

Los Angeles Regional Water Quality Control Board

August 26, 2013

Mr. Khalil Gharios, Division Manager
City of Los Angeles Department of Public Works
1149 South Broadway Street, 8th Floor
Los Angeles, California 90015

RESPONSE TO COMMENTS - TENTATIVE WASTE DISCHARGE REQUIREMENTS FOR GAFFEY STREET LANDFILL, LOS ANGELES, CALIFORNIA (File No. 55-018, CI 1001, Geotracker Global ID L10005503631)

Dear Mr. Gharios:

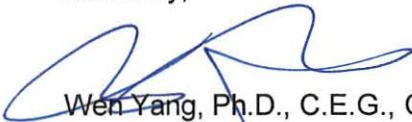
The Regional Water Quality Control Board (Regional Board) is in receipt of your letter dated August 15, 2013, that includes comments regarding the tentative revised waste discharge requirements (WDRs) for the Gaffey Street Landfill, a former municipal solid wastes disposal facility at 1400 North Gaffey Street, San Pedro, California. The tentative WDRs were sent to you and other interested parties on July 15, 2013.

Regional Board staff has reviewed the comments and prepared the attached responses to comments. Also attached are copies of the comments received and a revised tentative Order that includes all revisions made after July 15, 2013.

In accordance with administrative procedures, this Regional Board, at a public meeting to be held on September 12, 2013, beginning at 9:00 AM., at the Metropolitan Water District of Southern California, 700 North Alameda Street, Board Room, in Los Angeles, California, will consider the enclosed tentative WDRs. It is expected that the Regional Board will take action at the meeting, however, as testimony dictates, the Regional Board at its discretion may order further investigation.

If you have any questions or need additional information, please contact Mr. Douglas Cross (Project Manager) at (213) 620-2246 or dcross@waterboards.ca.gov, or me at (213) 620-2253 or wyang@waterboards.ca.gov.

Sincerely,



Wen Yang, Ph.D., C.E.G., C.H.G.
Chief of Land Disposal Unit

Enclosures

cc: Leslie Graves, Land Disposal Program, State Water Resource Control Board
Martin Perez, California Department of Resources Recycling and Recovery
David Thompson, City of Los Angeles Local Enforcement Agency

CITY OF LOS ANGELES

CALIFORNIA



ERIC GARCETTI
MAYOR

August 15, 2013

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California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Attention: Wen Yang, Chief of Landfill Disposal Unit
Douglas Cross, Engineering Geologist

GAFFEY STREET LANDFILL (FILE NO. 55-018) COMMENTS ON TENTATIVE WASTE DISCHARGE REQUIREMENTS

The City of Los Angeles Bureau of Sanitation hereby submits its comments and recommended revisions to the Gaffey Street Landfill Tentative Waste Discharge Requirements (WDR) received from the LARWQCB dated July 15, 2013. The following are our recommended changes for your consideration:

BACKGROUND:

1. [Page 2, Section 7-VI.3] Change Groundwater System I & M from Quarterly to Semiannual.

REQUIREMENT FOR POSTCLOSURE MAINTENANCE:

1. [Page 7, Section C.10] Survey monuments will not be placed on the ballfield. Benchmarks will be kept on the perimeter of the site.

REVISED MONITORING AND REPORTING PROGRAM:

1. [Page T-3, Section C.2] Limit graphs and concentration limits to pH, Nitrate, Chloride, Sulfate, and Boron.
2. [Page T-6, Table T-1] LW-1 is currently buried under 10 feet of soil. The City would like to abandon this well in place and have it removed from the WDR.
3. [Page T-7, Table T-2] Limit constituents to pH, Nitrate, Chloride, Sulfate, and Boron for both the semi-annual and annual monitoring.

If you have any questions or comments please contact John Hamilton at (213) 847-2700.

