California Regional Water Quality Control Board
Central Coast Region

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Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

February 9, 2007

Mr. Noel King
San Luis Obispo County Public Works
County Government Center
Room 207
San Luis Obispo, 93408

Dear Mr. King:

HEARING NOTICE, DRAFT PROPOSED REVISED WASTE DISCHARGE REQUIREMENTS FOR THE CLOSED LOS OSOS CLASS III LANDFILL, SAN LUIS OBISPO COUNTY

Central Coast Water Quality Control Board (Central Coast Water Board) staff has prepared draft revised Waste Discharge Requirements Order No. R3-2007-0023, and draft Monitoring and Reporting Program No. R3-2007-0023 for the closed Los Osos Class III Landfill. The Central Coast Water Board will hear public comments and consider this matter at its **May 11, 2007** Board meeting in San Luis Obispo.

The subject documents are available for review on our website at:
http://www.waterboards.ca.gov/centralcoast/Permits/Index.htm

Interested parties not able to access the documents electronically may request to receive a hard copy delivered by mail. Interested parties must submit comments no later than **March 16, 2007**. The Central Coast Water Board will not accept comments or other written submissions on the draft Order after **March 16, 2007**, unless the Central Coast Water Board Chairman rules that exclusion would create a severe hardship, and that the late submission will not prejudice any party or the Central Coast Water Board. Any person submitting late comments must explain why the materials were not submitted by March 16, 2007. The Central Coast Water Board Chairman will rule on late submittals at or before the hearing. Late submissions that consist of evidence (as opposed to policy statements or comments) are generally prejudicial unless all designated parties and Central Coast Water Board staff have time to consider the evidence before the meeting.

If you have any questions or comments concerning the draft Order, please contact **Ms. Thea Tryon at (805) 542-4776**, or by email at ttryon@waterboards.ca.gov, or her supervisor, Mr. John Robertson, at (805) 542-4630.

Sincerely,

for Roger W. Briggs
Executive Officer

Enclosures:

1. Draft Staff Report
2. Draft proposed revised Order No. R3-2007-0023
3. Draft proposed Monitoring and Reporting Program No. R3-2007-0023

S:\Land Disposal\Land Disposal Facilities\PERMITTED SITES\Los Osos\ORDERS\2007 WDR & MRP\R3-2007-0023 Public Notice.doc

cc (without attachments)

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STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

DRAFT STAFF REPORT FOR REGULAR MEETING OF MAY 11, 2007

ITEM X

SUBJECT **REVISED WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2007-0023 AND MONITORING AND REPORTING PROGRAM ORDER NO. R3-2007-0023, FOR THE CLOSED LOS OSOS CLASS III LANDFILL (LANDFILL), SAN LUIS OBISPO COUNTY**

KEY INFORMATION

Location:	2285 Turri Road approximately 1.5 miles northeast of the community of Los Osos as shown on **Attachment 1** of Waste Discharge Requirements Order No. R3-2007-0023.
Type of Waste:	Non-hazardous municipal solid wastes.
Waste In Place:	838,000 cubic yards.
Disposal:	Area fill method.
Liner System:	Unlined landfill.
Cover System:	Final cover consists of two feet of foundation layer, one foot of compacted clay and one foot vegetative layer.
Groundwater Contamination:	Volatile organic compounds have been detected in groundwater and inorganic compounds have been detected above background in groundwater.
Existing Orders:	Waste Discharge Requirements Order No. 94-64, Waste Discharge Requirements Order No. 93-84 (Landfill Super Order), State Water Resources Control Board Water Quality Order No. 97-03 DWQ (General Industrial Storm Water Permit), Cleanup or Abatement Order No. 95-66.
This Action:	Adopt Waste Discharge Requirements Order No. R3-2007-0023.

SUMMARY

Waste Discharge Requirements Order No. R3-2007-0023 (Hereafter "Order" or "Order No. R3-2007-0023") replaces Waste Discharge Requirements Order No. 94-64, adopted by the Central Coast Water Board on July 8, 1994. The primary purpose for Order No. R3-2007-0023 is to reflect the change of ownership and to revise and update requirements for post-closure maintenance and long-term monitoring of groundwater, surface water, and landfill gas.

The proposed Order also 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 (40CFR 257 and 258). Additionally, the proposed Order removes the Landfill from the requirements of Order No. 93-84 "Waste Discharge Requirements Amendment for All MSW Landfills in the Central Coast Region" (Super Order).

This updated Order benefits water quality by updating the requirements for post-closure maintenance and long-term monitoring or groundwater, surface water, and landfill gas.

Proposed Order No. R3-2007-0023 and Monitoring and Reporting Program No. R3-2007-0023 are included as Attachment 1 and 2, respectively.

DISCUSSION

Landfill Description and History

Mr. Charles Piccuta, is the owner of the property on which the Los Osos Closed Class III Landfill (hereafter "Landfill") is located. The County of San Luis Obispo (County) is responsible for closure and post-closure maintenance of the Landfill.

Previous owners of the property on which the Landfill is located include Mr. George Sousa and Mr. and Mrs. George and Ann Martines.

Disposal operations began at the Landfill in December 1958. The Landfill last received waste on November 26, 1988 when it was closed with approximately 838,000 tons of waste in place. The site covers approximately 40 acres with a landfill footprint of approximately 25 acres. The unlined Landfill is located at 2285 Turri Road approximately 1.5 miles northeast of the community of Los Osos as shown on Attachment A of the Order. The Landfill is located above Warden Creek, a seasonally flowing creek that joins the Los Osos Creek half a mile downgradient of the Landfill. The location of the Landfill is described as, Section 16, Township 30 south, Range 11 east, Mount Diablo Base and Meridian or Assessor Parcel Number 067-011-047.

Previous Landfill operators placed waste as area fill on native silty clay, sandy clay, and sandy soils with no liner or leachate collection and removal system. The Landfill site slopes to the south-west with ground surface elevations ranging from 35 to 160 feet mean sea level.

The County constructed the final cover for the Landfill in 1990. The Central Coast Water Board approved the final cover in January 1991. The County installed additional surface drainage improvements at the site in 1991.

Compliance History

The County identified VOC impacts to groundwater at the Landfill after installation of monitoring wells in 1986. The County addressed groundwater and surface water contamination originating from the Landfill through Cleanup or Abatement (CAO) Order No. 89-90 issued on March 27, 1989. CAO Order No. 89-90 required that the County characterize the nature and extent of groundwater and surface water impacts, and develop and implement an appropriate remedial response. In response to CAO No. 89-90, the County installed a series of groundwater monitoring wells between 1989 and 1994 to define the nature and extent of the landfill release.

The Central Coast Water Board replaced and updated CAO Order No. 89-90 in 1995 with CAO Order No. 95-66. CAO Order No. 95-66 requires the Discharger to implement a corrective action program to clean up contaminated groundwater downgradient of the Landfill. The County determined that a landfill gas extraction system was the most appropriate measure for reducing volatile organic compounds (VOC) impacts from fugitive landfill gas moving into groundwater. The County installed a landfill gas extraction system in 1998. As part of the corrective action program, the County implemented enhancements to the Landfill final cover in 1998 to minimize the potential for leachate formation and minimize landfill gas production.

From 2003 to 2005, the County made additional upgrades to the landfill gas extraction system and the final cover and drainage systems. The improvements to landfill gas extraction system enhanced gas extraction and fixed problems with equipment and header lines. The County also improved the final cover and drainage systems to promote better drainage and fill in areas where settlement occurred. The County's improvements to the landfill gas extraction system upgrades and final cover and drainage improvements improve the removal of VOC affected landfill gas from the waste and reduce leachate production.

Since implementation of the landfill gas extraction system and final cover improvements, VOC concentrations in some of the wells along the toe of the Landfill have decreased. However, VOC concentrations continue to exceed the maximum contaminant level (MCL) in groundwater downgradient of the Landfill. Based on a review of the groundwater monitoring results from the past several years, total VOC concentrations from wells (MW-5 and MW-12) located approximately 200 feet from the toe of the Landfill and a well at the southeastern tip of the toe of the Landfill (MW-3) show an overall increasing trend.

