% LEL alarm level.

26. The current groundwater monitoring network at the Landfill includes four background wells (IT-SA1, IT-SA3, 4897B, and 4887B) and three down gradient wells (IT-SA2, 4897C, and 4897D) (Figure 5). Monitoring wells 4887B, 4897B, 4897C, and 4897D are owned and maintained by the LADWP, which allows the Discharger to monitor and sample these wells as part of the Sites Detection Monitoring Program (DMP). The depths of the wells vary from 462 to 712 feet AMSL, with most well depths around 520 to 540 feet AMSL. Since 1997 the groundwater level has varied between 460 to 531 feet AMSL. This has resulted in the majority of the wells being above groundwater levels and could not be sampled the majority of the time.

27. DWP groundwater monitoring well 4897B has been historically used as an alert well to adjust spreading at the Tujunga Spreading Grounds.

28. Due to the low level of groundwater the monitoring wells have usually been dry. When water was detected there has been insufficient quantities for sampling. In 2012 the Discharger installed submersible pumps into monitoring wells IT-SA1 and IT-SA3 due to a rise in groundwater levels. Groundwater levels have since dropped below the level of these pumps. This Order requires the installation of one groundwater monitoring well at the location of existing lysimeter well number IT-SA8, and the replacement of IT-SA1 and IT-SA3 if they continue to be dry (see Section D. 1 of this Order, requirements for Groundwater Monitoring).

29. Considering the groundwater conditions determined from the SWAT report and that the majority of the wells are usually dry, this Order requires a revised groundwater monitoring network that is outlined in the attached MRP. The Executive Officer of the Regional Board (Executive Officer) may require the Discharger to expand groundwater monitoring, including installation of additional groundwater monitoring wells, in response to changes of site conditions.

30. Five lysimeter wells were previously installed to monitor soil pore water quality at the Site (IT-SA4, IT-SA5, IT-SA6, IT-SA7, and IT-SA8). Additionally, well 4897D, located within the Landfill, has been used to monitor for leachate. Due to the fact that no liquid has ever been detected, the Discharger abandoned wells IT-SA5, IT-SA6, and IT-SA7. This Order requires that (1) lysimeter well~~s IT-SA4 and~~ 4897D be used to ~~detect~~ monitor the occurrence and collect samples of leachate at the Landfill, (2) lysimeter well IT-SA4 be properly abandoned, and (3) lysimeter well IT-SA8 be replaced with a new groundwater monitoring well IT-SA9.

ADMINISTRATIVE

31. Revision of the WDRs for the Landfill constitutes an existing facility as defined in section 15301, chapter 3, title 14 of the CCR and is therefore exempt from the provisions of the California Environmental Quality Act (Public Resources Code section 21000 et seq.).

The Regional Board has notified interested agencies and all known interested persons of its intent to issue requirements for postclosure maintenance for the Landfill.

The Regional Board in a public meeting heard and considered all comments pertaining to postclosure maintenance for the Landfill.

Any person aggrieved by this action of the Regional Board may petition the State Board to review the action in accordance with CWC section 13320 and 23 CCR, sections 2050 and following. The State Board must *receive* the petition by 5:00 p.m., within 30 days ~~after~~ of the date of adoption of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: *http://www.waterboards.ca.gov/public_notices/petitions/water_quality/index.shtml* or will be provided upon request.

IT IS HEREBY ORDERED that the Discharger shall comply with the following at the Landfill:

A. SPECIFICATIONS

1. The Landfill is closed. No MSW or any other wastes may be received at the Landfill for the purpose of disposal.

2. Inert soil, concrete, and asphalt materials that are used for the construction or repair of the final cover, access roads, or other facilities at the Landfill may be imported, provided that the source, volume, and usage of such imported materials are reported in the corresponding semi-annual monitoring report.

3. The Discharger shall remove any unacceptable wastes that arrive at the Site in violation of the requirements in this Order and discharge such removed waste to a legal point of disposal.

4. The Discharger shall follow the guidelines for site maintenance in these WDRs and the FCPCMP. If there is any conflict between provisions stated within the WDRs and the FCPCMP, the WDRs provisions will prevail.

TENTATIVE

B. PROHIBITIONS

1. Discharge of waste as a result of inadequate 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 waste that the Landfill received throughout its operating life shall not:

   a. cause the occurrence of coliform or pathogenic organisms in the groundwater basin;

   b. cause the occurrence of objectionable tastes or odors in the groundwater basin;

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

   d. cause the presence of toxic materials in the groundwater basin;

   e. cause the pH of waters in the groundwater basin to fall below 6.5, or rise above 8.5;

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

   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 that migrate beyond the limits of the Landfill are prohibited.

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

5. The Discharger shall conduct site operations such that there is no discharge from the Landfill that causes any Basin Plan objective to be exceeded at any location under, or in the vicinity of, the Landfill.

6. The Discharger shall comply with all federal, state, and county sanitary health codes, rules, regulations, and ordinances pertinent to the disposal of wastes on land and with the operation and maintenance of the Landfill.

C. REQUIREMENTS FOR POSTCLOSURE MAINTENANCE

1. Within 90 days of the adoption of this Order, the Discharger shall submit an updated FCPCMP to this Regional Board for the approval of the Executive Officer. The revised FCPCMP shall provide a time schedule for the construction of the park at the Site.

2. The Landfill's postclosure maintenance period shall continue until the Regional Board determines that remaining wastes at the Landfill will not threaten water quality.

TENTATIVE

3. All containment structures and erosion and drainage control systems at the Landfill shall be designed and constructed by, or under the direct supervision of, a California-registered civil engineer or certified engineering geologist.

4. The Landfill shall have 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. The Discharger shall provide design specifications for Regional Board staff's review and approval prior to construction of any containment structure.

5. 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. When necessary, temporary structures shall be installed as needed to comply with this requirement.

6. 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.

7. 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.

8. Gas condensate gathered from the gas monitoring and collection system at the Landfill shall not be returned to the Landfill. 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.

9. The Discharger shall intercept and remove liquid detected in all leachate collection and removal systems in accordance with 27 CCR section 20340(c) at the Landfill. Leachate shall be discharged to a legal point of disposal and shall not be returned to the Landfill.

10. The Discharger shall maintain permanent survey monuments at the Landfill throughout the postclosure maintenance period. 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.

11. 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.

12. All inspections shall be documented and reported to the Regional Board in accordance with the MRP, No. CI 2765 (Attachment T).

D. REQUIREMENTS FOR GROUNDWATER MONITORING

1. Within 180 days of the adoption of this Order, the Discharger shall submit a technical report, for approval of the Executive Officer, for the installation of one groundwater monitoring well at the location of the existing lysimeter well IT-SA8. Additionally, if liquid samples cannot be collected from monitoring wells IT-SA1 and IT-SA3 by the time the technical report is due, these two monitoring wells shall be replaced at the same time when the new monitoring well is installed. The requirements of the technical report are outlined in Section D.9 of this Order. The technical report may be included as part of the updated FCPCMP, that is required in Section C.1 of this Order.

2. The Discharger shall implement the attached MRP 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 at the Landfill.

