STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING OF MAY 11-12, 2006
Prepared on April 14, 2006

ITEM NUMBER: **13**

SUBJECT: **Revised Waste Discharge Requirements Order No. R3-2006-0002, For Buena Vista Class III Landfill, Santa Cruz County**

KEY INFORMATION

Location:	Approximately 3.5 miles west of the City of Watsonville at 730 San Andreas Road.
Type of Waste:	Non-hazardous municipal solid wastes.
Remaining Capacity:	3.67 million cubic yards (January 2005)
Disposal:	Area fill method.
Liner System:	The Old Landfill (closed) is unlined. Modules 1 and 2 have a clay liner, and modules 3, 4A, 4B, 5, and 6 have or will have a composite liner
Groundwater Contamination:	Trace volatile organic compounds have been detected in MW-03, 06, and 09 adjacent to module 2. Inorganic monitoring parameters are generally below or similar to concentrations observed in upgradient well MW-01.
Existing Orders:	Waste Discharge Requirements Order No. 94-29, Waste Discharge Requirements Order No. 93-84 (Landfill Super Order), and State Water Resources Control Board Water Quality Order No. 97-03 DWQ (General Industrial Storm Water Permit)
This Action:	**Adopt Waste Discharge Requirements Order No. R3-2006-0002**

SUMMARY

The purpose of revised Waste Discharge Requirements Order No. R3-2006-0002 (Hereafter "Order" or "Order No. R3-2006-0002") is to update and replace existing Waste Discharge Requirements Order No. 94-29, adopted by the Water Board on April 8, 1994. The Order also incorporates the requirements of Waste Discharge Requirements Order No. 93-84, commonly known as the Landfill Super Order.

The County of Santa Cruz (Hereafter "Discharger" or "County") submitted a joint technical document on April 5, 2005, to facilitate the review and revision of Order No. 94-29. The County did not propose modifications to the design and operation of the Landfill. Although the County did not request modification, the proposed Order includes:

- Revisions to the MRP including groundwater, surface water, landfill gas and leachate monitoring.
- Modification of the waste stream to allow treated wood waste disposal.
- Language that brings the Landfill into compliance with California Code of Regulations Title 27, Solid Waste, effective July 18, 1997 (CCR Title 27), and 40 CFR Parts 257 and 258 Solid Waste Facility Disposal Criteria, Final Rule, as promulgated October 9, 1991 (40 CFR 257 and 258).
- Incorporation of requirements contained in Water Board Order No. 93-84.

The proposed Order covers current Landfill operations and provides requirements for future changes. Design and construction specifications

within the proposed Order meet or exceed requirements in both CCR Title 27 and 40 CFR 257 and 258.

DISCUSSION

Landfill Description

The Landfill site covers 126 acres in the Monterey Bay coastal plain. It is located approximately one mile east of the Pacific Ocean and approximately three miles west of the City of Watsonville, as shown in Order Attachments 1 and 2.

The active landfill expansion areas are bordered on all sides by public roads with 50-foot wide easements including Vista Drive, Harkins Slough Road, and Rountree Lane. The closed Old Landfill area west of the current active or expansion areas is surrounded by Galighan Slough to the east and north, and a biotic conservation easement to the southwest. The Southern Pacific Railroad is located immediately west of the Old Landfill.

The Monterey Bay coastal plain is made up of a broad band of gently rolling hills. Land uses in the surrounding area consist of scattered residential/agricultural uses to the east and north, agricultural/open space, and public facilities including the Sheriff's Rehabilitation Facility to the south, seasonal farm workers housing to the southeast, and the City of Watsonville Landfill to the west directly across the Southern Pacific railroad track.

Proposed Landfill Changes

The Discharger submitted a Joint Technical Document (JTD) on April 5, 2005, to facilitate the review and revision of Order No. 94-029. The County's JTD did not propose landfill design or operation modifications.