Respectfully,

Khalil M. Gharios, P.E., Division Manager
Solid Resource Processing and Construction Division

cc: David Thompson, LEA
Paul Blount, BOS

Jonathan Zari, BOS
Timmie DeRamos, BOS



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

WASTE DISCHARGE REQUIREMENTS
for
CITY OF LOS ANGELES, BUREAU OF SANITATION
(Gaffey Street Landfill)

RESPONSE TO COMMENTS

The public comment period for the tentative Order started on July 15, 2013, when the tentative Order was mailed to the City of Los Angeles, Bureau of Sanitation (Discharger) and interested persons, and ended on August 16, 2013, which was the deadline for submitting comments set in the cover letter transmitting the tentative revised Waste Discharge Requirements (WDRs) and Monitoring and Reporting Program (MRP). During the public comment period, Regional Board staff received comments regarding the tentative Order from the Discharger that were submitted to Geotracker on August 15, 2013. The comments are responded to as follows:

Comment No. 1. (On Page 2 of the tentative WDRs, Background Item 7.VI.3)

[Page 2, Section 7-VI.3] Change Groundwater System I & M from Quarterly to Semiannual.

Response: Staff disagrees with this comment. This finding of the WDRs simply describes what has been proposed by the Discharger in the Landfills Final Closure Post-Closure Maintenance Plan, which states that groundwater inspection and maintenance will be conducted quarterly. The actual required groundwater sampling frequency, which is semiannually, is stated in the Section A of the MRP. No revision is made to the tentative WDRs in response to this comment.

Comment No. 2. (On Page 7 of the tentative WDRs, Section C.10)

[Page 7, C.10] Survey monuments will not be placed on the ball field. Benchmarks will be kept on the perimeter of the site.

Response: Section C.10 of the tentative WDRs requires that *"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."* The WDRs do not specify where the benchmarks will be placed, however, Requirement C.10 has been revised to allow alternative measures to monitor settlement at the Landfill.

Comment No. 3. (On Page T-3 of tentative MRP, Item No. I.C.2.)

[Page T-3, Section C.2] Limit graphs and concentration limits to pH, Nitrate, Chloride, Sulfate, and Boron.

Response: Section I.C.2 of the tentative MRP requires that *"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."* Staff believes that the constituents that are required to be plotted in the MRP are appropriate for the Landfill at this time. No revision has been made in response to this comment.

Comment No. 4. (On Page 6 of tentative WDRs, Table T-1.)

[Page T-6, Table T-1] LW-1 is currently buried under 10 feet of soil. The City would like to abandon this well in place and have it removed from the WDR.

Response: Staff disagrees with this comment. The well is necessary to observe and sample any leachate that may be produced at the Landfill. If the well is inoperable, it must be replaced in accordance of Section D.4 of the WDRs. No revision is made to the tentative WDRs in response to this comment.

Comment No. 5. (On Page T-7 of tentative MRP, Table T-2)

[Page T-6, Table T-2] Limit constituents to pH, Nitrate, Chloride, Sulfate, and Boron for both the semi-annual and annual monitoring.

Response: Staff disagrees with this comment. Staff believes that the constituents that are required to be monitored in Table T-2 of the MRP are appropriate for the Landfill at this time. In accordance with Requirement D.2 of WDRs, the MRP, including groundwater monitoring requirements, may be revised at a later date by the Regional Board Executive Officer. No revision is made to the tentative MRP in response to this comment.

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
(Gaffey Street Landfill)

(File No. 55-018)

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 Gaffey Street Landfill (Landfill), a closed Class III municipal solid wastes (MSW) disposal facility located at 1400 North Gaffey Street, San Pedro, California. The Landfill is adjacent to the 110 Freeway and approximately 0.75 miles north of the junction between the 110 Freeway and the Vincent Thomas Bridge (Figure 1).
2. The Landfill occupies 17 acres of a 30-acre property (Site) and has a relatively flat top deck of approximately 13 acres. The remaining 4 acres consists of benched slopes with an average grade of 2:1 (horizontal:vertical). The Landfill is not equipped with a liner or leachate collection and removal system.
3. The Landfill was operated by the Discharger from 1957 to 1963 as a MSW and incinerator ash disposal facility and then, from January 1968 to August 1977, the facility received street maintenance waste. Subsequently, only inert materials were placed at the site for the purposes of constructing a soil final cover. During its active life, approximately 900,000 tons of MSW and ash were disposed of at the Landfill.
4. The Regional Board adopted Resolution No. 55-07 on May 26, 1955, prescribing waste discharge requirements (WDRs) for the Landfill for the disposal of MSW, greenwaste, incinerator ash, and inert materials. On May 24, 2001, the Regional Board adopted Order No. 01-071 that includes WDRs to regulate the postclosure maintenance activities at the Landfill, including groundwater monitoring.
5. Title 27 of the California Code of Regulations (27 CCR), provides that landfills which are closed, abandoned, or inactive (CAI) before November 27, 1984, are not specifically required to be