3. At any time, the Discharger may file a written request, including appropriate supporting documents, with the Executive Officer, proposing modifications to the MRP. The Discharger shall implement any changes to the revised MRP approved by the Executive Officer upon receipt of a signed copy of the revised MRP.

4. 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.

5. The effectiveness of all groundwater monitoring wells, groundwater monitoring devices, and leachate and gas collection systems shall be maintained throughout the Landfill's postclosure maintenance period in accordance with acceptable industry standards. If a well or lysimeter is found to be inoperative, the Regional Board and other interested agencies shall be informed in writing within fourteen days after such discovery, and this notification shall contain a time schedule for restoring the well or lysimeter to operating order.

6. Following the replacement of monitoring wells proposed in D.1 above, ~~I~~if a groundwater monitoring well or lysimeter is proposed to replace an inoperative well or lysimeter, 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.

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

8. Any abandoned groundwater monitoring 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

TENTATIVE

modify wells still in use, must conform to the specifications of the local health department or other appropriate agencies.

9. 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.

    Within 30 days of the installation of a groundwater monitoring well at the Landfill, the Discharger shall submit an as-built report to the Regional Board and the California Department of Water Resources (DWR), including delineation of the stratigraphy encountered, all water bearing zone(s) encountered and water quality data.

10. As of the effective date of this Order, the compliance monitoring wells at the Landfill shall consist of those wells listed in Table T-1 of the MRP. All monitoring wells shall be monitored pursuant to this Order or as directed by the Executive Officer through future revisions of the MRP.

11. The Discharger shall install any additional groundwater, soil pore liquid, soil pore gas, or leachate monitoring devices necessary to comply with the MRP, as adopted or as revised by the Executive Officer.

12. The point of compliance (POC) for groundwater monitoring for the Landfill is a vertical surface located at the hydraulically downgradient limit of the Landfill that extends through the uppermost aquifer underlying the Landfill pursuant to 27 CCR section 20405(a).

E. REQUIREMENTS FOR A DETECTION MONITORING PROGRAM (DMP)

1. The Discharger shall continue implementing the DMP at the Landfill that currently includes monitoring of groundwater wells and leachate wells and sampling if liquid is present.

2. In each semi-annual report submitted under the MRP, the Discharger shall summarize any detections in groundwater at the Landfill during the reporting period to determine whether there is measurably significant evidence of a release from the Landfill. The Discharger

shall verbally notify the Regional Board staff immediately of the finding and submit written notification within seven days of evidence of a release.

3. If the Discharger or the Executive Officer determines that there has been a measurably significant evidence of a release from the Landfill, the Discharger shall, pursuant to 27 CCR sections 20420 and 40 CFR section 258.58(b), submit an amended ROWD within 90 days of the determination to propose an Evaluation Monitoring Program (EMP).

F. REQUIREMENTS FOR ON-SITE USE OF WATER

1. No water shall be routinely applied at the Landfill except for irrigation, dust control, or other non-emergency uses approved by the Executive Officer. Any water used at the Landfill, except for potable water, recycled water permitted under Water Reclamation Requirements (WRRs) adopted by the Regional Board, and any other water allowed by the Executive Officer, shall be subject to these WDRs.

2. 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.

3. Overflow, runoff, or ponding caused by the over-application or improper management of on-site use of water are prohibited.

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

G. 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 fourteen days of its discovery of the omission.

4. The Regional Board shall be notified of any incident at the Landfill that are in violation of this Order and that may endanger the environment, by telephone within 24 hours from the time the Discharger becomes aware of the circumstances, and in writing within 14 days of the time that the Discharger becomes aware of the circumstances. 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 of the incident. All instances of noncompliance with this Order shall also be reported to the Regional Board in the same manner as stated above, and shall also be included in the next scheduled monitoring report.

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 or operator 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 or operator is liable from the transfer date on. The agreement shall include an acknowledgement that the new owner or operator accepts responsibility for compliance with this Order.

6. The Discharger shall notify the Regional Board of changes in information submitted in the revised FCPCMP within 30 days of the change.

7. All applications, reports, or information submitted to the Regional Board shall be signed and certified as follows:

   a. Applications, ROWDs, or similar documents 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 this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those

persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

H. GENERAL PROVISIONS

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

2. 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.

3. 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.

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

5. 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.

6. This Order includes the attached *"Standard Provisions Applicable to Waste Discharge Requirements"*, adopted November 7, 1990 (Attachment W) which is incorporated herein by reference.

7. The requirements adopted herein neither 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.

8. 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.

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

10. The Discharger is the responsible party for these WDRs, including any MRP or other body of requirements incorporated by reference therein. 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.

11. 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 within 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.

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

13. 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.

14. 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. G.5 of this Order.

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

16. 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.

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

18. This Order may be terminated or modified by the Regional Board, including, but not limited to the following:

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

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

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

19. This Order in no way limits the authority of the Regional Board, as delineated in the CWC, to require additional investigations and cleanups pertinent to this project. This Order may be revised by the Regional Board as additional information from the project becomes available.

20. 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.

I. TERMINATION

Except for violation enforcement purposes, Regional Board Order No. 01-070, adopted May 24, 2001, is hereby terminated.

I, Samuel Unger, 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~~ 4May 2, 2013.