In 2005, the County installed an additional groundwater monitoring well (MW-14) to delineate VOC impacted groundwater downgradient of the Landfill. To date, groundwater samples collected from this well have not containing VOCs. Therefore, in a letter to the County on December 29, 2005, Central Coast Water Board staff concluded that delineation of the VOCs in groundwater downgradient of the Landfill has been successfully completed. The December 29, 2005 letter also required that the County must take additional corrective action measures (besides landfill gas extraction and final cover improvements) to cleanup VOC contamination downgradient of the Landfill and near the southeastern portion of the Landfill.

Geology

From bottom to top, the Landfill and adjacent properties overlies 1) meta-volcanic rocks of the Cretaceous Franciscan Formation, 2) loosely consolidated, generally fine-grained sediments of the Pleistocene Paso Robles Formation, and 3) fine-grained alluvial deposits of Recent age.

The Franciscan Formation crops out east and west of the Landfill and underlies the entire site. Geophysical surveys and exploratory borings indicate that the Franciscan Formation forms a shallow southwesterly dipping trough beneath the Landfill. The unconformable contact between the Franciscan Formation and the overlying Paso Robles Formation is approximately 100 feet below the ground surface at the northern end of the property and 50 feet or less at the southerly toe of the Landfill. Alluvial deposits overlie the Paso Robles Formation with depths of approximately 20 to 35 feet southwest of the Landfill

Hydrogeology

The Landfill lies within the Los Osos Hydrologic Unit. Groundwater occurs beneath the Landfill in clayey sandstone bedrock of the Paso Robles Formation and Recent alluvial deposits overlying the Paso Robles Formation. The Franciscan Complex, which underlies the Paso Robles Formation, is non-water bearing. On the south side of Warden Creek, groundwater occurs in both the Recent alluvial deposits and in the underlying Paso Robles Formation. The Recent alluvial deposits thicken to the south toward the valley center and away from Warden Creek, while to the north they pinch out against the Paso Robles Formation beneath Warden Creek. The contact between the alluvial deposits and Paso Robles Formation is gradational and is not a barrier to groundwater flow. The average groundwater elevation beneath the Landfill and surrounding is approximately 20 feet above mean sea level. Groundwater beneath the Landfill generally flows south (toward Warden Creek).

The water-bearing sediments of the Recent alluvium and Paso Robles Formation have been divided into a shallow zone and deep zone for water quality monitoring purposes. The division of the shallow zone and deep zone is based on the differences in hydraulic conductivity between the two zones. Groundwater in the alluvial deposits and the upper portion of the Paso Robles Formation represent the shallow zone and the gravelly sandstone at the base of the Paso Robles Formation is representative of the deep zone.

Groundwater Monitoring

The Landfill's groundwater monitoring network contains 16 wells. Two of these wells are background wells, hydraulically upgradient from the Landfill (BW-1) or upgradient from the

impacted groundwater (BW-2). The remaining 14 wells are in detection or corrective action monitoring. The County installed well MW-1 in the upper portion of the Franciscan Formation. Well MW-1 is typically dry and groundwater samples collected from this well have not had detectable concentrations of VOCs. The County installed wells MW-2 through MW-9 to monitor the shallow water-bearing zone and wells the County installed wells MW-10 through MW-14 to monitor the deep water-bearing zone.

In 1986, groundwater monitoring detected VOC impact at the Landfill. Monitoring data collected from 1986 to 1994, demonstrates that a VOC plume in groundwater exists. The VOC groundwater plume extends offsite approximately 200 to 250 feet to the southwest as shown in Attachment B of the proposed Order.

Chlorinated ethene compounds such as tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride (VC) are the most commonly detected VOCs in groundwater. A small fraction of the total VOC mass detected in groundwater also includes freon's and aromatic hydrocarbons. Groundwater samples collected from several wells near the toe of the Landfill have evidence of inorganic impacts. Groundwater samples collected from wells along the toe of the landfill that also have VOC impacts, contain elevated levels of nitrate and chloride. Elevated nitrate and chloride concentrations in wells at the toe of the Landfill indicate groundwater VOC impacts from landfill leachate. Impacts associated with landfill gas are indicated by the presence of chlorinated aliphatic VOCs in both landfill gas and groundwater.

Surface Water

The Landfill is located above Warden Creek, a seasonally flowing creek which joins the Los Osos Creek half a mile downgradient of the Landfill. Warden Creek was constructed to enhance local irrigation by re-routing Los Osos Creek to the south side of the Landfill property. Warden Creek acts to drain alluvial groundwater along the northern portion of the floodplain (southern edge of the Landfill property) and can have a significant effect on local groundwater flow conditions. For example, during the rainy season, Warden Creek appears to recharge the alluvial deposits and groundwater flow is directed to the south and west. However, in the summer months, Warden Creek acts as a drain and groundwater flow within the alluvial deposits flows the north and east.

Surface water monitoring sites include upstream station S-1, midstream station S-2, and downstream station S-3. Surface water samples collected from Warden Creek sporadically have had trace to low levels of VOCs.

Storm Water

graded swales, corrugated-pipe down-drains, and a perimeter detention basin system that includes three separate, interconnected unlined detection basins on the west side of the Landfill and one detention basin at the southeast corner of the Landfill collectively control storm water run-on and run-off at the Landfill. Detention basins contain over-spill flumes or pipes, and water is ultimately discharged to Warden Creek at the toe of the Landfill. Warden Creek discharges to Los Osos Creek that in turn discharges to Morro Bay, approximately two miles from the Landfill.

The Discharger monitors potential releases from the Landfill to surface water runoff by complying with all requirements contained in the "State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000001 Waste Discharge Requirements for Discharge of Storm Water Associated with Industrial Activities Excluding Construction Activities" (General Permit).

Landfill Gas Control

In 1998, the County installed a landfill gas extraction system. The landfill gas system consists of 20 extraction wells, approximately 5,000 linear feet of gas piping, and a gas flare

station located near the southwest corner of the property. The County also implemented a landfill final cover enhancement program in 1998 to minimize the potential for leachate formation and to minimize landfill gas production.

Four soil gas monitoring probes (GP-1, GP-2A, GP-2B, and GP-3) and six gas extraction system monitoring ports (MP1 through MP6) are monitored at the Landfill. The County also monitors the landfill gas condensate at the Landfill.

PROPOSED ORDER CONTENTS

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, landfill gas control systems and monitoring programs, beneficial uses of the water, and surrounding land use.

Compliance with other Regulations, Orders and Standard Provisions

This section directs the Discharger to:

a. No longer comply with Central Coast Water Board Order No. 93-84 (Landfill Super Order) as the requirement of the Landfill Super Order are incorporated into revised Order No. R3-2006-0018.
b. Comply with all applicable requirements contained in CCR Title 27 and 40 CFR 257 and 258.
c. 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."

Prohibitions

These discharge prohibitions are applicable to Closed Class III waste disposal sites.

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.

Water Quality Protection Standards

These standards outline constituents of concern, monitoring parameters, concentration limits, monitoring points, points of compliance, and compliance period.

Provisions

This section addresses the Discharger's responsibilities regarding Landfill-related impacts to water quality and provides: Central Coast Water Board access to the Landfill and related reports, Order severability, discharge conditions, reporting and implementation provisions, a termination clause, wet weather operations provisions, and a requirement to record a notation on the deed to the Landfill.

MONITORING AND REPORTING PROGRAM (MRP) CONTENTS

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 Landfill monitoring and schedules (groundwater, storm water, surface water, and landfill gas), analytical monitoring of groundwater and landfill gas monitoring parameters, constituents of concern, and sample procurement limitations.

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, semi-annual reports, and summaries to the Central Coast 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 initiated by Central Coast Water Board staff. These Waste Discharge Requirements are for a closed Landfill 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

RECOMMENDATION

Adopt proposed Waste Discharge Requirements Order No. R3-2007-0023.

