

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

ORDER NO. R9-2016-0149

**WASTE DISCHARGE REQUIREMENTS FOR THE CLOSURE,
POST-CLOSURE MAINTENANCE, AND MONITORING OF
FORSTER CANYON LANDFILL
ORANGE COUNTY**

The Dischargers, as described in the following table, are subject to waste discharge and other requirements as set forth in this Order:

Table 1. Dischargers Information

WDID	9 000000586	
Dischargers	Advanced Group 99-SJ Limited Liability Partnership	County of Orange
Name of Facility	Forster Canyon Landfill	Forster Canyon Landfill
Facility Contact, Title, and Phone	Mr. Robb Cerruti Vice President Advanced Real Estate Services, Inc. (949) 595-5900	Mr. Jeff Arbour Manager Environmental Services County of Orange (714) 834-4056
Mailing and Billing Address	Mr. Robb Cerruti For Advanced Group 99-SJ Limited Liability Partnership 15320 Barranca Parkway Suite 100 Irvine, CA 92618	Mr. Jeff Arbour Waste and Recycling County of Orange 300 North Flower Street Suite 400 Santa Ana, CA 92703

Discharges of wastes by Advanced Group 99-SJ, Limited Liability Partnership and the County of Orange from the former Forster Canyon Landfill are subject to the waste discharge requirements set forth in this Order.

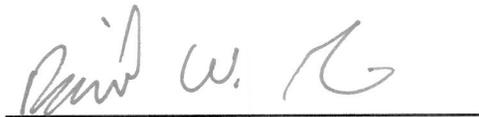
Table 2. Discharge Location

Discharge Point	Discharge Description	Discharge Point (Latitude)	Discharge Point (Longitude)	Receiving Water
Forster Canyon Landfill	Non-hazardous municipal solid waste	33.484815843159	-117.6590788364	Unnamed tributary to San Juan Creek and underlying groundwater.

Table 3. Effective Date

This Order was adopted by the California Regional Water Quality Control Board, San Diego Region and is effective on:	December 14, 2016
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I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on December 14, 2016.



David W. Gibson,
Executive Officer

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A. FINDINGS

The California Regional Water Quality Control Board, San Diego Region (hereinafter **San Diego Water Board**), finds that:

1. Dischargers.

The Forster Canyon Landfill (Landfill) is owned by Advanced Group 99-SJ, a California Limited Liability Partnership (AG 99-SJ). The Landfill was operated by the County of Orange from 1957 to 1976, whereupon landfilling operations ceased.

2. Legal Authority.

This Order is issued pursuant to the Water Code (commencing with section 13000) and implements (1) the regulations and policies adopted by the State Water Resources Control Board (State Water Board) in titles 23 and 27 of the California Code of Regulations,¹ and (2) the applicable provisions of the Health and Safety Code, division 20, chapter 6.5 (Hazardous Waste Control).

3. Rationale for Requirements.

The San Diego Water Board developed the requirements in this Order based on information submitted as part of the Joint Technical Document, groundwater monitoring reports, water quality control plans and policies, and other available information. An Information Sheet (Attachment C) was prepared for this Order, which contains the background information and rationale for the requirements of this Order. The Information Sheet is hereby incorporated into and constitutes findings for this Order.

4. Water Quality Control Plan.

The *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. This Order implements the Basin Plan by prescribing waste discharge requirements (WDRs) for the relocation of wastes, closure and post-closure operations, maintenance, and monitoring of the Landfill. The WDRs ensure that the municipal solid waste disposed of in the Landfill remains covered,

¹ Hereinafter, all references made to titles 23 and 27 within these WDRs will be from the California Code of Regulations.

and that the breakdown and leaching of municipal solid waste is minimized and does not impair beneficial uses of surface water and groundwater or result in violations of water quality objectives.

5. **California Environmental Quality Act.**

The closure and post closure operations of the Landfill are part of the San Juan Meadows and Distrito La Novia redevelopment project. An Environmental Impact Report (EIR) for the redevelopment project was certified by the City of San Juan Capistrano, the lead agency, on November 2, 2010 pursuant to the requirements of the California Environmental Quality Act (CEQA).² The San Diego Water Board is a responsible agency under CEQA. As such, the Board considered the EIR and addenda, and the project's environmental effects as described in those documents. The San Diego Water Board concurs that the project will have less than significant impacts on matters within the Board's jurisdiction.

6. **Antidegradation.**

The San Diego Water Board has considered State Water Resources Control Board (State Water Board) Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California*, (Antidegradation Policy) in adopting this Order. The groundwater monitoring results indicate that the historical releases of landfill gas and leachate from buried wastes have not impaired the beneficial uses of groundwater. This Order is consistent with the Antidegradation Policy because it requires the construction of a final cover system to contain wastes and prevent infiltration of storm water, thereby limiting the production of landfill gas and leachate. Once in place, the final cover system will prevent any further degradation of groundwater beyond what has occurred historically due to the lack of a liner system beneath the landfill.³

7. **Public Participation.**

The San Diego Water Board has notified interested agencies, and all interested persons known to the San Diego Water Board, of its intent to prescribe Closure and Post-Closure Maintenance WDRS and Monitoring Requirements for the Landfill.

² Public Resources Code section 21000 et seq.

³ At the time Forster Canyon Landfill was constructed, State law did not require the installation of liner systems beneath landfills to collect leachate.

8. **Applicability.**

Order No. R9-2016-0149 supersedes Order No. 94-106, as amended.

IT IS HEREBY ORDERED, that this Order supersedes Order No. 94-106, as amended upon the effective date of this Order. In order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and applicable regulations, it is further ordered that the Dischargers comply with the requirements of this Order. This action does not prevent the San Diego Water Board from taking enforcement actions for past violations of the previous Order. In order to meet the provisions contained in division 7 of the Water Code, and regulations adopted thereunder, the Dischargers must comply with the following:

B. PROHIBITIONS

Activities done in compliance with this Order do not include the following types of discharges, and they are prohibited as described below.

1. The discharge of waste to waters of the State in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in Water Code section 13050, is prohibited.
2. The discharge of waste to land, except as authorized by WDRs or the terms described in Water Code section 13264 is prohibited.
3. Discharges of treated or untreated solid or liquid waste to waters of the United States except as authorized by a National Pollution Discharge Elimination System permit issued by the San Diego Water Board, are prohibited.
4. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives and as authorized by the San Diego Water Board, is prohibited.
5. The dumping, deposition, or discharge of waste directly into waters of the State, or adjacent to such waters in any manner which may permit it being transported in the waters, unless authorized by the San Diego Water Board is prohibited.

Any discharge to a storm water conveyance system that is not composed entirely of “storm water”⁴, unless authorized by the San Diego Water Board is prohibited.

6. The discharge of waste into a natural or excavated site below historic water levels, unless the discharge is authorized by the San Diego Water Board, is prohibited.
7. The discharge of dewatering-derived effluent, except as authorized by waste discharge requirements, is prohibited.

C. EXCAVATION AND RELOCATION OF REFUSE.

The Joint Technical Document (JTD) estimates that approximately 250,000 cubic yards of waste must be removed from the perimeter of the landfill and relocated to the front face of the landfill. The relocation of waste is necessary to meet the County of Orange Department of Environmental Health Local Enforcement Agency’s (County LEA) setbacks requirements between the residential community and the landfill boundary. The range of volumes of wastes to be excavated from the perimeter of the Landfill evaluated in the EIR was 225,000 to 275,000 cubic yards. A range of volumes was evaluate in the event that site conditions encountered during excavation activities warrant a smaller or larger volume of waste removal. Details of the activities associated with the excavation, management, and discharge of wastes shall be documented in the Final Construction Quality Assurance (CQA) Report in accordance with the ***Final Cover Design and Execution of the Construction Quality Assurance Plan D.8.***⁵

1. EXCAVATION AREAS.

Areas where refuse has been excavated will be clean closed in accordance with the specifications found in title 27, section 21090(f). The Dischargers shall implement the following requirements in the excavation areas:

- a. Remove all waste materials, contaminated components of the containment system (if applicable) and affected geologic materials, including soils and rock beneath and surrounding the landfill wastes, and any groundwater polluted by a release from the landfill.

⁴ As defined in 40 CFR 122.26(b)(13) and 122.26(b)(2).

⁵ Final Joint Technical Document: Closure and Post-Closure Maintenance Plan for the Forster Canyon Landfill, received September 2016.

- b. Cover the excavation area and exposed wastes at the end of daily excavation activities and ensure adequate best management practices (BMPs) have been installed to prevent surface water from interacting with waste or infiltrating through the remaining waste prism in the excavation area, to control odors, and the venting of landfill gases from the remaining waste prism.
- c. Segregate and containerize any waste materials that are suspected to be hazardous wastes. These wastes shall be sampled and classified, and the data submitted to the San Diego Water Board and County LEA for review prior to either relocation (if materials are found to be non-hazardous), or disposal at an appropriately permitted facility. Copies of manifests for the transport and disposal of hazardous materials shall be included in the **Final CQA Report**.

2. **RELOCATION AREAS.**

The areas where waste will be relocated shall be prepared and maintained in accordance with the Closure Plan. Dischargers shall implement the following measures in the relocation areas:

- a. Place all excavated waste and soil materials in the designated areas approved in the Closure Plan contained within the JTD.
- b. Cover all relocated wastes at the end of daily excavation activities and ensure adequate BMPs have been installed to prevent the migration of wastes outside the relocated waste footprint, to prevent surface water from interacting with wastes, and to control odors, vectors, and other nuisances.

D. FINAL COVER DESIGN AND EXECUTION OF THE CONSTRUCTION QUALITY ASSURANCE PLAN.

The Dischargers shall construct the final cover system in accordance with the requirements of the CQA Plan, the cover design plan, and this Order.

1. **IMPLEMENTATION OF THE CQA PLAN.**

Construction of the final cover shall be carried out in accordance with the CQA Plan as approved by the San Diego Water Board. The CQA Program shall be supervised by a designated CQA Officer, who is a licensed engineer or geologist, to satisfy the requirements of title 27, section 20324(b).

2. FINAL COVER SYSTEM.

The final cover system for the Landfill shall consist of a four-foot thick monolithic cover on the upper deck and a five-foot thick monolithic cover on the side slopes, comprised of on-site and off-site borrow materials that meet the design specifications found in the JTD. The final landfill cover system is an engineered alternative to the prescriptive final cover system specified in title 27, section 21090(a).

3. FINAL COVER MATERIALS.

The JTD estimates that approximately 862,000 cubic yards of soil are needed to construct the final landfill cover system and to meet the minimum final grades required to integrate the landfill into the planned residential community to be constructed outside the setback zone at the perimeter of the Landfill. The soils will be excavated from on-site and off-site borrow areas and shall comply with the design specifications for the landfill cover as approved in the Final Closure Plan.⁶ Specifically, the final cover soil materials shall:

- a. Have a maximum hydraulic conductivity of 1×10^{-5} and an average hydraulic conductivity of 1×10^{-6} centimeters per second or less as determined through field and laboratory testing.
- b. Be compacted to 90 percent of the maximum dry density.
- c. Have a maximum particle size of less than three inches in diameter or length.
- d. If at any time the Grain-Size Distribution tests (ASTM D422) indicate that the final cover soils contain particles in excess of three (3) inches and/or have a minimum fines content (defined by No. 200 sieve) less than 37 percent for any individual test and an arithmetic mean for ten (10) consecutive tests of less than 42 percent, these materials shall be rejected for use in the final cover system. In addition, final cover soils shall have a minimum of 20 percent finer than 5-microns for an individual test and 25 percent for the mean of ten(10) consecutive tests.
- e. Be free of contamination, debris, or other materials that could compromise the integrity of the final cover system.

⁶ Final Joint Technical Document: Closure and Post-Closure Maintenance Plan for the Forster Canyon Landfill, received September 2016.

4. **FINAL COVER GRADE.**

The final cover of the Landfill shall be designed, graded, and maintained to prevent ponding and soil erosion due to high run-off velocities. In compliance with title 27, section 21090(b), all portions of the final cover shall have a slope of at least three percent unless otherwise specified in the JTD and approved by the San Diego Water Board. Any slopes that are steeper than a horizontal to vertical ratio of 3:1 (at 33 percent slope), shall have their design supported by a slope stability analysis, as required by title 27, section 21750(f)(5).

5. **FINAL COVER VEGETATION.**

Upon completion of construction of the final cover system, a native seed mix shall be applied to the upper deck, and the slopes shall be planted with shrubs and grasses to provide protection against soil erosion. Only the side slopes shall be irrigated, temporarily to establish the vegetative cover. The vegetative cover should be established on the side slopes in approximately three to five years. Because California is facing long-term drought conditions, the Dischargers shall provide the San Diego Water Board with a contingency plan for providing side slope protection against erosion should the vegetative cover fail to become established within five years of the initial application of the seed mix and planting of vegetation. This contingency plan shall be submitted to the San Diego Water Board ***within 180 days of completion of construction of the landfill final cover system.***

6. **AERIAL SURVEY.**

Upon completion of closure activities at the Landfill, the Dischargers shall conduct an aerial photographic survey of the Landfill and its immediate surrounding area in accordance with title 27, section 21090(e)(1). The results of this survey shall be submitted with the next scheduled semi-annual monitoring report in accordance with the reporting schedule found in **Attachment B, Monitoring and Reporting Program (M&RP) No. R9-2016-0149 of this Order.**

7. **APPLICATION OF LIQUIDS TO THE COVER.**

The Dischargers shall moderate the application rate of liquids discharged to the deck and side-slopes of the cover for dust control, irrigation of the vegetative layer, or other non-disposal purposes in a manner that minimizes the potential for through-flow to the underlying waste.

8. **FINAL CQA REPORT.**

Within ***180 days*** of completing construction of the Landfill final cover system, the Dischargers shall provide the San Diego Water Board with a Final CQA Report,

containing all the information required by title 27, section 20324(d). The Final CQA Report may be amended, as needed, to include additional information related to post-construction activities necessary to bring the Landfill into compliance with the approved Closure Plan. These activities may include subsequent planting or application of hydroseed for the purposes of establishing a vegetative cover, regrading of any portion of the cover system after a rain event to improve or maintain drainage, or to repair areas of erosion, and the implementation of additional BMPs. The Final CQA Report and any subsequent amendments thereto, must be signed by the CQA Officer overseeing the closure construction activities.

E. POST-CLOSURE MAINTENANCE SPECIFICATIONS

The Dischargers shall implement post-closure maintenance in compliance with the requirements of the Post-Closure Maintenance and Monitoring Plan,⁷ this Order, and M&RP No. R9-2016-0149.

1. WATER USE.

Water used for facility maintenance shall be limited to the minimum volume necessary for dust control and shall only be applied by spraying as follows:

- a. On covered areas and not on exposed wastes.
- b. In quantities not to exceed those necessary to reduce immediate dust hazards.

2. IRRIGATION SYSTEM CONTROL.

The irrigation system shall be installed to establish an effective vegetative cover to promote soil stability and limit erosion of the Landfill cover. The irrigation system is expected to run regularly while establishing the vegetative cover, and intermittently thereafter, as needed, to maintain vegetation on the Landfill cover. The irrigation system shall be managed by a weather-based irrigation controller, and shall be operated based on plant needs. When operational, the duration of watering shall not exceed the infiltration rate of the cover soil and cause erosion or soil loss. The irrigation system shall include the following minimum elements:

- a. A tandem master valve and flow sensor, installed at the point of connection.

⁷ Final Joint Technical Document: Closure and Post-Closure Maintenance Plan for the Forster Canyon Landfill, received September 2016.