_____
Samuel Unger, P.E.
Executive Officer

TENTATIVE

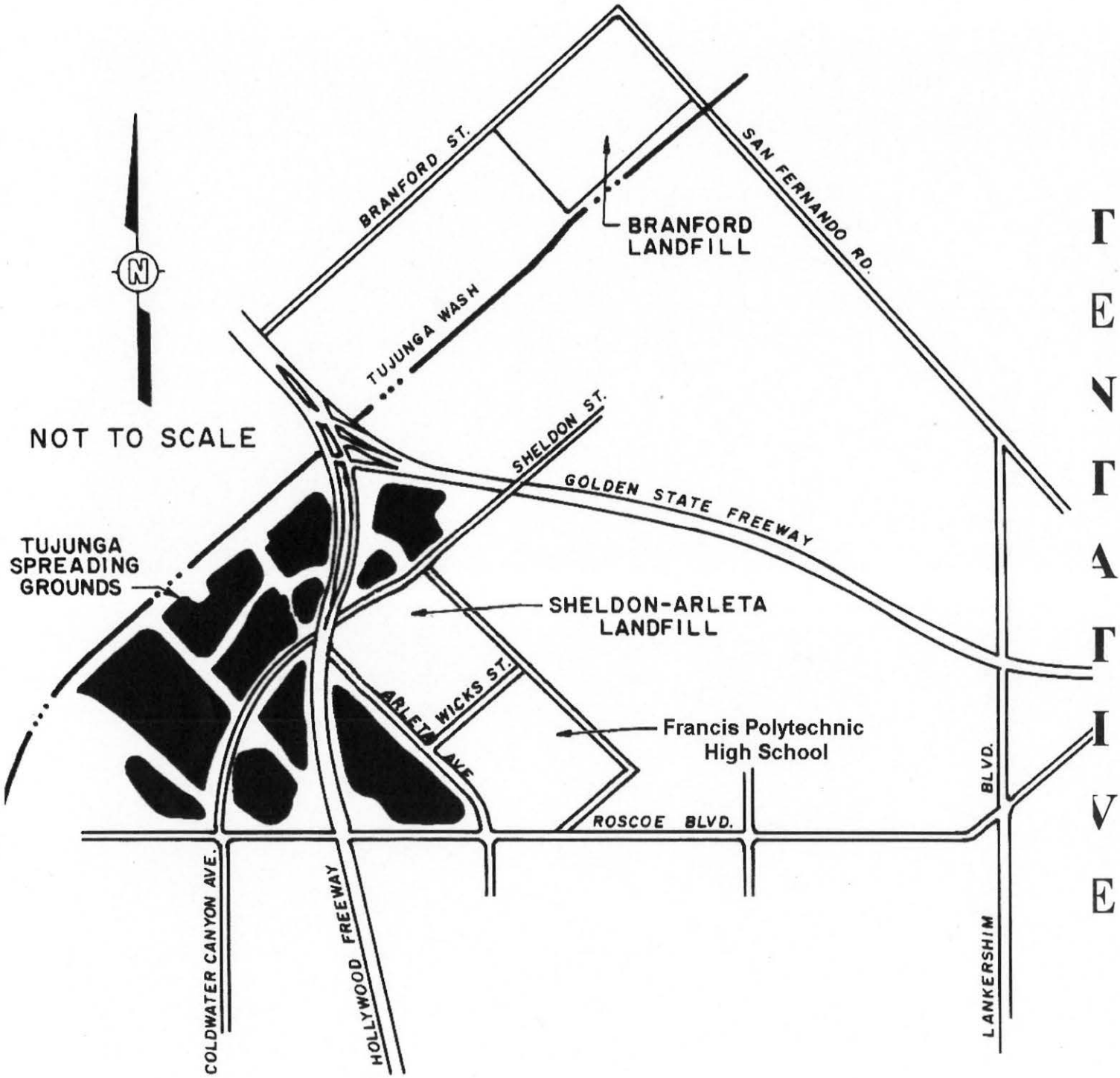


Figure 1. Location Map

LEGEND

1 Baseball Field
2 Softball Field
3 Soccer Field
4 Youth Soccer Fields
5 Basketball Courts
6 Walking / Jogging / Service Path
7 Children Play Area
8 Passive Play Area
9 Restroom / Office / Storage Building
10 Future Expansion
11 Elevated Overlook Area
12 Vehicle Turn Around and Drop Off
13 Group Picinic Area
14 Gravel-Pave® Parking Lot
15 Vehicular Entry
16 Service and Emergency Vehicle Entry
17 Bermed Lawn
18 Sound Attenuation
19 Water Tank Feature
20 Satellite Restroom Bldg.
21 Existing Pump Station
22 Seating Area
23 Maintenance Yard

Figure 2. Proposed Recreational Park

T E N T A T I V E

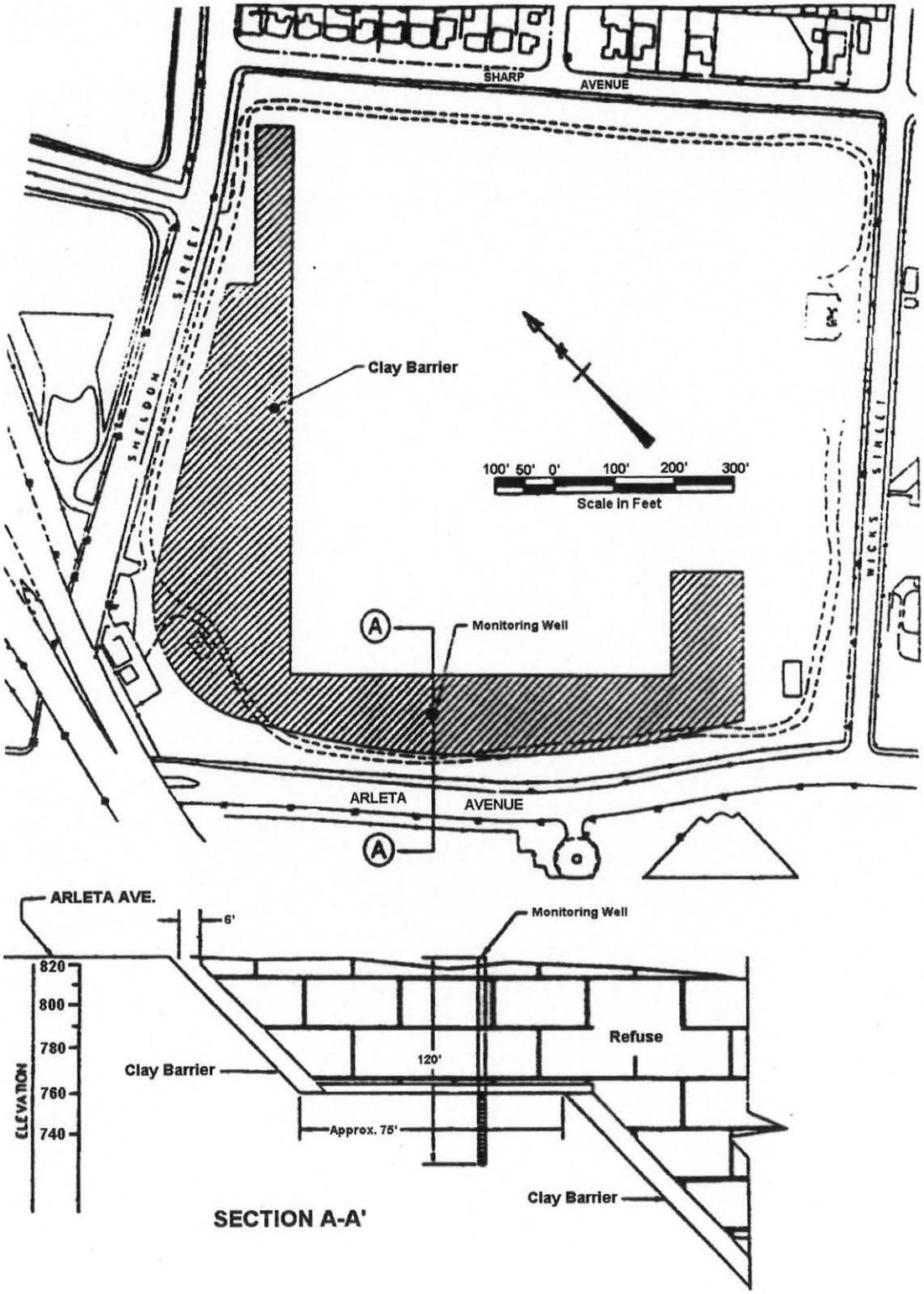
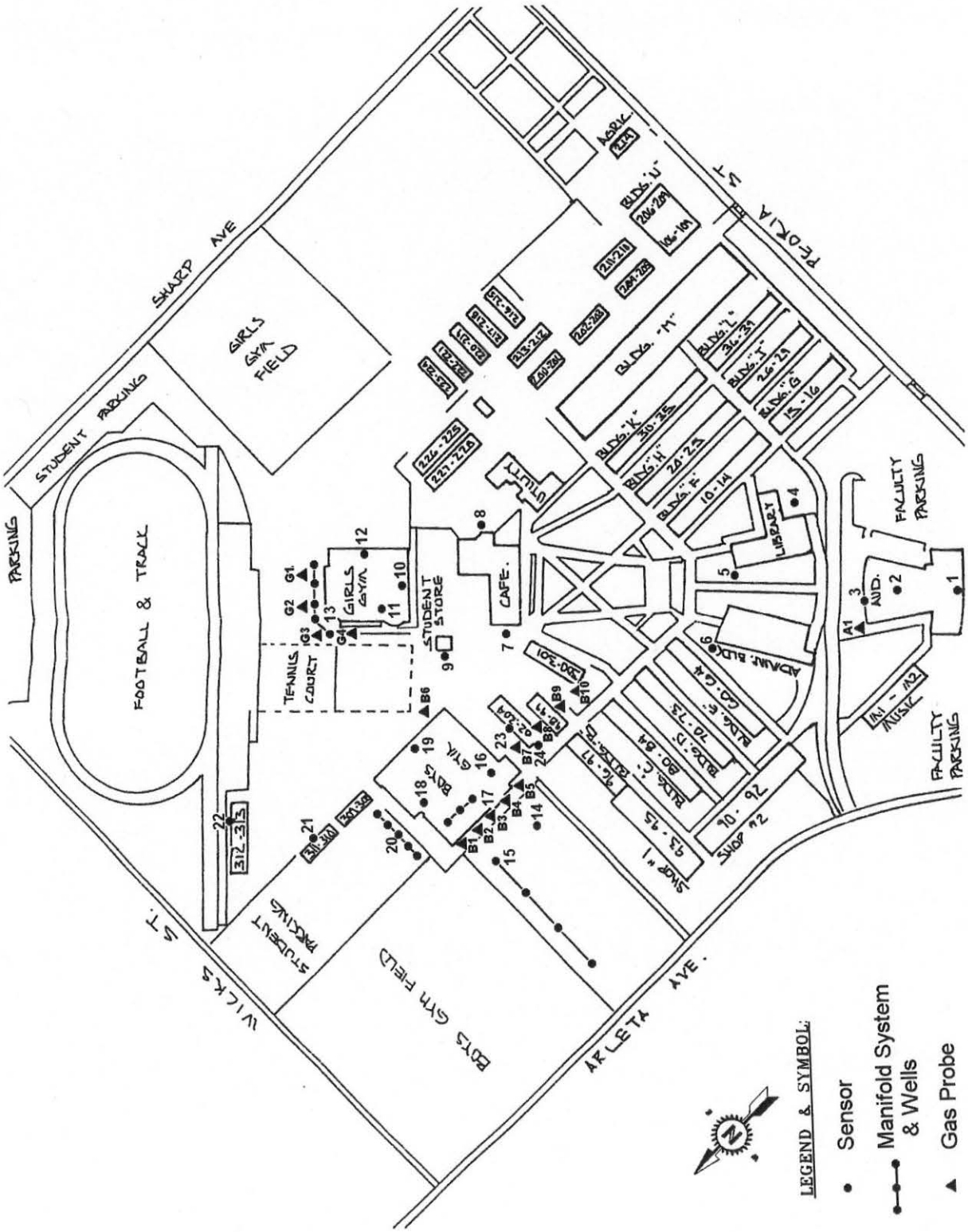