ATTACHMENTS

1. Proposed Waste Discharge Requirements Order No. R3-2007-0023.
2. Proposed Monitoring and Reporting Program No. R3-2007-0023.
3. Interested Parties List

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

DRAFT
WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2007-0023

Waste Discharger Identification No. 3400307001

FOR

CLOSED LOS OSOS CLASS III LANDFILL
SAN LUIS OBISPO COUNTY

The California Regional Water Quality Control Board, Central Coast Region (hereafter Central Coast Water Board) finds that:

LANDFILL OWNER AND LOCATION

1. Mr. Charles Piccuta (hereafter "Owner"), owns the property on which the Los Osos Closed Class III Landfill (hereafter "Landfill") is located. The County of San Luis Obispo (hereafter "County") is responsible for closure and post-closure maintenance of the Landfill. These Waste Discharge Requirements apply to both County and Owner (hereafter "Discharger").

2. Previous owners of the property on which the Landfill is located include Mr. George Sousa and Mr. and Mrs. George and Ann Martines. The County entered into a lease agreement with Mr. Sousa on October 16, 1978, which assigned responsibility to the County for maintaining the landfill premises to meet all State and County health laws, rules and regulations once waste disposal operations ceased. The lease with Mr. Sousa ended on November 30, 1988 and the County elected to cease waste disposal operation at the Landfill at that time. On June 6, 1989, the County entered into a new agreement with the subsequent property owners (Mr. and Mrs. Martines), which established that the County was responsible for closure and post-closure maintenance of the Landfill.

3. The Landfill is a closed facility which last received waste on November 26, 1988. The 25-acre unlined Landfill is located at 2285 Turri Road approximately 1.5 miles northeast of the community of Los Osos as shown on Attachment A included as part of this Order. The location is described as, Section 16, Township 30 south, Range 11 east, Mount Diablo Base and Meridian. The Assessor Parcel Number for the Landfill property is 067-011-047.

PURPOSE OF ORDER

1. The Discharger submitted an Amended Report of Waste Discharge (ROWD) on June 30, 2003 and an amendment to the Amended ROWD on December 31, 2003 to update the Landfill's Waste Discharge Requirements (WDR) Order No. 94-64 (hereafter "Order 94-64") and Monitoring and Reporting Program (MRP) Order No. 94-64. On December 15, 2004, Central Coast Water Board staff required a technical report to supplement the Amended ROWD due to changes in groundwater monitoring wells and upgrades to the landfill gas extraction system. The County submitted the technical report on December 1, 2005. The technical report was deemed incomplete by Central Coast Water Board staff and the following additional information was required 1) an updated closure and post-closure maintenance plan, 2) an engineering feasibility study for corrective action of groundwater, and 3) an updated groundwater monitoring program.

   On June 29, 2006, the County submitted an updated groundwater monitoring program and an updated post-closure maintenance plan. An engineering feasibility study for

corrective action of groundwater was submitted on November 1, 2006. All of these reports combined, provide the required information to update the Landfill's WDR and MRP Order Nos. 94-64.

2. The Landfill is regulated by Order No. 94-64, as adopted by the Central Coast Water Board on July 8, 1994. The primary purpose of proposed Order No. R3-2007-0023 (hereafter "Order") is to reflect the change in ownership, to revise and update requirements for post-closure maintenance and long-term monitoring pursuant to California Code of Regulations Title 27, Solid Waste (hereafter "Title 27") effective July 18, 1997, and pursuant to Code of Federal Regulations Title 40, Part 257 and 258 Solid Waste Facility Disposal Criteria, Final Rule, as promulgated on October 9, 1991 (hereafter "40CFR258").

3. This Order replaces Order No. 94-64, provides updates to the groundwater monitoring program, updates the post-closure maintenance plan, and specifically prohibits discharge of waste at the Landfill.

4. The Landfill is currently subject to the Central Coast Water Board's Order No. 93-84 "Waste Discharge Requirements Amendment for all MSW Landfills in the Central Coast Region" (Order 93-84). Order 93-84 was an "umbrella" order intended to collectively cover all Central Coast Water Board landfills and make them subject to 40CFR258. This Order preempts the need to continue covering the Landfill under Order 93-84.

CLASSIFICATION AND WASTE TYPE

5. The Los Osos Landfill is classified by the Central Coast Water Board as a Class III nonhazardous solid waste landfill under Title 27 of the California Code of Regulations.

LANDFILL DESCRIPTION AND HISTORY

6. The Landfill operators placed was as area fill on native silty clay, sandy clay, and sandy soils, without a liner or leachate collection and removal system. The site covers approximately 40 acres with a landfill footprint of approximately 25 acres.

7. Disposal operations began in December 1958, when the County leased the property from its owner, and subleased it to an operator for the purpose of providing disposal services to local residents. The landfill accepted waste until November 26, 1988 and closed with approximately 838,000 tons of waste in place. The County constructed a final cover for the Landfill in 1990. The Central Coast Water Board approved the final cover in January 1991. The County installed additional surface drainage improvements at the site in 1991.

   In 1998, the County installed a landfill gas extraction system. The landfill gas system consists of 20 extraction wells, approximately 5,000 linear feet of gas piping, and a gas flare station located near the southwest corner of the property. The County also implemented a landfill final cover enhancement program in 1998 to minimize the potential for leachate formation and to minimize landfill gas production.

   In 2003, the County made additional upgrades to the landfill gas extraction system to enhance gas extraction. In 2003, the County completed additional enhancements to the final cover to promote better drainage and fill in areas where settlement had occurred.

8. The final cover consists of three distinct layers: a foundation layer, a barrier layer, and a vegetative layer. The foundation layer consists of two feet of soil over all areas of waste fill. A compacted one-foot thick clay material with a minimum permeability of 9×10^{-8} centimeters per second (cm/sec) covers the foundation layer. The County placed a one-foot layer of on-site soils over the barrier layer and hydro-seeded to establish the final vegetative layer.

GEOLOGY/HYDROGEOLOGY

9. **Setting** – The landfill is located in Los Osos valley. Los Osos valley is an elongate triangular feature that widens and discharges at Morro Bay. Bedrock hills border the Los Osos valley to the north and south. The previous Landfill operators initiated Landfill

development within a relatively shallow, southwest-facing canyon that abuts Warden Creek on its southern border. The Los Osos Creek floodplain sits adjacent to and immediately south and west of the Landfill property.

10. **Topography** – The Landfill site slopes to the south-west with ground surface elevations ranging from 35 to 160 feet mean sea level. The Landfill slopes extend approximately 120 feet vertically to the northeast at a maximum gradient of approximately 3:1 (vertical:horizontal). North of the approximately 3.5-acre landfill deck area, the landfill slopes down to the north at a shallow gradient of about 13:1.

11. **Stratigraphy and Structure** – From bottom to top, the Landfill and adjacent properties overlies 1) meta-volcanic rocks of the Cretaceous Franciscan Formation, 2) loosely consolidated, generally fine-grained sediments of the Pleistocene Paso Robles Formation, and 3) fine-grained alluvial deposits of Recent age.

    The Franciscan Formation crops out east and west of the Landfill and underlies the entire site. Geophysical surveys and exploratory borings, indicate that the Franciscan Formation forms a shallow southwesterly dipping trough beneath the Landfill. The unconformable contact between the Franciscan Formation and the overlying Paso Robles Formation is approximately 100 feet below the ground surface at the northern end of the property and 50 feet or less at the southerly toe of the Landfill. Alluvial deposits overlie the Paso Robles Formation to depths of approximately 20 to 35 feet southwest of the Landfill

12. **Faulting** – No known Holocene faults underlie the Landfill.

13. **Hydrogeology** – The Landfill overlies the northeast margin of the Los Osos Valley Groundwater Basin. Groundwater within the Basin generally flows from east to west. Infiltration of rainwater, groundwater inflow along the basin margins, and seepage from Los Osos Creek are the largest sources of natural recharge to the Los Osos Valley Groundwater Basin.