- b. A mainline (supply line) providing a minimum of 30 pounds per square inch pressure throughout the system, and composed of UVR-PVC pipe.
- c. Remote control valves and secondary laterals with sprinklers on risers located across the side slopes.
- d. For irrigation lines overlying waste, the design shall also include: flexible connectors, secondary containment, rain sensors, and automatic shutoff valves. When not in operation, the pipes of the irrigation system shall not be charged with water. The Dischargers shall develop and submit to the San Diego Water Board a maintenance plan describing an inspection and maintenance schedule for the irrigation system. A copy of the maintenance plan and inspection schedule shall be submitted as an appendix to the Certification Report (see **Reporting Requirement H.2**).
- e. Once the irrigation is no longer needed, the watering system shall be removed or maintained in good condition if left in place.

3. **COVER MAINTENANCE.**

The structural integrity and effectiveness of all containment structures and the final cover system shall be maintained as necessary to correct the effects of settlement or other adverse factors. Annually, the Dischargers shall provide the San Diego Water Board documentation of the activities undertaken at the site to maintain the integrity of the Landfill final cover system as part of the Annual Site Certification Report.

4. **MANAGEMENT OF SOIL STOCKPILES.**

Soil materials imported and/or stockpiled to perform regular maintenance work on the Landfill cover system shall comply with the specifications of this Order and the approved Closure and Post-Closure Maintenance Plan. The soil stockpile area shall be clearly identified and labeled on a plot plan included with each Certification Report. The location of temporary⁸ soil stockpiles does not need to be included on the site map. However, the locations of permanent soil stockpiles, shall be in those areas identified in the Closure and Post-Closure Maintenance Plan. Stockpiles of soils to be used for maintenance of the Landfill cover system shall comply with the following minimum requirements:

- a. Surface drainage shall be diverted away from the soil stockpiles.

⁸ A temporary stockpile is one that will be on-site for 90-days or less.

- b. The Dischargers shall implement effective BMPs to prevent contact with surface water run-on, and the erosion and transport of soils by surface water runoff. The Dischargers shall amend the *Certification Report*, as needed, to include the list of effective BMPs that are implemented for control of soil erosion from soil stockpiles under this Order.
- c. All soil stockpiles established under this Order shall be located more than 100 feet from any surface waters of the State.
- d. All soil stockpiles shall be protected against 100-year peak stream flows as defined by the local county flood control agency.
- e. Any changes to permanent stockpile locations shall be identified in the Annual Site Certification Report.

5. INSPECTION AND MAINTENANCE.

The Dischargers shall regularly inspect and maintain all soil stockpiles. Inspections shall be conducted at a frequency that will ensure the discharge of soil does not create a condition of pollution or nuisance in waters of the State.

The Dischargers shall ensure that all soil stockpiles are adequately protected from erosion by storm water, and do not cause nuisance conditions due to dust. All soil stockpiles shall be overlain by plastic sheeting with a thickness of not less than 10 mils; or be managed with adequately maintained BMPs for soil stabilization and erosion control including, but not limited to, tackified straw, bonded fiber matrix, wattles, and silt fences. If plastic sheeting is used as a cover, it must be maintained in good condition.

The Dischargers shall report the condition and location of all onsite soil stockpiles in the *Certification Report*, as applicable.

6. SOURCE(S) OF STOCKPILED SOIL.

Soils stockpiled and used for the purposes of maintaining the Landfill cover system shall not contain wastes. Soils used for cover repair in the event of differential settlement, erosion, etc. must be of the same quality as those soils used in the initial construction of the final cover system. Specifically, these soils must meet the grain size, permeability, and compaction specifications for cover soils specified in the Closure Plan, as approved by the San Diego Water Board.

The Dischargers shall provide the San Diego Water Board with information regarding the source(s) of all imported stockpiled soils. This information shall include, but not be limited to:

- a. Name and address of the supplier.
- b. Address of the source location.
- c. Volume of soil obtained from that source.
- d. Documentation from the source that the soils are appropriate for use onsite.

The required information shall be included in the *Certification Report*.

7. **STORM WATER MANAGEMENT.**

The Landfill shall be adequately protected from any washout or erosion of wastes or cover materials to maintain the integrity of the final cover system and protect receiving water quality and beneficial uses. The Dischargers shall implement a storm water management system designed to control Landfill related runoff from a 100-year, 24-hour storm event. The following measures shall be implemented to manage storm water runoff from the Landfill:

- a. Storm water run-on from the upgradient housing development onto the Landfill shall be collected and/or diverted away from the Landfill through a system of drainage control measures separate from those measures implemented to control storm water runoff within the boundary of the Landfill.
- b. Storm water runoff resulting from precipitation that falls on the Landfill cover and the ground surface immediately surrounding the Landfill shall be collected by a system of berms, ditches, downchutes, swales, and drainage channels, and shall be diverted off the Landfill into the detention/retention basins without coming into contact with any waste.
- c. On the north and northwestern face of the Landfill, intermediate, 15-foot wide benches located at intervals of 35-feet in elevation shall contain flanged nestable corrugated steel pipe drains and channels to direct storm water flows from the front face of the Landfill towards the detention basins.

- d. The detention/retention basins shall be designed and constructed according to the findings presented in the Hydrology Study of the Final JTD⁹ as approved by the San Diego Water Board. At a minimum, basins shall be designed to contain peak surface water flows associated with a 100-year, 24-hour storm event.
- e. Storm water flows from the Landfill will ultimately be discharged to a tributary of the San Juan Creek Channel. Prior to discharge, collected storm water shall pass through BMPs consisting of a StormFilter (MP-40), Continuous Deflection Separation Units (MP-51) and a series of detention basins.
- f. Surface water drainage from tributary areas and internal site drainage from surface and subsurface sources shall not contact or percolate through any waste, and shall either be contained onsite or be discharged in compliance with applicable storm water regulations.
- g. Where storm water flows result in erosive flow velocities, erosion control materials shall be used for protection of drainage conveyance features. Effective erosion control BMPs shall be implemented on side slopes and interim bench ditches to control erosion when necessary.
- h. Where high storm water flow velocities occur at terminal ends or downchutes, or where downchutes cross access roads, effective erosion control BMPs shall be implemented.
- i. The Landfill cover system shall be maintained to minimize percolation of liquids through the wastes.
- j. The Landfill cover shall be maintained at the design grade to promote positive sheet flow, unless otherwise approved by the San Diego Water Board.

8. **SITE MAINTENANCE.**

Annually, prior to the anticipated rainy season but no later than **October 1**, the Dischargers shall implement any necessary erosion control measures, and shall complete any necessary construction, maintenance, or repairs of erosion control measures to prevent erosion, ponding on, or flooding of the landfill cover system. This specification shall not preclude the Dischargers from performing necessary

⁹ Final Joint Technical Document for Closure and Post-Closure Maintenance of the Forster Canyon Landfill, December 2011, Revised September 2015 and received September 2016.

maintenance and repairs, resulting from changing site conditions throughout the year. The Dischargers shall take the following actions and provide a description of the erosion control measures implemented in the annual *Certification Report*.

- a. The Dischargers shall report on implemented structural and non-structural BMPs to promote surface water drainage, and minimize the erosion of all landfill cover surface materials in areas undergoing containment system construction and/or maintenance.
- b. The Dischargers shall report on implemented BMPs based on changing site conditions. BMPs may include, but are not be limited to, the use of bonded fiber matrix, anchored fiber rolls, fiber blankets, hydroseeding/vegetating, or other equivalent engineered alternatives approved by the San Diego Water Board.
- c. The Dischargers shall report on any other activities implemented to maintain all areas of the Landfill cover system, including surface water drainage courses, to minimize erosion and the percolation of liquids through wastes.

9. PUBLIC NOTIFICATION REQUIREMENT.

The Dischargers shall post at least one sign clearly visible to the public (in English and Spanish), at the edge of the Landfill, listing the following minimum information:

- a. Site name.
- b. Name and address of the Dischargers.
- c. 24-hour emergency contact information, including name, address, email, and telephone number for the Forster Canyon Landfill.

If one sign in English and Spanish is not adequate to effectively communicate to the local community the minimum contact information prescribed in this section, the Dischargers shall post signs in additional locations and/or in languages other than English and Spanish. Sign(s) shall be maintained to remain legible and in place.

F. FINANCIAL ASSURANCES – GEOLOGIC HAZARD ABATEMENT DISTRICT

Title 27, sections 20380(b) and 20950(f) authorize Regional Boards to require dischargers to establish financial assurances to cover costs associated with the closure,

post-closure operations, maintenance and monitoring, and corrective actions related to a reasonably foreseeable release from a landfill. The Dischargers have proposed to satisfy the financial assurance requirement by forming a Geologic Hazard Abatement District (GHAD). The GHAD, a financial district, shall be established pursuant to Public Resources Code, division 17, sections 26500-26654 to fund oversight of post-closure maintenance activities, to manage the closed Landfill, and to administer financial assurances to cover costs associated with post-closure operations, maintenance and monitoring, reasonably foreseeable releases from the Landfill, and corrective actions in the event of a release from the Landfill.

The Dischargers must establish the GHAD and provide the San Diego Water Board proof of adequate financial assurance mechanisms sufficient for the completion of closure of the Landfill, post-closure operations, maintenance and monitoring, and for corrective actions in the event of a release from the Landfill. The GHAD must be established and the proof provided within **one year of completion of the final cover construction**

In the event the Dischargers are unable to establish a GHAD in the timeframe allocated by this Order, or the GHAD is dissolved or otherwise insolvent, the Dischargers shall provide alternative financial assurances in a mechanism deemed acceptable by the San Diego Water Board. The Dischargers are obligated to retain a continued source of financial assurance coverage during post-closure operations, maintenance, and monitoring, or for corrective actions.

1. **PLAN OF CONTROL.**

A Plan of Control, as defined in Public Resources Code section 26509 and described in Public Resources Code division 17, shall be developed to define the responsibilities, funding mechanism(s), and physical boundaries of the GHAD. The Plan of Control shall require the GHAD to provide post-closure operations, maintenance, and monitoring of the Landfill, and implement corrective actions as necessary, should a release of wastes or slope failure occur. The Plan of Control shall be provided to the San Diego Water Board for review and comment **at least 60 days** prior to the formation of the GHAD. If changing site conditions necessitate updates to the Plan of Control, the GHAD shall ensure that all interested parties, including the San Diego Water Board, are provided a copy of the revised Plan of Control for review and comment prior to adoption by the GHAD.

2. **ENGINEER'S REPORT.**

An Engineer's Report shall be developed by the GHAD to provide a detailed outline of the costs associated with the required activities established in the Plan of

Control. The Engineer's Report shall also include the calculation of the assessment needed to be levied against each parcel in the surrounding housing development on an annual basis, to meet the costs associated with post-closure operations, maintenance, and monitoring activities.

G. PROVISIONS.

The Dischargers shall comply with all of the following Standard Provisions.

1. GENERAL PROVISION.

The discharge of wastes shall at all times be in conformance with applicable State regulations, water quality standards, including but not limited to, all applicable provisions and prohibitions contained in the Basin Plan, including beneficial uses, water quality objectives, and implementation plans. This Order does not preempt or supersede the authority of municipalities, flood control agencies, or other State or local agencies to prohibit, restrict, or control discharges of waste subject to their jurisdiction. Duty to Comply.

Any noncompliance with this Order constitutes a violation of the Water Code and is grounds for (a) enforcement action, and (b) revocation and re-issuance, modification of this Order, or termination of this Order.

2. FINAL LAND USE.

The final land use of the Landfill shall be non-irrigated open space. Any changes to the final land use cannot be made prior to submitting a Report of Waste Discharge (ROWD) and being issued revised WDRs from the San Diego Water Board.

3. RECORDING OF WASTE DISCHARGE REQUIREMENTS.

Within 30 days of adoption of this Order, the Dischargers shall record a copy of this Order, including all attachments, with the County of Orange with the Title for the Landfill.

4. CORRECTIVE ACTION.

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

5. RESPONSIBILITY FOR MONITORING AND MAINTENANCE.

The Dischargers shall be responsible for covering the costs associated with the activities necessary to maintain compliance with this Order until the San Diego Water Board determines that the Landfill no longer poses a threat to water quality.

6. PROPER MAINTENANCE.

The Dischargers shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Dischargers to achieve compliance with the specifications of this Order. Proper maintenance includes effective performance of the Landfill cover system, appropriate BMPs for the control of erosion and runoff, and operation of the dewatering system, as needed, for stability of the Landfill.

7. MAINTENANCE PERIOD.

The maintenance period shall continue until the San Diego Water Board determines that any remaining solid wastes, waste constituents, and waste degradation products will not threaten waters of the State.

8. REVISION OF WASTE DISCHARGE REQUIREMENTS.

This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

- a. Violation of any term or condition of this Order.
- b. Obtaining this Order by misrepresentation or failure to fully disclose all relevant facts.
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

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

9. LANDFILL DISCLOSURE STATEMENT.

Should the current owner of the Landfill enter into a purchase agreement that would transfer the ownership of the Landfill, prior to the completion of such a transfer, the owner shall provide the interested party (i.e., purchaser) with a landfill disclosure statement. Similarly, the owner shall furnish each potential purchaser of property located adjacent to the Landfill, within the San Juan portion of the

development project, with a disclosure statement that provides notification that their potential residential property is located adjacent to a former, unlined Landfill.

The landfill disclosure statement shall provide the necessary details, including information regarding the GHAD (or other financial assurance mechanism) and its oversight of the Landfill. Additionally, the owner shall provide a copy of this Order, and contact information for the GHAD and San Diego Water Board as attachments to the disclosure statement. The Discharger shall also provide a copy of the Plan of Control and the most recent fee invoice as additional attachments to the disclosure statement for any potential purchaser of the Landfill. These actions are consistent with the San Diego Water Board's Practical Vision for Proactive Public Outreach and Communication.

10. **PROPERTY RIGHTS.**

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Dischargers from liability under federal, State, or local laws, nor create a vested right for the owner and operator to continue the regulated activity.

11. **ENTRY AND INSPECTION.**

Under the authority of Water Code section 13267(c), the Dischargers shall allow the San Diego Water Board, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

- a. Enter upon the Dischargers' premises where a regulated facility or activity is located or conducted, or where records must be kept under the specifications of this Order.
- b. Have access to and copy, at reasonable times, any records that must be kept under the specifications of this Order.
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or specified under this Order.
- d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the Water Code, any substances or parameters at any location.

- e. Photograph or video record any structures, facilities, activities, or other conditions that could result in adverse impacts to water quality and that are pertinent to compliance with this Order.

12. REPOSITORY FOR WASTE DISCHARGE REQUIREMENTS.

A complete and correct copy of this Order will be maintained at the local offices of the Dischargers, and shall be available to monitoring and maintenance personnel at all times.

13. SEVERABILITY.

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. Effective Date.

This Order becomes effective on December 14, 2016 and this Order supersedes Order No. 94-106, as amended.

H. REPORTING REQUIREMENTS.

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

1. REPORT OF WASTE DISCHARGE.

The Dischargers shall file a Report of Waste Discharge (ROWD) at least **120 days** prior to any of the following:

- a. Any significant changes at the Landfill. These activities include, but are not limited to excavation and relocation of wastes onsite, or changes to the monitoring or dewatering systems.
- b. Implementation of an Evaluation Monitoring Program, as required pursuant to title 27, section 20425, and/or a Corrective Action Monitoring Program, pursuant to title 27, section 20430.
- c. Any planned change in the regulated facility or activity which may result in noncompliance with this Order.

d. Changes in land use other than as described in this Order.