Landfill History and Development

The Buena Vista Landfill has been regulated by Waste Discharge Requirements since October 17, 1969, and is constructed with unlined and lined areas. The Landfill accepts waste consisting of non-hazardous residential, commercial, and industrial solid waste, which is classified by CCR Title 27, Section 20220(a) as Class III Waste.

To date, the Landfill has been developed in three stages (shown in Order Attachment 3), including an older closed portion located west of Galighan Slough, referred to as the Old Landfill or Old Module 1; completed portion of the active landfill, referred to as the Old Expansion Area located to the east and northeast of Galighan Slough, and the current active portion, known as the expansion area and composed of six modules (modules 1 through 6). Modules 1, 2, 3, and 6 have been constructed and filled to interim elevations from 70 to 170 feet above sea level.

The Discharger expects future landfill development to occur in four phases. Phase 1 includes filling module 4A to an interim elevation of 130 feet, and construction of module 4B (excavation liner, LCRS, and drainage). Phase 2 includes filling module 4B to an interim elevation of 130 feet and construction of module 5 (excavation, liner, LCRS, and drainage). Phase 3 includes filling of module 5 to an interim elevation of 130 feet. Finally, phase 4 includes filling all modules to an elevation of approximately 200 feet to create final contours.

The Discharger landfills waste utilizing the area fill method. The wastes are compacted in approximately 2-foot thick layers on a working face sloped no steeper than 3:1. The lift is covered as it advances across the landfill active area. The working face is covered with alternative daily cover that consists of spray applied cemetitious material or Posi-Shell. If the lift is to be left undisturbed for over 180 days, the top and side slopes of the lift are covered with an approved intermediate soil cover. Soil cover material is generally obtained from on-site sources.

Final landfill capacity is expected to be reached by the year 2019, based on average disposal of 0.2 million cubic yards in 2005 with 2% growth per year and an existing refuse capacity of 3.67 million cubic yards (January 2005).

Geology

The landfill is underlain by Manresa dune sands that overlie fluvial terrace deposits made up of interbedded clays, silts, and sands, followed by the Aromas Sands Formation made up of interbedded fluvial sands, gravels, silts, and clays.

Hydrogeology

Two aquifer zones are located below the landfill site. The Aromas formation is the uppermost and the principal water-bearing formation. The overlying fluvial terrace deposits contain only thin, localized areas of perched groundwater. The static groundwater level for the Aromas Formation near the landfill is near mean sea level and at or near the fluvial terrace deposits/Aromas Formation interface. Discontinuous clay lenses result in an unconfined or locally semi-confined aquifer in and around the Landfill. Hydraulic continuity exists between the fluvial terrace deposits, the Aromas Formation and the sloughs; as a result, the sloughs cause local seasonal changes in the direction of groundwater movement. Groundwater in the Aromas Sands formation generally flows southeast with a gradient of approximately 0.0002 ft/ft. The deepest aquifer is the Purisima formation. Groundwater in the Purisima formation generally flows east towards the valley floor.

Supply Wells

There is an County water supply well near the water tank and tool shed as shown on Order Attachment 3. Two nearby wells serve the County sheriff facility and the neighboring seasonal farm worker housing development (Tierra Alta). Supply well Tierra Alta is monitored regularly and is included in Monitoring and Reporting Program R3-2006-0002. The on-site and nearby off-site County wells are screened in the deeper Purisma formation and are monitored bi-annually by the County.

Surface/Storm Water

The Landfill site is located on hillsides that drain towards Gallighan Slough. Galighan slough flows in a southeast direction and traverses the site between the Old Landfill and the Old Expansion Area.

Gallighan Slough joins Harkins Slough 0.5 miles southeast of the site. Harkins Slough is tributary to Watsonville Slough, which discharges to the Pajaro River. The Watsonville Slough system consists of flat alluvial valleys near sea level, which are intermittently flooded with fresh water during the winter months. The lower part of the Watsonville Slough is subject to tidal action. The low gradient of the slough bottom delays the discharge of storm water and the slough bottoms are flooded up to several feet deep during most winters. The Federal Emergency Management Agency Flood Insurance Rate Map shows the landfill is outside the 100-year flood plain.