14. **Rainfall** – The average annual rainfall at the Landfill ranges from approximately 15 to 21 inches.

15. **Floodplain** - The Landfill is not within the 100-year flood plain or any designated wetlands.

GROUND, STORM, AND SURFACE WATER

16. **Groundwater** – The Landfill is located within the Los Osos Hydrologic Unit. Groundwater occurs beneath the Landfill in clayey sandstone bedrock of the Paso Robles Formation and Recent alluvial deposits overlying the Paso Robles Formation. The Franciscan Complex, which underlies the Paso Robles Formation, is non-water bearing. On the south side of Warden Creek, groundwater occurs in both the Recent alluvial deposits and in the underlying Paso Robles Formation. The Recent alluvial deposits thicken to the south toward the valley center and away from Warden Creek, while to the north they pinch out against the Paso Robles Formation beneath Warden Creek. The contact between the alluvial deposits and Paso Robles Formation is gradational and is not a barrier to groundwater flow. Groundwater beneath the Landfill generally flows south (toward Warden Creek). Shallow groundwater in the vicinity of Warden Creek periodically switches flow direction.

    The water-bearing sediments of the Recent alluvium and Paso Robles Formation have been divided into a shallow zone and deep zone for water quality monitoring purposes. The division of the shallow zone and deep zone is based on the differences in hydraulic conductivity between the two zones. Groundwater in the alluvial deposits and the upper portion of the Paso Robles Formation represent the shallow zone and groundwater within clayey sandstones and thin gravelly sandstones at the base of the Paso Robles Formation are representative of the deep zone. The hydraulic conductivity of the alluvial deposits ranges from approximately 3×10^{-5} to 1×10^{-4}

cm/sec and the hydraulic conductivity of the upper or shallow zone of the Paso Robles Formation is approximately 5×10^{-4} cm/sec. The hydraulic conductivity of the deep zone of the Paso Robles Formation ranges from approximately 5×10^{-4} to 3×10^{-1} cm/sec.

Based on site-specific data, the groundwater velocity is calculated to be approximately 130 feet per year (ft/yr) in the deep zone of the Paso Robles Formation beneath the Landfill. The groundwater velocity in the alluvium is approximately 1.7 ft/yr (south of the Landfill) and approximately 10 ft/yr in the shallow Paso Robles Formation south of the Landfill.

17. **Groundwater Quality** – The County identified impacts to groundwater by volatile organic compounds (VOCs) at the Landfill in 1986. Groundwater monitoring results from 1986 to 1994 at the Landfill demonstrate that a VOC plume in groundwater exists. The groundwater VOC plume extends approximately 200 to 250 feet beyond the Landfill property to the southwest as shown in Attachment B.

    Chlorinated ethene compounds such as tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride (VC) are the most commonly detected VOCs in groundwater. A small fraction of the total VOC mass detected in groundwater also includes freon's and aromatic hydrocarbons. Groundwater samples collected from several wells near the toe of the Landfill have evidence of inorganic impacts. Groundwater samples collected from wells along the toe of the landfill that also have VOC impacts, contain elevated levels of nitrate and chloride. Elevated nitrate and chloride concentrations in wells at the toe of the Landfill indicate groundwater VOC impacts from landfill leachate. Impacts associated with landfill gas are indicated by the presence of chlorinated aliphatic VOCs in both landfill gas and groundwater.

    Groundwater quality upgradient from the Landfill supports domestic and agricultural beneficial uses. The general water quality parameters reported for background well BW-1 in the First Semi-Annual 2006 Groundwater Monitoring Report are as follows:

Parameter	Concentration	Unit
EC[1]	510	µmhos/cm[2]
pH	6.3	
TDS[3]	310	mg/L[4]
Chloride	77	mg/L[4]
Sulfate	39	mg/L

[1] EC = electrical conductivity
[2] µmhos/cm = micromhos per centimeter
[3] TDS = total dissolved solids
[4] mg/L = milligrams per liter

18. **Storm Water** - Graded swales, corrugated-pipe down-drains, and a perimeter detention basin system that includes three separate, interconnected unlined detention basins on the west side of the Landfill and one detention basin at the southeast corner of the Landfill collectively control storm water run-on and run-off at the Landfill. Storm water discharges to Warden Creek at the toe of the Landfill through detention basins that are equipped with over-spill flumes or pipes. Warden Creek discharges to Los Osos Creek that in turn discharges to Morro Bay, approximately two miles from the Landfill.

19. **Surface Water** - The Landfill is located above Warden Creek, a seasonally flowing creek which joins the Los Osos Creek half a mile downgradient of the Landfill. Warden Creek was constructed to enhance local irrigation by re-routing Los Osos Creek to the south side of the Landfill property. Warden Creek drains alluvial groundwater along the northern portion of the floodplain (southern edge of the Landfill property) and can have a significant effect on local groundwater flow conditions. For example, during the rainy season, Warden Creek appears to recharge the alluvial deposits and groundwater flow is directed to the south and west. However, in the summer months, Warden Creek acts as a drain and groundwater flow within the alluvial deposits flows north and east.

20. **Surface Water Quality** - Trace to low levels of VOCs occur sporadically in surface water samples collected within Warden Creek.

MONITORING PROGRAMS

Groundwater - The Landfill's groundwater monitoring network contains 16 wells. Attachment C shows the locations of the monitoring wells. Two of these wells sit hydraulically upgradient from the Landfill (BW-1) or upgradient from the impacted groundwater (BW-2). The remaining 14 wells are in detection or corrective action monitoring. The County installed well MW-1 in the upper portion of the Franciscan Formation. Groundwater in MW-1 is typically dry and groundwater samples collected from this well have not had detections of VOCs. The County installed wells MW-2 through MW-9 to monitor the shallow water-bearing zone and the County installed wells MW-10 through MW-14 to monitor the deep water-bearing zone.

Analytical data presented in the First Semi-Annual 2006 Groundwater Monitoring Report indicate that MW-2, MW-3, MW-5, MW-6, MW-10, and MW-12 contain VOCs. The County reported the following maximum VOC concentrations above their respective maximum contaminant level (MCL) in the following wells:

Well	VOC	Maximum Concentration[1]
MW-2	Benzene	2.1
MW-10	cis-1,2-DCE	43
MW-2	PCE	44
MW-3	TCE	19
MW-10	VC	3.9

[1] Concentrations in micrograms per liter

21. **Surface Water** - Surface water monitoring stations are located at upstream station S-1, midstream station S-2, and downstream station S-3. Attachment C shows the location of the surface water sampling stations. The surface water samples collected during the First Semi-Annual 2006 sampling event contained no VOCs.

22. **Soil Gas** – Four soil gas monitoring probes (GP-1, GP-2A, GP-2B, and GP-3) and six gas extraction system monitoring ports (MP1 through MP6) are monitored at the Landfill. Attachment C shows the gas probe and gas extraction system monitoring ports locations. The County also monitors the landfill gas condensate.

BASIN PLAN

23. The Water Quality Control Plan, Central Coast Basin (Basin Plan), was adopted by the Central Coast Water Board on September 8, 1994, and approved by the State Water Resources Control Board on November 17, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State Waters. This Order implements the water quality objectives stated in that Plan.

24. The Basin Plan identifies the following present and anticipated beneficial uses for surface water adjacent and downgradient of the Landfill:

    a. Municipal and domestic supply
    b. Wildlife habitat;
    c. Water contact recreation;
    d. Agricultural supply;
    e. Non-contact water recreation; and
    f. Groundwater recharge

25. Currently, groundwater use in the vicinity of the Landfill is agricultural and domestic water supply. Other than the groundwater monitoring wells at the Landfill, groundwater wells are more than 2000 feet from the Landfill property. The Basin Plan identifies the following present and anticipated beneficial uses of groundwater in the vicinity of the Landfill:

    a. Agricultural water supply
    b. Municipal and domestic water supply
    c. Industrial supply

CALIFORNIA ENVIRONMENTAL QUALITY ACT

26. This Order contains prohibitions, discharge specifications, water quality protection standards, and provisions intended to protect the environment by mitigating or avoiding impacts of the project on water quality. This Order is for an existing facility and therefore is exempt from provisions of the California Environmental Quality Act (Public Resources

Code, Section 21000, and et seq.) in accordance with Title 14, Chapter 3, Section 15301.