2. **SITE CERTIFICATION REPORT.**

The Dischargers shall submit a Site Certification Report certifying under penalty of perjury, that the Landfill cover system and site conditions are protective of water quality and beneficial uses. The Dischargers shall submit the Site Certification Report to the San Diego Water Board on an annual basis, beginning in **October 2017**. The Site Certification Report must be received by the San Diego Water Board no later than **5:00 pm on October 30** of each year, and may be submitted as an attachment to the Annual Compliance Report required by the M&RP. The Report shall contain at a minimum, the following information:

- a. A transmittal letter, signed and certified as directed in **Reporting Requirement H.16** of this Order, highlighting the major aspects of the report, including but not limited to, any violations noted during the year-long reporting period, and a brief description of any major grading or cover maintenance work, including repairs completed during the reporting period.
- b. The names of the persons, companies, or agencies responsible for each aspect of the Landfill maintenance, along with their addresses and phone numbers.
- c. A site map that clearly illustrates the property boundaries, the existing limits of waste, internal roads, the location of any temporary soil stockpiles, and other structures located within the property boundary.
- d. A site map that clearly illustrates the location and layout of the current monitoring, dewatering, and control systems, including drainage and erosion control systems, groundwater monitoring systems, surface water monitoring systems, and landfill gas monitoring systems.
- e. Descriptions of the general site conditions and any methods, procedures, schedules, and processes that will be utilized to maintain, monitor, and inspect the Landfill. The description shall include structural and/or non-structural BMPs, grading, and any other maintenance or repair work activities completed to bring the site into compliance with the requirements of this Order.
- f. A detailed description of the maintenance or repair activities completed during the reporting period in order to ensure that site conditions comply with this Order.

- g. A copy of all inspection reports completed during the reporting period and a discussion of any significant findings, including any deficiencies with regards to the conditions of all monitoring points (including all monitoring and control systems).
- h. All observed deficiencies. Any observable deficiencies shall be photographed and discussed in the *Certification Report*, and in a permanent log that is kept at the office of the Dischargers. The Certification Report shall also contain photographs and a discussion of how these deficiencies were corrected to maintain compliance with the requirements of this Order.
- i. Documentation of compliance with the maintenance requirements listed in **Section E** of this Order.
- j. The volume of liquids collected from any waste containment structure a ponded seep, or as a result of periodic leak detection surveys or the accumulation of condensate or leachate in landfill gas probes, recorded at a minimum on a quarterly basis.
- k. Any other problem areas identified on the landfill cover.
- l. Areas of the vegetative cover, if any, requiring replanting.
- m. Eroded portions of the final cover requiring regrading, repair, replacement or (for areas where the problem persistently reoccurs), increased erosion resistance.
- n. Areas lacking free drainage.
- o. Areas damaged by equipment operation.
- p. Areas that are leaking wastes or waste constituents.
- q. Localized areas identified in the iso-settlement survey having sustained repeated or severe differential settlement.

Problem areas shall be identified periodically on at least a semi-annual schedule.

3. **SITE RE-CERTIFICATION REPORT.**

Should the Dischargers become aware of any area of non-compliance with this Order during the rainy season (October 1 through April 30), either through the Dischargers' inspection, or an inspection report provided by the County LEA or

San Diego Water Board, the Dischargers shall take immediate steps to implement temporary measures to mitigate these areas. The Dischargers shall provide the San Diego Water Board with a Site Re-Certification Report. This Report shall detail the temporary and permanent steps taken (either through photographs or an inspection report) to mitigate the areas of non-compliance, and recertify that the Landfill cover system and site conditions are again protective of water quality and beneficial uses in compliance with this Order. The Site Re-Certification Report must be received by the San Diego Water Board **within 30 days** of completing all mitigation measures, or by 5:00 pm on **June 30** of that year, whichever is earlier.

4. **METHANE AND OTHER LANDFILL GASES.**

The County LEA, has prescribed a landfill gas (LFG) monitoring program for the Landfill. The Dischargers shall implement the requirements prescribed by the County LEA, and provide copies of all LFG monitoring data and reports to the San Diego Water Board.

5. **MONITORING AND REPORTING PROGRAM.**

Pursuant to Water Code section 13267, and title 27, section 20385, the Dischargers shall comply with **M&RP No. R9-2016-0149**. Failure to comply with M&RP No. R9-2016-0149 may subject the Dischargers to civil liability pursuant to Water Code section 13268.

6. **MONITORING WELLS.**

The Dischargers shall comply with all notice and reporting requirements of the California Department of Water Resources, and with any local agency well-permitting requirements imposed by a local agency with regard to the construction, alteration, destruction, maintenance, or abandonment of all monitoring wells used for compliance with this Order and M&RP No. R9-2016-0149, as required under Water Code sections 13750 through 13755, and local agency requirements.

7. **ISO-SETTLEMENT MAP.**

Five years after completing closure of the Landfill, the Dischargers shall produce and submit an iso-settlement map depicting the elevation of the final cover in accordance with title 27, section 21090(e)(2). The iso-settlement map shall show all areas where differential settlement has occurred since the submittal of the previous map and shall highlight areas of repeated or severe differential settlement as required by title 27, section 21090(e)(4).

8. REPORTING OF ENDANGERMENT OF HEALTH AND ENVIRONMENT.

The Dischargers shall report any noncompliance which may endanger human health or the environment. Any such information shall be provided orally to the San Diego Water Board **within 24-hours** from the time the Dischargers become aware of the circumstances. A written report of the noncompliance shall also be provided within **5 days** of the time the Dischargers become aware of the circumstances. The written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and whether or not the noncompliance has been corrected; the anticipated time the noncompliance is expected to continue (if not already corrected), and steps taken or planned to reduce, eliminate, or prevent recurrence of the noncompliance. The San Diego Water Board, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been deemed sufficient.

9. REPORTING OF SLOPE FAILURE.

The San Diego Water Board shall be **immediately** notified of and the Dischargers shall promptly repair any failure that threatens the integrity of containment structures, or structures that control surface drainage or erosion, groundwater monitoring wells, or the landfill gas collection system. A written summary of the actions that were implemented to correct the slope failure shall be prepared and submitted with the next semi-annual detection groundwater monitoring report.

10. REPORTING OF SIGNIFICANT SITE MAINTENANCE.

The Dischargers shall notify the San Diego Water Board, either in writing, via e-mail, facsimile, or telephone, at least **2 working days** prior to initiating any significant site maintenance activities. Significant site maintenance activities may include those activities that could alter existing surface drainage patterns or change existing slope configurations. The San Diego Water Board should be notified prior to the implementation of any of the following activities:

- a. Significant grading activities.
- b. Installation or destruction of soil borings, groundwater monitoring wells or landfill gas probes or wells (if applicable).

A description of these activities shall be included in the annual Certification Report.

11. REPORTING OF SEEPAGE FROM THE LANDFILL.

The Dischargers shall **immediately** report by telephone or e-mail the discovery of any previously unreported seepage from the Landfill. A written report shall be filed

with the San Diego Water Board within **7 days** of the discovery of the seepage, containing at least the following information:

- a. A map showing the location(s) of the seepage.
- b. An estimate of the flow rate.
- c. A description of the nature of the discharge (e.g., all pertinent observations and analyses).
- d. Analytical data obtained from a sample of the seep if a sample can be obtained.
- e. The corrective measures proposed to eliminate the seep.

12. REPORTING OF LEACHATE PRODUCTION OR CHANGE IN PRODUCTION.

Pursuant to title 27, section 21710(c)(3), the Dischargers shall notify the San Diego Water Board within **7 days** if fluid is detected in any unsaturated zone monitoring system (i.e., landfill gas migration monitoring probes), or if a progressive increase is detected in the volume of fluid in any unsaturated zone monitoring system.

13. NOTIFICATION OF CLOSURE COMPLETION.

The Dischargers shall provide the San Diego Water Board with written notification of completion of construction of the final cover, of monitoring networks or systems, and of storm water and erosion control systems, and completion of any other activities associated with the closure of the Landfill. The written notifications must be received by the San Diego Water Board **within 30 days** of the completion of the construction or activity. In the notifications the Dischargers shall certify under penalty of perjury that all closure activities were performed in accordance with all applicable regulations in accordance with title 27, section 21710(c)(6).

14. INCOMPLETE REPORTS.

Where the Dischargers become aware that they failed to submit any relevant facts or submitted incorrect information in a ROWD, groundwater monitoring report, *Certification Report*, or any other report submitted to the San Diego Water Board, the Dischargers shall promptly submit the additional facts or corrected information.

15. CHANGE IN OWNERSHIP.

The Dischargers shall notify the San Diego Water Board in writing at least **30 days** in advance of any transfer of the property to a new owner(s). The notification shall include an acknowledgement that the current owner is liable for violations of the

Order up to the date of transfer, and that the new owner is liable for any violations after the date that ownership of the property transfers. The notification shall include an acknowledgement signed by the new owner(s) that the new owner(s) accepts responsibility for compliance with this Order, including financial assurances as the State may require, for implementation of maintenance and monitoring of the Landfill.

16. REPORTING DECLARATION.

All applications, reports, or information submitted to the San Diego Water Board are part of the public record and shall be signed and certified as follows:

- a. A Report of Waste Discharge 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.*
- b. All other reports required by this Order and any other information required by the San Diego Water Board shall be signed by a person designated in paragraph (a) of this section, 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.*
 - iii. The written authorization is submitted to the San Diego Water Board.*

The authorization, in the form of a Signature Authority Statement, shall be submitted to the San Diego Water Board within **30 days** from either (1) the adoption of this Order; or (2) a change in the duly authorized representative.

- c. Any person signing a document pursuant to this section shall make a certification statement regarding the accuracy and authenticity of the information provided in the document. The certification statement shall be

included as part of the transmittal letter submitted with any document referenced herein. The certification statement shall read as follows:

"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 known violations."

17. DUTY TO USE LICENSED PROFESSIONALS.

Pursuant to title 27, sections 20950(b), 20324(b), and 20324(d), any report submitted in compliance with title 27 and this Order, which documents design final waste containment features for closure of a landfill and final construction of containment features or monitoring systems, shall be approved by a professional civil engineer or a certified engineering geologist appropriately licensed by the State of California.

The Dischargers shall provide documentation that plans and reports required under this Order are prepared by or under the direction of, appropriately qualified professionals. Title 27, sections 20324(b) and (d), 20950(b), and 21090(b)(1)(C); and the California Business and Professions Code sections 6735, 7835, and 7835.1 require that engineering and geologic evaluations and judgments be performed by or under the direction of licensed professionals. A statement of qualifications and license numbers of the responsible lead professionals shall be included in all plans and reports submitted by the Dischargers. The lead professional shall sign and affix their license stamp to the report, plan, or document.

18. REPORT SUBMISSION PROCEDURES.

The Dischargers shall submit all paper or electronic copies of reports and notifications required under this Order, including M&RP No. R9-2016-0149, and any other information requested by the San Diego Water Board, via email to:

California Regional Water Quality Control Board, San Diego Region:
sandiego@waterboards.ca.gov
Attn: Land Discharge Unit Supervisor

Larger documents shall be divided into separate files at logical places in the report to keep the file sizes under 150 megabytes. The Dischargers shall continue to provide a paper transmittal letter, a paper copy of all figures larger than 8.5 inches by 14 inches (legal size), and an electronic copy (on a CD or other appropriate media) of all reports to the San Diego Water Board. Unless directed otherwise by the Executive Officer, all correspondence and documents submitted to the San Diego Water Board shall include the reference code “**225044:Land Discharge Supervisor**” in the header of subject line.

The Dischargers shall also upload all reports into the GeoTracker database in accordance with this Order including M&RP No. R9-2016-0149 (**See M&RP No. R9-2016-0149, Part III.E.3 - Electronic Data Submittals**).

I. DECLARATIONS BY THE SAN DIEGO WATER BOARD

1. ENFORCEMENT ACTIONS.

Pursuant to Water Code section 13350(a), any person who is in violation of any WDRs, or prohibition issued, reissued, or amended by the San Diego Water Board, discharges waste, or causes or permits waste to be deposited where it is discharged into the waters of the State, shall be liable civilly under Water Code section 13323, and remedies may be proposed, in accordance with Water Code sections 13350(d) and (e).

2. PENALTIES FOR INVESTIGATION, MONITORING, OR INSPECTION VIOLATIONS.

The San Diego Water Board reserves its right to take any enforcement action authorized by law for violations of the terms and conditions of this Order.

3. CIVIL MONETARY REMEDIES.

Water Code section 13350 provides that any person who intentionally or negligently violates any WDR issued, or amended by the San Diego Water Board, is subject to administrative civil liability of up to 10 dollars per gallon of waste discharged, or if no discharge occurs, up to 100 dollars per day of the violations. Water Code section 13268 further provides that failure or refusal to submit technical or monitoring program reports required by this Order, is subject to administrative civil liability of up to 1,000 dollars per day of the violation.

4. OTHER REGULATIONS.

The Dischargers may be subject to additional federal, State, or local regulations.

5. **REQUESTING ADMINISTRATIVE REVIEW BY THE STATE WATER BOARD.**

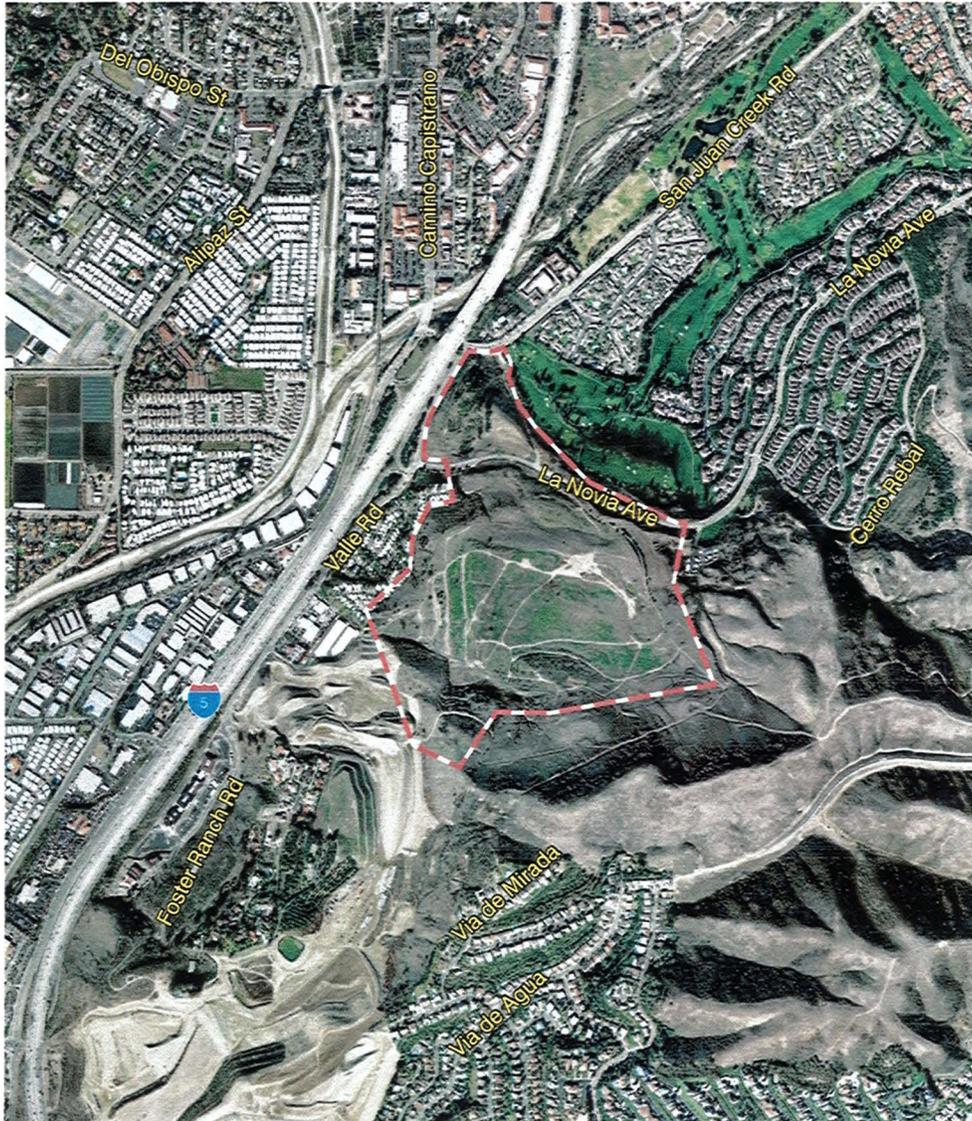
Any person affected by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320, and title 23, section 2050. The petition must be received by the State Water Board (Office of Chief Counsel, P.O. Box 100, Sacramento, CA 95812) **within 30 days** of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request.