Rainfall is seasonal and approximately 90 percent of the annual precipitation occurs from October through April. The average annual rainfall is 22.3 inches. January is the wettest month with an average precipitation of 4.7 inches. Based on information from the National Oceanographic and Atmospheric Administration, the peak 100-year, 24-hour storm event is approximately 6 inches. California Code of Regulations Title 27, Section 21750(e), requires that Class III landfills be designed to handle the runoff from a 100-year, 24-hour storm. Surface-water runoff from the active landfill and Old Expansion Area side slopes is carried by bench v-ditches and overside drains, which discharge to an on-site storm water detention basin. The detention basin and surface water sampling locations are shown on Order Attachment 3. Surface water is monitored at four water-sampling locations, R-1 through R-4, and are shown on Order Attachment 3.

In addition to this Order, the Discharger is covered under a Statewide General Storm Water Permit. In October 1992, the Discharger submitted its "Notice of Intent" to comply with the General Permit to Discharge Storm Water Associated with Industrial Activity (WQ Order No. 97-03-DWQ). The Discharger performs storm water monitoring in accordance with the General Permit's Monitoring and Reporting Program and required storm water pollution prevention plan. Storm water samples are collected twice per year. Samples are collected during the first hour of runoff from a storm event that occurs during scheduled operating hours and that was preceded by at least three working days without storm water discharge. Samples are analyzed for pH, total suspended solids, specific conductivity, oil and grease, and iron.

Leachate Management System

The leachate collection and removal system (LCRS) currently constructed in expansion area modules includes a high permeability layer, perforated pipes, nonperforated riser pipes, pumps,

and leachate storage tanks. Each modules LCRS drains to a separate collection sump. Access to the sumps is through side slope rises. Submersible pumps are lowered to the riser's base and are equipped with automatic pump controllers. The pumped leachate is stored in a double contained storage tank. Leachate is currently hauled to the City of Watsonville Wastewater Treatment Plant but may be used on the site in lined areas for dust control or added back into composite lined modules.

Landfill Gas Control

To control landfill gas and prevent off-site migration, the current Landfill gas collection system includes 78 collection and perimeter migration wells. A network of gas header pipes interconnects these wells and transports gas to a flaring facility. Since 1997, the Landfill has operated a flare facility with capacity of 1,800 cfm. This flare facility serves both the Buena Vista landfill (1300 cfm) and the adjacent City of Watsonville landfill (500 cfm). In 2006, the County expects to bring an electrical cogeneration facility online. Up to 1200 cfm of landfill gas derived from the higher quality internal gas collection wells will be used to generate approximately 3 megawatts of electricity. The flare will remain operational in order to serve the City of Watsonville landfill and to handle excess landfill gas generated at the Buena Vista landfill.

Gas probes are located adjacent to onsite and off-site buildings and in locations along the landfill perimeter, as shown on Order Attachment 3. The gas monitoring system consists of 19 single, double, and triple level probes. All triple level probes are screened at approximately 10 to 25, 30 to 55, and 60 to 85 foot depths. Double level probes are screened at approximately 10 to 25, and 30 to 55 foot depths. The triple and double level probes measure landfill gas levels from the bottom of the fill to near ground surface. Single level probes provide immediate monitoring near buildings or in areas where depth to refuse is less than 30 feet at grade.

Gas condensate resulting from landfill gas collection is stored in tanks and hauled as necessary to the City of Watsonville WWTP.

Groundwater Monitoring

The groundwater monitoring well network consists of thirteen monitoring wells (MW-01 through MW-12, and Tierra Alta) screened in the Aromas Sands formation and at the locations shown on Order Attachment 3. Three piezometers (PZ-8, PZ-15, and PZ-16) are also used to supplement groundwater elevation data. The Lower Purisima aquifer is not monitored.