GENERAL FINDINGS

27. Operation of the landfill became inactive prior to the promulgation of Title 27. As such, the Landfill final closure criteria referenced in Title 27 regulations, does not apply directly to this Landfill. This Order implements the applicable prescriptive standards and performance goals of Title 27.

28. The goal of post-closure maintenance is to assure that the Landfill continues to comply with Title 27 and 40CFR258 closure requirements until such time that the waste in the Landfill no longer constitutes a potential threat to water quality.

29. The California Integrated Waste Management regulates the Landfill with Solid Waste Facilities Permit No. 40-AA-0007.

30. The State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000001 Waste Discharge Requirements for Discharge of Storm Water Associated with Industrial Activities Excluding Construction Activities" (General Permit) regulates storm water related issues at the Landfill.

31. In May 2004, the Discharger demonstrated availability of financial resources to conduct closure and post-closure maintenance activities.

32. On **February 9, 2007**, the Central Coast Water Board notified the Discharger and interested agencies and persons of its intent to issue Waste Discharge Requirements for the Landfill, and has provided the opportunity to review a copy of the proposed Order and submit written views and comments.

33. After considering all comments pertaining to this discharge during a public hearing on **May 11, 2007**, this Order was found consistent with the above findings.

IT IS HEREBY ORDERED pursuant to authority in Section 13263 of the California Water Code, the Discharger, its agents, successors, and assigns in maintaining the closed Los Osos Class III Landfill, shall comply with the following:

A. COMPLIANCE WITH OTHER REGULATIONS AND ORDERS

1. Discharge of waste is a privilege, not a right, and authorization to discharge waste is conditioned upon the discharge complying with provisions of Division 7 of the California Water Code and with any more stringent limitations necessary to implement the Basin Plan, to protect beneficial uses, and to prevent nuisance. Compliance with this Order should ensure conditions are met and mitigate any potential changes in water quality due to the Landfill waste.

2. Cleanup or Abatement (CAO) Order No. 89-90 issued March 27, 1989, addressed groundwater and surface water contamination originating from the Landfill. CAO Order No. 89-90 required the Discharger to characterize the nature and extent of groundwater and surface water impacts, and develop and implement an appropriate remedial response. In response to CAO No. 89-90, the County installed a series of groundwater monitoring wells between 1989 and 1994 to define the nature and extent of the landfill release.

   The Central Coast Water Board replaced and updated CAO Order No. 89-90 in 1995 with CAO Order No. 95-66. CAO Order No. 95-66 requires the Discharger to clean up contaminated groundwater downgradient of the Landfill. In response, the County installed a landfill gas extraction system in 1998 to minimize landfill gas and VOC impacts to groundwater. The County also made enhancements to the Landfill cap to minimize the potential for leachate formation and to minimize landfill gas production.

   On December 29, 2005, Central Coast Water Board staff informed the County that the delineation of VOCs in groundwater downgradient of the Landfill has been successfully completed. However, based on the available information, Central Coast

Water Board staff determined that additional corrective action measures were required to cleanup VOC contamination downgradient of the Landfill.

The County submitted an engineering feasibility study in November 2006 that proposes enhancement of the ongoing corrective action program and to cleanup VOC impacts to groundwater using enhanced bioremediation technologies.

3. Discharge of waste, closure, post-closure maintenance and long-term monitoring shall comply with all applicable requirements contained in the California Code of Regulations Title 27, Division 2 Solid Waste (Title 27) and 40 CFR Parts 257 and 258 Solid Waste Facility Disposal Criteria (40CFR258). If any applicable regulation requirements overlap or conflict in any manner, the most water quality protective requirement shall govern in all cases, unless specifically stated otherwise in this Order, or as directed by the Executive Officer.

4. This Landfill is no longer subject to this Central Coast Water Board's Order No. 93-84 "Waste Discharge Requirements Amendment for All MSW Landfills in the Central Coast Region" (Order No. 93-84).

5. The Discharger shall monitor potential releases from the Landfill to surface water runoff by complying with all requirements contained in the "State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000001 Waste Discharge Requirements for Discharge of Storm Water Associated with Industrial Activities Excluding Construction Activities" (General Permit).

B. DISCHARGE PROHIBITIONS

1. Discharge of wastes at the Landfill is prohibited, except as provided in an Executive Officer approved Closure and Post-Closure Maintenance Plan for the Landfill.

2. Discharge of waste or leachate to ponded water or waters of the State, including groundwater, is prohibited.

C. SPECIFICATIONS

1. The Discharger shall ensure the Landfill remains closed and maintain the Landfill in conformance with the Central Coast Water Board Executive Officer approved closure plan, except where the plan conflicts with this Order. In the event of conflict, this Order shall govern in cases where it is more protective of water quality. Any changes to the closure plan that may affect compliance with this Order must be approved by the Executive Officer.

2. All Landfill containment structures and drainage facilities shall be designed, constructed, and maintained to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, overtopping, and damage due to natural disasters (e.g., 100 years 24-hour precipitation, the maximum probable earthquake, and severe wind storms).

3. Drainage ditches crossing over the Landfill must be lined with material that provides an effective field permeability of 1×10^{-6} cm/sec or less.

4. Throughout the post-closure maintenance period, the Discharger shall:

   a. Maintain the structural integrity and effectiveness of all containment structures, and maintain the final cover as necessary to correct the effects of settlement or other adverse factors.
   b. Maintain monitoring systems as specified in this Order.
   c. Prevent erosion and related damage of the final cover due to drainage.
   d. Protect and maintain surveyed monuments.

5. Rills in the final cover exceeding six inches in depth must be backfilled and compacted throughout the year.

6. Water collected in any storm water catchment basin may be used in minimum

amounts necessary for dust control, compaction, or irrigation of cover vegetation provided none of the water infiltrates past the root zones of vegetation or past a depth where effective evaporation can occur.

7. Storage facilities associated with precipitation and drainage control systems must be emptied immediately following each storm or otherwise managed to maintain the design capacity of the system.

8. Discharge of waste shall not cause the release of pollutants, contaminants, or waste constituents in a manner, which could cause a condition of pollution or contamination to occur.

9. Discharge of waste shall not create nuisance, as defined by California Water Code Section 13050(m).

10. The Discharger shall prevent formation of a habitat for carriers of pathogenic microorganisms.

11. Wastes discharged in violation of this Order, shall be removed and relocated.

12. The Compliance Period, pursuant to Title 27 Section 20380(d)(1) and Section 20410, is a minimum of thirty years or until waste discharged at the Landfill no longer poses a threat to water quality.

D. WATER QUALITY PROTECTION STANDARDS

1. The discharge of waste shall not cause a statistically significant difference in water quality over background concentrations for proposed Concentration Limits for each Constituent of Concern or Monitoring Parameter (per MRP Order No. R3-2007-0023) at the Point of Compliance. Whereby the Point of Compliance is defined as the edge of the waste and extends vertically down through the uppermost water-bearing zone. The Concentration Limits shall be maintained for as long as the waste poses a threat to water quality. Discharge of waste shall not adversely impact the quality of State waters.

2. Discharge of waste shall not cause concentrations of chemicals and radionuclides in groundwater downgradient of the Landfill to exceed the State Department of Health Services latest recommended Drinking Water Action Levels or MCL of the California Code of Regulations Title 22, Division 4, Chapter 15, Article 5.5.

3. Discharge of waste shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Central Coast Water Board or the State Water Resources Control Board.

4. Discharge of waste shall neither cause nor contribute to any surface water impacts, including, but not limited to:
   a. Floating, suspended, or macroscopic particulate matter or foam.
   b. Increases in bottom deposits or aquatic growth.
   c. An adverse change in temperature, turbidity, or apparent color beyond natural background levels.
   d. The creation or contribution of visible, floating, suspended, or oil or other products of petroleum origin.
   e. The introduction or increase in concentration of toxic or other pollutants/contaminants resulting in unreasonable impairment of State waters' beneficial uses.

