

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION**

ORDER NO. R8-2011-0014

**WASTE DISCHARGE REQUIREMENTS
FOR**

USA WASTE OF CALIFORNIA

**EL SOBRANTE LANDFILL
CLASS III SOLID WASTE DISPOSAL SITE
RIVERSIDE COUNTY**

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. USA Waste of California (hereinafter Discharger) owns and is responsible for the operation and maintenance of the El Sobrante Landfill (ESL). ESL is a Class III landfill that accepts non-hazardous municipal solid waste (MSW). The landfill is located at 10910 Dawson Canyon Road, Corona, California, within the County of Riverside. Landfilling operations at ESL began in 1986. Approximately 495 acres of the site have been surveyed and permitted for landfill activities to date. The existing, permitted portion of the ESL is located in Section 26, T4S, R6W, SBB&M, at latitude 33°47'36" and longitude -117°28'24". The location of the site is shown on **Attachment A**, which is hereby made a part of this order.
2. The discharge of waste to land is regulated by California Code of Regulations, Title 27, Division 2, Subdivision 1 (Title 27). The terms used in this order are contained in Title 27, Chapter 2, §20150, §20163, §20164, and §20415.
3. ESL currently operates under Waste Discharge Requirements (WDR) Order No. 01-53 as amended by Order No. R8-2010-0032, which authorized ESL to accept treated woodwaste and other designated wastes as approved by the Regional Board staff. The current permitted capacity of the ESL is approximately 210 million cubic yards (MCY). The permitted footprint is 495 acres. This order updates and replaces WDR Order No. 01-53.
4. Storm water discharges from ESL are regulated by State Water Resources Control Board (SWRCB) Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, for discharges of storm water associated with industrial activities.
5. The WDRs for the site are being updated to reflect the Discharger's request for a change in the previously approved bottom liner design and construction, as described in Order No. 01-53, for the new expansion projects at ESL into previously

permitted areas, and to incorporate WDR Order No. R8-2010-0032 into the revised WDRs.

6. ESL is located in western Riverside County in the foothills east of the Temescal Valley, between Olsen Canyon and Dawson Canyon. Elevations across the site range from 1,450 feet above mean sea level (MSL) to 1,832 feet above MSL. Natural slopes range from 1.5 (horizontal) to 1 (vertical) to nearly flat. The steeper slopes are generally found in the eastern portions of the site.
7. ESL is located within the Peninsular Ranges Physiographic Province and is part of the Perris Structural Block. The Glen Ivy North segment of the active Elsinore fault zone projects along the Temescal Valley approximately 2 miles west of the site. The site is primarily underlain by the metasedimentary¹ rocks of the Jurassic Bedford Canyon Formation. The Bedford Canyon Formation is composed mainly of thinly to thickly interbedded argillites, quartzites, metabreccias, and metasandstones. Portions of the site are also underlain by Tertiary and Quaternary sedimentary formations including the Lake Mathews Formation, the Silverado Formation and older alluvium. Cretaceous granitic rocks associated with the Southern California Batholith are located in the extreme northeastern portion of the site, and intrusive dikes² of the Cretaceous Temescal Wash Quartz Latite Porphyry were encountered during excavation of some cells in the existing landfill area.
8. The site is located in an arid to semi-arid environment. Average annual site precipitation is estimated to be approximately 12 inches based on precipitation data and maps from the National Weather Service (NOAA Atlas 2 dated 1973). The estimated precipitation for a 24-hour, 100-year storm event is 6 inches. The evaporation rate averages 73.39 inches per year.
9. ESL is located between Lake Mathews to the northeast and Temescal Wash to the southeast within the Lake Mathews Hydrologic Area, in the Bedford Canyon Hydrologic Subarea of the Santa Ana River Watershed (Santa Ana Hydrologic Basin). No natural lakes or other bodies of standing water occur at the site. Ephemeral³ seeps and springs occur in several canyons located within or adjacent to the landfill property. Groundwater, of generally poor quality, can be found in the bedrock fractures of the Bedford Canyon Formation and in the alluvium-filled bottoms of the canyons. Depth to groundwater beneath the site varies, with groundwater in the canyon bottoms occurring at depths less than 20 feet, and groundwater beneath the ridges occurring at depths in excess of 150 feet (approximately 1,070 to 1,300 feet above MSL, respectively). Groundwater flow varies across the site, but in the vicinity of the existing landfill it flows predominantly

¹ Sedimentary rocks that have been partially metamorphosed. Sedimentary rocks are rocks that have formed from the deposition of sediments from water or air such as silt, sand, and gravel, or through the precipitation of chemicals from water such as limestone and gypsum. Metamorphism is the process by which rocks are altered in the solid state by pressure, heat, and chemical substances.

² Intrusive dikes are tabular bodies of igneous rocks (such as granite) that are usually caused by the injection or emplacement of magma into fractures, joints, or bedding of adjacent rocks.

³ Streams or springs that only flow during part of the year, usually in direct response to precipitation.

from the northeast to the south and southwest at an average hydraulic gradient of 0.08 foot per foot.

10. A Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) became effective on January 24, 1995. The Basin Plan contains beneficial uses and water quality objectives for waters in the Santa Ana Region. The water quality objectives and the groundwater basin boundaries, now known as groundwater management zones, were updated in February 2008.
11. Surface drainage from the landfill property, and surface drainage from ephemeral streams located adjacent to the landfill property, is tributary to Temescal Creek Reach 2, the intermittent beneficial uses of which include:
 - a. Agricultural supply,
 - b. Industrial service supply,
 - c. Groundwater recharge,
 - d. Contact water recreation,
 - e. Non-contact water recreation, and
 - f. Limited Warm freshwater habitat.
12. Groundwater from the fractured bedrock and alluvial deposits beneath the landfill property flows into the Bedford Groundwater Management Zone, the beneficial uses of which include:
 - a. Municipal and domestic supply,
 - b. Agricultural supply,
 - c. Industrial service supply, and
 - d. Industrial process supply.
13. Water quality at the site is currently monitored under a Detection Monitoring Program (DMP) and a Corrective Action Program (CAP) in accordance with the parameters and schedules set forth in Monitoring and Reporting Program (M&RP) No. 01-053. The water quality monitoring program for the ESL currently includes groundwater, surface water (including natural seeps and springs), leachate, and landfill gas (LFG) condensate.
14. Low-level concentrations of inorganics and volatile organic compounds (VOCs) were detected in wells located near the toe of the landfill in the fall of 1987, and the landfill was placed in an Evaluation Monitoring Program (EMP). Since LFG was considered to be the principal source of the suspected release, a LFG collection and extraction system was installed and began operation in June 1993. In July 1996, a CAP was initiated, consisting of a groundwater extraction and treatment system, to contain and remove low-level VOCs that were found in groundwater. The CAP was successful, and in June 2003, the Regional Board staff permitted the Discharger to

shut off the groundwater extraction and treatment system and change the CAP remedy to monitored natural attenuation (MNA).