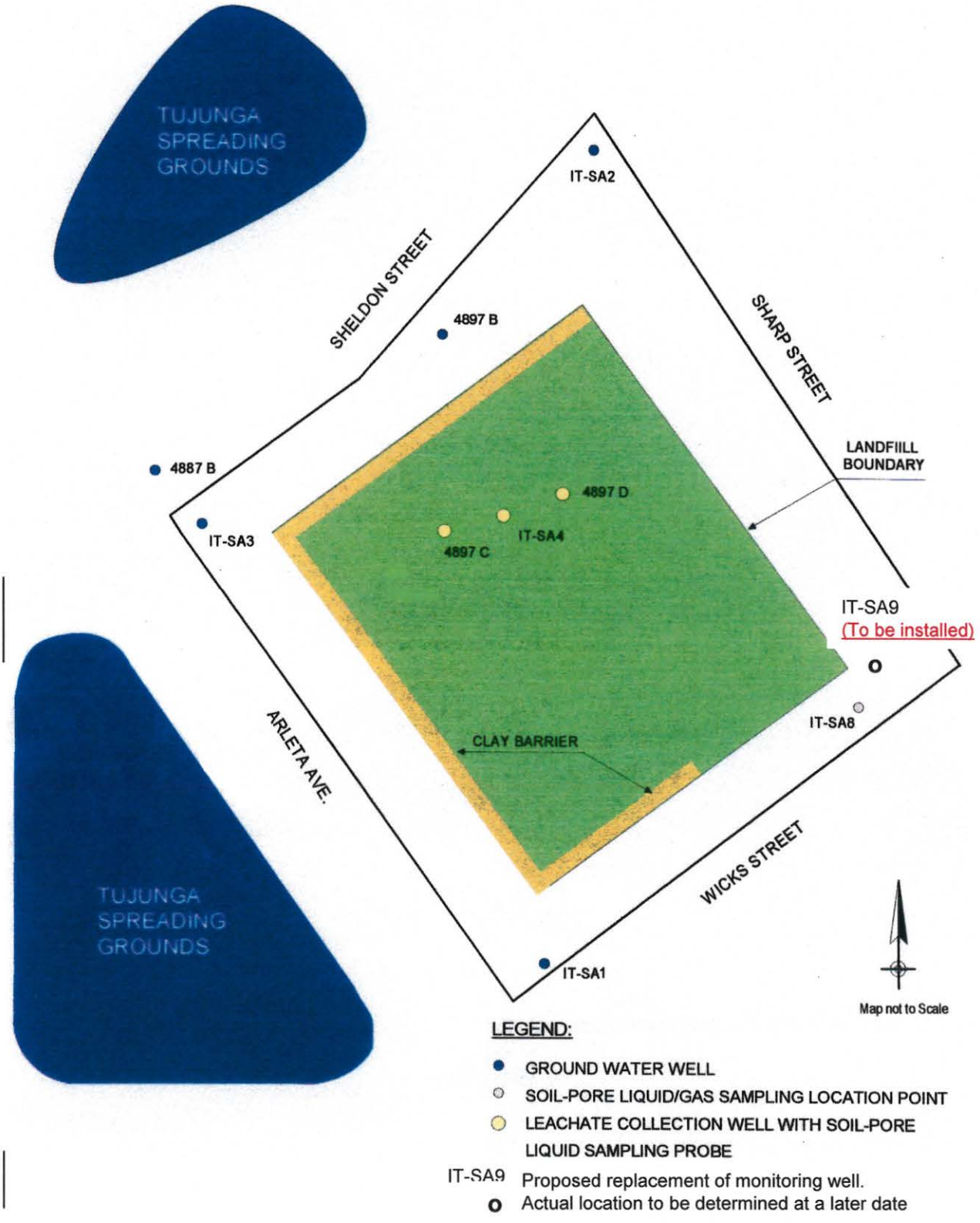
Figure 3. Vertical Clay Barrier System

T E N T A T I V E



TENTATIVE

Figure 4. Gas Migration Control System



TENTATIVE

Figure 5. Existing Groundwater Well and Leachate Well Locations

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

REVISED MONITORING AND REPORTING PROGRAM (No. CI-2765)