5. Constituents of Concern and monitoring parameters for groundwater and landfill gas are listed in MRP Order No. R3-2007-0023. Monitoring points and background monitoring points shall be those specified in MRP Order No. R3-2007-0023.

E. PROVISIONS

1. Order No. 94-64 adopted by this Regional Board on July 8, 1994 is hereby rescinded.

2. The Discharger is responsible for waste containment, monitoring and correcting any problems resulting from the discharge of waste for as long as the waste poses a threat to water quality.

3. The Discharger shall comply with MRP Order No. R3-2007-0023, as specified by the Executive Officer.

4. By **October 1 of each year**, all necessary runoff diversion and erosion prevention measures shall be implemented. All necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed.

5. By **October 1, of each year**, vegetation shall be planted (as necessary) and maintained over all slopes within the entire Landfill area to prevent erosion. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall have a rooting depth not in excess of the vegetative soil layer thickness. Upon Executive Officer approval, non-hazardous sludge may be utilized as a soil amendment to promote vegetation. Soil amendments and fertilizers (including wastewater sludge) used to establish vegetation shall not exceed the vegetation's agronomic rates (i.e., annual nutrient needs), unless approved by the Executive Officer.

6. Should additional data become available through monitoring or investigation that indicates compliance with this Order is not adequately protective of water quality, the Central Coast Water Board will review and revise this Order as appropriate.

7. If the Discharger or the Central Coast Water Board determines, pursuant to Title 27, Section 20420, that there is evidence of a release from any portion of the Landfill, the Discharger shall immediately implement the procedures outlined in Title 27 Sections 20380, 20385, 20430 and MRP Order No. R3-2007-0023.

8. The Central Coast Water Board shall be allowed, at any time and without prior notification:
   a. Entry upon the Landfill area or where records are kept under the conditions of this Order and MRP Order No. R3-2007-0023.
   b. Access to copy any records that must be kept under the conditions of this Order and MRP Order No. R3-2007-0023.
   c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order and MRP Order No. R3-2007-0023.
   d. To photograph, sample, and monitor for the purpose of showing compliance with this Order.

9. The Discharger shall take all reasonable steps to minimize or correct adverse impacts on the environment resulting from non-compliance with this Order.

10. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
    a. Violation of any term or condition contained in this Order.
    b. Obtaining this Order by misrepresentation, or by failure to disclose fully all relevant facts.
    c. A change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge.

11. By **May 12, 2008**, the Owner shall record a notation on the deed to the Landfill property, or some other instrument that is normally examined during title search. A copy of the notation will be included in the Landfill record and a copy of the recorded notation will be submitted to the Central Coast Water Board Executive Officer. The notation must in perpetuity notify and potential purchaser of the property that:
    a. The land has been used as a landfill,
    b. The land use is restricted pursuant to Title 27, Section 21170,
    c. Pursuant to Title 27, Section 21090, should the Discharger default in post-closure care, liability shifts to the new owner/operator.

F. REPORTING

1. Any person signing a report makes the following certification, whether its expressed or implied: "I certify under penalty of perjury I have personally examined and am familiar with the information submitted in this document and all attachments and, based on

my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

2. Except for data determined to be confidential under Section 13267 (b)(2) of the California Water Code, all reports prepared in accordance with this Order shall be available for public inspection at the Central Coast Water Board office.

3. The Discharger shall submit reports in advance of any planned changes in the permitted Landfill or any activity that could potentially result in noncompliance. Advance submittal should reflect relative need for Central Coast Water Board review and concurrence.

4. By **November 1 of each year**, the Discharger shall submit a Wet Weather Preparedness Report (WWPR). The WWPR shall describe compliance with Provisions E.4 and E.5, above. The report shall also detail preparedness actions taken to ensure discharges to surface or groundwater do not occur during the impending rainy season, and ensure compliance with all other relevant Title 27 and 40CFR258 criteria.

5. The Discharger shall notify the Central Coast Water Board with a written request of any proposed change in ownership or responsibility for construction or operation of the Landfill in accordance with Title 27, Section 21710 (c)(1). The written request shall be given at least 90-days prior to the effective date of change in ownership or responsibility and shall:

   a. Be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these Waste Discharge Requirements.
   b. Contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Coast Water Board.
   c. Contain a statement indicating that the new owner or operator assumes full responsibility for compliance with this Order.

6. Request for change in ownership or responsibility may be approved or disapproved in writing by the Executive Officer. In the event of any change in ownership of this Landfill, the Discharger shall notify the succeeding owner or operator, in writing, of the existence of this Order. A copy of that notification shall be sent to the Executive Officer.

7. The Discharger shall furnish, within a reasonable time, any information the Executive Officer may request to determine compliance with this Order or to determine whether cause exists for modifying or terminating this Order.

8. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources and with concurrence of the Executive Officer regarding the construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with the MRP Order No. R3-2007-0023, as required by Sections 13750.5 through 13755 and Section 13267 of the California Water Code.

9. Should the Discharger discover that it failed to submit any relevant facts or that it submitted incorrect information, it shall promptly submit the missing or corrected information.

10. All reports shall be signed as follows:
    a. By either a division manager responsible for Landfill compliance or ranking elected official.
    b. Their "duly authorized representative."
    c. A California Registered Civil Engineer or Certified Engineering Geologist must sign engineering reports.

11. The Discharger shall notify the Executive Officer, within 24 hours by telephone or

electronic mail and within 14 days in writing, of:

a. Any noncompliance potentially or actually endangering health or the environment.
b. Any flooding, equipment failure, slope failure, or other change in Landfill conditions which could impair the integrity of waste containment facilities or of precipitation and drainage control structures.
c. Leachate seep occurring on or in proximity to the Landfill
d. Violation of a Discharge Prohibition.

12. Reports of compliance or noncompliance with, or any progress reports on, final requirements contained in any compliance schedule shall be submitted within 14-days following each scheduled date. If reporting noncompliance, the report shall include a description of:
    a. The reason for non-compliance.
    b. A description of the non-compliance.
    c. Schedule of tasks necessary to achieve compliance.
    d. An estimated date for achieving full compliance.

13. Any noncompliance, which threatens the Landfill's containment integrity, shall be promptly corrected. Correction schedules are subject to the approval of the Executive Officer, except when delays will threaten the environment and/or the Landfill's integrity (i.e., emergency corrective measures). Corrections initiated prior to Executive Officer approval shall be so stated in the above described report.

14. By **January 31 of every year**, the Discharger shall submit a Compliance Report addressing compliance with all terms of this Order. The report can be included in the Landfill's Annual Report to the Executive Officer.

15. The Discharger shall maintain a financial assurance instrument to cover the estimated costs for initiating and completing corrective action of all known or reasonably foreseeable releases from the Landfill until the end of the post-closure maintenance period. The Discharger shall submit a report every five years that either validates the financial assurance instrument's ongoing viability or proposes and substantiates any needed changes. The report is due **January 15, 2009** and every five years from this date thereafter.

16. By **May 11, 2012**, the Discharger must submit a Report of Waste Discharge (hereafter "ROWD") pursuant to CCR Title 27 Section 21710, to the Executive Officer. The ROWD is to be submitted in the form of a Joint Technical Document (hereafter "JTD"), in accordance with Title 27 Section 21585 et al, and meet the following criteria:

    a. Contain information on waste characteristics, geologic and climatologic characteristics of the Unit and the surrounding region, installed features, precipitation and drainage controls, and closure and post closure maintenance plans, in accordance with CCR Title 27 Section 21740, Section 21750, Section 21760, and Section 21769.
    b. Include a completed State Water Board JTD Index, in accordance with CCR Title 27 Section 21585(b),
    c. Discuss whether, in the Discharger's opinion, there is any portion of this Order that is incorrect, obsolete, or otherwise in need of revision.
    d. Include any other technical documents needed to demonstrate continued compliance with this Order and all pertinent State and Federal requirements.
    e. Include detailed information regarding regulatory considerations, operating provisions, environmental monitoring, and closure and post closure.