15. The existing LFG collection and extraction system consists of a series of horizontal collectors and vertical wells located in each operating or completed phase. A series of LFG monitoring probes are located around the perimeter of the existing landfill footprint. This LFG monitoring system is regulated by the Riverside County Department of Environmental Health, Local Enforcement Agency.
16. The Discharger has been monitoring leachate annually for Appendix II constituents and re-testing for newly discovered ones, in order to create a constituent of concern (COC) list containing those Appendix II constituents that have been detected and verified to be present.
17. On July 18, 1997, the State Water Resources Control Board (SWRCB) and the Department of Resources Recycling and Recovery (Cal Recycle), formerly known as California Integrated Waste Management Board, enacted the Solid Waste Requirements, Title 27, to replace the non-hazardous waste portions of 23 CCR, Chapter 15.
18. The Regional Board adopted Order No. 01-53 on July 20 2001, for discharges of MSW to land at the ESL. Order No. 01-53 contains discharge requirements, provisions, and monitoring and reporting requirements in accordance with Title 27, for landfill design, operations, and groundwater monitoring. Order No. 01-53 is being replaced by R8-2011-0014.
19. On January 1, 2005, Assembly Bill 1353 (AB 1353), a state law that governs the disposal of treated wood waste (TWW), became effective. "Treated wood," as defined in California Health and Safety Code (CHSC) §25150.7, means wood that has been treated with a chemical preservative registered pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. Sec. 136 and following), that is used for the purposes of protecting wood against insects, microorganisms, fungi, and other environmental conditions that can lead to decay of the wood. The chemicals used to treat wood may include, but are not limited to, chromated copper arsenate, pentachlorophenol, creosote, acid copper chromate, ammoniacal copper arsenate, ammoniacal copper zinc arsenate, or chromated zinc chloride. Order No. 01-53 was amended by WDR Order No. R8-2010-0032, adopted on September 16, 2010, to allow the acceptance of TWW and other designated wastes (as approved by the Regional Board staff) into the lined portions of ESL.
20. AB 1353 negated all existing hazardous waste variances for TWW formerly granted by the California Department of Toxic Substances Control (DTSC), and requires TWW to be disposed of in either:
 - a. A Class I hazardous waste landfill, or
 - b. A Class III landfill that meets all three of the following conditions:

- i. The landfill has at least one composite-lined unit that meets all requirements applicable to the disposal of MSW in California after October 9, 1993. All TWW shall be disposed of in a composite-lined unit of an MSW landfill.
 - ii. The landfill must be regulated by WDRs that specifically allow discharges of TWW, as defined in CHSC §25150.7(b), or designated waste, as defined in California Water Code (CWC) §13173. All TWW accepted at a MSW landfill must be managed to prevent scavenging and landfill operations must assure compliance with CHSC §25150.7(d)(2).
 - iii. Groundwater monitoring of the composite-lined unit(s) to be used for TWW disposal does not indicate a verified release of contaminants to groundwater.
21. AB 1353 does not affect existing law (CHSC, §25143.1.5), which allows MSW landfills to accept non-hazardous TWW generated by the utility industries for disposal in composite-lined units if so authorized by the facility's WDRs.
22. This WDR will allow the Discharger to dispose of TWW and other designated waste (as approved by the Regional Board staff) at the ESL.
23. The California Water Code (CWC) §13263(a) requires that waste discharge requirements implement relevant water quality control plans. The requirements contained herein are intended to assure compliance with the Basin Plan, including water quality objectives and beneficial uses. The Discharger is proposing to implement a waste containment system that meets or exceeds the requirements imposed by Title 27 to protect water quality.
24. As part of the permit application, the Discharger has requested the use of an Engineered Alternative Design (EAD) for both the bottom and side-slope liner systems in place of the prescriptive standard design (PSD). The proposed EAD is equivalent to that previously approved by the Regional Board at ESL. All EADs must be approved by the Regional Board prior to implementation.
25. Engineered alternatives to the PSD are proposed because they will:
- a. Provide minimum static and seismic stability as required under Title 27 §21750(f)(5) on steep side slopes. Steep cut slopes (1.5:1) are proposed at the landfill to decrease the amount of hard rock requiring excavation by blasting; and
 - b. Save installation time and cost while providing equivalent or better protection against water quality impairment offered by the PSD.
26. On April 19 2010, the Discharger submitted an amendment to the May 2009 Joint Technical Document (JTD) to allow the use of an alternative liner design than the one prescribed in Order No. 01-53. Order No. 01-53 is being revised to incorporate the changes to the EAD for liner at ESL. The Regional Board has evaluated the design and has determined that the design is consistent with the requirements of Title 27.

27. Title 27 §20240(c) provides that there shall be a five-foot separation zone between MSW and the highest anticipated elevation of underlying groundwater. There are portions of the ESL expansion area where natural groundwater seeps have been observed at the ground surface. The proposed EAD for the liner at ESL expansion area includes the use of a subdrain system to intercept and collect the intermittent flow from the seeps. The Regional Board has evaluated the Discharger's engineering analysis and concluded that the subdrain component of the EAD liner system meets the requirements of 27 CCR §20080(c) for protection of water quality, and is equivalent to that provided by a five-foot separation zone between the historic high groundwater elevation and the first lift of refuse. Any contamination discovered in the liquids from the subdrain is an indication of a release to the groundwater beneath the site and must be mitigated through an EMP and a CAP.
28. Regional Board staff has reviewed the JTD and its amendments, which is equivalent to a report of waste discharge. It includes the slope stability analyses; the construction quality assurance/ construction quality control (CQA/CQC) plan; final closure and postclosure maintenance plans (PCMP); the financial assurance plan; and the design, operation, and drainage control plans for the expansion areas. During the JTD review period, Regional Board staff provided comments to, and received responses from, the Discharger. All comments were incorporated in the final JTD.
29. The capability of the EAD liner systems to afford water quality protection equivalent to the PSD system depends largely on good quality control during manufacturing of the materials used and diligent CQA/ CQC during the installation of these materials.
30. The Discharger is proposing to implement a rigorous CQA/CQC program for all phases of the project. This CQA/CQC program is intended to identify and correct any problems associated with the construction of the landfill liner systems. The goal of the CQA/CQC program is to prevent any potential tears or other imperfections in the base and side-slope liner systems.
31. A quality assurance/ quality control (QA/QC) program is also implemented during the operation of the landfill. This program includes load checking to screen waste material that comes into the landfill for disposal in order to remove and properly dispose of hazardous waste detected in the waste stream. The QA/QC program also includes on-going monitoring of various elements of the landfill's liner containment system⁴ so that any problems detected will be corrected immediately.
32. The Discharger has demonstrated that the expansion of ESL, if conducted as proposed, will not pollute or threaten to pollute the waters of the State. Further, based on the significantly enhanced containment and operational controls proposed by the Discharger, wastes discharged to the expansion area of the ESL during its

⁴ The liner containment system includes the landfill liner and leachate collection and recovery system (LCRS), which may also include subdrains, and a protective soil layer placed over the liner and LCRS system.

operation and post-closure period should not pollute or threaten to pollute the waters of the State.

33. The proposed post-closure land use is non-irrigated open-space graded to blend in with the natural surroundings and landscaped with low-maintenance ground cover and native plants and shrubs. No construction improvements are proposed on the completed site.
34. The Discharger has stated in the ESL PCMP that the deed to the landfill property, or some other instrument that is normally examined during title search, will be modified to include, in perpetuity, a notation advising any potential purchaser of the property that:
 - a. The parcel has been used as a MSW landfill,
 - b. The land use options for the parcel are restricted in accordance with the post-closure land uses set forth in the PCMP in the JTD, and
 - c. In the event that the Discharger defaults on carrying out either the PCMP or any corrective action needed to address a release, then the responsibility for carrying out such work falls to the property owner.
35. The Regional Board has notified the Discharger and interested agencies and persons of its intent to prescribe revised WDRs for the ESL.
36. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.
37. The project involves the continued operation of an existing facility and as such, is exempt from provisions of the California Environmental Quality Act (Public Resources Code, §21000 et seq.) in accordance with §15301, Chapter 3, Title 14 of the California Code of Regulations.
38. The Regional Board has notified the Discharger and interested agencies and persons of its intent to prescribe revised WDRs for ESL.
39. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger, in order to meet the applicable provisions contained in the California Water Code (CWC), Title 27, and Subtitle D of the Federal Code of Regulations (40 CFR §258), shall comply with the following:

A. DISCHARGE SPECIFICATIONS

1. GROUNDWATER:

The discharge shall neither cause nor contribute to the contamination or pollution of groundwater via the release of waste constituents in either the liquid or gaseous phase.

2. SURFACE WATER:

The discharge shall neither cause nor contribute to any surface water contamination, pollution, or nuisance, including, but not limited to:

- a. Floating, suspended, or deposited macroscopic particulate matter or foam;
- b. Increases in bottom deposits or aquatic growth;
- c. An adverse change in temperature, turbidity, or apparent color change beyond natural background levels and occurrences;
- d. The creation or contribution of visible, floating, suspended, or deposited oil or other products of petroleum origin; and
- e. The introduction or increase in concentration of toxic or other pollutants/contaminants resulting in unreasonable impairment of beneficial uses of the waters of the State.