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closed in accordance with requirements of 27 CCR section 20950. However, pursuant to 27 CCR section 20080(g), persons responsible for discharges at landfills which have CAI status 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. Although not required to do so because of the CAI status of the Landfill, the Discharger submitted a Final Closure and Post-Closure Maintenance Plan (FCPCMP) for the site (dated June 29, 1999) proposing an alternative evapotranspirative (ET) cover for the Landfill. The FCPCMP was prepared pursuant to requirements of 27 CCR and was conditionally approved on May 24, 2001, by the Regional Board with the adoption of Order No. 01-071, which required a technical document to be submitted by August 24, 2001. The technical document, submitted to the Regional Board by the Discharger on August 24, 2001, provided a proposal for the installation of two moisture monitoring probes, relevant data/information to justify cessation of monitoring at pressure vacuum lysimeters (L1, L2, and L3), and details of a final cover consisting of the following from top to bottom:

- I. One foot of lightly compacted borrow soil
- II. Three feet of compacted soil
- III. Six inches of clean gravel
- IV. The existing cover soil and/or asphalt grindings to achieve final grades.

7. The FCPCMP includes the following closure and post-closure maintenance activities:

V. CLOSURE

- a. Final grades on the top deck of the Landfill where the soccer fields are located are 1% with a subdrain beneath the soil cover. The remaining soil cover on the top deck of the Landfill is graded at 3% to provide for storm water runoff and to prevent ponding. Side slopes are graded at 2:1 horizontal to vertical with 20-foot benches every 20 vertical feet.
- b. Vegetation coverage to prevent erosion of the final cover.

VI. POST-CLOSURE MAINTENANCE

The City shall inspect the Landfill for the following:

	<u>Inspection Period</u>
1. Site Security Inspection and Maintenance (I & M)	Monthly
2. Landfill Gas Monitoring I & M	Monthly
3. Groundwater System I & M	Quarterly
4. Final Cover I & M	Semiannual
5. Drainage System I & M	Semiannual
6. Vegetative Cover I & M	Semiannual
7. Final Grading I & M	Yearly
8. Settlement Analysis	5-Years

8. Between 1999 and 2002, the Discharger completed final closure activities at the site that included final cover construction and drainage improvements to accommodate a 100-year, 24-hour storm.

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- The monolithic soil cover at the Landfill is approximately 11 to 15 feet in thickness.
9. 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 post-closure maintenance at the Landfill.
 10. The Discharger has submitted a revised Report of Waste Discharge (ROWD), dated October 30, 2012, to the Regional Board to facilitate the revision of the WDRs.

REGULATORY REQUIREMENTS

11. 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.
12. 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 Los Angeles Coastal Plain 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.

ENVIRONMENTAL SETTING

13. The Landfill is located within the West Coast Hydrologic Subarea of the Coastal Plain Hydrologic Area of the Los Angeles – San Gabriel Hydrologic Unit in the southern portion of the Los Angeles Basin. The Landfill is underlain by Recent-aged, highly porous and permeable, alluvium, which occurs as a thin cover overlying the San Pedro Formation. The Landfill is not within a 100-year floodplain.
14. The hydrologic unit where the Landfill is located is bounded by the Palos Verde Hills to the west, the Los Angeles Basin to the north, the Los Angeles Harbor to the east, and by the Pacific Ocean to the south. The bedrock beneath the site consists of marine sediments of Miocene and upper Pleistocene age which unconformably overly the Catalina schist basement rock.
15. The Landfill is located on the eastern edge of the Palos Verdes Block. Several northwest-southeast trending anticlines that plunge southeast into the San Pedro Harbor, including the Gaffey anticline that lies just north of the Landfill. The Palos Verdes Fault, trending northwest-southeast, is approximately one mile to the north of the Landfill and is considered an inactive fault. Active faults are defined as Holocene epoch faults that have exhibited movement in the last 11,000 years.
16. The closed Landfill is zoned for public use facilities, intended for open active outdoor recreational activities. Ancillary structures at the Landfill include public restrooms, soccer fields, parking lot, and a yard trimmings processing facility.