G. ENFORCEMENT

1. The Discharger must comply with all conditions of this Order. Non-compliance violates state law and is grounds for enforcement action or modification of the Order.

2. Any person failing or refusing to furnish technical or monitoring program reports as required in this Order under subdivision (b) of Section 13267 of the California Water Code, or falsifying any information provided therein, is guilty of a misdemeanor.

3. The Discharger and any person who violates Waste Discharge Requirements and/or who intentionally or negligently discharges waste or causes or permits waste to be discharged into surface waters or groundwater of the state may be liable for civil and/or criminal remedies, as appropriate, pursuant to Sections 13350, 13385, and 13387 of the California Water Code.

4. Provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

5. This Order does not authorize commission of any act causing injury to the property of another, does not convey any property rights of any sort, does not remove liability under federal, state, or local laws, and does not guarantee a capacity right.

6. All technical and monitoring reports submitted pursuant to this Order are being requested pursuant to Section 13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the Discharger to enforcement action pursuant to Section 13268 of the California Water Code.

7. The Discharger must comply with all conditions of these Waste Discharge Requirements. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Central Coast Water Board. [California Water Code Sections 13261, 13267, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350].

The Discharger shall comply with the following submittal and implementation schedule for all tasks and/or reports required by this Order

REPORT AND IMPLEMENTATION DATE SUMMARY

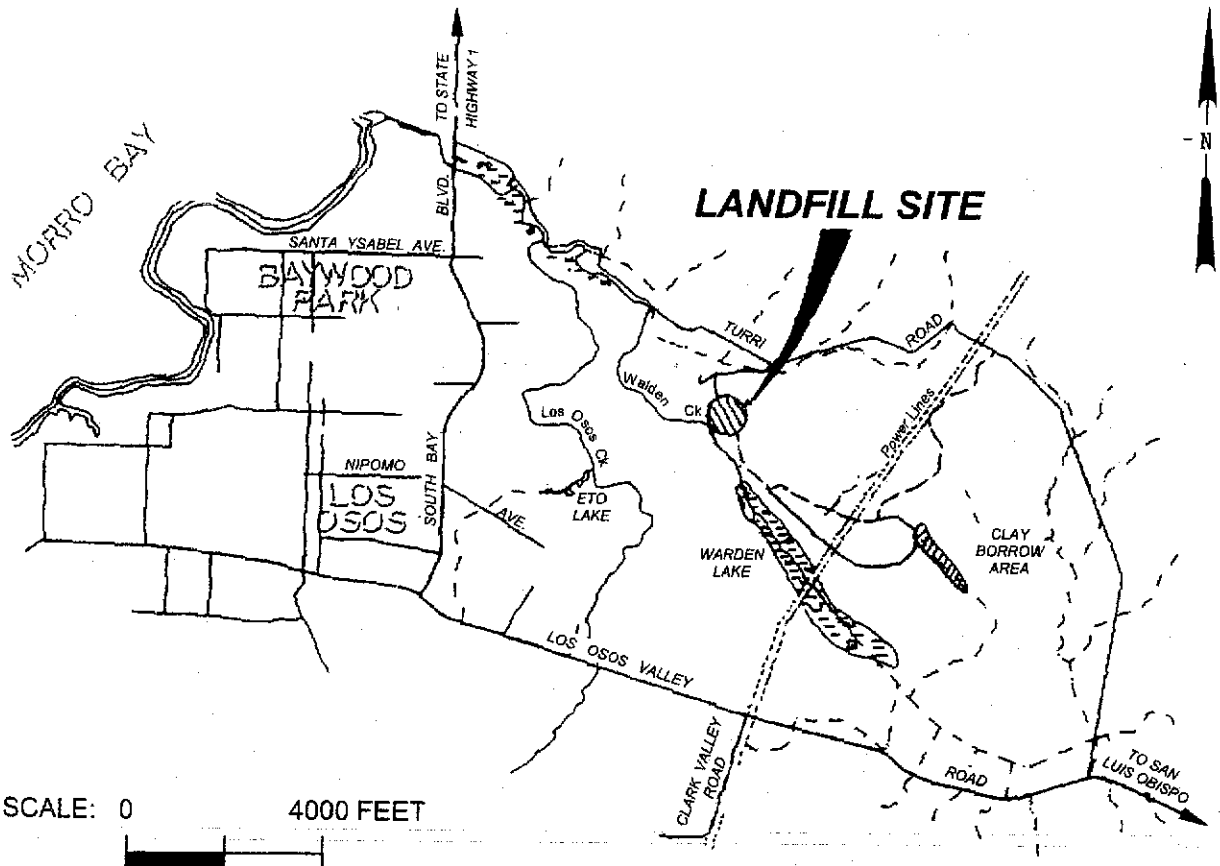
TASK	IMPLEMENTATION DATE
Runoff diversion and erosion prevention [Provision No. E.4]	October 1, of each year
Vegetation placement over entire Landfill area [Provision No. E.5]	October 1, of each year
REPORT	**DUE DATE**
Deed Notation [Provision E.11}	May 12, 2008
Wet Weather Preparedness Report [Reporting No. F.4]	November 1, of each year
Compliance Report [Reporting No. F.14]]	January 31, of each year
Financial Assurance [Reporting No. F.15]	January 15, 2009, and every five years thereafter
ROWD/JTD [Reporting No. F.16]	May 11, 2012

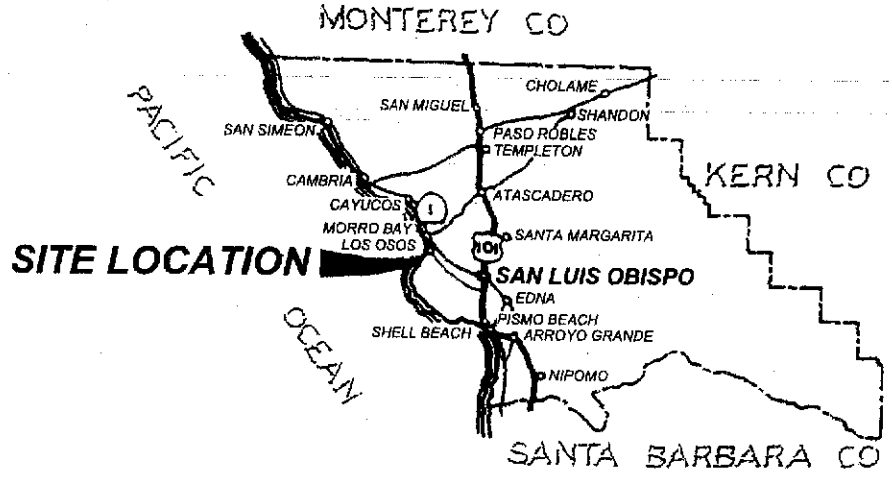
I, Roger W. Briggs, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on May 11, 2007.