3. UNSATURATED ZONE:

The discharge shall not cause any increase in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil, subdrain water, or other geologic materials beneath or outside of ESL, if such waste constituents could migrate to the waters of the State and cause a condition of contamination, pollution, or nuisance.

4. PRECIPITATION AND DRAINAGE CONTROL:

- a. Waste management units shall be designed, constructed, and maintained to prevent, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, and washout which could occur as a result of precipitation from a 100-year, 24-hour frequency storm.
- b. Units shall be designed and constructed to achieve compliance with Title 27, §20365.
- c. Top deck surfaces shall be constructed to achieve a minimum one-percent slope and to direct flows to downdrains.
- d. Downdrains and other necessary drainage structures must be constructed for all sideslopes.
- e. All containment structures shall be protected and maintained continuously to prevent commingling of leachate and gas condensate with surface run-on and runoff and to ensure their effectiveness.

5. LIQUIDS USAGE:

- a. The discharge of liquids, including groundwater, leachate or landfill gas condensate, or their use for dust control or irrigation at ESL is prohibited, unless the following conditions are met:
 - i. The liquids are being returned to or used at the landfill; **and**

- ii. The portion of the landfill to which these liquids are discharged is equipped with a containment system meeting the requirements of Section B of this order; **or**
 - iii. The liquids generated from the site are disposed of in accordance with a disposal plan approved by the Executive Officer of the Regional Board.
- b. This section shall not apply to groundwater, leachate, and landfill gas condensate that is treated in accordance with an approved plan prior to being used for dust control or irrigation over the lined portions of the site.

6. ALTERNATIVE LINER DESIGN:

Engineered Alternative Design - The Discharger has demonstrated that the EAD for ESL (including the expansion areas) liner system satisfies the criteria for an engineered alternative to the PSD (as provided by Title 27, §20080 (b)). The performance of the EAD equals or exceeds the waste containment capability of the PSD. For each phase of liner construction, the following shall apply:

- a. An approved construction quality assurance/ construction quality control (CQA/CQC) program for the EAD shall be implemented during each phase of construction;
- b. All mitigation measures proposed by the Discharger or the Regional Board shall be implemented to protect water quality;
- c. The Discharger and its contractors shall submit progress reports on a weekly basis to the Regional Board during the construction of the landfill's EAD so that compliance with Item (a), above, can be determined. Daily summary reports, including all construction activities and tests, shall be submitted by 12:00 PM the following business day;
- d. Within 90 days of completion of the EAD, the Discharger shall submit a final as-built report including drawings, maps, and CQA/CQC certification; and
- e. If the EAD fails to perform as expected, the Regional Board reserves the right to require additional protective measures at the landfill.

B. CONTAINMENT SYSTEMS INSTALLED BEYOND THE EXISTING FOOTPRINT

Discharge prohibition – The discharge of MSW to any area of ESL beyond the existing footprint of the site is prohibited, unless approved by the Regional Board, and unless such discharge is to an area equipped with a containment system that is constructed in accordance with the standard of the industry, and that meets the additional requirements for both liners and leachate collection systems in accordance with an approved JTD or JTD addendum, and any additional requirements of Title 27, §§20330, 20080, 20340, and 20360; and State Board Resolution No. 93-62.

C. PROVISIONS

1. The Discharger shall comply with all discharge prohibitions, discharge specifications, provisions, and monitoring and reporting requirements of this order immediately upon its adoption.
2. The discharge of wastes shall not cause the release of pollutants or waste constituents in a manner that could cause a condition of contamination, pollution, or nuisance to occur, as indicated by the most appropriate statistical or non-statistical data analysis method and retest method.
3. The treatment or disposal of wastes shall not cause a nuisance or pollution, as defined in CWC §13050.
4. All wastes shall be maintained on property owned or controlled by the Discharger.
5. There shall be no disposal of wastes that contain any substances in concentrations toxic to human, animal, or plant life, such that these wastes could commingle with waters of the State.
6. The discharge of hazardous wastes at the site is prohibited.
7. The disposal of liquid wastes into the landfill is prohibited, except as allowed by Discharge Specification A.5 of this order.
8. The operation of ESL shall not cause a discharge of pollutants into waters of the United States, including wetlands, that violates any requirements of the Clean Water Act (CWA), including, but not limited to, the National Pollutant Discharge Elimination System (NPDES) requirements, pursuant to CWA §402.
9. During the months when precipitation can be expected, disposal activities shall be confined to the smallest area possible based on anticipated quantity of wastes that will be received and on operational procedures.
10. The Discharger shall remove and properly dispose of any wastes that are placed at the site in violation of these requirements.
11. All sewage treatment plant grit and screening residues disposed of at the site must be segregated from public access and shall meet the following criteria:
 - a. A moisture content of less than 50 percent;
 - b. Disinfection in accordance with a method approved by the local Department of Environmental Health and the Regional Board; and
12. The Discharger shall require all operators that submit a request to dispose sewage treatment plant grit and screening residues at the ESL to provide a minimum 24-hour notice to landfill personnel, or a written schedule of expected

delivery dates and approximate arrival times, before these materials can be transported to the ESL.

13. The Discharger shall establish and maintain permanent monuments in California coordinates (or equivalent) to define the boundary of the footprint of the landfill. The benchmarks shall be certified by a licensed surveyor or a professional civil engineer authorized to practice in California.
14. Prior to the initiation of waste discharge in the proposed expansion area, the Discharger shall install an approved groundwater monitoring network.
15. The water used during landfill operations shall be limited to the minimum amount reasonably necessary for dust control purposes, fire suppression, and minor maintenance.
16. Adequate cover shall be placed over all lifts at all times, with the exception of the active face of the landfill, which receives alternative daily cover (ADC) or soil for protection.
17. At the end of each operating day, as defined in the ESL's solid waste facility permit, or if landfilling operations cease for more than a 12-hour period, daily cover or an approved ADC must be placed over the active face in a quantity and depth sufficient to prevent any waste from daylighting or as directed by Regional Board staff.
18. The Discharger shall notify the Regional Board within 48 hours of any slope failure occurring in a waste management unit. Any failure that threatens the integrity of containment features or the landfill shall be promptly corrected after a remediation workplan and schedule have been approved by the Executive Officer of the Regional Board, unless it poses an immediate threat to the environment or landfill containment structures. Then it will be corrected as soon as possible.
19. The Discharger shall implement the attached M&RP No. R8-2011-0014 in order to detect, at the earliest opportunity, any unauthorized discharge of waste constituents from the Unit, or any unreasonable impairment of beneficial uses caused by or associated with discharges of waste to the Unit.
20. At any time, the Discharger may file a written request, including appropriate supporting documents, with the Executive Officer of the Regional Board, proposing modifications to M&RP No. R8-2011-0014. The Discharger shall implement any changes in the revised M&RP upon receipt of a signed copy.
21. The Discharger shall install any additional ground water, soil pore liquid, soil pore gas, or leachate monitoring devices determined by the Executive Officer of the Regional Board to be necessary to comply with M&RP No. R8-2011-0014.

22. The Discharger shall expand the existing landfill gas collection and recovery system as the landfill operation progresses in order to prevent the migration of landfill gas to groundwater and to the environment.
23. This Order supersedes and replaces WDR Order Nos. 01-53 and R8-2010-0032, which are hereby rescinded.
24. Concentration Limits – The concentration limit for any given Constituent of Concern (COC) or Monitoring Parameter in a given monitored medium at an MSW landfill shall be in accordance with Title 27, §20400. These limits are specified in the attached Monitoring and Reporting Program (M&RP).