6. **DEFINITIONS.**

Definitions of terms used in this Order shall be as set forth in title 27, section 20164, and in Water Code section 13050.

7. **DELEGATION OF AUTHORITY.**

The San Diego Water Board has delegated to the Executive Officer by resolution, all the powers and authority that may be delegated pursuant to Water Code section 13223. The San Diego Water Board intends for the Executive Officer to make modifications or revisions in appropriate cases, to M&RP No. R9-2016-0149.



--- Site Boundary

Source: Google Earth Pro 2008

0 1,500
Scale (Feet)



ATTACHMENT B

MONITORING AND REPORTING PROGRAM NO. R9-2016-0149 FOR THE MAINTENANCE AND MONITORING OF FORSTER CANYON LANDFILL

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**MONITORING AND REPORTING PROGRAM NO. R9-2016-0149
FOR THE MAINTENANCE AND MONITORING OF
FORSTER CANYON LANDFILL
ORANGE COUNTY**

This Monitoring and Reporting Program No. R9-20160149 (MR&P) is issued to Advanced Group, 99-SJ and the County of Orange pursuant to Water Code section 13267, which authorizes the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) to require that dischargers furnish technical and monitoring program reports. The San Diego Water Board Executive Officer has the authority to modify this M&RP as appropriate. The San Diego Water Board finds that:

1. LEGAL AUTHORITY.

M&RP No. R9 2016-0149 is issued pursuant to the Water Code commencing with section 13000, and implements the: (1) regulations and policies adopted by the State Water Resources Control Board (State Water Board) in State Water Board Resolution No. 68-16 Statement of Policy with Respect to Maintaining High Quality Waters in California and all applicable portions of title 27, California Code of Regulations; (2) all applicable provisions of the statewide Water Quality Control Plan adopted by the State Water Board and the Water Quality Control Plan, San Diego Basin (Basin Plan) adopted by the San Diego Water Board, including beneficial uses, water quality objectives, and implementation plans; (3) applicable provisions of the California Health and Safety Code, Division 20, Chapter 6.5 (Hazardous Waste Control); and (4) applicable State and federal regulations.

2. PURPOSE.

Slope stability, landfill gas, and dewatering effluent monitoring are necessary for the San Diego Water Board to determine if the facility is in compliance with Order No. R9-2016-0149 - *Waste Discharge Requirements for the Closure and Post-Closure Maintenance of the Forster Canyon Landfill*. The M&RP also prescribes performance standards for a detection groundwater monitoring program in accordance with title 27, California Code of Regulations, sections 20415 et seq. and 20420. This monitoring will ensure early detection of any releases of waste constituents and waste degradation products from the Forster Canyon Landfill (Landfill) enabling the Dischargers to provide early response actions for the long-term protection of water quality and beneficial uses of groundwater and surface waters within the Lower San Juan Hydrologic Subarea (HSA 901.27) of the San Juan Hydrologic Unit (901.00).

3. QUALIFIED PROFESSIONALS.

Qualified professionals are necessary for preparing the technical and monitoring program reports required by this M&RP. Use of qualified professionals ensures that the collected data and interpretations are reliable and accurate. Professionals should be licensed where applicable, and competent and proficient in fields pertinent to the required activities. California Business and Professions Code section 6735, 7835, and 7835.1 require that engineering and geologic evaluations and judgments be performed by or under the direction of licensed professionals.

4. **CALIFORNIA ENVIRONMENTAL QUALITY ACT.**

The San Diego Water Board's adoption of this M&RP is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with section 15061(b)(3) of chapter 3, title 14 of the California Code of Regulations because it can be seen with certainty that there is no possibility that the activities required by this M&RP will have a significant effect on the environment.

5. **APPLICABILITY.**

M&RP No. R9-2016-0149 supersedes the M&RP associated with Order No. 94-106, and shall be implemented immediately upon adoption by the San Diego Water Board.

IT IS HEREBY ORDERED that, pursuant to Water Code section 13267 and California Code of Regulations title 27, the Dischargers must comply with the following monitoring and reporting requirements:

PART I. SAMPLING AND ANALYSIS PLAN

The Dischargers shall furnish a Sampling and Analysis Plan that incorporates the standard monitoring provisions and describes the sampling and analysis protocols for detection groundwater, slope stability, and dewatering effluent monitoring for the Forster Canyon Landfill (Landfill). The Sampling and Analysis Plan must be received by the San Diego Water Board ***within 90 days*** of adoption of this M&RP.

A. STANDARD MONITORING PROVISIONS.

The Sampling and Analysis Plan shall incorporate the following standard provisions for all sampling and analyses conducted pursuant to this M&RP.

1. **Monitoring Systems.**

Site-specific monitoring systems must comply with the detection monitoring requirements and associated performance standards included in title 27,¹ California Code of Regulations, sections 20385 et seq.

2. **Methods of Analysis.**

Specific methods of analysis shall be identified in the Sampling and Analysis Plan. If the Dischargers propose to use methods or test procedures other than those included in the most current version of the U.S. Environmental Protection Agency's (USEPA) SW-846² or title 40 of the Code of Federal Regulations (CFR), part 136,³ the Sampling and Analysis Plan must explain the rationale for the change. The change must be approved by the San Diego Water Board prior to implementation.

3. **Sampling Frequency.**

If the Dischargers monitor any sampling point or constituent of concern (COC)⁴ more frequently than required by this M&RP, the results shall be included in the monitoring reports. The Dischargers shall also report the increased frequency of monitoring and specific monitoring locations to the San Diego Water Board.

4. **Protocols.**

Sample collection, storage, and analysis shall be performed in accordance with protocols included in the USEPA's "Test Methods for Evaluations of Solid Waste, Physical/Chemical Methods, SW-846" and in accordance with a written Sampling and Analysis Plan, approved by the San Diego Water Board.

5. **Calibration.**

All monitoring instruments and equipment shall be properly calibrated and maintained as necessary to ensure accuracy of measurements.

6. **Record Retention.**

The Dischargers shall retain records of all monitoring information, including all calibration and maintenance records, and copies of all reports required by this M&RP. Records shall be maintained for a minimum of five years from the date of

¹ Hereinafter, all references made to title 27 within this M&RP will be from the California Code of Regulations.

² USEPA guidance document SW-846, "Test Methods for Evaluations of Solid Waste, Physical/Chemical Methods."

³ 40 CFR, part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants: Procedures for Detection and Quantification."

⁴ COCs are derived from 40 CFR part 258, Appendix I. Appendix I COCs are those constituents likely to be in or derived from landfill wastes and are therefore appropriate to use as monitoring parameters when the intent of monitoring is to determine whether a release from the landfill has occurred. The COCs from Appendix I also serve as the initial detection groundwater monitoring parameters for the Landfill.

sample or measurements. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the San Diego Water Board.

7. Sample Records.

Records of monitoring information shall include:

- a. The date, identity of sample, monitoring point from which the sample was collected, and time of sampling or measurement.
- b. The name of the individual(s) who performed the sampling or measurements.
- c. The Date and time that analyses were started and completed.
- d. The analytical techniques or method used, including method of preserving the sample and any other details requested by the San Diego Water Board, such as the identity and volumes of reagents used.
- e. The Calculation of results.
- f. The Results of analyses and the method detection limit (MDL) for each parameter.
- g. The Laboratory quality assurance results (e.g., percent recovery, response factor, etc.).
- h. Chain of Custody forms.

8. Standard Reporting Provisions.

The Sampling and Analysis Plan shall incorporate the following:

- a. The methods of analysis shall be appropriate for the expected concentrations.
- b. Analytical results falling between the MDL and the practical quantitation limit (PQL) shall be reported as "trace" and shall be accompanied by documents reporting both the MDL and PQL values for that analytical run.
- c. MDLs and PQLs shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. In a relatively interference-free laboratory, derived MDLs and PQLs are expected to closely agree with published USEPA MDLs and PQLs.

- d. If the laboratory suspects that, due to a change in matrix or other effects, the MDL or PQL for a particular analytical run differs significantly from historic MDL or PQL values, the results shall be flagged and reported in the QA/QC report.
- e. The MDL shall always be calculated such that it represents a concentration associated with a 99 percent reliability of non-zero results.
- f. The PQL shall represent the lowest concentration at which a numerical value can be assigned with reasonable certainty.
- g. All QA/QC data shall be reported, along with the sample results to which they apply. The QA/QC information shall include the method, equipment, and analytical detection and quantitation limits, the recovery rates, an explanation for any recovery rate that is less than 80 percent, the results of equipment and method blanks, the results of spiked and surrogate samples, and the frequency of quality control analysis. Sample results shall be reported unadjusted for blank results or spike recovery. In cases where contaminants are detected in field, trip, or laboratory blank samples, the accompanying sample results shall be appropriately flagged in the tabulated data.
- h. Upon receiving written approval from the San Diego Water Board, a proposed alternative statistical or non-statistical procedure may be used for determining the significance of analytical results for a constituent that is a common laboratory contaminant (e.g., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate) during any given Reporting Period in which QA/QC samples show evidence of laboratory contamination for that constituent. Nevertheless, analytical results involving detection of these analytes in any background or downgradient sample shall be reported and flagged for easy reference by the San Diego Water Board.

9. Five-Yearly COC Scan.

The Sampling and Analysis Plan shall include a Five-Yearly COC Scan⁵ for the purpose of creating a “COC List” of constituents present in groundwater at each well. As part of a Five-Yearly COC Scan, any unknown peaks on the chromatographs shall be reported along with an estimate of the concentration of the unknown analyte(s). When unknown peaks are encountered, a second column or second method confirmation procedures shall be performed to attempt to

⁵ The COC scan includes all COCs found in 40 CFR, part 258, Appendix II. Appendix II provides a comprehensive list of analytes that may exist in leachate generated from a landfill.

identify and more accurately quantify the unknown analyte. If an analyte is detected that is not yet on the COC list, the Dischargers shall, ***within 30 days***, resample the well and reanalyze the sample for the newly detected constituent(s). All newly detected constituents verified by a retest become part of the COC list for regular detection groundwater monitoring at the Forster Canyon Landfill. Furthermore, a Five-Yearly COC Scan, following the same procedures listed above, shall be performed on dewatering effluent to update the list of detection groundwater monitoring COCs and ensure that all potential constituents of concern are monitored and analyzed.

The five-yearly COC sampling and analysis shall occur at alternating intervals to account for seasonal variations in the hydrogeology at the Landfill. Therefore, the Discharger shall sample either in the winter-spring timeframe, or summer-fall timeframe, and report the results of that sampling event in the groundwater monitoring report that is due at the end of that reporting interval. For example, if the Discharger samples in the winter-spring timeframe, the COC report and analysis is due on April 30 of that same year.

B. DETECTION GROUNDWATER MONITORING.

The Sampling and Analysis Plan shall include a Detection Groundwater Monitoring Program compliant with the specific requirements and performance standards found in title 27, California Code of Regulations, sections 20415 and 20420.

1. Detection Groundwater Monitoring Program Requirements.

The Detection Groundwater Monitoring Program (DMP) shall include:

- a. A sufficient number of monitoring points and background monitoring points installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer that represent the quality of groundwater passing the Point of Compliance and allow for the detection of a release from the Unit.⁶
- b. A sufficient number of monitoring points installed at additional locations and depths to yield groundwater samples from the uppermost aquifer to provide the best assurance of the earliest possible detection of a release from the Landfill.⁷

⁶ Title 27, California Code of Regulations, section 20415(b)(1)(B)(1).

⁷ Title 27, California Code of Regulations, section 20415(b)(1)(B)(2).

- c. A sufficient number of monitoring points and background monitoring points installed at appropriate locations and depths to yield groundwater samples from portions of the zone of saturation, including other aquifers not monitored pursuant to title 27, California Code of Regulations, section 20415(b)(1)(B)(1) and 20415(b)(1)(B)(2), to provide the best assurance of the earliest possible detection of a release from the Landfill.⁸
- d. A sufficient number of monitoring points and background monitoring points installed at appropriate locations and depths to yield groundwater samples from zones of perched water to provide the best assurance of the earliest possible detection of a release from the Landfill.⁹
- e. Monitoring point locations and depths that include the zone(s) of highest hydraulic conductivity in each groundwater body monitored pursuant to title 27, California Code of Regulations, section 20415(b)(1)(B)(5).

2. **Detection Groundwater Monitoring Program Elements.**

The Detection Groundwater Monitoring Program shall include the following minimum elements:

- a. The Dischargers shall use and maintain detection groundwater monitoring wells to conduct the detection groundwater monitoring program.
- b. The groundwater samples shall be collected, analyzed, and reported for the general chemistry parameters and COCs at the frequencies shown in **Table 1 of Part I.B**, and any additional parameters included in the approved Sampling and Analysis Plan.
- c. The static water elevation shall be measured to the nearest 0.01 foot in each well prior to pumping monitoring wells for sampling.
- d. Samples shall be collected for any given monitored medium.
- e. For all monitoring points and background monitoring points to satisfy the data analysis requirements for a given Reporting Period.
- f. Samples shall be collected in a manner that ensures sample integrity.
- g. Samples shall be collected on a consistent schedule, with sampling events evenly spaced approximately six months apart.

⁸ Title 27, California Code of Regulations, section 20415(b)(1)(B)(3).

⁹ Title 27, California Code of Regulations, section 20415(b)(1)(B)(4).

- h. Prior to purging and sampling monitoring wells, the Dischargers shall assess the well for the presence of a floating immiscible layer. If an immiscible layer is found, the Dischargers shall notify the San Diego Water Board **within 24 hours** of the discovery.
- i. Groundwater elevations shall be monitored at least quarterly, including the times of expected highest and lowest elevations of the water level for the respective groundwater body¹⁰ Groundwater elevations shall be measured within a period of time short enough to avoid temporal variations in groundwater elevations.
- j. Groundwater sampling shall also include an accurate determination of the field parameters of temperature, electrical conductivity, turbidity, and pH – pursuant to title 27, section 20415(e)(13).

Table 1 – Detection Groundwater Monitoring

Monitoring Parameters	Units	Sampling Frequency¹
pH ²	pH	Semi-annual
Field Conductivity ²	µS/cm	Semi-annual
Turbidity ²	NTU	Semi-annual
Total Dissolved Solids	mg/l	Semi-annual
Chloride	mg/l	Semi-annual
Sulfate	mg/l	Semi-annual
Nitrate as Nitrogen	mg/l	Semi-annual
Volatile Organic Compounds ³	µg/l	Semi-annual
Metals ³	mg/l	Semi-annual

¹The San Diego Water Board Executive Officer may increase or decrease the monitoring frequency if determined to be necessary.

²These monitoring parameters are field parameters measured during sampling activities. Note: mg/l = milligram per liter; µg/l = micrograms per liter; NTU = Nephelometric turbidity units; µS/cm = microsiemens/centimeter.

³These monitoring parameters are derived from 40 CFR, Part 258, Appendix I – “Constituents for Detection Monitoring.” These constituents are generally expected to be in or derived from wastes associated with landfill. Lab Accreditation.

¹⁰ Title 27, California Code of Regulations, section 20415(e)(15).

Unless otherwise approved by the San Diego Water Board, all analyses shall be conducted at a laboratory accredited for such analyses by the State Water Board Division of Drinking Water (DDW). Any report presenting new analytical data is required to include the complete Laboratory Analytical Report(s).