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ENVIRONMENTAL MONITORING SYSTEMS AND KNOWN POLLUTION

17. Section 13273 of 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 for the Landfill to the Regional Board on June 30, 1988. The Regional Board Executive Officer approved the SWAT with a letter dated December 8, 1993. The SWAT concluded that the Landfill might be affecting groundwater quality in the vicinity of the Landfill. As a result of the SWAT, five groundwater monitoring wells (MW-A, MW-B, MW-D, MW-2, and MW-3) and one leachate well (LW-1) were installed.
18. Following the SWAT, groundwater monitoring has been continued at the Landfill. Low levels of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), including acetone, toluene, bis(2-ethylhexyl) phthalate, diethylphthalate, di-n-butyl phthalate, pyrene, and isoprene have been detected in groundwater. Such pollutants have been detected in all of the groundwater monitoring wells, while the majority of the VOC detections have been reported at monitoring wells MW-B and MW-2. The pollutants, when present, have been at low concentrations, generally below the maximum contaminant level (MCL) for drinking water of each constituent.
19. Between December 2001 and September 2002, a gas collection system consisting of four horizontal wells, eight vertical wells, a 140 cubic feet per minute blower, and two activated carbon absorber vessels was installed at the Landfill.
20. The current groundwater monitoring network at the Landfill includes one background well (MW-D) and four down gradient wells (MW-A, MW-B, MW-2, and MW-3) (Figure 2). Additionally, one leachate observation well has been installed west of the Landfill (LW-1). Groundwater level is typically about 2 to 15 feet above mean sea level (msl) (bottom of waste is approximately 30 feet above msl). Groundwater flows northerly from the Landfill (Figure 3).
21. Considering the groundwater conditions determined from the SWAT and the results of the last 15 years of groundwater monitoring, this Order includes a reduced groundwater monitoring network that is outlined in the attached monitoring and reporting program (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.

ADMINISTRATIVE

22. 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.

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The Regional Board in a public meeting heard and considered all comments pertaining to postclosure maintenance of 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 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 postclosure maintenance plan required in section C.1. of this Order. If there is any conflict between provisions stated within the WDRs and the postclosure maintenance plan, the WDRs provisions shall prevail.

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;

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- 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 Postclosure Maintenance Plan to the Regional Board for the approval of the Executive Officer. The plan shall provide a description of current conditions at the Landfill and shall include schedules of all monitoring and inspection activities required in this Order.
2. The Landfill's postclosure maintenance period shall continue until the Regional Board determines that remaining wastes at the Landfill does not threaten water quality.
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.

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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 any 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, or use other appropriate measures, to monitor settlement 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 1001 (Attachment T).

D. REQUIREMENTS FOR GROUNDWATER MONITORING

1. 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.
2. 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.
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.
4. The effectiveness of all groundwater monitoring wells, groundwater monitoring devices, and leachate and gas detection systems shall be maintained throughout the Landfill's

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postclosure maintenance period in accordance with acceptable industry standards. If a well 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 to operating order.

5. If a groundwater monitoring well is proposed to replace an inoperative well, 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 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).
7. 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 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.

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.

9. 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

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monitored pursuant to this Order or as directed by the Executive Officer through future revisions of the MRP.

10. 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.
11. 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 three groundwater wells and a leachate observation well, which shall be sampled 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.

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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. 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.

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- 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.

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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

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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.