Groundwater monitoring well MW-01 is located upgradient of the landfill and serves as the background monitoring point. Groundwater monitoring wells MW-02, 03, 06, 09, 10, and 12, and the Tierra Alta well monitor groundwater south, southeast, and east of the active Landfill. Wells MW-04, 05, 07, 08, and 11 are located downgradient or crossgradient of the closed Landfill area.

Groundwater Degradation and Remediation Effectiveness

Trace volatile organic compounds (VOC) have been detected in groundwater monitoring wells MW-03, 06, and 09, which are located adjacent to Module 2. Because of the lack of leachate indicator compounds, the Discharger believes the VOC impacts are caused by landfill gas. To remove landfill gas from the vadose zone, the Discharger has added 33 landfill gas collection wells to modules 1, 2, and 3 since 1997. VOC concentrations in monitoring wells MW-03 and MW-06 initially declined following the installation of gas extraction wells. VOC concentrations in MW-09 are decreasing with some seasonal variation.

Continued implementation of the existing groundwater/leachate management system and the landfill gas control system is expected to further improve groundwater quality.

Compliance History

During 2001, the Discharger received two notices of violations and a failure to submit letter for not submitting monitoring reports. According to the Discharger, the reports were not submitted due to frequent staff turnover. As a result, the Discharger hired a consultant to generate the late reports and submit future monitoring reports. The Discharger

did submit the late monitoring reports and has maintained compliance.

Overall, the Discharger is responsive to Regional Water Board staff's information requests and proactively addresses compliance issues. At this time, staff is not recommending changes to the existing Order or Monitoring and Reporting Program based on prior formal or informal compliance issues or actions.

PROPOSED ORDER CONTENTS

Proposed Order No. R3-2006-0002 updates regulatory language by referencing CCR Title 27, which combined and replaced Chapter 15 and California Waste Board regulations (Title 14). It also reflects current Federal regulations; specifically, 40 CFR 257 and 258 (Subtitle D). The proposed Order updates the Monitoring and Reporting Program to reflect current site conditions and groundwater monitoring and reporting requirements.

1. **General Information:** The section includes discussions of the site's description and history, waste type and classification, geology and hydrogeology, groundwater, storm water and surface water, water quality, control systems and monitoring programs, beneficial uses of the water, and surrounding land use.

2. **Compliance with other Regulations, Orders and Standard Provisions:** This section directs the Discharger to:
   - No longer comply with Regional Board Order No. 93-84 (Landfill Super Order) since the proposed order incorporates requirements contained therein.
   - Comply with all applicable requirements contained in CCR Title 27 and 40 CFR 257 and 258.
   - Comply with State Water Resources Control Board Water Quality Order No. 97-03-DWQ, which addresses storm water associated with industrial activities, commonly referred to as "General Industrial Storm Water Permit."

3. **Prohibitions:** These discharge prohibitions are applicable to Class III waste disposal.

4. **Specifications**: These are specifications that the Discharger must meet and/or implement to comply with site specific aspects of CCR Title 27 and 40 CFR 257 and 258 pertaining to solid waste disposal practices. These specifications are categorized into several groups; a) General Specifications, b) Wet Weather, c) Design Criteria and d) Closure.

5. **Water Quality Protection Standards:** These standards outline constituents of concern, monitoring parameters, concentration limits, monitoring points, points of compliance, and compliance period.

6. **Provisions**: This section addresses the Discharger's responsibilities regarding Landfill-related impacts to water quality and provides Regional Board access to the Landfill and related reports, Order severability, discharge conditions, reporting and implementation provisions, a termination clause, and wet weather operations provisions.

MONITORING AND REPORTING PROGRAM (MRP) CONTENT

Part I - Monitoring and Observation Schedule: This section contains the following requirements: periodic routine Landfill inspections, intake monitoring, drainage system inspections, rainfall data collection, pollution control system(s), Landfill monitoring (groundwater, surface water, leachate and gas), analytical monitoring of groundwater and gas monitoring parameters and constituents of concern, and quarterly determination of groundwater flow rate and direction.