FOR

CITY OF LOS ANGELES
(Sheldon-Arleta Landfill)

This Monitoring and Reporting Program, No. CI-2765 (MRP) is issued by the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) to ~~responsibilities of~~ the City of Los Angeles Bureau of Sanitation (Discharger) for the Sheldon-Arletta Landfill (Landfill) ~~are specified in~~ pursuant to California Water Code (CWC) ~~section 13225(a),~~ section 13267(b)~~, and section 13387(b)~~. This ~~Monitoring and Reporting Program (~~MRP~~)~~ is incorporated by reference into~~issued pursuant to California Regional Water Quality Control Board, Los Angeles Region (~~ Regional Board~~)~~ Order No. R4-2013-XXXX (Order), adopted on ~~April 4~~May 2, 2013. The Discharger shall begin implementing this MRP following the adoption of the Order. This MRP is required to assure compliance with the conditions of the Order and is issued to the Discharger, which is the owner of the Landfill.

I. REQUIRED REPORTS AND CONTINGENCY RESPONSE

A. GENERAL REQUIREMENTS FOR REPORT SUBMITTAL

1. **Schedule:** The Discharger shall submit all regular reports required in this MRP to this Regional Board in accordance with the following schedule:

Report	Date due to the Regional Board
1st Semi-Annual Report (for the period from January 1 to June 30)	August 15
2nd Semi-Annual Report (for the period from July 1 to December 31)	February 15
Annual Report (for the period from January 1 to December 31)	February 15

The Discharger may combine the Annual Report with the 2nd Semi-Annual Report into a single report as long as this is clearly indicated on the cover page and all the required information is included. The compliance index number (**CI-2765**), as well as the period that the report covers, shall be clearly displayed on the cover pager of each report.

2. **Transmittal Letter** - A letter transmitting the essential points shall accompany each report. Such a letter shall include a discussion of any violations found since the last such report was submitted, and shall describe actions taken or planned for correcting those violations. If the Discharger has

TENTATIVE

correspondence transmitting such schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter.

3. **Signature, certification, and perjury statement requirements:** All letters transmitting monitoring reports shall follow the signature, certification, and perjury statement requirements provided in Section G.7. of the Order.

4. **Electronic Data Submittal** - Unless it is otherwise required by the Executive Officer, all reports required under this MRP shall be submitted to the State Water Resources Control Board GeoTracker database system in the form of searchable Portable Document Format (PDF) files (Geotracker Global ID. L10008273857). In addition, all groundwater monitoring data shall also be submitted to GeoTracker in Electronic Deliverable Format (EDF). A hard copy of the report, including all original laboratory reports and field records that are used in preparation of the reports, must be kept in the Landfill's Operating Record pursuant to California Code of Regulations, Title 27 (27 CCR), section 20415(e)(16).

B. SEMI-ANNUAL MONITORING REPORT

Semi-annual Reports shall include, but should not be limited to, the following:

1. **Summary of Non-Compliance** – The report shall contain a summary of non-compliance that discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. Significant aspects of any on-going corrective action measures conducted during the monitoring period shall also be summarized. This section shall be located at the front of the report and shall clearly list all non-compliance with discharge requirements, as well as all exceedances of water quality protection standards.

2. **Site Conditions**: General discussion of site conditions (geology, climate, 100-year 24-hour storm, and watershed specifics, etc.) relative to water quality monitoring.

3. **Narrative Description** - A narrative discussion of the site's various monitoring activities and results. Each requirement of Section II of this MRP shall be specifically discussed.

4. **Laboratory Results** - Laboratory results and statements demonstrating compliance with Section II of this MRP. Results of additional water sampling and analyses performed at the Landfill, outside of the requirements of this MRP, shall be summarized and reported. If the results of such additional sampling and analyses have or will be reported under separate cover, a statement as such shall be included in the monitoring report.

5. **Standard Observations** - A summary and certification of completion of all Standard Observations for the Landfill property in accordance with monitoring and reporting requirements under the NPDES General Permit for industrial activities. The records of observation must be included in the semi-annual reports required by this Order.

6. **Landfill Gas Condensate** - A summary of the total estimated volume, on a semi-annual basis, of landfill gas (LFG) condensate that has been discharged to the sanitary sewer system.

C. ANNUAL SUMMARY REPORT

The annual summary report shall include at least the following:

1. **Discussion** - Include a comprehensive discussion of the compliance record, any significant monitoring system and operational changes, a summary of corrective action results and milestones, and a review of construction projects, with water quality significance, completed or commenced in the past year or planned for the up-coming year.

2. **Graphical Presentation of Analytical Data** - For each monitoring point, submit in graphical format the laboratory analytical data for all samples taken within at least the previous eight 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. Maximum contaminant levels (MCL) shall be graphed along with constituent concentrations where applicable. 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.

3. **Analytical Data** - All monitoring analytical data obtained during the previous year, presented in tabular form.

4. **Concentration Limits** - The Annual Summary Report shall include updated Concentration Limits required in Section II.A.5. of this MRP.

5. **Map(s)** - Map(s) showing the areas where any significant events have taken place during the previous calendar year.

D. CONTINGENCY RESPONSE

1. **Response to an Initial Indication of a Release** - Should the initial statistical or non-statistical comparison indicate that a release is tentatively identified, the Discharger shall:

   a. Within 24 hours, verbally notify the designated Regional Board staff contact as to the monitoring point(s) and constituent(s) or parameter(s) involved;

   b. Provide written notification by certified mail within seven days of such determination; and

   c. Do either of the following:

      i. Carry out a discrete re-test in accordance with Section II.A.7.b. of this MRP. If the re-test confirms the existence of a release or the Discharger fails to perform the re-test, the Discharger shall carry out the release discovery response requirements in Section I.D.4. In any case, the Discharger shall inform the Regional Board of the re-test outcome within 24 hours of results becoming available, following up with written results submitted by certified mail within seven days, or

      ii. Make a determination, in accordance with 27 CCR section 20420(k)(7), that a source other than the waste management unit caused the release or that the evidence is an artifact

T E N T A T I V E

caused by an error in sampling, analysis, or statistical evaluation or by natural variation in the groundwater, surface water, or the unsaturated zone.

2. **Physical Evidence of a Release** - If either the Discharger or the Executive Officer determines that there is significant physical evidence of a release (27 CCR section 20385(a)(3)), the Discharger shall conclude that a release has been discovered and shall:

   a. Within seven days notify the Regional Board of this fact (or acknowledge the Board's determination).

   b. Carry out the requirements of Section I.D.4. for all potentially-affected monitored media.

   c. Carry out any additional investigations stipulated in writing by the Executive Officer for the purpose of identifying the cause of the indication.