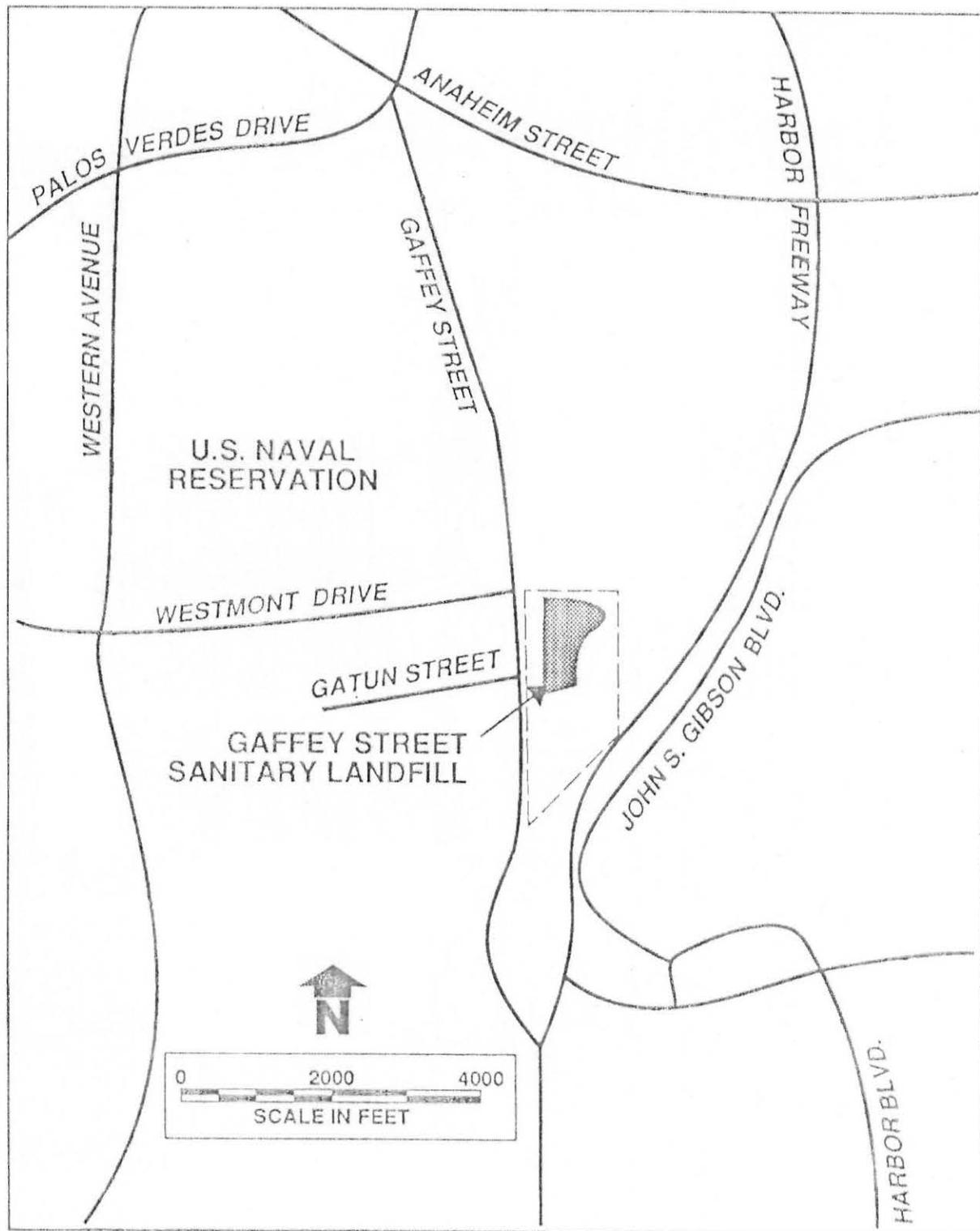
I. TERMINATION

Except for violation enforcement purposes, Regional Board Order No. 01-071, 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 September 12, 2013.