D. CONTINGENCY RESPONSES

1. **Leachate seep** – The Discharger shall immediately report by telephone and/or email the discovery of any seepage from, or soil staining at, the site. If feasible, a sample of the leachate shall be collected and analytical data submitted to the Regional Board. A written report shall be filed with the Regional Board within seven days, containing at least the following information:
 - a. Map – A map showing the location(s) of seepage;
 - b. Flow rate – An estimate of the flow rate or volume;
 - c. Description – A description of the nature of the discharge (e.g., all pertinent observations and analyses); and
 - d. Corrective measures – Measures proposed to address any seep(s) for approval by Regional Board staff.
2. **An initial indication of a release** – Should the initial statistical or non-statistical comparison of the groundwater monitoring data under Title 27, §20415 for any COC or Monitoring Parameter indicate that a release is tentatively identified, the Discharger shall immediately notify the site's designated Regional Board staff person by phone and/or email. The Discharger shall also provide written notification by certified mail within seven days of such determination (Title 27, §20420(j)(1)) and shall carry out a discrete retest in accordance with Title 27, §20415(e)(8)(E). The Discharger shall inform the Regional Board of the outcome of the retest as soon as the results are available, and follow up with written results submitted by certified mail within seven days of completing the retest.
3. **Retest** – If the retest confirms the existence of a release, the Discharger shall carry out the requirements of Title 27, §20420(k) and §20425.
4. **Physical evidence of a release** – If either the Discharger or the Regional Board determines that there is significant physical evidence of a release (Title 27, §20385(3)), the Discharger shall conclude that a release has been discovered and shall:

- a. Immediately notify the Regional Board of this fact by certified mail (or acknowledge the Regional Board's determination);
 - b. Carry out the requirements of Title 27, §20420(k) and §20425, for all potentially affected monitored media; and
 - c. Carry out any additional investigations stipulated in writing by Regional Board staff for the purpose of identifying the cause of the release.
5. **Release beyond facility boundary** – Any time the Discharger or Regional Board staff concludes that a release from the Unit 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).
- a. **Initial notice** – 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. **Updated notice** – 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. **Submittal** – Each time the Discharger sends a notification to Affected Persons, the Discharger shall, within seven days of sending such notification, provide Regional Board staff with both a copy of the notification and a current mailing list of all Affected Persons.
6. **Response to VOC detection in background**
- a. **Detection and verification** - Except for VOCs validated as not having come from the landfill, any time the laboratory analysis of a sample from a background monitoring point shows either three or more VOCs at or above their respective method detection limit (MDL), or one VOC at or above its respective practical quantitation limit (PQL), then the Discharger shall immediately notify Regional Board staff by phone that possible background contamination has occurred; shall follow up with written notification by certified mail within seven days; and within thirty days, shall obtain two new independent VOC samples from that background monitoring point and send them for laboratory analysis of all detectable VOCs. If either or both of these retest samples validate the presence of VOCs at that background monitoring point using the above procedure, the Discharger shall:
 - i. **Notification** - Immediately notify the Regional Board about the VOCs verified to be present at that background monitoring point, and follow up with written notification submitted by certified mail within seven days of validation; and

- ii. **Report** - Within 180 days of validation, submit a report, acceptable to Regional Board staff, that examines the possibility that the detected VOC(s) originated from the Unit (e.g., using concentration gradient analyses) and proposes appropriate changes to the monitoring program.
- b. **VOCs not from landfill** - If, after reviewing the report, Regional Board staff determines that the VOC(s) detected originated from a source other than the Unit, the Regional Board will make appropriate changes to the monitoring program.
- c. **VOCs likely from landfill** - If, after reviewing the report, Regional Board staff determines that the detected VOC(s) most likely originated from the Unit, the Discharger shall be notified that a release has been detected and shall immediately begin carrying out the requirements of Title 27, §20420(k) and §20425.

E. WATER SAMPLING AND ANALYSIS

All water quality monitoring and sampling analysis for the monitored media, and the monitoring points and background monitoring points for each such medium, shall be in accordance with Title 27, §20415.

1. Monitoring parameters for the required monitoring program(s) at the landfill shall be approved by Regional Board staff. Regional Board staff may approve alternative monitoring parameters that meet the requirements of both Title 27, §§20380 et seq. and 40 CFR §258.54. Regional Board staff may also approve alternative statistical methods that meet the requirements of Title 27, §20415(e) and 40 CFR §258.53.
2. **Latter third/thirty days** – For any given monitored medium, samples shall be taken from all monitoring points and background monitoring points to satisfy the data analysis requirements. All samples shall be taken during the latter third of the Reporting Period within a maximum of 30 days, and shall be taken in a manner that insures sample independence to the greatest extent feasible, in accordance with Title 27, §20415(e)(12)(B).
3. **Elevation/field parameters** – Shall be in accordance with Title 27, §20415(e)(13). Groundwater elevations taken prior to purging the well and sampling for monitoring parameters shall be used to fulfill the Spring and Fall groundwater flow rate/direction analyses required under item 5, below.
4. **Data analysis** – Data analysis shall be carried out as soon as the monitoring data are available, in accordance with Title 27, §20415(e).

5. **Groundwater flow rate/direction** – Shall be monitored in accordance with Title 27, §20415(e)(15). This information shall be included in the regular monitoring reports for ESL.

F. DRAINAGE AND EROSION CONTROL

1. Waste management units shall be designed, constructed, and maintained to prevent, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, and washout which could occur as a result of precipitation from a 100-year, 24-hour frequency storm. This shall be accomplished by, at a minimum, the following:
 - a. Top deck surfaces shall be constructed to achieve a minimum of one percent (1%) slope, including structures which direct water to downdrains;
 - b. Downdrains and other necessary drainage structures must be constructed for all sideslopes as necessary; and
 - c. All components of the facility drainage system must be designed and constructed to withstand site-specific maximum intensity precipitation (peak flow⁵) from a 100-year, 24-hour storm.
2. Leachate and landfill gas condensate containment system structures shall be protected and maintained continuously to ensure their effectiveness and to prevent commingling of leachate and gas condensate with surface run-on and runoff.
3. The Discharger shall design, construct, and maintain:
 - a. A run-on drainage control system to prevent flow from off-site sources onto the disposal areas of the landfill (active or inactive portions), and to collect and divert both the calculated volume of precipitation and the peak flow from off-site sources that result from a 100-year, 24-hour storm;
 - b. A runoff drainage control system to minimize sheet flow from the disposal areas, and to collect and divert both the calculated volume of precipitation and the peak flow from on-site surface runoff that results from a 100-year, 24-hour storm; and
 - c. Drainage control structures to divert natural seepage from native ground and to prevent such seepage from entering the waste management units.
4. All drainage structures shall be protected and maintained continuously to ensure their effectiveness.
5. Annually, **by October 1**, all drainage control system construction and maintenance activities shall be completed. By December 31 of each year, the

⁵ Peak flow is the maximum expected flow of run-on and runoff resulting from precipitation both on and off-site for a given recurrence interval.

Discharger shall submit a drainage control system maintenance report to the Executive Officer of the Regional Board. The drainage control system maintenance report shall include, but not be limited to, the following information:

- a. For the previous 12 months, a summary of the adequacy and effectiveness of the drainage control system to collect and divert the calculated volume of precipitation and peak flows resulting from a 100-year, 24-hour storm;
 - b. A tabular summary of both new and existing drainage control structures, including the types and completion dates of maintenance activities performed for each of these structures; and
 - c. An 11"x17" or larger site map indicating the locations of the elements listed in Item b., above, and the flow direction of all site drainage.
6. At least 30 days prior to the construction of any new elements of the drainage control system, the Discharger shall submit a workplan outlining all design parameters and calculations, construction details, and a construction quality assurance plan for approval by the Executive Officer of the Regional Board.
 7. The Discharger shall submit as-built drawings within 4 weeks of completing construction of any new elements of the drainage control system at the site.
 8. All design plans, construction plans, and operation and maintenance plans shall be prepared by, or prepared under the direct supervision of, a registered civil engineer or a certified engineering geologist.
 9. Periodic inspection of the waste management units, the drainage control system, and all containment structures shall be performed to assess the conditions of these facilities and to initiate corrective actions necessary to maintain compliance with this order.
 10. The facility shall be surveyed once a year either by aerial surveillance or a licensed surveyor to assure compliance with the one percent slope requirements. By December 31 of each year, a map compiled from the survey data shall be submitted to the Regional Board, showing landfill elevations, the flow direction of all site drainage, the drainage control system, and containment structures.
 11. The Discharger shall notify the Regional Board staff site representative by telephone and/or email within two business days of determination of a failure of facilities necessary to maintain compliance with the requirements in this order. Within seven days, the notification shall be submitted in writing to the Regional Board.
 12. The Discharger shall maintain a copy of this order at the site so as to be available at all times to site operating personnel.