3. **Release Discovery Response** - If either the Discharger or the Executive Officer concludes that a release has been discovered, the following steps shall be carried out:

   a. If this conclusion is not based upon monitoring for all constituents of concern (COCs), the Discharger shall sample for all COCs at all monitoring points in the affected medium. Within seven days of receiving the laboratory analytical results, the Discharger shall notify the Executive Officer, by certified mail, of the concentration of all COCs at each monitoring point. This notification shall include a synopsis showing, for each monitoring point, those constituents that exhibit an unusually high concentration.

   b. The Discharger shall, within 90 days of discovering the release, submit an Amended Report of Waste Discharge proposing an Evaluation Monitoring and Reporting Program that:

      i. Meets the requirements of 27 CCR sections 20420 and 20425.

      ii. Satisfies the requirements of title 40 of Code of Federal Regulations (40 CFR) section 258.55(g)(I)(ii) by committing to install at least one monitoring well at the facility boundary directly down-gradient of the center of the release.

   c. The Discharger shall, within 180 days of discovering the release, submit a preliminary Engineering Feasibility Study meeting the requirements of 27 CCR section 20430.

   d. The Discharger shall immediately begin delineating the nature and extent of the release by installing and monitoring assessment wells as necessary to assure that it can meet the requirements of 27 CCR section 20425 to submit a delineation report within 90 days of when the Executive Officer directs the Discharger to begin the Evaluation Monitoring and Reporting Program.

4. **Release Beyond Facility Boundary** - Any time the Discharger concludes (or the Executive Officer directs the Discharger to conclude) that a release from the Landfill has proceeded beyond the facility boundary, the Discharger shall so notify all persons who either own or reside upon the land that directly overlies any part of the plume (Affected Persons) as follows:

T E N T A T I V E

a. Initial notification to Affected Persons shall be accomplished within 14 days of making this conclusion and shall include a description of the Discharger's current knowledge of the nature and extent of the release.

b. Subsequent to initial notification, the Discharger shall provide updates to all Affected Persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.

c. Each time the Discharger sends a notification to Affected Persons (under a. or b., above), it shall, within seven days of sending such notification, provide the Regional Board with both a copy of the notification and a current mailing list of Affected Persons.

E. RESPONSE TO VOLATILE ORGANIC COMPOUNDS (VOC) DETECTION IN BACKGROUND WELL

1. Except as indicated in Section I.E.2. below, any time the laboratory analysis of a sample from a Background monitoring point shows either (1) two or more VOCs above their respective Method Detection Limit[1], or (2) one VOC above its Practical Quantitation Limit, the Discharger shall:

   a. Within 24 hours, notify the Regional Board by phone that possible Background monitoring point contamination has occurred.

   b. Follow up with written notification within seven days.

   c. Immediately obtain two new independent VOC samples from that Background monitoring point and send them for laboratory analysis of all detected VOCs.

2. If either or both the new samples validate the presence of VOC(s) at the Background monitoring point, the Discharger shall:

   a. Within 24 hours, notify the Regional Board about the VOC(s) verified to be present at that Background monitoring point.

   b. Provide written notification to the Regional Board within seven days of validation.

   c. Within 180 days of validation, submit a report, acceptable to the Executive Officer, which examines the possibility that the detected VOC(s) originated from other than the Landfill, and proposes appropriate changes to this MRP.

3. If the Executive Officer determines, after reviewing the report submitted under Section I.E.2. above, that the VOC(s) detected originated from a source other than the Landfill, the Executive Officer will make appropriate changes to this MRP.

4. If the Executive Officer determines, after reviewing the report submitted under Section I.E.2. above, that the detected VOC(s) most likely originated from the Landfill, the Discharger shall

[1] In case the discrete re-test is triggered by detections of common laboratory contaminants (i.e., acetone, toluene, methylene chloride, and carbon disulfide) the Discharger may postpone the discrete re-test until after the next monitoring event. Re-test will not be required unless the same pollutants are also detected in the next monitoring event

assume that a release has been detected and shall immediately begin carrying out the requirements of Sections I.D.3 and I.D.4. of this MRP.

II. REQUIRED MONITORING AND INSPECTIONS

The Discharger shall continue implementing a Detection Monitoring Program (DMP) that meets the requirements in 27 CCR, section 20420, at the Landfill. Unless otherwise indicated, all monitoring data and inspection results shall be reported to the Board as outlined in Section I of this MRP.

A. GROUNDWATER MONITORING

Groundwater Monitoring Networks - The groundwater monitoring network for the Landfill shall include detection monitoring wells IT-SA1, and a new well at the location of existing lysimeter well IT-SA8, 4897B, and background monitoring well IT-SA3. Well 4897B shall be monitored for groundwater depth as an alert well to maintain groundwater levels below a minimum of 690 feet AMSL. The required environmental monitoring points for the Landfill are summarized in Table T-1 and their locations are displayed on Figure T-1.

Table T-1: Groundwater Monitoring Points at the Sheldon-Arleta Landfill

Media Monitored	Monitoring Point	Location
Compliance wells	IT-SA1, ~~New Well~~IT-SA9 (to be installed)	Downgradient
Background well	IT-SA3	Upgradient
Alert Well	4897B	For Groundwater Level Observation Only

1. **Water Quality Protection Standard (WQPS)** - In accordance with 27 CCR section 20390, WQPS for the Landfill is established as the natural background groundwater quality at the site, which is set to either the statistically predicted value(if the constituent naturally exists) or the laboratory detection limit (if the constituent does not naturally exist in the water).

2. **Routine Groundwater Monitoring** - Routine groundwater monitoring at the site includes semi-annual monitoring, annually monitoring, and five-year COC scan. Current groundwater Monitoring Parameters (MPars) and their minimum monitoring frequencies are listed in Table T-2. Unless otherwise approved by Board staff, semi-annual sampling shall be conducted in May and November, annual and five-year COC sampling shall be conducted in November.

3. **Constituents of Concern (COC) List** - As of the date of the adoption of this MRP, the COC list for the Landfill consists of all the semi-annually and annually monitored parameters plus any Appendix II pollutants (40 CFR, part 258) that have been detected in the leachate from the landfill. In addition, at any subsequent time, the COC list shall include all Appendix II constituents detected and affirmed in the leachate scan required in Section II.A.9 of this MRP. The Discharger shall notify Regional Board staff of any such new addition to the COC list immediately, via phone or e-mail, shall record it in the Operating Record of the Landfill within 14 days of the verification, and shall add the constituent(s) to the COC list in the next scheduled monitoring report.

4. **Development and Updating of Concentration Limits** - The Discharger shall develop, and submit to the Regional Board for the Executive Officer's approval, all Concentration Limits following the procedures provided in Section II.A.6.a. of this MRP. The revised concentration limits shall be submitted with the next semi-annual report, following the adoption of Regional Board Order No. 4R-2013-0xxx. Subsequently, the Discharger shall review Concentration Limits biannually in its annual reports submitted to the Regional Board. When appropriate, new Concentration Limits shall be proposed. For any well/MPar pair for which the Intra-Well Comparison analysis is not applicable, the Discharger shall use the Inter-Well comparison analysis to determine whether water quality protection standards are violated.