Samuel Unger, P.E.
Executive Officer

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Figure 1. Location Map

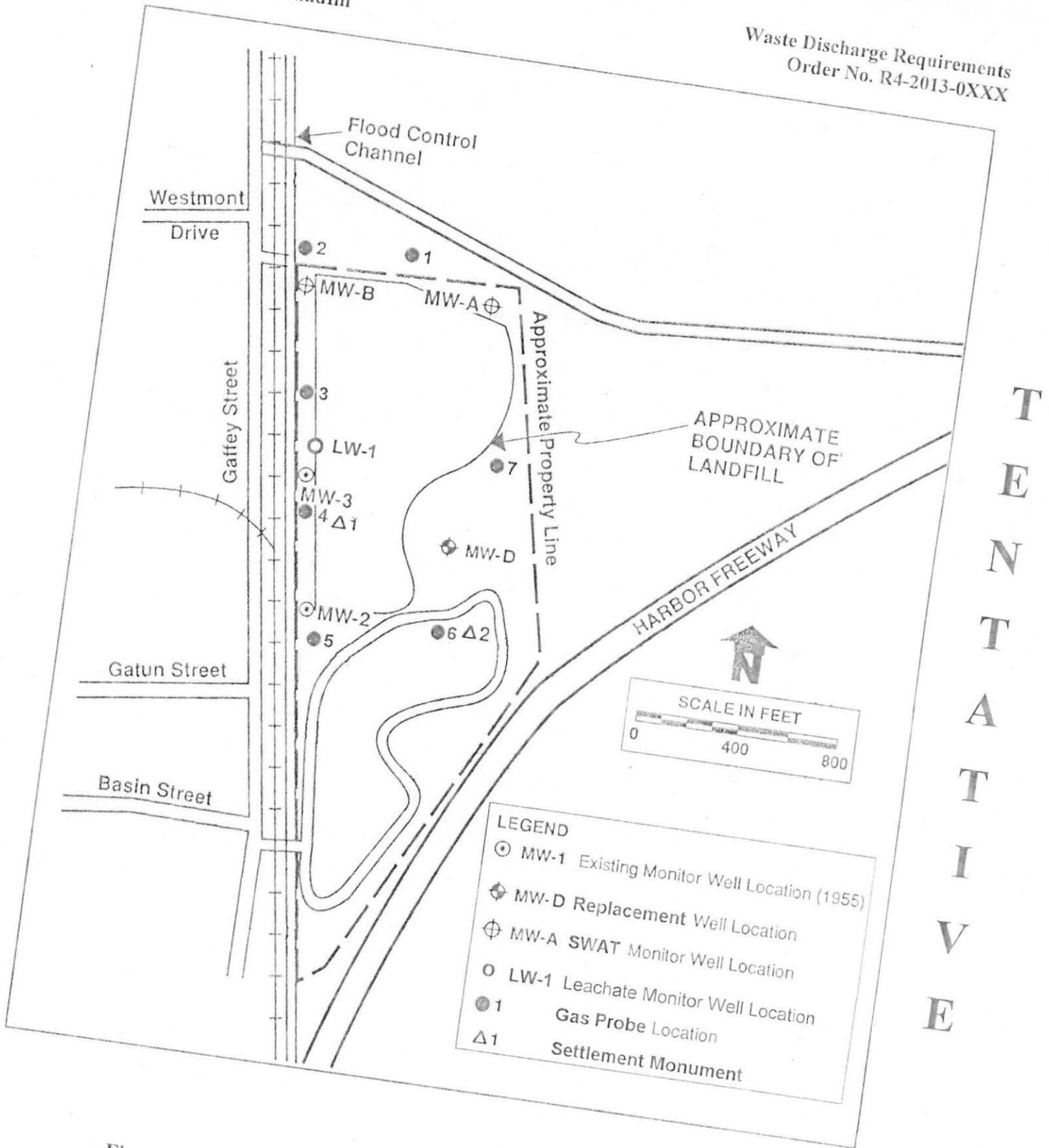
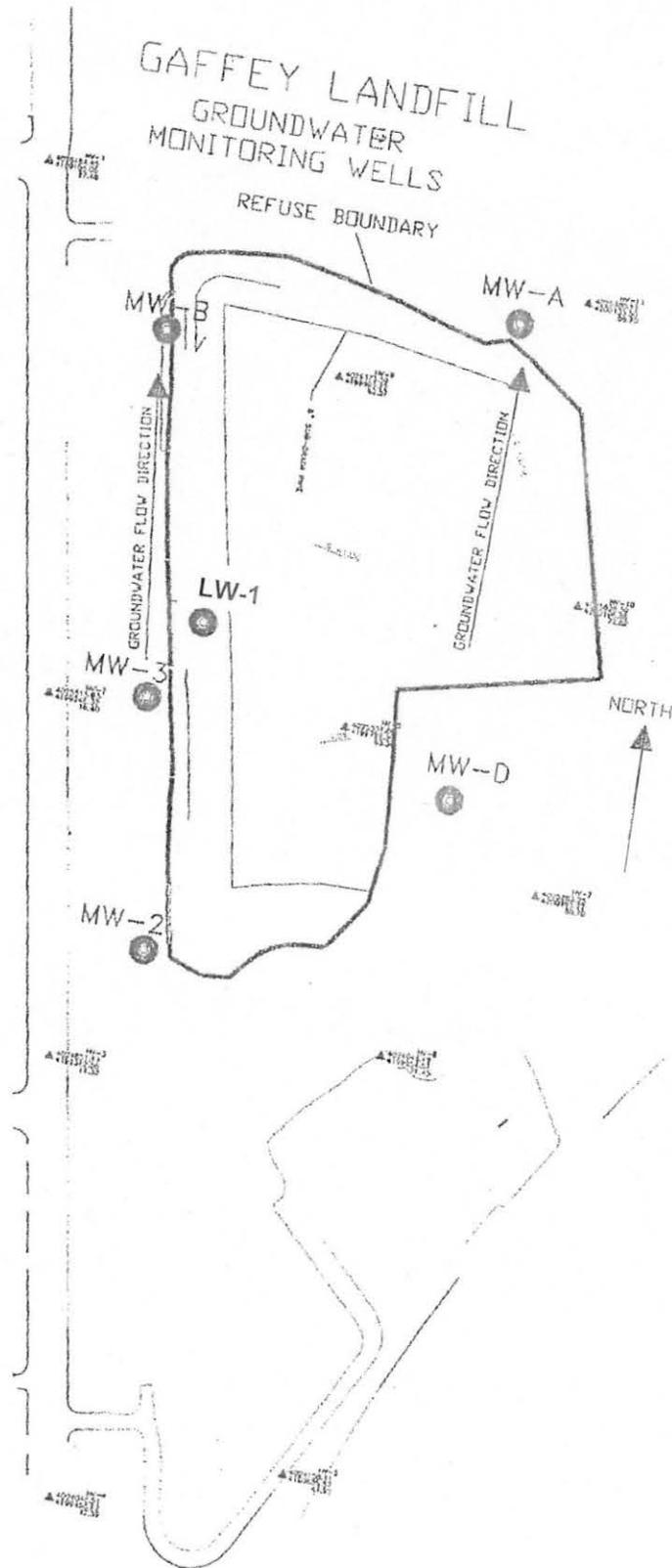