13. The Discharger shall permit the Regional Board:
 - a. Entry upon premises where a discharge source is located;
 - b. To copy any records required to be kept under terms and conditions of this order;
 - c. To photograph or videotape any structures, facilities, activities, or other phenomena that could result in adverse impacts to water quality and that are pertinent to compliance of the landfill with its WDRs; and
 - d. To sample any discharges.
14. The Discharger shall notify the Regional Board in writing of any proposed change in ownership or responsibility for construction, operation, closure or post-closure maintenance of the landfill. This notification shall be given prior to the effective date of the change and shall include a statement by the new Discharger that construction, operation, closure, and post-closure maintenance will be in compliance with any existing WDRs and any revisions thereof.

G. REQUIRED REPORTS AND NOTICES

1. REPORTING PROVISIONS:
 - a. All applications, reports or information submitted to the Regional Board shall be signed and certified in accordance with 40 CFR §122.22.
 - b. The Discharger shall furnish, within a reasonable time, any information the Regional Board may request to determine whether cause exists for modifying, reissuing, or terminating this order. The Discharger shall also furnish to the Regional Board, upon request, copies of records that this order requires the Discharger to maintain.
2. The Discharger shall file a JTD or JTD amendment with the Regional Board at least 120 days before making any material change or proposed change in the character, location, volume, treatment, or disposal methods of any discharge of waste.
3. The Discharger shall give advance notice to the Regional Board of any planned changes in the permitted facility or site activities that may result in noncompliance with these WDRs.
4. The Discharger shall submit to the Executive Officer, as part of the application for proposed discharge, a report certifying the adequacy of each component of the existing and any future groundwater treatment system(s) and the associated operation and maintenance (O & M) manual. This certification shall contain a requirement-by-requirement analysis, based on accepted engineering practice, of how the process and physical design of the treatment systems will ensure compliance with this order. The design engineer shall affix his/her signature, professional license number and seal to this certification.

5. In the event of any change in control or ownership of land or waste discharge facilities currently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this order by letter. A copy of this letter shall be signed by the new owner accepting responsibility for complying with this order, and shall be forwarded to the Executive Officer of the Regional Board.

6. CLOSURE AND POST-CLOSURE PLANS:

- a. In accordance with Title 27, §21780 (b)(3), final closure and PCMPs for solid waste landfills shall be submitted two years prior to the anticipated date of closure. Within five years of the anticipated date of closure, the operator may submit the final closure and PCMPs in lieu of submitting new or updated preliminary closure and PCMPs.
- b. An alternative monolithic final cover using on-site soil was modeled to determine whether the alternative cover would be consistent with the performance goal addressed by the prescriptive standard. The soils used for the model exhibited a grain size distribution that excluded particles in excess of three inches and had a minimum fines-content passing U.S. No. 200 Sieve of 20 percent by weight, and a minimum fines-content less than five microns of seven percent by weight. In addition, the cover soils exhibited a maximum saturated hydraulic conductivity of 5×10^{-6} cm/sec.

7. FINANCIAL ASSURANCE PLANS:

The Discharger shall obtain, maintain, and submit assurances of financial responsibility for:

- a. Closure activities pursuant to Title 27 §22205;
- b. Post-closure maintenance activities pursuant to Title 27 §22210;
- c. Operating liability pursuant to Title 27 §22215; and
- d. Corrective action activities pursuant to Title 27 §22220.

I, Kurt V. Berchtold, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on April 22, 2011.

Kurt V. Berchtold
Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION**

ORDER NO. R8-2011-0014

**MONITORING AND REPORTING PROGRAM
FOR**

USA WASTE OF CALIFORNIA

**EL SOBRANTE LANDFILL
CLASS III SOLID WASTE DISPOSAL SITE
RIVERSIDE COUNTY**

A. GENERAL

1. The discharger shall comply with all the monitoring programs required under this Monitoring and Reporting Program (M&RP).
2. Water Quality Protection Standard (Water Standard) – The Water Standard shall consist of the list of Constituents of Concern (COC) (under Title 27, §20395), the Concentration Limits (under Title 27, §20400), and the Point of Compliance and all Monitoring Points (under Title 27, §20405). The Water Standard shall apply during the active life of the landfill, the closure period, the postclosure maintenance period, and during any compliance period (under Title 27, §20410).
3. The Water Standard concentration limits shall be assumed to be equal to background concentration limits for all COCs unless the discharger proposes, and the Regional Board approves, an alternative Water Standard. The discharger shall perform all monitoring activities in compliance with the Water Standard, and the requirements of both Title 27, §20390 and 40 CFR §258.50 et seq.
4. The Concentration Limit for any given COC or Monitoring Parameter in a given monitored medium (e.g., the uppermost aquifer) shall be established in accordance with Title 27, §§20400 and 20415(e)(6, 7, and 10), and shall be used as the basis of comparison with data from the monitoring points in that monitored medium. Monitoring parameters, COCs, data evaluation procedures, and reporting requirements for the required water quality monitoring programs for the ESL are specified in this M&RP. This M&RP may be revised and approved by the Executive Officer of the Regional Board as necessary to reflect changes in the required water quality programs.
5. At this time, the COC list consists of those constituents listed in Table 1 of this M&RP. In addition, at any subsequent time, the COC list shall include all

Appendix II constituents detected and verified in the COC scan; and all Appendix II constituents that have been detected and affirmed in leachate and gas condensate.

6. The Regional Board shall specify the Points of Compliance at which the Water Standard applies, in accordance with Title 27, §20405. All Point of Compliance Monitoring Point and Background Monitoring Point locations and depths shall be in accordance with Title 27, §20415(a-d).
7. The compliance period of the Detection Monitoring Program (DMP) at ESL shall equal the active life of the landfill plus a 30-year closure period in accordance with Title 27, §20410. The compliance period may be extended if the facility is not in compliance with its Water Standard.
8. Sample collection, storage, and analysis shall be performed according to the most recent version of Standard U.S. EPA Methods (U.S. EPA Publication "SW-846").
9. **CORRECTIVE ACTION SYSTEM**

Low-level concentrations of inorganics and volatile organic compounds (VOCs) were detected in wells located near the toe of the landfill in the fall of 1987, and the landfill was placed in an Evaluation Monitoring Program (EMP). Since landfill gas (LFG) was considered to be the principal source of the suspected release, a LFG collection and extraction system was installed and began operation in June of 1993. In July 1996, a corrective action program (CAP) was initiated, consisting of a groundwater extraction and treatment program, to contain and remove low-level VOCs that were found in groundwater. The CAP was successful, and in June 2003, the Regional Board staff permitted the discharger to shut off the groundwater extraction system and change the CAP remedy to monitored natural attenuation (MNA). If the monitoring shows any further release from the site, the discharger shall begin a new EMP, and a new CAP (if needed).