Table T-2 Groundwater Monitoring Parameters and Minimum Monitoring Frequencies

Constituent	Reporting Unit*
Semi Annually Monitoring	
pH	pH Unit
Specific conductivity	µmuos/cm
Alkalinity	mg/L
Nitrate (as nitrogen)	mg/L
Chloride	mg/L
Sulfate	mg/L
Boron	mg/L
Total dissolved solids (TDS)	mg/L
Chemical oxygen demand (COD)	mg/L
Total organic carbon (TOC)	mg/L
Volatile organic compounds	µg/L
Annually Monitored Parameters	
Bicarbonate	mg/L
Total Hardness	mg/L
Calcium	mg/L
Potassium	mg/L
Sodium	mg/L
Trace metals (including Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Hg, Ni, Se, Ag, and Zn)	µg/L
Semi-volatile organic compounds	µg/L
All other COCs added per Section II.A.4	various

*Indicates milligram per liter (mg/L) and micrograms per liter (µg/L).

6. **Statistical Data Analysis Methodology**

   a. Intra-well comparison methods shall be used for all compliance wells for all constituents that are detectable at concentrations above their respective Method Detection Limit (MDL) in 10% or more of the background data to date. Initially, 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 obtained in the past eight (8) years. Every two years, following the adoption of this MRP, as part of the annual

T E N T A T I V E

monitoring summary report, 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 indicate an increase over the existing background data. At that time, the Discharger shall also retire the well/MPar's oldest two years of background data, thereby producing a data set covering the then-previous eight 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.

b. Per 27CCR section 20415(e)(9)(C), if a control chart approach is used to evaluate water quality monitoring data, the specific type of control chart and its associated statistical parameter values (e.g., the upper control limit) shall be included in the supporting documentation as required by section 20415(e)(7). The discharger shall use the procedure only if this supporting documentation shows the procedure to be protective of human health and the environment. Any control charting procedure must have a false positive rate of no less than 1 percent for each monitoring point charted. For example, upper control limits on X bar or R Charts used only once every six months (where no composite retest is used) must be set at no more than 2.327 standard deviations of the statistic plotted for a one-sided statistical comparison, or at no more than 2.576 standard deviations of the statistic plotted for a two-sided statistical comparison.

c. In the event that an approved data analysis method provides a preliminary indication that a given monitoring parameter has a measurably significant increase at a given well, the Discharger shall conduct a verification procedure (retest) in accordance with 27CCR section 20415(e)(8)(E).

d. The verification procedure shall be performed only for the constituent(s) or parameter(s) that has shown "measurably significant" (see 27CCR section 20164) evidence of a release, and shall be performed only for those monitoring points at which a release is indicated.

e. For any COC or monitoring parameter that is detectable at concentrations above its respective MDL in 10% or less of the background data to date, the constituent's concentration limit shall be its MDL. A measurable exceedance of this concentration limit shall be determined by application of the non-statistical analysis method described in Section II.A.7 of this MRP.

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's arrival at that well at a concentration in excess of its respective Threshold Value; 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. For any well/MPar pair in Tracking Mode, its Threshold Value automatically

becomes the mean of its Concentration Limit (background data set), which should be plotted as a horizontal line on its concentration-versus-time plot. The goal is to indicate when the applied corrective action measures have brought the MPar's concentration down to, or below, this concentration. These plots shall be the primary input for the Discharger's twice-yearly analysis of the effectiveness of the corrective action measures.

g. **Detection Mode Data Analyses** - The following applies to all detection mode data analyses:

i. **Monitoring Parameters Readily Detectable in Background** - At any given monitoring point, the Discharger shall apply an appropriate statistical analysis for each detection mode monitoring parameter that exceeds its respective MDL in at least 10% of the applicable background data set;

ii. **Monitoring Parameters Not Readily Detectable in Background** - For any monitoring point at which one or more monitoring parameters, in detection mode, exceed their respective MDL in less than 10% of the applicable background data set, the Discharger shall analyze the data for these monitoring parameters via the California Nonstatistical Data Analysis Method (CNSDAM) test described in Section II.A.7 of this MRP.

7. **California Nonstatistical Data Analysis Method (CNSDAM)**

a. **Non-Statistical Method for Detection Mode for MPars Seldom Found in Background** - For any given compliance (downgradient) well, regardless of the monitoring program (DMP, EMP, AMP, or CAP), the Discharger shall use this data analysis method, jointly, for all constituents on the "scope list" as described below:

i. **Scope List** – The scope list subject to CNSDAM for a monitoring well shall constituent all Mpars for which less than 10% of the background data points exceed its MDL; and

ii. **Two Triggers** - From the scope list, for an initial test (or, for a retest, the modified scope list under Section No. II.A.7.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 release of waste from the Landfill 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** [27CCR section 20415(e)(8)(E)]**:**

i. In the event that the Discharger concludes (pursuant to Section II.A.7.a.ii above) that there is a preliminary indication, then the Discharger shall immediately notify Board staff by phone or e-mail and, within 30 days of such indication, shall collect two new (retest) samples from the indicating compliance well.

T E N T A T I V E

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 Section II.A.7.a.ii of this MRP, 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 Section II.B.7.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 trips either (or both) of the triggers under Section II.A.7.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 at that well, shall remove the constituent(s) from the scope list created for that well, notify the Board in writing, and highlight this conclusion and these changes in the next scheduled monitoring report and in the Landfill's operating record.

8. **Groundwater Flow Direction** - The Discharger shall measure the water level in each well, at least Semi-annually, including the times of expected highest and lowest elevations of the water level, and determine the presence of horizontal and vertical gradients, and groundwater flow rate and direction for the respective groundwater body.

9. **Leachate Monitoring** - The Discharger shall conduct leachate monitoring at the ~~two~~ leachate well~~s~~ located within the landfill (~~IT SA4 and~~ 4897D or a replacement) and collect samples if any leachate is detected~~, as follows: (If leachate is detected in both leachate wells, samples shall be collected at each well and combined and tested.)~~. If the leachate well is inoperable, it must be replaced in accordance with Sections D.1 or D.6 of this Order.

   a. **Annual Appendix II Constituent Scan** - Leachate samples shall be taken each year during the month of November. The samples shall be analyzed for all Appendix II Constituents in 40 CFR, part 258.

   b. **Retest** - If any constituents that are not in the COC list are detected in the leachate sampling event at any sampling point, the Discharger shall resample the leachate at that point during the next April and analyze the sample for those detected constituents. If any such constituent is confirmed to be in the leachate, the Discharger shall add the constituent to the COC list and report this to the Board within two weeks of the confirmation.

   c. **Reporting** - Leachate monitoring results shall be included in the semi-annual and annual reports that cover the period during which the monitoring is conducted.

B. SITE INSPECTIONS

The Discharger shall inspect the Landfill in accordance with the following schedule, and record, at a minimum, Standard Observations.

1. During the wet season (October through April), following each storm that produces storm water runoff, or on a monthly basis if no storm produces runoff during the month.

2. During the dry season, a minimum of one inspection shall be performed every three months.

3. **Standard Observations** during a site inspection shall include at least the following:

   a. Evidence of any surface water leaving or entering the Landfill, estimated size of affected area, and estimated flow rate (show affected area on map).