Figure 2. Existing Groundwater Well and Leachate Well Locations



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Figure 3. Groundwater Gradient

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

REVISED MONITORING AND REPORTING PROGRAM (No. CI-1001)

FOR
CITY OF LOS ANGELES
(Gaffey Street Landfill)

This Monitoring and Reporting Program (MRP), No. CI-1001, is issued by the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) to the City of Los Angeles Bureau of Sanitation (Discharger) for the Gaffey Street Landfill (Landfill) pursuant to California Water Code (CWC) section 13267(b). This MRP is incorporated by reference into Regional Board Order No. R4-2013-XXXX (Order), adopted on September 12, 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:

<u>Report</u>	<u>Date due to the Regional Board</u>
1 st Semi-Annual Report (for the period from January 1 to June 30)	August 15
2 nd 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-1001), 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 previously submitted a time schedule for correcting said 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 transmittal letter.

July 15, 2013
August 23, 2013

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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.6. 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. L10005503631). 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 shall 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 Dischargers 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.

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.

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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 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 Regional Board's determination).
 - b. Carry out the requirements of Section I.D.4. for all potentially-affected monitored media.

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- 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 submit a report to GeoTracker in accordance with Section I.A.4 of this MRP that includes 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:
 - 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.

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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 Limit¹, 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 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 Regional Board as outlined in Section I of this MRP.

A. GROUNDWATER MONITORING

1. **Groundwater Monitoring Networks** - The groundwater monitoring network for the Landfill shall include detection monitoring wells MW-D, MW-2, and MW-B. The required environmental monitoring points for the Landfill are listed in Table T-1 and displayed on Figure T-1.

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.

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Table T-1: Groundwater and leachate Monitoring Points at the Gaffey Street Landfill

Media Monitored	Monitoring Point	Location
Compliance wells	MW-2 and MW-B	Downgradient
Background well	MW-D	Upgradient
Leachate Observation Well	LW-1	For Leachate Observation and Sampling Only

2. **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).
3. **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 Regional Board staff, semi-annual sampling shall be conducted in May and November, annual and five-year COC sampling shall be conducted in November.
4. **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.
5. **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. R4-2013-0xxx. 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.

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Table T-2 Groundwater Monitoring Parameters and Minimum Monitoring Frequencies

Constituent	Reporting Unit*
<u>Semi Annually Monitoring</u>	
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
<u>Annually Monitored Parameters</u>	
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 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.

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- 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 shall 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

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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 constitute 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 Regional 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.