3. Laboratory Reporting Requirements.

The Laboratory Analytical Report(s) shall contain:

- a. A complete sample analytical report.
- b. A complete laboratory Quality Assurance/ Quality Control (QA/QC) report.
- c. A discussion of the sample and QA/QC data.
- d. A properly completed Chain of Custody form for the analyzed samples.
- e. A transmittal letter, signed by the laboratory director, certifying that.
 - i. The laboratory is an Environmental Laboratory Accreditation Program (ELAP) – accredited laboratory which has demonstrated to DDW ELAP its capacity to analyze environmental samples using approved methods.
 - ii. All analytical work performed by, or on behalf of the laboratory, was supervised by the laboratory director.
 - iii. All analytical work performed by the laboratory used the most current methods for the analytes specified in this M&RP or Chain of Custody submitted by the Discharges.
- f. If requested by the San Diego Water Board, the Laboratory Analytical Report(s) shall be signed by the laboratory director.

The Detection Groundwater Monitoring Program shall specify either the inter-well or intra-well method, or a combination of the two as the method of analysis of the detection groundwater monitoring data depending on which type of analysis is the best fit for site conditions (See Part II for a description of the two methods). Once implemented, the method of analysis cannot be changed without the written approval of the San Diego Water Board.

C. DEWATERING EFFLUENT MONITORING.

The Sampling and Analysis Plan shall include a Dewatering Effluent Monitoring Program. The Dewatering Effluent Monitoring Program shall include information about the design and installation of a network of permanent dewatering wells. The program shall include a construction quality assurance plan, well design drawings, a location map with proposed well locations, and a time schedule for completing the installation of the network. The Dischargers shall provide the San Diego Water Board with revisions to the workplan as required by changing site conditions or construction timelines.

D. SLOPE STABILITY MONITORING.

The Sampling and Analysis Plan shall include a Slope Stability Monitoring Program for the slopes in the final cover of the Landfill. The Slope Stability Monitoring Program shall incorporate a combination of inclinometers and/or permanent surface monuments for measuring the displacement or slope movement of the final cover slopes, and a schedule for periodic visual inspections. The Slope Stability Monitoring Program must include activities adequate to determine if the integrity of final cover system has been compromised such that it no longer functions as designed. The Dischargers shall provide the San Diego Water Board with revisions to the Slope Stability Monitoring Program as warranted by changing conditions at the Landfill. Monitoring frequency shall be monthly for the first year after closure of the landfill is completed and quarterly thereafter.

E. SCHEDULE OF ACTIVITIES.

The Sampling and Analysis Plan shall include a schedule for implementing all the activities described in the various monitoring programs detailed in the plan.

PART II. METHODS OF DATA ANALYSIS FOR DETECTION GROUNDWATER MONITORING

Part II of M&RP No. R9-2016-0149 provides the requirements for the analysis of detection groundwater monitoring data collected from monitoring wells associated with the Landfill. The objective of the detection groundwater monitoring program is to ensure early detection of a release of waste constituents from the Landfill. To accomplish that objective, the detection groundwater monitoring program must be able to determine whether the release of any COC has created a measurably significant increase at any given monitoring well. Using the list of monitoring parameters provided in Table 1 and

any additions of COCs from subsequent “COC Scans” of groundwater, the Dischargers must analyze groundwater samples collected from each well according to the analytical methods in Part II below to determine whether a release has occurred, and if so, which COCs are present and how their concentrations change over time.

A. DETECTION MODE MONITORING

If COCs have not been detected in groundwater samples collected from a given well, that well will be monitored in “detection mode.” In detection mode, the Dischargers have the option of using either the “*inter-well*” or “*intra-well*” statistical approach when analyzing groundwater data. The inter-well and intra-well approaches are described in Section M of Attachment C.

B. TRACKING MODE MONITORING

When one or more COCs are detected in groundwater samples and there is statistically significant evidence of a release, the Discharger shall monitor all of the COCs in that groundwater-monitoring well in “tracking mode.” In tracking mode, the Dischargers shall analyzing COC concentrations in groundwater by plotting the concentrations in groundwater samples collected from a given well over time. The graphical representation of the groundwater data will be used to track trends in COC concentrations over time, and assist in evaluating the impacts of COCs on groundwater quality.

C. VALIDATION OF BACKGROUND DATASETS

The Dischargers may need to validate an intra-well background dataset for COCs at an existing well if there have not been enough sampling events at that well to create a background data set, and for each new well installed as part of the groundwater detection-monitoring program. If the Dischargers use an intra-well approach, then the background monitoring program shall report the validated background dataset, specifying the COCs and monitoring well(s) effected, in the next scheduled monitoring report.

1. Accelerated Background Data Procurement.

If there are less than ten sampling points for a given COC at any well, the Dischargers shall implement the accelerated data procedure prior to initiating the intra-well background data set validation procedure described below. Background concentrations for new wells or COCs may be accomplished by collecting and analyzing samples quarterly from each affected well until there are at least 10 data points. If quarterly sampling would not provide representative data for the site,

Dischargers shall submit an alternative sampling plan to the San Diego Water Board for approval.

2. **Intra-well background Validation for New COCs.**

Once 10 data points are available, then a background dataset can be established and the intra-well analytical approach implemented.

a. **Commonly Quantified Constituents.**

For any COC that, absent the Landfill's existence, would usually be detected in groundwater at concentrations exceeding the COC's PQL, the Dischargers shall validate the intra-well background data at each compliance well. A compliance well's data cannot be used for an intra-well comparison if the constituent's median concentration exceeds the 75th percentile of the pooled data. Inter-well comparisons shall be used for these wells. Data sets from a COC whose existing data's median is less than the pooled background plot's 75th percentile may be used as the initial background dataset for intra-well comparisons for that well or COC.

b. **Rarely Quantified Constituents.**

For a COC that, absent the Landfill's existence, would seldom be detected in groundwater (e.g., synthetic constituents), the Dischargers shall identify the highest value in the pooled dataset from all background wells that have passed validation or, in a case where all applicable upgradient well data is non-detect, the MDL. The Dischargers shall use this value as a basis of comparison to validate the data points in the proposed intra-well background dataset. The initial intra-well background dataset for that downgradient well shall consist of all data points in the proposed intra-well background dataset that are less than this value.

3. **Validate Upgradient Data for Synthetic Organic Appendix II COCs.**

Synthetic organic constituents should not be at detectable concentrations in groundwater samples collected from background wells except in error (around 1 percent of the time) or because the constituent comes either from the Landfill or from another source. If synthetic organic constituents are detected in more than 10 percent of analyses in background wells, the Dischargers shall conduct an investigation under **Part II.E** of this M&RP;

4. **Performance Standards.**

All statistical or non-statistical data analysis methods shall meet the requirements of title 27, section 20415(e)(9).

5. **Regular Retest Method.**

Regular retesting is required to validate data that suggests increasing COC concentrations. For wells in detection mode, the Dischargers shall conduct up to two re-tests whenever test results signify an increased concentration, to verify the initial data, pursuant to title 27, section 20415(e)(8)(E)(2). If the first retest validates the preliminary indication, a second retest shall be conducted. A measurably significant increase exists if both retest samples validate the preliminary indication.

6. **Limited Retest Method.**

For any given detection groundwater monitoring point, the Dischargers may perform the verification procedure only for those COCs that have shown a preliminary indication of a release at that well for that reporting period.

D. CALIFORNIA NON-STATISTICAL DATA ANALYSIS METHOD

The following section provides a description of the California non-statistical data analysis method that may be used by Dischargers to evaluate and validate detection groundwater monitoring data collected from the Landfill.

1. **Non-Statistical Method for Detection Mode COCs Seldom Found in Background.**

The Dischargers shall use this data analysis jointly for each constituent that exceeds its MDL in less than 10 percent of its background dataset. A measurably significant indication of a release occurs in a given sample when:

- a. Two or more of the Detection Mode COCs exceed their respective MDLs; or
- b. One or more of the COCs equals or exceeds its respective PQL.

2. **Discrete Retest**

- a. In the event that the data indicate a release, then the Dischargers shall **immediately notify** the San Diego Water Board by phone or e-mail and, **within 60 days** of the original sampling event, shall collect a new independent retest sample from the indicating compliance well.
- b. For the retest sample, the Dischargers shall include only the laboratory analytical results for those constituents indicated in that well's original test. As soon as the retest data are available, the Dischargers shall apply the same test, for only those COCs with a tentative indication of a release, to

separately analyze each of the two suites of retest data at that compliance well.

- c. If the retest sample trips either or both of the triggers in section D.1 above, then there is a measurably significant increase at that well for the constituent(s) indicated in the validating retest sample. Thereafter, the Dischargers shall monitor all constituent(s) in “tracking mode” instead of “detection mode” at that well, and shall highlight the conclusion about the measurably significant increase at the well and document the changes to the monitoring program in the next scheduled monitoring report.

E. DETECTIONS OF SYNTHETIC ORGANIC COCS IN A BACKGROUND WELL.

An “excessive proportion” of a COC exists when 10 percent or more of the COC data collected from a given background well are reported to have concentrations equal to or greater than the MDL. An “excessive frequency” exists when a COC is reported to have concentrations equal to or greater than the MDL for two consecutive sampling events. The Dischargers shall notify the San Diego Water Board **within 30 days** of the determination that either an “excessive proportion” or “excessive frequency” exists. Furthermore, **within 180 days** of the determination, the Dischargers shall submit a report to the San Diego Water Board that evaluates whether the COC is from the site, and propose appropriate changes to the monitoring program. Based on the evaluation, if the San Diego Water Board concludes that the organic constituent originated from a source other than the Landfill then the Dischargers may be required to do the following:

1. Determination of Secondary Source.

The Dischargers shall make appropriate changes to the monitoring program, such as using an appropriate statistical “inter-well” comparison procedure with a suite of background data that reflects the expected concentration for that constituent. The Dischargers shall complete the following:

- a. List the constituents as a COC in the next scheduled monitoring report if it is not already listed, and note this change in the Transmittal Letter.
- b. Include this background well as part of the release for that COC and consider this well as a compliance well as part of the Evaluation Monitoring Program.
- c. **Within 120 days**, install a new upgradient or cross-gradient background well in a portion of the aquifer that will provide data representative of background

conditions for the Landfill's compliance wells. **Ongoing Background Well Test.**

The Dischargers shall continue to monitor background wells, for each COC, each time that COC is monitored at downgradient wells (excluding retests). New background well data shall be included in the Annual Compliance Report¹¹ and included on a time-versus-concentration plot for that "background" well and constituent. Any time such a plot for a given well and constituent shows two successive data points in excess of the MDL for any organic constituent that has not already been investigated at that well, the Dischargers shall notify the San Diego Water Board **within 30 days** of the sampling event by phone or e-mail, and shall initiate an investigation **within 180 days** of noting this condition.

PART III. REPORTS TO BE FILED WITH THE SAN DIEGO WATER BOARD

Part III provides a description of the reports required to be submitted to the San Diego Water Board for the Forster Canyon Landfill.

A. DETECTION GROUNDWATER MONITORING REPORT

The Dischargers shall submit Detection Groundwater Monitoring Reports to the San Diego Water Board semi-annually no later than **April 30 and October 30** of each year. The Report due by October 30 shall be submitted as part of the Annual Compliance Report (See Part III.B). The Reports shall contain, at a minimum, the following information:

1. **Topographic Map.**

A topographic map (or copy of an aerial photograph), at an appropriate scale, identifying the maximum lateral extent of wastes in the Landfill, the locations of observation stations, monitoring points, background monitoring points, the groundwater elevation contours, with interpreted groundwater flow direction and gradient. Maps must also be updated to show the maximum extent of any waste constituent or waste degradation product in groundwater.

The information contained on the topographic map shall also be provided in a Geographic Information System shape file that shall be submitted as part of the Detection Groundwater Monitoring Report. The shape file must be polygons and

¹¹ Title 27, California Code of Regulations, section 20415(e)(14).

include two Global Positioning System (GPS) points for each line of the polygon, with a minimum of 10 points. GIS metadata must also be submitted. The shapefile and metadata should be included on a CD attached to the Report.

2. **COC List.**

A list of COCs for each detection groundwater monitoring well.

3. **Detection Limits.**

Detection limits of laboratory testing and monitoring equipment.

4. **COC Concentrations.**

The concentrations of COCs in samples collected during the current reporting period.

5. **Groundwater Elevations.**

The method and time of groundwater elevation measurements, a description of the method used to purge the well and collect groundwater samples, and quality assurance/quality control (QA/QC) procedures used.

6. **Field Logs.**

Field logs used during well purging and sampling. At a minimum, the field logs should include the following:

- a. The well number.
- b. Sampling date and time.
- c. The method of monitoring field parameters and calibration of equipment used to monitor field parameters.
- d. Purge method (if a pump is used, include the depth of pump placement in each well and the pumping rate).
- e. Purging and sampling information such as: date each well was purged; well recovery time; method of disposal of the purged water; an estimate of the volume of water purged from each well; the results of all field analyses; depth to groundwater prior to purging, at the conclusion of purging, and when the sample was collected; the method of measuring the water level; and field personnel names and signatures.

7. **Graphical Display.**

For each downgradient monitoring well and background monitoring well, a graphical display of all the groundwater data collected within at least the previous five calendar years as required by title 27, section 201415(e)(14). Each graph shall plot the concentration of one or more constituents on a semi-log scale. Based on visual inspection of trends, the San Diego Water Board may direct the Dischargers to carry out a preliminary investigation to determine whether or not a release is indicated.

8. **Method of Analysis.**

Documentation of statistical and non-statistical data analysis at each monitoring well, for those COCs that have not previously been identified in a release at the well.

9. **Background Data.**

Updates to the background data set.

10. **Summary of Groundwater conditions.**

A written summary of the monitoring results and any changes to the groundwater monitoring system since the previous Semi-Annual Detection Groundwater Monitoring Report. The written summary shall include a discussion of the groundwater flow rate and direction, the appearance of trends or other information that may indicate a potential change in the hydrogeologic conditions beneath and adjacent to the Landfill.

11. **Evaluation of Groundwater Data.**

An evaluation of the detection groundwater monitoring data analyzed according to the methods described in Part II of this M&RP, and whether the analysis indicates a release of waste constituents or waste degradation products from the Landfill.

12. **Data Tables.**

All data obtained during the current, and previous four semi-annual reporting periods (two years total) presented in tabular form. Data files larger than 150 megabytes shall be provided electronically on compact disks (CD) or other media, and in a file format approved by the San Diego Water Board.

B. ANNUAL COMPLIANCE REPORT

The Dischargers shall submit an Annual Compliance Report comprised of the slope stability monitoring, dewatering effluent monitoring, detection groundwater monitoring, and the landfill gas monitoring program data collected during the past

year, and evaluations of that data. The Annual Compliance Report, covering the previous monitoring and reporting year, must be received by the San Diego Water Board no later than **5:00 p.m. on October 30** of each year, and shall contain the following minimum information:

1. Sampling and Analysis Plan.

Include the current version of the Sampling and Analysis Plan electronically on a CD attached to the Annual Compliance Report.

2. Detection Groundwater Monitoring Report.

Include the Detection Groundwater Monitoring Report due on October 30.

3. Dewatering Effluent Monitoring Program Summary.

Include the following information regarding the Dewatering Effluent Monitoring Program:

- a. Any analytical data obtained through the monitoring of dewatering effluent as required by the sewerage agency, as an appendix to the Annual Compliance Report.
- b. A table, recording the volumes of dewatering effluent discharged to the sewer system, in tabulated format.
- c. A table containing an operation and maintenance record for the dewatering system, including but not limited to: time periods (date intervals) that the dewatering system was operational, time periods (date intervals) when the system was not operational and the reason that the dewatering system was not operational; water levels (reported as feet below top of casing and elevation in feet above mean sea level) maintained during the time of operation, water levels observed during times when the system was not operational, and a schedule of maintenance work with a description of the tasks performed to maintain the dewatering system.