Part II - Sample Collection and Analysis: This section establishes criteria for sample collection and analysis, methods to determine concentration limits, and specifies how these records shall be maintained. This section also establishes acceptable statistical and non-statistical methods the Discharger must use to perform data analysis, and outlines acceptable re-test procedures.

Part III - Reporting: This section establishes formats and requirements that the Discharger must follow when submitting analytical data, semiannual reports, and summaries to the Water Board. It includes notification requirements, contingency responses and reporting requirements.

Part IV - Definition of Terms: This section defines a number of terms used in the MRP.

ENVIRONMENTAL SUMMARY

This project involves an update of Waste Discharge Requirements. These Waste Discharge Requirements are for an existing facility and as such are exempt from provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) in accordance with Title 14, California Code of Regulations, Chapter 3, Section 15301.

COMMENTS AND RESPONSES

The County of Santa Cruz submitted a comment letter dated March 17, 2006, followed by an email dated March 20, 2006, which staff is providing in paraphrased format. Staff responses immediately follow the paraphrased comments.

1. General Comment - The phrase "Executive Officer (EO) approved/approval..." appears throughout the proposed WDR and MRP. Many of the requested approvals are defined and included in the facility's Joint Technical Document (JTD) and it is not clear if you are requesting separate submittals or if your approval of the submitted JTD meets the requirements. Please define the process and the timeline for EO approvals within the WDR and MRP.

Response
The phrase "Executive Officer approved or approval" is intended to address two issues. The first issue is to ensure that the Executive Officer has approved specific design and operational criteria prior to their application or installation. Specifically, if the WDR requires approval of a plan or report, the Discharger should ensure that the Regional Water Board has an approved current version on file. The second issue is to allow a process to change and approve the design or operations of the landfill without requiring a full revision of the Waste Discharge Requirements. Landfills are dynamic and design or operational changes occur regularly. Regional Water Board staff expect that design specification or operational changes would be submitted by the Discharger to the Executive Officer through submittal of, or amendments to, applicable documents such as the JTD, Closure Plan, Module Construction Plan, and Construction Quality Assurance Plan.

2. WDR, Finding 12 - The alternative daily cover mentioned is tarps rather than Posi-shell.

Response
Staff concurs and has modified the finding.

3. Attachment 3 - Per your request, the County's consultant recently added water supply wells to Attachment 3.

Response
Staff has updated Attachment 3.

4. WDR, Specification C.13 - Title 27, Section 20700 requires 12 inches of earthen material be placed over areas where no additional waste will be placed in 180 days. Title 27, Section 20705 states that intermediate covers minimize percolation and are composed of materials that are compatible with the waste management unit. The requirements listed are more stringent than the regulations and incorporate an EO approval of the long-term intermediate cover plan. Is this plan required to be submitted annually, or does the plan within the JTD meet these requirements?

Response
Title 27 Section 20080 (a)(1) allows the Regional Board to impose more stringent requirements to accommodate regional and site-specific conditions. In addition, this is a standard requirement for landfills throughout the Central Coast Region. The specification has been modified to include the minimum requirements of 12 inches of soil. Please note that the intent of the long-term intermediate cover plan is to evaluate and document the adequacy of a 12-inch soil cover or specify a more appropriate intermediate cover thickness. The JTD states that the Buena Vista Landfill historically has placed soil on top of a

daily soil cover to obtain a intermediate soil cover depth of 2 ft. The JTD also states that a Posi-shell as intermediate cover demonstration project is currently underway. Regional Board staff look forward to reviewing your evaluation and the Executive Officer will make a determination, if necessary.

5. WDR, Specification C.17 - Does the low permeability component of the final cover qualify for the ditch lining or is the ditch lining in addition to the final cover?

Response
The final cover may qualify and satisfy the low permeability requirement of drainage ditches crossing over landfill areas. Please note that properly designed drainage channels utilize erosion and protective components to reduce the need for frequent maintenance and prevent damage to the channels low permeability layer, especially if the cap is used as the drainage ditches' low permeability layer.