- 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

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tracking mode at that well, shall remove the constituent(s) from the scope list created for that well, notify the Regional 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 annual leachate monitoring at the leachate observation well located just west of the landfill (LW-1) and collect a sample if any leachate is detected.
 - 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 Regional 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.

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- 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. Landfill gas 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

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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 parameters² (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.

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.

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

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: September 12, 2013

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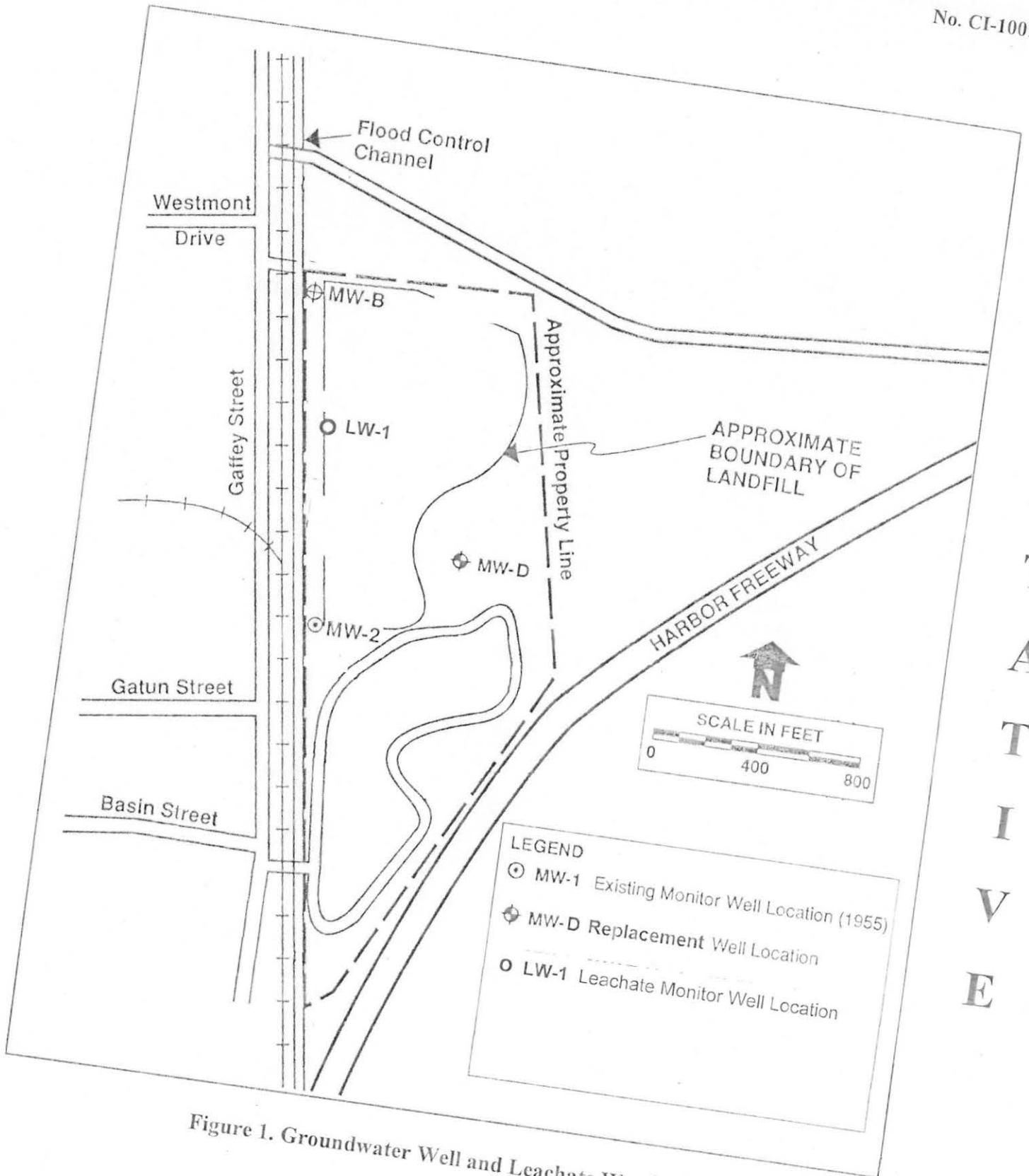


Figure 1. Groundwater Well and Leachate Well Locations

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