10. MONITORING PARAMETERS

- a. The discharger shall analyze separate water samples from each water-bearing medium for the monitoring parameters approved in Table 4, and shall test the resulting data using one of the statistical or non-statistical methods listed in Title 27, §20415(e)(7) et seq. Monitoring parameters for the required monitoring program(s) at ESL shall be approved by the Executive Officer of the Regional Board. The Executive Officer may approve alternative monitoring parameters that meet the requirements of both Title 27, §§20380 et seq. and 40 CFR §258.54. The Executive Officer may also approve alternative statistical or non-statistical analytical methods that meet the requirements of Title 27, §20415(e) and 40 CFR §258.53.
- b. The VOCs listed as monitoring parameters in Table 1 are based on a compilation of historical landfill groundwater, gas and leachate data collected from ESL. The VOCs contained in Table 2 were detected more than once

(confirmed) in either landfill gas or leachate samples. The degradation by-products of the VOCs confirmed in the landfill gas and leachate samples are also included in Table 2. The VOC monitoring parameters list shall be updated annually as follows:

- (i) Any Appendix II VOC or degradation by-products of confirmed VOCs that are detected in the landfill gas sample collected in October of each year, and confirmed in the landfill gas sample collected in April of the following year, shall be permanently added to the VOC monitoring parameter list included in Table 2.
 - (ii) Any Appendix II VOC or degradation by-products of confirmed VOCs that are detected in the leachate sample collected in October of each year, and confirmed in the leachate sample collected in April of the following year, shall be permanently added to the VOC monitoring parameter list included in Table 1.
- c. The groundwater monitoring parameters shall be evaluated as follows:
- (i) **Monitoring parameters (metals surrogates) that use statistical data analysis methods:**
 - (a) **Metals surrogates under 40 CFR §258.54(a)(2)** – bicarbonate alkalinity (as Ca CO₃), chloride, calcium, magnesium, sodium, and potassium, shall be analyzed using a statistical analysis method specified in Title 27, §20415(e)(8)(C, D, and E). If using SANITAS™, the discharger shall use the “CA Standards” settings. Other inorganic monitoring parameters, in particular those that can be naturally-occurring (such as metals), shall be evaluated using time-series concentration plots.
 - (ii) **Monitoring parameters and VOCs that use non-statistical data analysis methods:**
 - (a) **VOCs-** A release of VOCs in a DMP well will have tentatively occurred if either of the two following triggering conditions is met:
 - (i) Three or more VOCs exceed their laboratory method detection limits (MDLs) in the sample; or
 - (ii) One or more VOCs exceed their laboratory practical quantitation or reporting limit (PQL or RL) in the sample.
 - (b) General chemistry parameters – pH, nitrate as nitrogen, sulfate, total dissolved solids, total organic carbon, iron, and manganese.
 - (c) If a tentative release is indicated in a DMP or a CAP well, the Regional Board shall be immediately notified and two additional groundwater samples will be collected from this well within 30 days of the

notification for retesting (unless laboratory contamination is suspected). The two additional groundwater samples will be retested in the laboratory for only the constituents detected in the initial sample that triggered the retesting. If either of the two triggering conditions listed above is met for either of the two additional groundwater samples, then the release will be confirmed.

- (d) If the release is confirmed and is considered significant, but is derived from off-site sources, then the discharger shall comply with Title 27, §20420(k)(7) and demonstrate that the landfill is not the cause of the release. If the landfill is the cause of the release, then the discharger shall implement an EMP pursuant to Section B.3 of this M&RP.

11. CONSTITUENTS OF CONCERN (COCS)

The ESL is equipped with both a liner and a leachate collection and removal system (LCRS) that collects leachate generated within the landfill. Therefore, COCs shall be established and monitored as follows:

- a. The "COC list" (list of Constituents of Concern required under Title 27, §20395) includes all Appendix II constituents.
- b. The discharger shall monitor all COCs every five years, pursuant to Title 27, §20420(g). Any COC that exceeds its PQL in any of the monitoring wells will be added to the list of groundwater monitoring parameters for the site.
- c. Background sampling for new constituents - For each newly detected Appendix II constituent that is added to the existing monitoring parameter list, the discharger shall establish a reference background value by analyzing at least one sample semi-annually from each background monitoring point for a period of at least two years. Once this reference set of background data is collected, the discharger shall include it as a separate, identified item in the next monitoring report submittal. Existing background data for the newly identified Appendix II constituents may be substituted for additional background sampling with the approval of the Executive Officer of the Regional Board.

B. MONITORING PROGRAM

1. Water Quality Monitoring

- a. The discharger shall comply with the requirements of Title 27, §20415 for any water quality monitoring program developed to satisfy §20420, §20425, or §20430 of Title 27 and the requirements of this order.
 - (i) The ground water monitoring shall meet the requirements of Title 27, §20415(b) and 40 CFR §§258.51(a, c, and d).

- (ii) The surface water monitoring shall meet the requirements of Title 27, §20415(c).
 - (iii) Unsaturated zone monitoring shall meet the requirements of Title 27, §20415(d).
 - (iv) All general monitoring requirements shall be in accordance with Title 27, §20415(e).
2. **Detection Monitoring Program (DMP)** - The discharger shall implement the requirements of the DMP as outlined in Title 27, §20420 and as specified in **Table 4** of this M&RP.
 3. **Evaluation Monitoring Program (EMP)** - In the event of the discovery of a release from the Landfill unit, the discharger shall implement the requirements of Title 27, §20425. The EMP shall be used to assess the nature and extent of the new release and to design a corrective action program meeting the requirements of Title 27, §20430.
 4. **Corrective Action Program (CAP)** – The discharger shall continue to implement the CAP to meet the requirements of Title 27, §20430. The compliance period of the CAP shall end when the discharger can demonstrate, and the Regional Board concurs, that the site has been in compliance with its Water Standard for a period of three consecutive years.
 5. **General Site Monitoring**
 - a. At a minimum, all systems such as landfill gas condensate collection, leachate containment, groundwater extraction, and seep water collection systems shall be inspected and evaluated on a monthly basis for their effectiveness. All deficiencies identified and the dates and types of corrective action taken shall be recorded in a permanent log. All deficiencies shall be documented for the record. The volume of liquids collected in the containment structures shall be recorded monthly. Liquid samples, such as gas condensate and leachate, shall be collected in accordance with the monitoring frequency in Table 3, and analyzed for constituents specified in Tables 6 and 7.
 - b. Monthly, the discharger shall inspect all waste management units and shall evaluate their effectiveness in achieving compliance with Discharge Specifications in the WDRs. All areas of slope failure, differential settlement, fissuring, erosion, ponding, leachate staining, and seepage into or from the landfill shall be identified, field-marked, and documented. In the event seepage is discovered, the location of each seep shall be mapped and a mitigation plan submitted for the approval of Regional Board staff. All findings shall be photographed for the record.

- c. At a minimum, all run-on and runoff drainage control structures shall be inspected and evaluated quarterly for their effectiveness in achieving compliance with Discharge Specification F.3. of the WDRs. During dry weather conditions, the effectiveness of the drainage control system shall be evaluated on the basis of its conformance to the as-built drawings, or revised drawings, for the system. All deficiencies shall be identified, repaired, and recorded.
- d. Annually, by October 15, an aerial or ground survey of the landfill facility shall be performed in accordance with the schedule in Table 3 of this M&RP. The Discharger shall notify the Regional Board if the October 15 deadline for the aerial photogrammetric survey cannot be adhered to due to bad weather conditions or bad visibility.