6. WDR, Specification C.19 - Because Modules 1 and 2 do not have a composite liner, does this requirement mean that only inert wastes can be disposed in Modules 1 and 2? Please strike or clarify the Board's intent with this provision. What is an EO approved Waste Sampling Plan?

Response
Staff did not intend to have a specification restricting discharge into any of the currently approved disposal units; therefore, Specification C.19 has been modified to allow continued disposal of wastes to clay-lined Modules 1 and 2. The intent of Specification C.19 is to allow disposal of only inert waste outside of lined cells, and within the permitted Landfill waste footprint. The Waste Sampling Plan is a report that the Discharger would submit proposing periodic monitoring to demonstrate that waste is inert and suitable for disposal outside of lined areas.

7. WDR, Specification C.23 - There is reference to a minimum 1 ft thick soil cover, an intermediate cover, and an Executive Officer approved vegetative layer. Please clarify

Response
Staff has clarified the language to refer consistently to a one-foot thick wet weather soil cover. References to an intermediate cover and vegetative layer have been removed as they are addressed in Specifications C.13 and 24 respectively.

8. WDR, Specification C.27 – Repairing wells or erosion damage may be difficult at times during the wet season when areas are too wet to access with equipment. Please modify to allow temporary protective measures to be taken until access is possible.

Response
Staff concurs and has revised specification C.27 to allow temporary protective measures.

9. WDR, Specification C.28 - The sedimentation pond is designed for the 25-year, 24-hr storm. Perhaps the requirement could refer to storm water conveyance facilities rather than drainage facilities.

Response
Title 27 Section 20365 states "...units and their respective containment structures shall be designed and constructed to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping under the precipitation conditions specified in Table 4.1..." Based on Table 4.1, a class III MSW landfill's precipitation and drainage control facilities must have capacity to contain to a 100 year, 24-hour design storm. Until Buena Vista Landfill increases the size of the sedimentation pond or demonstrate that increasing the size of the pond is infeasible and an engineered alternative is allowed per Title 27, Section 20080 (b) the Landfill will be considered out of compliance with its WDR. Staff intends to work with the Discharger during 2006 to address this compliance issue.

10. WDR, Specification C.32.b - A technical equivalency report has been previously submitted and approved by your Board to allow Geosynthetic Clay Liners (GCL) in lieu of the two-ft of clay. It would be beneficial to include the GCL as an engineered alternative to the 2-ft clay liner rather than to have to make the repetitive technical arguments each time we want to use GCL.

Response
Executive Officer approval of an alternative liner design shall continue to be required on a case-by-case basis.

11. WDR, Specification C.34 - The acceptable limit for permanent slope displacement of 6-inches for bottom liners and 12-inches for final cover system slopes exceeds the requirements of Title 27, Section 21750(f)(5). We request the last sentence of this requirement be stricken. No data has been provided to support the 6-inch deformation limits for liners required in the draft WDR. However, we have previously demonstrated and supported seismic deformation limit of 1 foot as acceptable for liners, pursuant to Title 27. The Board should consider the fiscal and landfill capacity requirements of implementing provisions that exceed regulatory standards.

Response
The Regional Water Board has previously contracted out slope stability analysis to the Department of Water Resources (DWR). Department of Water Resources and the State Water Board staff have been consistent in recommending six inches as the maximum limit for seismic induced displacements. This has been DWR's recommendation for more than 10 years and has been used in over 20 landfill reviews that DWR has been part of. This value is originally based on a paper by Seed and Bonaparte (1992), which includes a survey of several of the largest firms in the landfill design business, and what they thought was acceptable. The final cover maximum permanent displacement of 12 inches is consistent with what is required in other landfill WDRs. Additionally, the Buena Vista Landfill is located on geologic materials (including shallow soils) that are highly permeable and do not meet the criteria for containment structures contained in CCR Title 27 Section 20320 (d). Therefore, the potential for a leachate or gas release that would affect groundwater quality is very high if liner displacement resulted in rupture.