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

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

   d. Inspection of all storm water discharge locations for evidence of non-storm water discharges during dry seasons, and integrity during wet seasons.

   e. Evidence of ponded water at any point on the waste management facility (show affected area on map).

   f. Landscape and irrigation systems.

   g. Integrity of all drainage systems.

   h. LFG collection system.

   i. Site security.

4. Additionally, a Settlement Analysis of the Landfill shall be conducted every five years to determine the degree of long term settlement.

PART III: SAMPLING AND ANALYTICAL PROCEDURES

A. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analysis shall be performed according to the most recent version of Standard USEPA Methods (USEPA publication "SW-846"), and in accordance with a sampling and analysis plan acceptable to the Executive Officer. A State of California approved laboratory shall perform water analysis. Specific methods of analysis must be identified. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign reports of such work submitted to the Regional Board. In addition, the Discharger is responsible for seeing that the laboratory analysis of samples from all monitoring points meets the following restrictions:

1. The methods of 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) in historical data for that medium, the SW-846 analytical method having the lowest Method Detection Limit (MDL) shall be selected.

2. Trace results (results falling between the MDL and the Practical Quantitation Limit (PQL)) for organic compounds shall be reported as such.

3. MDL and PQL shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. Both limits shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. If the laboratory 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 values, the results shall be flagged accordingly, and an estimate of the limit actually achieved shall be included.

4. 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.

5. Non-targeted chromatographic peaks shall be identified, quantified, and reported to a reasonable extent. When significant unknown peaks are encountered, second column or second method confirmation procedures shall be performed in an attempt to identify and more accurately quantify the unknown analyte(s).

6. QA/QC analytical results involving detection of common laboratory contaminants in any sample shall be reported and flagged for easy reference.

7. 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.

8. Proper chain of custody procedures shall be used in all sampling activities at the Landfill.

9. 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.

10. **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 thirty days, and shall be taken in a manner that insures sample independence to the greatest extent feasible [27 CCR section 20415(e)(12)(B)]. For any sampling event during which samples are not collected within thirty days, the Discharger shall report the sampling period in the corresponding semiannual report.

11. Groundwater sampling shall also include an accurate determination of the groundwater surface elevation and field parameters[2] (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 Section II.A.8 of this MRP. All field parameter measurements shall be included in the semiannual reports submitted to the Regional Board.

T E N T A T I V E

[2] "Field parameters" may also be tested in a laboratory instead of being tested in the field.

B. RECORDS TO BE MAINTAINED

Analytical records shall be maintained by the Discharger or laboratory, and shall be retained for a minimum of five years. The period of retention shall be extended during the course of any unresolved litigation or when directed by the Executive Officer. Such records shall show the following for each sample:

1. Identity of sample and the actual monitoring point designation from which it was taken, along with the identity of the individual who obtained the sample.
2. Date and time of sampling.
3. Date and time that analyses were started and completed, and the name of personnel performing each analysis.
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used.
5. Calculations of results; and
6. Results of analyses, and MDL and PQL for each analysis

Ordered by: _____
Samuel Unger, P.E.
Executive Officer

Date: ~~April 4~~May 2, 2013

TENTATIVE

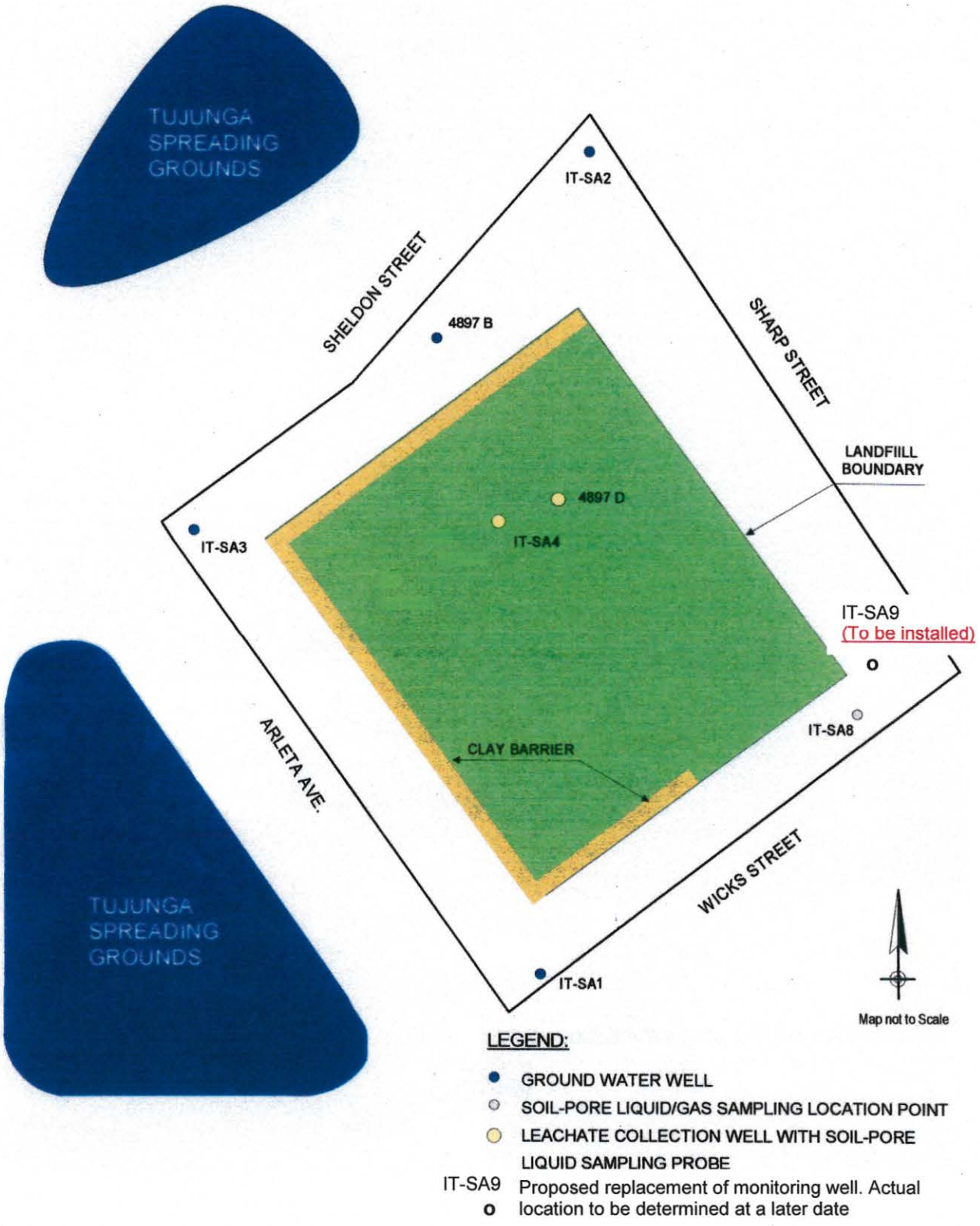


Figure 1. Groundwater Well and Leachate Well Locations