C. REPORTING

1. **Monitoring report contents** - All reports shall be submitted no later than one month following the end of their respective Reporting Period. The reports shall be comprised of at least the following, in addition to the specific contents listed for each respective report:
 - a. **Transmittal letter** - A letter summarizing the essential points in the report. This letter shall include a discussion of any requirement violations found since the last such report was submitted, and shall describe actions taken or planned for correcting those violations;
 - b. **Compliance evaluation summary** - For groundwater monitoring and COC reports, a compliance evaluation summary containing at least:
 - (i) **Flow rate/direction** - For each monitored groundwater body, a description and graphical presentation (e.g., arrow on a map) of the velocity and direction of groundwater flow under/around the Unit, based upon quarterly water level elevations. The results are reported on a semi-annual basis;
 - (ii) **Well information** - For each monitoring well addressed by the report, a description of the method and time of water level measurement, and a description of the method of purging used before sampling to remove stagnant water in the well, pursuant to Title 27, §20415(e)(12)(B); and

- (iii) **Sampling Information** - For each monitoring point and background monitoring point addressed by the report, a description of the type of pump or other device used and its vertical placement for sampling, and a detailed description of the sampling procedure (number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the type of containers and preservatives used, the date and time of sampling, the name of the person collecting the samples, and any other observations);
- c. **Map** - A map (or copy of an aerial photograph) showing the locations of observation stations, monitoring points, and background monitoring points;
- d. **Laboratory data** - The laboratory results of all analyses shall be submitted in accordance with Section A.8 of this M&RP;
- e. **Leachate monitoring and control facilities, and drainage and erosion control system** - A statement as to the condition and performance of any leachate monitoring and control facilities, containment structures, waste management unit, and the drainage and erosion control systems. The summary shall include a list of deficiencies identified and the dates and types of corrective actions taken to achieve compliance with the requirements contained in this order. If corrective actions for identified deficiencies could not be implemented by the end of the monitoring period; the discharger shall provide the reason(s) for noncompliance and a time schedule for implementing the corrective actions; and
- f. **Waste type and placement** - The quantity and types of wastes discharged and the locations in the landfill where waste has been placed since submittal of the last such report.
2. **Compliance monitoring report** - The discharger shall submit monitoring reports for the monitoring periods and reporting due dates specified below, which are also summarized in Table 3. The discharger may propose an alternate schedule and the Executive Officer may approve the proposal or require the discharger to comply under an alternate reporting frequency.
3. **Semi-Annual monitoring reports** - For each monitored medium, all monitoring points assigned to detection monitoring, evaluation monitoring and corrective action monitoring, including all background monitoring points, shall be monitored on a semi-annual basis. Reports prepared for this M&RP shall be submitted semi-annually to the Regional Board in accordance with Table 3.
4. **Leachate Monitoring Report** –
- a. **October leachate sampling results** - The discharger shall report to the Regional Board, no later than January 31 of each year, the analytical results of the leachate sample taken the previous October;

- b. **April leachate retest results-** If the annual leachate sample taken in October identifies constituents which are not on the updated monitoring parameters list, the discharger shall collect and analyze a retest leachate sample in April. During any year in which an April leachate retest is carried out, the discharger shall submit a report to the Regional Board no later than August 1 of that year. This report must identify all constituents, including degradation by-products of confirmed constituents(s) that must be added to the landfill's monitoring parameters list as a result of having been detected in both the previous calendar year's October sample and in the April retest sample. The report shall also include an updated monitoring parameter list.

5. Landfill Gas Monitoring Report –

- a. **October landfill gas sampling results -** The discharger shall report to the Regional Board, no later than January 31 of each year, the analytical results of the landfill gas sample taken the previous October;
- b. **April landfill gas retest results-** If the annual landfill gas sample taken in October identifies constituents that are not on the updated monitoring parameters list, the discharger shall collect and analyze a retest landfill gas sample in April. The retest sample shall be analyzed only for the constituents detected in the October sampling event. During any year in which an April landfill gas retest is carried out, the discharger shall submit a report to the Regional Board no later than August 1 of that year. This report must identify all constituents that must be added to the landfill's monitoring parameters list as a result of having been detected in both the previous calendar year's October sample and confirmed in the April retest sample (as well as degradation by-products of confirmed constituents(s)). The report shall also include an updated monitoring parameter list.

6. Annual summary report - The discharger shall submit an annual report to the Regional Board covering the previous monitoring year (April 1 of the previous year through March 31 of the following year). The annual summary reports are due on April 30. This report may be combined with the water quality monitoring report period ending March 31, and shall meet the following requirements:

- a. **Graphical Presentation -** Graphing the Groundwater Analytical Data shall be in accordance with Title 27, §20415(e)(14);
- b. **Tables -** All monitoring analytical data obtained during the two previous semi-annual reporting periods shall be presented in tabular form in the annual summary report and shall be uploaded electronically onto the State's database (GeoTracker) within one month following the submittal of the semi-annual monitoring reports to the Regional Board. The Regional Board regards the submittal of data in hard copy and electronically on the State's database as the form necessary for statistical analysis [Title 27, §20420(h)]. This format facilitates periodic review by the Board's statistical consultant;

- c. **Compliance record discussion** - A comprehensive discussion of the compliance record, and of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the landfill's waste discharge requirements relating to water quality issues;
 - d. **Waste allocation map** - A map showing the area, if any, in which filling has been completed during the previous calendar year;
 - e. **Summary of changes** - A written summary of monitoring results and monitoring and control systems, indicating any changes made or observed since the previous annual report; and
 - f. **Leachate control** - For units having leachate monitoring/control facilities, an evaluation of their effectiveness, pursuant to Title 27, §20340(b, c, & d). This evaluation of the effectiveness of leachate monitoring/control systems will be performed under the General Site Monitoring Program described in Section B.5.a. of the M&RP.
7. **Annual drainage control and maintenance report** - Annually, by January 31, an annual site drainage control and maintenance report shall be submitted. The drainage control system maintenance report shall include, but not be limited to, the following information:
- a. For the previous 12 months, a summary of the adequacy and effectiveness of the drainage control system to collect and divert the calculated volume of precipitation and peak flows resulting from a 100-year, 24-hour storm.
 - b. A tabular summary of the new and existing drainage control structures including the types and completion dates of maintenance activities performed for each of these structures; and
 - c. An 11"x17" site map indicating the locations of the elements listed in Item b., above, and the flow direction of all site drainage.
8. **COC Report at least every five years** - In the absence of a new release being indicated, the discharger shall monitor all parameters on the facility's COC list and submit a report (COC Report).
- a. **Reporting period for COCs** - The discharger shall sample all monitoring points and background monitoring points for each monitored medium for all COCs every fifth year, beginning with the Fall of 2011. The first Reporting Period ends September 30, 2011, with subsequent COC monitoring to be carried out every fifth year thereafter, alternately in the Spring (Reporting Period ends March 31) and the Fall (Reporting Period ends September 30).
 - b. **COC report** - This report, which is due one month following the Reporting period, may be combined with any semi-annual monitoring report or annual

summary report. The last COC scan was performed in 2006. Future COC reports are due every 5 years since the last COC report submittal (in 2011, 2016, 2021, etc.)

9. **Reporting Schedule** - The discharger shall submit the reports/ documents in accordance with the deadlines specified in Table 3.
10. **Signature** - All reports shall be signed by a responsible officer or a duly authorized representative of the discharger and shall be submitted under penalty of perjury.

I, Kurt V. Berchtold, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on April 22, 2011.