12. WDR, Specification C.39 - The second bullet allows GCLs and geomembrane but not compacted clay covers if there are VOC detections at point of compliance wells. This requirement is beyond the regulations and may not be feasible due to seismic stability issues in using GCLs and geomembranes.

Response
Staff partially agrees and has modified the language of Specification C.39 to state that clay covers may not be suitable when there are VOC impacts at point of compliance wells.

13. WDR, Specification C.42 - This requirement appears to require submittal of a Leachate Reduction and Removal Plan to be approved by the Executive Officer. Please clarify.

Response
Upon review of Specification C.42, Regional Water Board staff has modified the specification to require removal of leachate from the LCRS's (rather than Landfill) to the maximum extent feasible. The Leachate Reduction and Removal Plan should address the efforts taken to reduce the formation of leachate, removal of leachate, and methods of disposal. This information should be consistent with the JTD and WDR.

14. WDR, Water Quality Protection Standard D.9. This standard reads as if the Executive Officer can require any additional monitoring devices to be installed without specific reasons or criteria. We ask that the language be modified to require the EO to provide justification for additional monitoring devices.

Response
Regional Water Board staff disagrees and does not believe it necessary to add the requested the language. Please note, Section 13267 of the California Water Code requires that the Water Board provide the Discharger with a written explanation with regard to the need for, and identify the evidence that supports requiring, additional monitoring.

15. WDR, Provision E.3 - The third party Construction Quality Assurance (CQA) requirement is beyond the requirements of Title 27, Section 20324 which states that "The construction quality assurance program shall be supervised by registered civil engineer or certified engineering geologist who shall be designated the CQA officer" with no mention of third party CQA. The County desires to continue to use the design engineer for CQA

and has had far better results in implementing CQA requirements using the design engineer who also has intimate knowledge of the design parameters. We believe this is an enhancement to the construction process. We request "project designer" be stricken from this section.

Response
Staff disagrees. Our experience has shown that serious construction deficiencies occur in situations where a party related to the discharger, the landfill operator, the designer, and/or the contractor implements the CQA plan. This is not due to any single event but several events. Construction of a liner or final cover system is extremely important since there is only one chance to build the liner correctly. Once waste is deposited, there is no feasible way to correct construction flaws other than forced unit closure. A significant amount of time and money goes into the design and review of liners and final covers. Appropriately designed and constructed liners and final covers are a primary factor in preventing water quality impacts. Since it is almost impossible to see a failure in liner after construction, construction defects are only observed after a release has occurred. Staff believes it is necessary to continue requiring implementation of the CQA plan by an independent third party. Provision E.3 is consistent with what is required in WDRs for other Central Coast Water Board regulated landfills. In addition, CCR Title 27 requirements are minimum standards and the Regional Board may impose more stringent standards per section 20080(a)(i).

16. WDR, Provision E.5 - Receiving approval of the CQA Report by the Executive Officer could significantly delay waste placement in new cells. The regulation (Title 27, Section 20324(d)(1)(C) states that a CQA plan shall be submitted to the RWQCB but does not require Executive Officer's advance approval. This will further increase the approval process for new cells and delay use of landfilling capacity.

Response
Staff disagrees. Provision E.5 requires authorization from the EO to begin discharging waste into a new cell. This authorization is based on a final site inspection with review and approval of the final CQA Report. If there is a problem with the new liner, it can be fixed much more easily prior to waste disposal. The Discharger should plan an appropriate construction timeline including a reasonable amount of time for Regional Water Board Executive Officer review and approval of the new cell. Regional Water Board staff intends to work with the Discharger and consultants to efficiently complete a final inspection, review reports, and obtain Executive Officer approval, when necessary.