4. Landfill Gas Data Summary.

Include a Landfill Gas Data Summary consisting of all landfill gas data collected during the past year in accordance with the requirements set forth by CalRecycle and the County LEA. This Summary shall also contain a brief discussion of the findings and observations made during the past year regarding landfill gas production, migration, and/or any issues with the landfill gas monitoring system noted during the previous year.

5. Site Conditions Certification Report.

Include the *Site Conditions Certification Report* as required by **Report Requirements H.2** of Order No. R9-2016-0149. The Site Certification Report shall be submitted electronically, on a CD, attached to the Annual Compliance Report.

6. Slope Stability Monitoring Program Summary.

Include a Slope Stability Monitoring Program Summary consisting of all slope stability data collected during the previous year, as well as a brief discussion of any required slope maintenance or repairs, trends in monitoring data, areas of concern, or recommendations with respect to the slope stability monitoring network.

C. OTHER REPORTS TO BE FILED WITH THE SAN DIEGO WATER BOARD.

In addition to the Detection Groundwater Monitoring Report and Annual Compliance Report, the following reports shall be submitted to the San Diego Water Board as described below.

1. First Year Slope Stability Monitoring Program Summary Reports.

Reports summarizing the results of the Slope Stability Monitoring Program shall be submitted to the San Diego Water Board quarterly for the first year (after adoption of Order No. R9-2016-0149). After the first year of monitoring, these reports are to be included in the Annual Compliance Report as required in Part III.B.6. Reports must be received by the San Diego Water Board ***no later than 5:00 p.m. on January 30, April 30, July 30, and October 30.*** The October 30 report shall be included in the first Annual Compliance Report.

2. Construction Quality Assurance Report.

The Dischargers shall provide the San Diego Water Board with a complete Construction Quality Assurance (CQA) Report that contains all the final report elements and the results from laboratory and field testing referenced in the approved CQA Plan for closure of the final cover system. The preparation of the final CQA Report, and supervision of the CQA Program, shall be performed by persons having the qualifications required by title 27, section 20324(b). The CQA Report shall be submitted upon completion of construction activities associated with the final closure of the Landfill.

3. **Five Year COC Reports..**

Every five years, the Dischargers shall complete a complete a COC analysis on groundwater samples to update and verify the COC list included in the semi-annual monitoring reports. Furthermore, the Dischargers shall complete a COC analysis on the dewatering effluent every five years. The COC analysis shall include all COCs found in Appendix II of title 40, Code of Federal Regulations part 258. The first COC reports shall be received ***no later than 5:00 p.m. on October 30, 2018***. Subsequent COC reports shall be due every fifth year alternately by April 30 and October 30 in conjunction with the detection groundwater monitoring program Five Yearly COC Scan. The COC reports shall be submitted as an appendix to any Detection Groundwater Monitoring Report or Annual Compliance Report having a reporting period that ends at the same time.

4. **Violations Reports.**

If the Dischargers determines there has been a violation of any requirement in M&RP No. R9-2016-0149, then the Dischargers must notify the San Diego Water Board office by telephone ***within 24 hours*** once the Dischargers have knowledge of the violation. The San Diego Water Board may, depending on the severity of the violation, require the Dischargers to submit a separate technical report regarding the violation within ***five working days*** of the request of the San Diego Water Board.

5. **Significant Maintenance Activity Workplan.**

The Dischargers shall submit a workplan prior to any significant maintenance activities that could alter the existing surface drainage patterns or change existing slope configurations. These activities include, but are not limited to, significant grading activities, the installation of soil borings, detection groundwater monitoring wells, dewatering wells, landfill gas borings and monitoring points, and other devices for site investigation purposes. Unless otherwise directed by the San Diego Water Board, the Dischargers may initiate the activities proposed in the workplan after expiration of ***30 days*** of receipt of the report by the San Diego Water Board.

D. REPORTING SCHEDULE.

Reports shall be received in the San Diego Water Board office ***no later than 5:00 p.m.*** on the due date shown in the following schedule:

Table D.1: Reporting Schedule

Report Type	Report Frequency	Reporting Period	Report Due Date³
First Sampling and Analysis Plan ¹	Annual	NA	Within 90 days of adoption of the M&RP
Detection Groundwater Monitoring Report	Semi-Annual	October – March	April 30
Detection Groundwater Monitoring Report	Semi-Annual	April – September	October 30
Annual Compliance Report	Annual	October – September	October 30
Initial Five-Yearly Dewatering COC scan	Once	April - September	October 30, 2018
Five-Yearly Dewatering COC scan	Every 5 years	October - March	April 30
		April - September	October 30
Initial Five-Yearly COC Scan	Once	October - March	April 30, 2017
Five-Yearly COC Scan	Every 5 years	April - September	October 30
		October - March	April 30
Site Conditions Certification Report ¹	Annual	October – September	October 30
First Year Slope Stability Monitoring Reports ²	Quarterly	Monthly	January 30 April 30 July 30 October 30
Construction Quality Assurance Report	One Time	NA	Upon completing construction of final cover

- ¹ Subsequent Sampling and Analysis Plans shall be submitted as an attachment to the Annual Compliance Report.
- ² For the first year after closure of the Landfill, the Dischargers shall monitor slope stability on a monthly basis and report on a quarterly basis. After the first year of closure, the Dischargers shall monitor slope stability on a quarterly basis and report the results on a semi-annual basis as part of the semi-annual monitoring reports.
- ³ Unless the date falls on a weekend day or holiday, in which case the report is due the next available business day.

E. STANDARD REPORTING REQUIREMENTS

Standardized protocols for reporting are discussed below. There are protocols for submission procedures, use of licensed professionals, electronic data submission, and transmittal letters.

1. Submission Procedures.

The Dischargers must submit all reports required under this M&RP in a text-searchable, electronic, Portable Document Format (PDF). Larger documents shall be divided into separate files at logical places in the report to keep the file sizes under 150 megabytes. The Dischargers shall continue to provide a paper transmittal letter, a paper copy of all figures larger than 8.5 inches by 14 inches (legal size), and an electronic copy (on a CD or other appropriate media) of all reports to the San Diego Water Board. All correspondence and documents submitted to the San Diego Water Board shall include the reference code "Land Discharge Unit Supervisor" in the header or subject line, where "Land Discharge Unit Supervisor" is the first initial and last name of the San Diego Water Board case manager.

2. Use of Licensed Professionals.

Pursuant to title 27, section 21710(d), any report submitted in compliance with title 27, and this Order, which proposes a design or design change (or which notes occurrences) that might affect the Landfill's containment features or monitoring systems, shall be approved by a civil engineer or a certified engineering geologist appropriately licensed by the State of California. The Dischargers shall provide documentation that plans and reports required under this M&RP are prepared by or under the direction of, appropriately qualified professionals. Title 27, sections 20324(b), 20415(e)(1) and (e)(2), and 21090(b)(1)(C); and the California Business and Professions Code sections 6735, 7835, and 7835.1 require that engineering and geologic evaluations and judgments be performed by or under the direction of licensed professionals. A statement of qualifications and license numbers of the responsible lead professionals shall be included in all plans and reports submitted

by the Dischargers. The lead professional shall sign and affix their license stamp to the report, plan or document.

3. **Electronic Data Submittals.**

The State's Electronic Reporting Regulations¹² mandate the electronic submission of any report or data required by a regulatory agency for any discharge of waste to land subject to title 27. All information submitted to the San Diego Water Board in compliance with this M&RP is also required to be submitted electronically via the internet into the Geotracker database at <http://geotracker.waterboards.ca.gov/>. The electronic data must be uploaded on or prior to the regulatory due dates set forth in the M&RP or addenda thereto. To comply with title 23, California Code of Regulations, section 3893(b), the Dischargers must upload to the Geotracker database the following information:

a. **Laboratory Analytical Data.**

Analytical data (including geochemical data) for all soil, vapor, and water samples in Electronic Deliverable File (EDF) format.¹³ Water, soil, and vapor data including analytical results of samples collected from monitoring wells, boreholes, LFG probes, LFG extraction wells, soil vapor wells, piezometers, surface water, stockpiles, and drinking water wells, if applicable.

b. **Location Data.**

The latitude and longitude of any permanent monitoring well for which data is reported in EDF format, accurate to within one meter and referenced to a minimum of two reference points from the California Reference System (CSRS-H), if available. Monitoring Well Elevation Data.

The surveyed elevation relative to a geodetic datum of any permanent monitoring well. Elevation measurements shall be made at the top of groundwater well casings for all detection groundwater monitoring wells.

c. **Depth-to-Water Data.**

The depth-to-water in monitoring wells even if groundwater samples are not actually collected during the sampling event.

d. **Monitoring Well Screen Intervals.**

The depth to the top of the screened interval and the length of screened interval for any permanent monitoring well.

¹² title 23, California Code of Regulations, chapter 30, division 3, section 3890 et seq.

¹³ See Geotracker database:

http://www.swrcb.ca.gov/water_issues/programs/ust/electronic_submittal/docs/edf_gr_v1_2i.pdf

e. **Landfill Map.**

A map or maps which display discharge locations, streets bordering the Landfill, and sampling locations for all soil, water, and vapor samples. The sample map is a stand-alone document that may be submitted in various electronic formats. An updated map may be submitted at any time.

f. **Boring Logs.**

Boring logs (as searchable PDF documents) prepared by an appropriately licensed professional.

g. **Electronic Report.**

A complete copy (as a searchable PDF document) of all Joint Technical Documents, technical reports, workplans, CQA Reports, plans, and monitoring reports, including the signed transmittal letter, professional certifications, and all data presented in the reports.

4. **Transmittal Letter.**

A letter summarizing the significant findings must be submitted with each report. The transmittal letter shall also include the following minimum information:

a. **Summary of Non-Compliance.**

A summary of any areas of non-compliance with M&RP No. R9-2016-0149 or Order No. R9-2016-0149, incurred during the reporting period. The summary may include verbal and written notices of violations from State and local regulatory agencies regarding monitoring and/or maintenance deficiencies or violations noted by the Dischargers, such as the exceedance of Water Quality Protection Standards, failure to conduct monitoring as required by M&RP No. R9-2016-0149, failure to implement adequate BMPs, or any other violations of Order No. R9-2016-0149 or M&RP No R9-2016-0149.

b. **Certification Statement.**

The person signing the transmittal letter must 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 managed 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 known violations."

c. **Signatory Designation.**

All documents submitted to the San Diego Water Board shall be signed by either a principle executive officer or ranking elected official, or by a duly authorized representative of the Dischargers. An individual is a duly authorized representative only if:

- i. The authorization is made in writing by an authorized representative of the Dischargers;
- ii. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated Landfill or activity; and
- iii. The authorization is submitted to the San Diego Water Board.

PART IV. CONTINGENCY REPORTING

In the event that the Dischargers discover that a release from the Landfill has occurred, the Dischargers shall notify the San Diego Water Board within the timeframes listed below.

A. NOTIFICATION OF A RELEASE

Should the Dischargers discover that a release to groundwater from the Landfill has occurred, the Dischargers shall:

1. Notify the San Diego Water Board by telephone or e-mail **within 24-hours**, and by mail **within seven days** when the Dischargers determines from groundwater monitoring results that there is significant physical evidence of a release.
2. Notify the San Diego Water Board by telephone or e-mail **within 30 days** of a sampling event when they determine that there is preliminary indication of a release. The Dischargers shall provide written notification by certified mail **within seven days** of the initial notification, and conduct a retest.

B. EVALUATION OF A RELEASE.

If the Dischargers determine that a release from the Landfill has occurred, the following actions shall be taken:

1. The Dischargers shall, **within 90 days** of determining there is measurably significant evidence of a release, submit an Amended Report of Waste Discharge (ROWD) proposing an Evaluation Monitoring Program that meets the requirements of title 27, sections 20415(b)(2), 20420(k)(5) and 20425 et seq..
2. The Dischargers shall, **within 180 days** of discovering the release, submit to the San Diego Water Board a preliminary engineering feasibility study report that meets the requirements of title 27 section 20420(k)(6).

C. RELEASE BEYOND THE FACILITY BOUNDARY.

If the Dischargers determines that a release has been discovered to extend beyond the facility boundary the Dischargers shall:

1. Develop a Public Participation Plan and submit it for review and comment by the San Diego Water Board **within 90 days** of determining that a release extends beyond the facility boundary.
2. The Dischargers shall provide notification of the release to all affected persons (i.e., individuals and private and public entities) who either own or occupy property that overlies the release. The initial notification shall include a description of the Discharger's current knowledge of the nature and extent of the release.
3. The Dischargers shall provide updates to all affected persons.
4. The Dischargers shall provide the San Diego Water Board a copy of the current mailing list of affected persons and copies of the notification and updates **within seven days** of sending such notifications.

PART V. NOTIFICATIONS

The San Diego Water Board hereby notifies the Dischargers of the following information.

A. ENFORCEMENT DISCRETION.

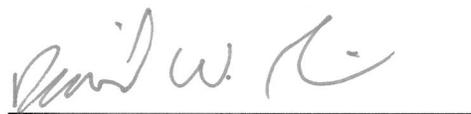
The San Diego Water Board reserves its right to take any enforcement action authorized by law for violations of the terms and conditions of M&RP No. R9-2016-0149.

B. REQUESTING ADMINISTRATIVE REVIEW BY THE STATE WATER BOARD.

Any person affected by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320, and title 23, California Code of Regulations, section 2050. The petition must be received by the State Water Board (Office of Chief Counsel, P.O. Box 100, Sacramento, CA 95812) **within 30 days** of the date of adoption of this M&RP. Copies of the law and regulations applicable to filing petitions will be provided upon request. DELEGATION OF AUTHORITY.

The San Diego Water Board has delegated to the Executive Officer by resolution, all the powers and authority that may be delegated pursuant to Water Code section 13223. The San Diego Water Board intends for the Executive Officer to make modifications or revisions when appropriate, to M&RP No. R9-2016-0149. The Board further directed the Executive Officer to exercise discretion in determining whether proposed modifications and revisions should be considered for approval by the Board.

Ordered by:



David W. Gibson
Executive Officer

ATTACHMENT C

INFORMATION SHEET

ORDER NO. R9-2016-0149

WASTE DISCHARGE REQUIREMENTS FOR THE CLOSURE, POST-CLOSURE MAINTENANCE, AND MONITORING OF FORSTER CANYON LANDFILL ORANGE COUNTY

This Information Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of Order No. R9-2016-0149 (Order) and of Monitoring and Reporting Program No. R9-2016-0149 (M&RP; Attachment B).

A. INTRODUCTION

The Order establishes requirements for the closure, post-closure maintenance, and monitoring of the Forster Canyon Landfill (Landfill). The closure of the Landfill is necessary before Advanced Group 99-SJ, a Limited Liability Partnership (AG 99-SJ) can develop the surrounding properties into the Distrito La Novia-San Juan Meadows Master Planned Community Development Project. The Order establishes specifications for closing the landfill, and for maintenance and monitoring systems to ensure the protection of human health and the environment. This Order replaces and supersedes Order No. 94-106, as amended.

Monitoring and Reporting Program No. R9-2016-0149 (M&RP) requires the Discharger to furnish certain technical and monitoring program reports to demonstrate compliance with the WDRs in the Order. The M&RP also prescribes performance standards for a detection monitoring program as required by title 27, California Code of Regulations, sections 20415 and 20420. This program will ensure early detection of any releases of waste constituents from the landfill for the protection of water quality and beneficial uses of groundwater and surface waters within the Lower San Juan Hydrologic Subarea (HSA 901.27) of the San Juan Hydrologic Unit (901.00). The M&RP also requires dewatering effluent, and slope stability monitoring and summary reports on landfill gas monitoring required by the County local enforcement agency (LEA) and CalRecycle.

The San Diego Water Board developed the requirements in this Order and M&RP based on information submitted as part of the Joint Technical Document, groundwater

monitoring reports, water quality control plans and policies, and other available information. This Information Sheet contains background information and rationale for requirements contained in the Order and M&RP. This Information Sheet is hereby incorporated as Findings for the Order and M&RP.