Kurt V. Berchtold
Executive Officer

Attachment A

DRAFT

**TABLE 1
CURRENT CONSTITUENT OF CONCERN (COC) LIST
FOR THE EL SOBRANTE LANDFILL**

General Chemistry	Metals	Volatile Organic Compounds (VOCs)	
Alkalinity (Total)	Aluminum	Acetone	1,1,1,2-Tetrachloroethane
Ammonia (as Nitrogen)	Antimony	Acrylonitrile	1,1,2,2-Tetrachloroethane
Anions	Arsenic	Benzene	Tetrachloroethene (PCE)
Bicarbonate	Barium	Bromochloromethane	Toluene
Carbonate	Beryllium	Bromodichloromethane	1,1,1-Trichloroethane
Cations	Boron	Bromoform	1,1,2-Trichloroethane
Chemical Oxygen Demand (COD)	Cadmium	Bromomethane	Trichloroethene (TCE)
Chloride	Calcium	Carbon Disulfide	Trichlorofluoromethane
Cyanide	Chromium (Total)	Carbon Tetrachloride	1,2,4-Trimethylbenzene
Dissolved Oxygen	Chromium (Hexavalent)	Chlorobenzene	Vinyl Acetate
Fluoride	Cobalt	Chloroethane	Vinyl Chloride
Hardness	Copper	Chloroform	o-Xylene
Hydroxide	Iron	Chloromethane	p+m-Xylene
Nitrate (as Nitrogen)	Lead	Dibromochloromethane	Semi-Volatile Organic Compounds (SVOCs)
pH	Magnesium	1,2-Dibromo-3-chloropropane	Benzoic Acid
Phenols (Total)	Manganese	1,2-Dichlorobenzene	bis(2-Ethylhexyl) Phthalate
Phosphate	Mercury	1,4-Dichlorobenzene	Butylbenzylphthalate
Phosphorus (Total)	Molybdenum	trans-1,4-Dichloro-2-butene	2-Methylphenol (m-Cresol)
Specific Conductance	Nickel	Dichlorodifluoromethane	4-Methylphenol (o-Cresol)
Sulfate	Potassium	1,1-Dichloroethane	2,4 Dimethylphenol (p-Cresol)
Sulfide	Selenium	1,2-Dichloroethane	Dimethylphthalate
Total Dissolved Solids (TDS)	Silver	1,1-Dichloroethene	di-n-Butylphthalate
	Sodium	cis-1,2-Dichloroethene	Napthalene
	Thallium	trans-1,2-Dichloroethene	Nitrobenzene-d5
	Tin	1,2-Dichloropropane	Phenol-d5
	Vanadium	cis-1,3-Dichloropropene	Organochlorine Pesticides
	Zinc	trans-1,3-Dichloropropene	Aldrin
		Ethylbenzene	delta-BHC
		Ethylene dibromide (EDB)	Dieldrin
		Isobutyl Alcohol	Endosulfan II
		Isopropylbenzene	Heptachlor epoxide
		Methylene Chloride	Chlorinated Herbicides
		Methyl Butyl Ketone	2,4,5-TP (Silvex)
		Methyl Tertiary Butyl Ether (MTBE)	Polychlorinated Biphenyls (PCBs)
		Methyl Ethyl Ketone (MEK)	Aroclor 1016-1260
		Methyl Iodide	
		4-Methyl-2-Pentanone	
		Styrene	
		Tetrachloroethane	

TABLE 2
SUBSET OF 40CFR §258 APPENDIX II CONSTITUENTS
DETECTED IN LEACHATE

General Chemistry	Volatile Organic Compounds (VOCs)	
Cyanide Sulfide	Acetone Acrylonitrile Benzene	Isopropylbenzene Methylene Chloride Methyl Butyl Ketone Methyl Ethyl Ketone
Metals	Bromochloromethane Bromodichloromethane	(MEK)
Antimony	Bromoform	Methyl Iodide
Arsenic	Bromomethane	4-Methyl-2-Pentanone
Barium	2-Butanone (MEK)	Styrene
Beryllium	Carbon Disulfide	1,1,1,2-Tetrachloroethane
Boron	Carbon Tetrachloride	1,1,2,2-Tetrachloroethane
Cadmium	Chlorobenzene	Tetrachloroethene (PCE)
Calcium	Chloroethane	Toluene
Chromium (Total)	Chloroform	1,1,1-Trichloroethane
Chromium	Chloromethane	1,1,2-Trichloroethane
(Hexavalent)	Dibromochloromethane	Trichloroethene (TCE)
Cobalt	1,2-Dibromo-3-	Trichlorofluoromethane
Copper	chloropropane	1,2,3-Trichloropropane
Iron	1,2-Dichlorobenzene	1,2,4-Trimethylbenzene
Lead	1,4-Dichlorobenzene	Vinyl Acetate
Magnesium	trans-1,4-Dichloro-2-butene	Vinyl Chloride
Manganese	Dichlorodifluoromethane	o-Xylene
Mercury	1,1-Dichloroethane	p+m-Xylene
Nickel	1,2-Dichloroethane	
Potassium	1,1-Dichloroethene	
Selenium	cis-1,2-Dichloroethene	
Silver	trans-1,2-Dichloroethene	
Sodium	1,2-Dichloropropane	
Thallium	cis-1,3-Dichloropropene	
Tin	trans-1,3-Dichloropropene	
Vanadium	Ethylbenzene	
Zinc	Ethylene dibromide (EDB)	
	Isobutyl Alcohol	

**TABLE 3
 MONITORING AND REPORTING FREQUENCY**

Task Description	Monitoring Frequency	Report Due Date
Detection Monitoring	Semi-annual	Semi-annual Reporting
Expansion Area Background Monitoring (see footnote below for types of monitored mediums)	Semi-annual	Semi-annual Reporting
General Site Monitoring	Semi-annual	Semi-annual Reporting
Leachate Monitoring	Annually (October 1 – October 31)	January 31 of the following year
April Leachate Re-test	As Required (April 1 – April 30)	August 1 of each year
Landfill Gas (LFG) Monitoring (Perimeter probes and LFG control system header)	April 1 – September 30	October 31 of each year
	October 31 – March 31	April 30 of each year
LFG Condensate Monitoring	Quarterly	Semi-annual Reporting
Annual Summary	April 1 of previous year through March 31	April 30 of each year
Five-Year COC Scan	October 1, 2010 – March 31, 2011	April 30, 2011, and every fifth year thereafter, alternately in the Spring (April 30) and the Fall (October 31)
Annual Drainage Control and Maintenance	By October 1 of each year	December 31 of each year
Aerial or ground survey	Not applicable	Annually, by October 15

**TABLE 4
DETECTION MONITORING PARAMETERS**

1) Volatile organic compounds per 27 CCR §20420 including all 40CFR §258 Appendix II constituents
2) General chemistry: Bicarbonate, Carbonate, Chemical Oxygen Demand (COD), Chloride, pH, Nitrate as Nitrogen, Sulfate, and Total Dissolved Solids (TDS)
3) Leachate Indicator Metals: Calcium, Iron, Magnesium, Manganese, Sodium, and Potassium
5) Field measurements (i.e., groundwater elevation, estimated volumetric flow (subdrains [if applicable], seeps, or springs) or estimated volume of soil-pore liquid (subdrains [if applicable], sumps, or lysimeters), specific conductance, pH, temperature, turbidity, and dissolved oxygen)

**TABLE 5
EXPANSION AREA
BACKGROUND MONITORING PARAMETERS**

1) Volatile organic compounds per 27 CCR §20420 including all 40CFR §258 Appendix II constituents
2) General chemistry: Bicarbonate, Carbonate, Chemical Oxygen Demand (COD), Chloride, pH, Nitrate as Nitrogen, Sulfate, and Total Dissolved Solids (TDS)
3) Leachate Indicator Metals: Calcium, Iron, Magnesium, Manganese, Sodium, and Potassium
4) Trace metal constituents identified through reference in 27 CCR §20420 (Appendix I metals), including: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc
5) Field measurements (i.e., groundwater elevation, estimated volumetric flow (subdrains [if applicable], seeps, or springs) or soil-pore liquid (subdrains [if applicable], sumps, or lysimeters), specific conductance, pH, temperature, turbidity, and dissolved oxygen)

TABLE 6
LEACHATE MONITORING PARAMETERS

1) Volatile organic compounds per 27 CCR §20420 including all identified 40CFR §258 Appendix II constituents
2) General chemistry: Ammonia and Nitrate as Nitrogen, Bicarbonate, Carbonate, Chemical Oxygen Demand (COD), Chloride, pH, Sulfate, and Total Dissolved Solids (TDS)
3) Metals: Calcium, Iron, Magnesium, Manganese, Sodium, and Potassium
4) Trace metal constituents identified through reference in 27 CCR §20420, including: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc;
5) Field measurements (i.e., liquid levels/ volume, specific conductance, pH, temperature, turbidity, and dissolved oxygen)

TABLE 7
LANDFILL GAS CONDENSATE MONITORING PARAMETERS

1) Volatile and semi-volatile organic compounds (VOCs and SVOCs) per 27CCR §20420, including all 40CFR §258 Appendix II constituents except TCDD (Dioxin).
2) General chemistry: Bicarbonate, Carbonate, Chloride, pH, Nitrate as Nitrogen, Sulfate, and Total Dissolved Solids (TDS)
3) Metals: Calcium, Iron, Magnesium, Manganese, Sodium, and Potassium
4) Trace metal constituents identified through reference in 27 CCR §20420, including: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc;
5) Field measurements (i.e., liquid levels, electrical conductance, pH, temperature, turbidity, and dissolved oxygen)