17. WDR, Provision E.32 - There is no good method to test the entire Leachate Collection and Removal System (LCRS). We have historically checked that the LCRS pumps are operational and that leachate volumes are consistent with past records. Is this an acceptable LCRS test method?

Response
Staff agrees. Testing the pumps and evaluating leachate volumes compared to historical and projected leachate volumes is appropriate.

18. WDR, Provision E.37 - The California Integrated Waste Management Board is the applicable Local Enforcement Agency for the Buena Vista Landfill.

Response
Staff has removed the incorrect reference.

19. WDR, Provision E.39 - The table refers to the wrong Specifications and Provisions.

Response
Staff has corrected the table.

20. MRP, Part I: E.1.d - What exactly is biofouling and how do you assess its presence? Does it mean the LCRS gravel is clogged such that leachate will not pass through?

Response
Staff has replaced biofouling with clogging, which is consistent with Title 27, Section 20340 (d).

21. MRP, Part I: Table 1, Note 2 - COC sampling should be performed in August 2008 and not September 2008, if Note 3 is followed.

Response
Staff agrees and has modified Note 2 of Table 1.

22. MRP, Part I: Table 2, Note 2 - Statistical analysis is only required on the five compounds listed; however concentration limits are still required on all monitoring parameters. Are comparisons only required on the five compounds listed in Note 2?

Response
Staff partially agrees as only constituents with footnotes (2) and (3) are required to have statistical or non-statistical analysis, respectively. This statistical or non-statistical analysis will then be used to establish concentration limits.

23. MRP, Part I: Table 2 - Total metals have been monitored in past groundwater and surface water samples, rather than dissolved metals. It will take a few monitoring events to obtain sufficient data to allow statistical analysis and the calculation of concentration limits for Dissolved Metals.

Response
Regional Board staff agrees.

24. MRP, Part I: I.2 and Table 4 - Section I.2 and Table 4 list VOCs as a Landfill gas monitoring parameter for adjacent structures and landfill gas probes respectively. Landfill gas probes are sampled monthly which we estimate would cost $150,000 dollars per year (over three times our current annual lab cost). Please clarify your intent with Section I.2 and Table 4.

Response
Staff has modified Section I.2 to include parameters listed in Table 4, except VOCs. Please note, if landfill gas is consistently detected in the gas probes or adjacent structures, the Water Board may amend your Monitoring and Reporting Program to require additional monitoring for VOCs.

25. MRP, Part I: E.1.g - Leachate must be tested if it is used for dust control. Does this testing requirement apply if we re-inject leachate at the active face, but do not apply it for dust control?

Response
The leachate does not need to be tested if it is re-injected at the active face. Please note, Title 27 Section 20340 (g) requires collected leachate to be returned to the unit from which it came or discharged in another manner approved by the Water Board. Furthermore, collected leachate can only be discharged to a different unit if it meets specific criteria including: the receiving unit has an LCRS and contains similar waste, the Water Board has approved the alternative disposal, and the added leachate cannot exceed the moisture holding capacity of the receiving unit.

26. MRP, Part I: E.2.f - It appears we are required to sample gas condensate for all parameters. It is unlikely constituents such as heavy metals will be present. Please clarify.

Response
Staff agrees and has modified Section E.2.f to require analysis of gas condensate only for VOCs, which is consistent with Table 1.

27. MRP, Part I: F - We are required to monitor all groundwater wells and piezometers quarterly, "including times of expected highest and lowest elevation so of the water level." What is your intent with this last phrase?

Response
The Discharger should make an effort to evaluate historical groundwater monitoring data, along with site-specific issues, to adjust when groundwater samples are taken during the expected peak and low groundwater elevation monitoring quarters for the year. This language is consistent with what is required in Monitoring and Reporting Programs for other Central Coast Water Board regulated landfills. Additionally, it allows the determination if seasonal trends are present.

RECOMMENDATION

Adopt Waste Discharge Requirements Order No. R3-2006-0002 as proposed.

ATTACHMENT

1. Proposed Waste Discharge Requirements Order No. R3-2006-0002