B. DISCHARGERS

Any person who discharges waste or proposes to discharge waste that could affect the quality of the waters of the State is a discharger under the Water Code (Wat. Code. section 13260, subd. (a)(1)). Consistent with the Water Code definition, for the purpose of waste management units regulated under California Code of Regulations title 27, a discharger is “. . . any person who discharges waste which could affect the quality of waters of the State, and includes any person who owns a waste management unit (Unit) or who is responsible for the operation of a Unit. . .”¹

An operator of a waste management unit is further defined in title 27 as “. . . the landowner or other person who through a lease, franchise agreement or other arrangement with the landowner becomes legally responsible to the State for including, but not limited to, the following requirements for a solid waste facility or disposal site:

- a. Obtaining a solid waste facility permit.
- b. Complying with all applicable federal, State, and local requirements.
- c. The physical operation of the facility or site.
- d. Closing and maintaining the site during the post-closure maintenance period.”²

These definitions provided in the regulations are broad and afford the Regional Water Boards the flexibility to identify dischargers for compliance with waste discharge requirements. The current property owner is AG 99-SJ. The County of Orange leased the property and operated the Landfill from 1957 to 1976, whereupon landfilling operations ceased. During its operating history, approximately 2.5 to 3.0 million cubic yards of municipal solid wastes and construction and demolition debris were disposed of in the 50-acre Landfill.

¹ Cal. Code Regs., title 27, section 20164. Hereinafter, all references made to titles 23 and 27 within this information sheet, are from the California Code of Regulations.

² Cal. Code Regs., title 27, section 20164.

In the past, the San Diego Water Board included both the property owner and the County of Orange as responsible parties or “Dischargers” in Waste Discharge Requirement (WDR) Orders issued by this Board for the Landfill.

The San Diego Water Board adopted WDR Order No. 94-106 for closure and post-closure maintenance of the Forster Canyon Landfill in August 1994. In that order, both the property owner and the County of Orange were designated as “Dischargers” responsible to close and to maintain the Landfill after closure. The County of Orange petitioned the State Water Board in 1995 to be removed from Order No. 94-106. The State Water Board Office of Chief Counsel dismissed the County of Orange’s petition in 1996.

This Order identifies AG 99-SJ, the current property owner, and the County of Orange, the former operator, as the Dischargers responsible for discharges of wastes at the Landfill. Both parties are responsible for ensuring compliance with the waste discharge requirements set forth in this Order and M&RP. The San Diego Water Board may choose to revisit the designation of the County of Orange as a discharger after the Financial Assurance instrument (in this case, a Geologic Hazard Abatement District or GHAD; see Section K – Financial Assurances) has been established and becomes financially solvent. At that time, the San Diego Water Board may find that the GHAD is a viable long-term mechanism for ensuring that post-closure maintenance and monitoring will be effectively implemented at the Forster Canyon Landfill without the financial resources of the County of Orange.

C. FACILITY DESCRIPTION

The Forster Canyon Landfill is located within the Distrito La Novia-San Juan Meadows Planned Master Community Development Project area in southern Orange County. Approximately 2.5 to 3.0 million cubic yards of municipal solid wastes and construction and demolition debris were disposed of in the 50-acre landfill. A map showing the location of the landfill is provided in Attachment A to this Order. Having ceased operations in 1976, the Forster Canyon Landfill is classified as a closed, abandoned, or inactive (CAI) unit under title 27.³

The Distrito La Novia-San Juan Meadows Master Planned Community Development Project includes a mixed-use development of commercial and residential buildings on

³ Cal. Code Regs. section 20080(g) provides that CAI units are comprised of any area of land, or portion of a nonhazardous solid waste management facility that were closed, abandoned, or inactive on or before November 27, 1984.

the Distrito La Novia portion of the property, and 94 single-family homes located adjacent to the north and east boundary of the Landfill. The proposed final land use for the area directly overlying the Landfill will be non-irrigated open space on the San Juan Meadows portion of the property. Due to the close proximity of future homes to the Landfill, and the potential for future development or a change in final land use for the Landfill, the Dischargers are required to record the WDRs with the County Recorder's Office to notify prospective purchasers of the regulatory requirements applicable to the Landfill.

D. GEOLOGY AND HYDROLOGY OF THE SITE

The geologic and hydrologic characteristics of the site that are pertinent to findings and requirements of this Order are described below.

Geologic Setting and Hazards.

The Landfill is underlain by landslide deposits and by alluvium and colluvium from erosion and transportation of bedrock materials of the Capistrano Formation. The Capistrano Formation consists of poorly to moderately consolidated siltstone, claystone, and shale. The formation is generally massive with minor concretionary zones and thin beds of claystone. These claystone beds form the majority of the rupture surfaces for landslides within the Capistrano Formation.

The composition of landslide deposits varies between relatively intact, bedrock-like materials to highly disturbed, and/or dry, porous or other collapsible and/or compressible materials, alluvium, colluvium, and fractured bedrock blocks.

The Landfill is underlain by the Forster Canyon Landslide. The Forster Canyon Landslide is estimated to encompass approximately 300 acres. The landslide deposits range in thickness from approximately 60 feet in the northeast corner of the site, to upwards of 410 feet near the southeast corner of the site. Based on carbon dating of organic materials found within the landslide deposits, the Forster Canyon Landslide failed approximately 20,000 years ago. Aerial photographs of the site suggest that several secondary smaller, younger landslides overlie the larger Forster Canyon Landslide.

The Dischargers completed a slope stability analysis to determine the stability of the landfill and the underlying Forster Canyon Landslide. The analysis concluded that in order to maintain the stability of the Forster Canyon Landslide, groundwater levels must remain at a level that is lower than the slide plane of the Landslide. This Order requires

the Dischargers to construct a permanent dewatering system to maintain groundwater levels at elevations below the slide plane of the Forster Canyon Landslide.

The Landfill is not located within an Alquist-Priolo Earthquake Fault Zone and there are no known active or potentially active faults within the vicinity of the site.

Because of the geologic hazards associated with the Forster Canyon Landslide, and the need to fulfill financial assurance requirements the Dischargers have proposed to form a Geologic Hazard Abatement District (GHAD; see Section K – Financial Assurances). The proposed GHAD will be responsible for managing and allocating funds needed for post-closure operations, maintenance and monitoring, and implementation of corrective actions should a release from the Landfill occur due to a landslide or for any other reason.

Local Hydrology and Groundwater Use.

The overall direction of groundwater flow at the Landfill is to the west. The elevation of groundwater at the Landfill varies from 78 to 259 feet above mean sea level. There are six water supply wells within a one-mile radius of the Landfill. All six of these wells are located hydrologically up-gradient or cross-gradient to the Landfill, and therefore are not likely to be impacted by a release of waste constituents from the Landfill.

The County of Orange completed a Solid Waste Assessment Test (SWAT) investigation in December 1991 to determine whether or not the Landfill had impacted groundwater or surface waters within the vicinity of the facility. The results of the SWAT investigation indicate that both groundwater and soils adjacent to the Landfill have been impacted by low levels of landfill-related constituents, including volatile organic compounds and metals.

The Dischargers are required to implement a detection monitoring program, which is designed to identify a release from the Landfill. M&RP No. R9-2016-0149 is consistent with the minimum performance requirements found in sections 20415(b) and 20420(b) of title 27, for detecting the release of waste constituents from the Landfill into the groundwater.

E. CLOSURE

The closure of the Landfill will be completed in two phases. Phase one involves the excavation and relocation of wastes. In order to meet the final grading requirements for

the Landfill and the average 100-foot setback for the proposed adjacent residential development,⁴ approximately 250,000 cubic yards of waste will be excavated from the north, south, and eastern perimeter of the upper deck and placed on the west-facing front slope within the existing footprint of the Landfill. The actual volume excavated could be within the range of volumes evaluated in the EIR, which was 225,000 to 275,000 cubic yards. The slope stability evaluation in an appendix to the JTD showed that excavation volumes within this range complied with applicable slope stability requirements. .

Phase two involves the construction of the final cover system over the remaining Landfill footprint. The proposed cover system for the Landfill consists of a four-foot thick monolithic cover on the upper deck, and a five-foot thick monolithic cover on the sideslopes. The cover will incorporate approximately 138,700 cubic yards⁵ of soil materials from on-site⁶ and off-site borrow areas that are consistent with the current interim cover system. The final cover system must comply with the design specifications detailed within the Closure Plan, the construction specifications, and the Construction Quality Assurance Plan.⁷

The Dischargers must conduct regular maintenance and monitoring to ensure that water quality supports beneficial uses as required in title 27, sections 20800(a)(1) and 20380 *et seq.* The Dischargers are financially responsible for the costs and implementation of monitoring activities, until the San Diego Water Board has determined that the Forster Canyon Landfill no longer poses a threat to water quality.

Dischargers that are responsible for facilities subject to waste discharge requirements are required to pay annual fees in accordance with Water Code section 13263. Annual fees will be assessed in accordance with the current fee schedule prescribed in title 23, section 2200, *et seq.*

⁴ This setback is required by Orange County Department of Environmental Health.

⁵ One cubic yard of soil is approximately 2,000 pounds or 1 ton in weight.

⁶ Permitted by a Section 401 Water Quality Certification issued in 2014.

⁷ The Closure Plan and Construction Quality Assurance Plan were included as part of the final JTD, received September 2016,

F. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the Order and M&RP are based on State statutes, regulations and authorities described in this section.

Legal Authorities.

This Order and M&RP are issued pursuant to the Water Code commencing with section 13000, all applicable portions of titles 23 and 27, and the applicable provisions of the Health and Safety Code, division 20, chapter 6.5 (Hazardous Waste Control).

Water Quality Control Plans.

The *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The beneficial uses of groundwater designated for the Lower San Juan Hydrologic Subarea (901.27) of the San Juan Hydrologic Unit are municipal and domestic supply, agricultural supply, and industrial service supply. The beneficial uses for surface waters in the San Juan Creek Watershed are agricultural supply, industrial service supply, contact water recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, and wildlife habitat.

The Landfill is an unlined solid waste containment unit which may produce leachate and landfill gas with the potential to degrade water quality and impact beneficial uses. The construction and maintenance of a final cover system at the Landfill will ensure the containment of wastes within the landfill and minimize the production of waste degradation products, thereby maintaining water quality and protecting beneficial uses. The monitoring of groundwater, landfill gas, and surface waters if needed, will allow the Dischargers to evaluate the long-term effectiveness of the waste containment system. The Order implements the Basin Plan by prescribing waste discharge requirements for the closure, post-closure operations, maintenance, and monitoring of the Landfill. The Discharger's adherence to these requirements will ensure that municipal solid waste disposed of in the landfill, and pollutants produced from their breakdown and leaching will not impair beneficial uses of groundwater or surface waters, or result in violations of water quality objectives. This Order also implements applicable requirements of title 27, for closed municipal solid waste landfills.

California Environmental Quality Act.

The discretionary decision to adopt waste discharge requirements as prescribed in the Order is a project under the California Environmental Quality Act (CEQA).⁸ As lead agency, the City of San Juan Capistrano certified an Environmental Impact Report (EIR) for the entire Distrito La Novia-San Juan Meadows Master Planned Community Development Project on November 2, 2010. The project includes the closure and post-closure maintenance of the Forster Canyon Landfill. The San Diego Water Board is a responsible agency under CEQA. As such, the San Diego Water Board has reviewed and considered the EIR and the project's environmental effects as described therein.

Antidegradation Policy.

The San Diego Water Board's Basin Plan implements and incorporates by reference both the State and federal antidegradation policies. As discussed below, the discharge regulated by this Order is consistent with the antidegradation policies.

G. COMPLIANCE WITH THE ANTIDEGRADATION POLICY

The State Water Resources Control Board established California's Antidegradation Policy in Resolution No. 69-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. Resolution No. 68-16 requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. All disposal of wastes into waters of the State is required to be regulated to achieve the highest water quality with the maximum benefit to the people of the State. The Antidegradation Policy requires the following:

- Higher quality water will be maintained until it has been demonstrated to the State that any change will be consistent with the maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of the water, and will not result in water quality less than that prescribed in the Basin Plan.
- Any activity that produces waste or may produce waste or increased volume or concentration of waste, and discharges to existing high quality waters will be required to meet waste discharge requirements that will result in the best practicable treatment, or control the discharge necessary to assure pollution or nuisance will not occur, and the highest water quality consistent with the maximum benefit of the people of the State will be maintained.

⁸ Pub. Resources Code section 21000 et seq.

Groundwater monitoring data indicate that historical releases of landfill gas and leachate from buried wastes have not impaired beneficial uses of the receiving groundwater. This Order is consistent with the Antidegradation Policy because it requires the construction of a final cover system to contain wastes and prevent infiltration of storm water, thereby limiting the production of landfill gases and leachate. Once in place, the final cover system will prevent any further degradation of the receiving groundwater beyond what has occurred historically due to the lack of a liner system beneath the Landfill.⁹

H. RATIONALE FOR DISCHARGE PROHIBITIONS

Water Code section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste, or certain types of waste are prohibited. The Basin Plan waste discharge prohibitions are applicable to any person, as defined by section 13050(c) of the Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the State within the boundaries of the San Diego Region. The Discharge Prohibitions listed in Section B of Order No. R9-2016-0149 are based upon the waste discharge prohibitions established in the Basin Plan, (Implementation, Chapter 4).

I. RATIONALE FOR CLOSURE SPECIFICATIONS

Sections C and D of the Order contain Landfill closure specifications based upon requirements found in applicable State regulations.¹⁰ The closure specifications are necessary for the protection of water quality during the excavation and relocation of wastes within the Landfill footprint. Effective design and construction of the Landfill cover system will ensure long-term containment of solid wastes and minimize the production of waste degradation products within the Landfill.

⁹ At the time Forster Canyon Landfill was constructed, State law did not require the installation of liner systems beneath landfills to collect leachate.

¹⁰ Closure requirements for excavated areas found in title 27, Cal. Code Regs., section 21090(f), and 20950(a)(2)(B)); Final Cover Design and Execution of Construction Quality Assurance (CQA) Plan in title 27, Cal. Code Regs., sections 20310, 21090(a)(4)(D), 21090(b), 21090(e)(1), 21090(e)(2), 21090(f)); and Execution of Construction Quality Assurance Plan in title 27, Cal. Code Regs., sections 20324(b), 20324(d) and 20950(b).

J. RATIONALE FOR POST-CLOSURE MAINTENANCE SPECIFICATIONS

Section E of the Order contains landfill post-closure maintenance specifications which are based upon applicable requirements found in State regulations.¹¹ The post-closure maintenance specifications protect water quality by ensuring the long-term integrity of the Landfill cover system, the long-term containment of solid wastes within the landfill, the minimization of waste degradation products, and the stability of the Forster Canyon Landslide.

Storm Water Management and Site Maintenance Requirements.

Section E of the Order requires the Dischargers to construct and maintain storm water drainage facilities to prevent infiltration of surface waters into buried wastes and prevent erosion of the cover system. The Dischargers are also required to manage soil stockpiles to prevent their erosion.

The Landfill is classified as a Closed, Abandoned, or Inactive (CAI) unit under title 27. The Landfill is not required to enroll under State Water Board Order No. 2014-0057-DWQ, *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Industrial Activities, Order NPDES No. CAS000001*, because CAI units are not active industrial facilities. However, the Landfill must be adequately protected against washout, erosion of wastes, and the erosion of cover materials.

Updated requirements are included in the Order to ensure that adequate best management practices (BMPs) for storm water control, surface water drainage, and erosion control are implemented at the Landfill. The Dischargers may use a variety of approaches to implement effective BMPs for long-term control of surface water runoff and erosion of the landfill cover. Storm water control, surface water drainage and erosion control facilities for the Landfill must be designed to carry peak flows associated with 100-year, 24-hour storm events. This requirement comes from title 27, section 20365(f) and Table 4.1, which provide the design requirements for drainage and erosion control facilities and require dischargers to design these facilities to carry the peak discharge anticipated for the specified return frequency.

¹¹ Post-closure and maintenance requirements found in title 27, Cal. Code Regs., sections 20310(f), 21090(a)(3)(A) through 21090(a)(4)(D), 21090(e), 21090(c); and further performance standards required in title 27, Cal. Code Regs., section 20950(a)(1), 20950(a)(2)(A) and 20950(a)(2)(B), 20950(d), and 20950(e).

The Order requires the Dischargers to maintain, and repair the storm water control, surface water drainage, and erosion control features at the Landfill. Proper construction and routine maintenance of these features are necessary to prevent ponding or flooding; to keep surface drainage from contacting or percolating through wastes; and for effective erosion control. The Dischargers may find it necessary to stockpile soils onsite in order to conduct grading operations or to perform regular site maintenance. These stockpiles, if not managed properly, can cause waste to be deposited in areas that could affect groundwater and surface waters. Provisions designed to prevent adverse impacts from these stockpiles are included in the Order.

Any change to the final land use of the Landfill will require the submittal of a Report of Waste Discharge (ROWD). If the Dischargers are considering a change to the final land use they should consult with the San Diego Water Board prior to submittal of the ROWD. Other permits may be required depending on the proposed changes.

K. RATIONALE FOR FINANCIAL ASSURANCE REQUIREMENTS

The California Department of Resources Recycling and Recovery (CalRecycle) may require financial assurances for closure, post-closure operations, maintenance and monitoring, and/or corrective actions at the Landfill, as authorized by title 27, sections 20380(b), 20950(f), 22207, 22212 and 22222. In the event that CalRecycle does not require financial assurances for this Landfill, the San Diego Water Board must require the Dischargers to establish an irrevocable fund naming the San Diego Water Board as beneficiary. The fund will be used in the event that the Dischargers fail or refuse to implement closure, post-closure operations, maintenance and monitoring, and/or to complete corrective actions in response to a release from the Landfill. Financial assurance instruments that do not provide the San Diego Water Board direct access to funds are unacceptable. CalRecycle did not require the Dischargers to provide financial assurances. Therefore, the Order requires the Dischargers to establish financial assurances for post-closure operations, maintenance and monitoring, and/or corrective actions if there is a release of wastes from the Landfill.

The Dischargers, AG 99-SJ and the County of Orange, have established a settlement agreement between them that designates the financial and legal obligations for each party associated with the closure and post-closure operations, maintenance and monitoring, and/or corrective actions of the Landfill.

The Dischargers have estimated the closure costs for the Landfill to be \$8,400,000. This estimate includes, but is not limited to, costs associated with the excavation and relocation of wastes, construction of the final monolithic cover system, installation of the

landfill gas monitoring system, installation of the permanent dewatering system, installation of the slope stability monitoring system, and installation of erosion and drainage control systems.

The County of Orange has agreed to provide \$3,000,000 towards the closure costs associated with the installation and operation of the landfill gas monitoring system. The remainder of the closure costs will be provided by AG 99-SJ, including any additional costs incurred during the closure construction activities at the Landfill.

The Order requires the Dischargers to update, as necessary, financial assurance estimates to ensure adequate funds are available to cover the costs associated with post-closure activities. The Dischargers estimate that annual post-closure costs will be approximately \$450,000. According to the settlement agreement, the County of Orange has also agreed to fund \$1,500,000 towards the initial post-closure maintenance costs. Once the funds provided by the County of Orange have been depleted, funding for post-closure operations, maintenance and monitoring and/or to complete corrective actions in response to a release from the Landfill will be provided through an annual property tax assessed on parcels in the residential development adjacent to the Landfill.

The Dischargers have chosen to establish a Geologic Hazard Abatement District (GHAD), a publicly financed assessment entity, to collect, manage, and allocate financial assurances for post-closure costs. The proposed GHAD will be administered as an independent public agency and in accordance with California Public Resources Code Section 26500 et seq.

To manage the post-closure funds, the GHAD will develop a Plan of Control and an Engineer's Report. The Plan of Control will define the responsibility, funding mechanism(s), and physical boundaries of the GHAD. The Plan of Control will require the GHAD to provide post-closure operations, maintenance, and monitoring of the closed Landfill, and implement corrective actions as necessary should a release or slope failure occur. The Plan of Control must be submitted to the San Diego Water Board, the County of Orange Local Enforcement Agency (LEA), and any other local regulatory agency for review and comment prior to the formation of the GHAD.

The Engineer's Report will detail the costs associated with the required activities established in the Plan of Control. The Engineer's Report will also contain a calculation of the assessment needed to be levied against each parcel in the residential development. The assessment may be adjusted at any time by the GHAD to meet the costs needed to fulfill the requirements of the Plan of Control.

L. RATIONALE FOR PROVISIONS

The standard provisions contain language that allows the San Diego Water Board to enforce this Order. Provisions include the need for inspections, implementation of corrective actions, monitoring and maintaining the property, and the disclosure of former landfill activities to parties seeking to purchase the Landfill property or real property located adjacent to the Landfill. Standard provisions apply to all WDRs and are consistent with San Diego Water Board findings. Special provisions that apply to landfills are derived from title 27.

M. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Monitoring and Reporting Program No. R9-2016-0149 requires the Discharger to furnish certain technical and monitoring program reports to demonstrate compliance with the WDRs in the Order. The San Diego Water Board's authority to require submission of the reports is found in both Water Code section 13267 and in title 27. Water Code section 13267 provides that the San Diego Water Board may require the Dischargers to furnish technical or monitoring program reports as the San Diego Water Board may specify, provided that the burden, including costs, of these reports bears a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring these reports, the San Diego Water Board must provide the person with a written explanation with regard to the need for the reports, and must identify the evidence that supports requiring that person to provide the report. Based on the nature and possible consequences of the discharge as described in the following sections, the burden of providing the required reports, including the costs, bears a reasonable relationship to the need for the reports, and the benefits to be obtained from the reports.

Title 27, section 20385 provides that when a Regional Water Board determines that groundwater or surface water monitoring is necessary to evaluate impacts or potential impacts from landfill wastes, dischargers shall implement one of the monitoring programs outlined in the regulations.

Basis for Detection Groundwater Monitoring.

Regional Water Boards are authorized by title 27, section 20080(g) to issue monitoring and reporting requirements to landfills if site conditions indicate that impairments or potential impairments to water quality and/or beneficial uses may be caused by a landfill. The Landfill is unlined, thus, a release of waste, waste constituents, or waste degradation products derived from the Landfill may create a condition of pollution or nuisance as defined in Water Code section 13050. The M&RP requires the Dischargers

to implement a detection monitoring program that is designed to provide the earliest possible detection of a release from the Landfill. The detection monitoring program prescribes a standard set of monitoring and reporting requirements consistent with title 27, sections 20385 and 20420, et seq. Results of the detection groundwater monitoring must be provided in the semi-annual detection groundwater monitoring reports.

Detection monitoring programs require dischargers to have a sufficient number of wells, including background and compliance monitoring wells, to evaluate the quality of water upgradient and downgradient of a landfill. The Dischargers have the discretion to determine how many wells are necessary to provide adequate groundwater monitoring information to make this evaluation. An adequate detection monitoring program includes both background and compliance monitoring wells. The following descriptions apply to the two types of monitoring wells:

- a. Background monitoring wells are located up-gradient or cross-gradient from a landfill, and are used to evaluate the quality of water outside the area of influence of the Landfill that cannot be impacted by a release from the Landfill. Background monitoring wells are installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer that represents the quality of water that has not been impacted by a release from the Landfill.
- b. Compliance monitoring wells are to detect constituents of concern (COCs) as they leave the Landfill and enter the groundwater aquifer. The data collected from these wells are used to track the concentrations of those constituents over time. Compliance monitoring wells are placed at locations immediately downgradient of the Landfill in order to detect a release as soon as it occurs. Similar to background monitoring wells, compliance monitoring wells are installed at depths to yield groundwater samples from the uppermost aquifer. Should a release occur and a pollutant plume develop, the Dischargers may need to install additional compliance monitoring wells to further delineate the plume and assess impacts to water quality downgradient of the Landfill.

The Dischargers may propose to implement one of two statistical approaches for the long-term detection of any release(s) of wastes from the Landfill. These two approaches are known as an Intra-Well Analysis and an Inter-Well Analysis.

An intra-well analysis compares groundwater data collected from a given well to historical groundwater data collected at that same well for the previous two year timeframe. This method of analysis minimizes the adverse effects of geographic and

hydrogeographic variation at the Landfill, thereby reducing the likelihood of a false positive indication of a release. If an intra-well analysis method is used for detection mode monitoring, then prediction limits will be used to establish a range of concentrations for monitoring parameters, within which future groundwater monitoring data should fall. These prediction limits will be used to evaluate whether there is a statistically significant change in concentration of monitoring parameters in groundwater. Every two years, Dischargers may retire the COC's oldest two years of background data points, thereby creating a background dataset that is representative of current and recent groundwater conditions at the landfill.

An inter-well analysis compares groundwater data collected from background wells with groundwater data collected from compliance wells to determine whether there is statistical evidence of a release from the landfill. This approach does not allow consideration of variability in groundwater quality due to geographic and hydrogeographic conditions and therefore the method may result in higher frequencies of false indications of a release. Therefore Dischargers should use caution when choosing to implement this type of groundwater data analysis.

Basis for Dewatering Monitoring System Requirements and Standards.

The M&RP prescribes a groundwater effluent and elevation monitoring system and reporting requirements for a permanent dewatering system at the Landfill. A permanent dewatering system is necessary to lower groundwater elevations as necessary to prevent movement and reactivation of the Forster Canyon Landslide. The purpose of the dewatering system is to maintain groundwater levels below the landslide failure surface which is necessary to meet the stability requirements set forth in title 27, sections 21750(f)(5)(B) and waste containment/integrity requirements in sections 21090(c), and 20950(a). Dewatering monitoring results must be provided in the Annual Compliance Report.

Basis for Slope Stability Monitoring.

This Order and M&RP prescribe monitoring and reporting requirements for a slope stability monitoring system to ensure that conditions at the Landfill comply with those required by title 27, sections 20310(g), 20950(a)(2)(A)(2) and 21090(c). The purpose of the slope stability monitoring system is to track any movement along the slopes, initiated either through instability of the Forster Canyon Landslide, or through human activities and impacts so that mitigation measures may be implemented to prevent slope failure within the Landfill. These requirements are necessary to ensure the integrity of the final cover system and to meet the final stability requirements set forth in title 27,

section 21750(f)(5)(B). Slope stability monitoring results must be provided in the Annual Compliance Report.

Basis for Landfill Gas Monitoring.

The Dischargers are required to comply with the requirements prescribed by the County of Orange LEA for the landfill gas monitoring system and program. Title 27, gives the authority for oversight of landfill gas monitoring and systems to CalRecycle and their Local Enforcement Agencies. Results from the landfill gas monitoring must be provided in the Annual Summary Compliance report.

Basis for Site Certification Reports.

The purpose of the Site Certification Reports is for the Dischargers to document those activities undertaken throughout the year to ensure the Landfill containment systems are intact and protective of water quality. Inadequate maintenance of the Landfill cover system could create conditions whereby waste constituents or solid wastes may be discharged in a manner that creates a condition of pollution or nuisance, adversely affecting the quality of waters of the State. Regular monitoring of the site and the reporting of site conditions is essential for the Dischargers and the San Diego Water Board to intervene early to correct problems where releases of wastes or waste constituents threaten to create a condition of pollution or nuisance.

The Site Certification Reports will enable the San Diego Water Board to determine if the conditions at the site comply with the performance, maintenance, and monitoring requirements of title 27, sections 20950(a)(2)(A)(2) and 21090(c)

N. RATIONALE FOR NOTIFICATIONS

Notifications are included in the Order to inform the Discharger of administrative issues regarding this Order.

O. OTHER PERMITS REQUIRED

The Landfill is subject to additional permits from the San Diego Water Board as well as other local agencies. The information below provides a list of other types of permits the Dischargers must obtain prior to initiation of activities associated with the redevelopment project and closure of the Landfill

Section 401 Water Quality Certification.

The San Diego Water Board issued *“Clean Water Act Section 401 Water Quality Certification No. R9-2013-0098 for the Distrito La Novia / San Juan Meadows Project”* on August 26, 2014. The 401 Water Quality Certification is for the larger redevelopment project surrounding and encompassing the Landfill, and includes the borrow area for materials to be used in the construction of the final cover system.

Final Grading Permit.

The Dischargers will need to obtain a final grading permit from the City of San Juan Capistrano for implementation of grading work associated with the closure of the landfill and surrounding redevelopment project. According to AG 99-SJ’s consultant, the final grading permit cannot be obtained until waste discharge requirements for closure and post-closure maintenance have been adopted by the San Diego Water Board.¹²

Permit to Discharge Dewatering Effluent.

The Dischargers must obtain a permit from South Orange County Wastewater Authority (SOCWA) for the disposal of the dewatering effluent from the permanent dewatering system into the sanitary sewer system.

P. PRACTICAL VISION

The issuance of this Order establishing closure and post-closure maintenance requirements is consistent with the goal to provide water resources protection, enhancement and restoration while balancing economic and environmental impacts as stated in the Practical Vision of the San Diego Water Board.

Q. PUBLIC PARTICIPATION

Two of the four values embraced by the San Diego Water Board in its Practical Vision are communication and transparency. Participation of the public in the decision making process of the Board is a hallmark of the board governmental structure in California and essential to this Board’s success. The San Diego Water Board’s process to encourage public participation in the adoption of this Order is discussed in the following paragraphs.

Notification of Interested Parties.

¹² Personal communication with the consultants of record, Tetra Tech BAS.

Consistent with Water Code section 13167.5, and title 27, sections 21730 (a and b), the San Diego Water Board provided a 45-day notice to the Dischargers and Interested agencies and persons, of its intent to adopt waste discharge requirements for the closure and post-closure maintenance of the Landfill, and made a copy of this Order available on its website. Furthermore, the San Diego Water Board provided the public an opportunity to submit written comments and recommendations. Notification was provided through posting on the San Diego Water Board website, a newspaper notice in the Orange County Register, and in the board meeting agenda publication.

Written Comments.

The staff determinations are tentative. Interested persons are invited to submit written comments concerning this tentative Order. Written comments must be submitted in text searchable Portable Document Format (PDF) or Microsoft Word format via email to sandiego@waterboards.ca.gov by **5:00 p.m. on November 9, 2016**. Written comments must include a signed cover/transmittal letter. Comments should be addressed to the attention of Ms. Amy Grove.

In order for comments to receive a written response from staff, and be provided to the San Diego Water Board for consideration prior to the hearing, written comments must be received at the San Diego Water Board office by **5:00 p.m. on November 9, 2016**.

Public Hearing.

The San Diego Water Board will hold a public hearing on the tentative Order during its regular Board meeting on the following date and time, and at the following location:

Date: **December 14, 2016**

Time: 9:00 a.m.

Location: **Board Room
San Diego Water Board
2375 Northside Drive, Suite 100
San Diego CA 92108**

Petitions.

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the San Diego Water Board regarding the final Order. The petition must be submitted **within 30 days** after the San Diego Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

Information and Copying.

The Order, written comments received, and other related documents are on file and may be inspected at the San Diego Water Board's address listed above, at any time **between 8:30 a.m. and 4:45 p.m., Monday through Friday.** Copying of documents may be arranged through the San Diego Water Board by calling (619) 516-1990.

Register of Interested Persons.

Any person interested in being placed on the mailing list for information regarding the Order should contact the San Diego Water Board, reference this facility, and provide a name, address, phone number, and email address.

Additional Information.

Requests for additional information or questions regarding this order should be directed to Ms. Amy Grove at (619) 521-3920 or at Amy.Grove@waterboards.ca.gov.