_____

Executive Officer

S:\Land Disposal\Land Disposal Facilities\PERMITTED SITES\Los Osos\ORDERS\2007 WDR & MRP\WDR R3-2007-0023 draft.doc

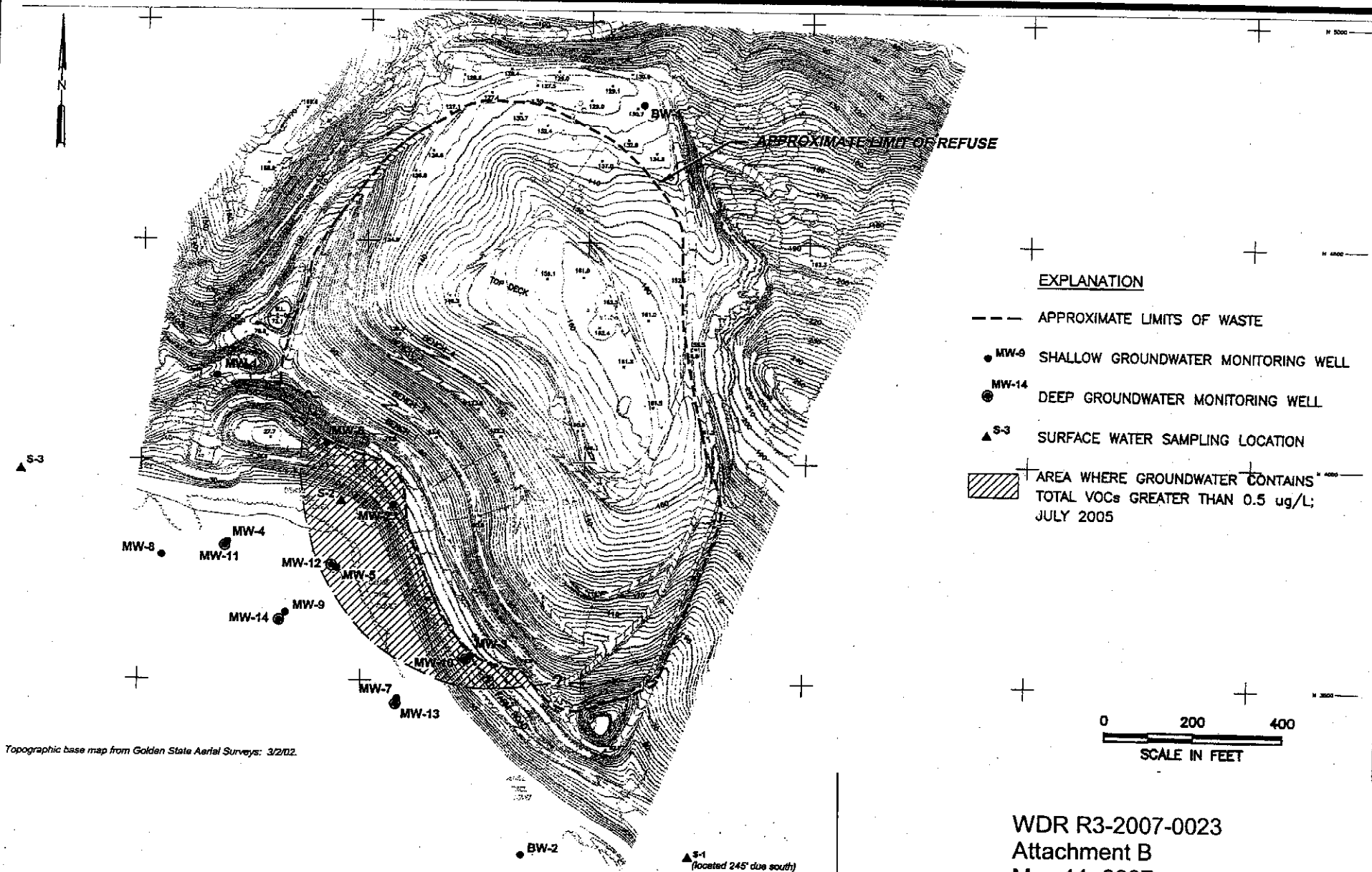




Golder Associates

G:\053-7865\FIGURES\SITE LOCATION.DSF 7/25/05

WDR R3-2007-0023
Attachment A
May 11, 2007

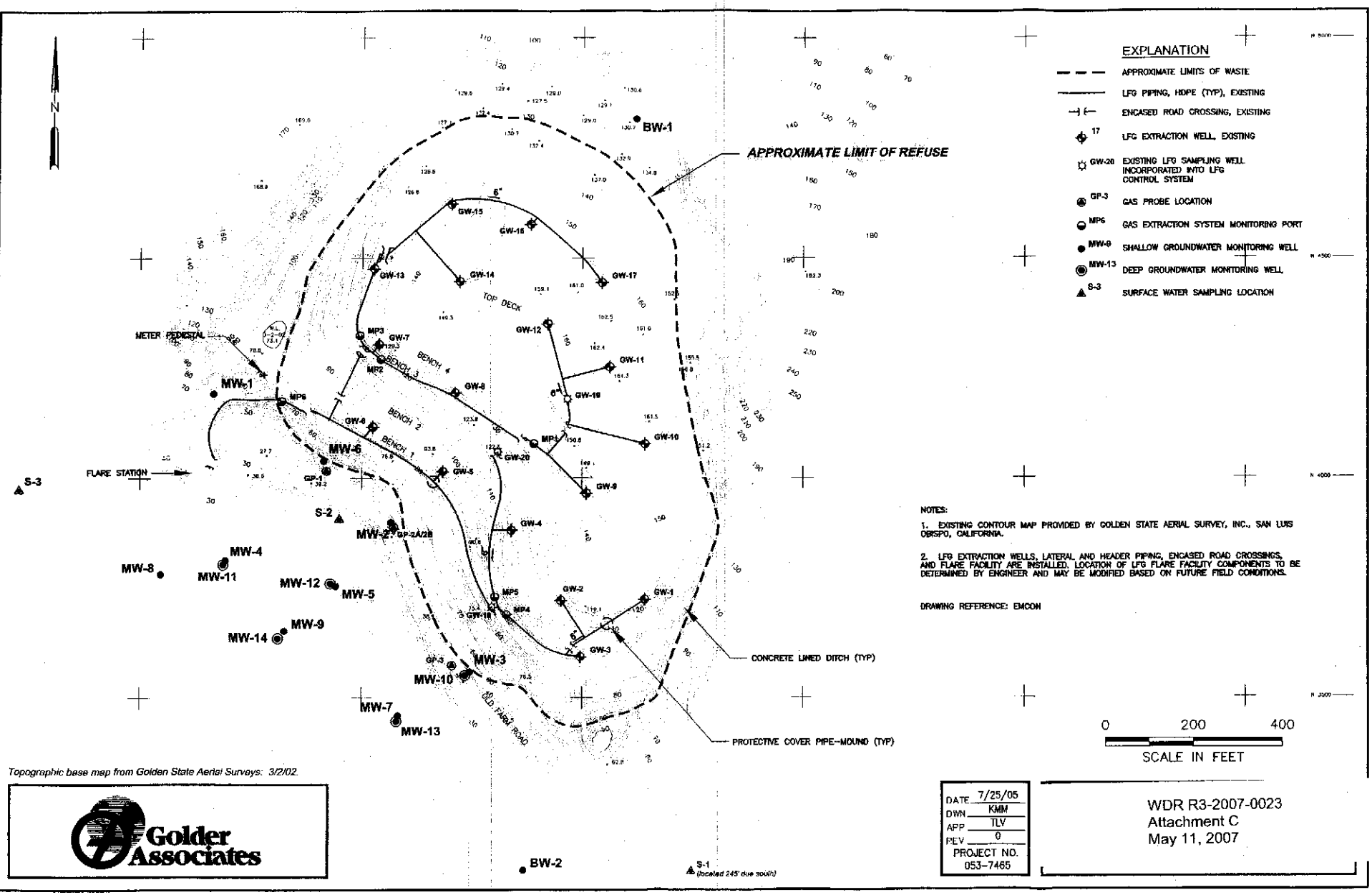


SOURCE: GOLDER ASSOCIATES, 2005

WDR R3-2007-0023
Attachment B
May 11, 2007

GeoLogic Associates
Geologists, Hydrogeologists, and Engineers

DRAWN BY:	DATE:	JOB NO.
VL	AUGUST 2006	2006-106



NOTES:

1. EXISTING CONTOUR MAP PROVIDED BY GOLDEN STATE AERIAL SURVEY, INC., SAN LUIS OBISPO, CALIFORNIA.

2. LFG EXTRACTION WELLS, LATERAL AND HEADER PIPING, ENCASED ROAD CROSSINGS, AND FLARE FACILITY ARE INSTALLED. LOCATION OF LFG FLARE FACILITY COMPONENTS TO BE DETERMINED BY ENGINEER AND MAY BE MODIFIED BASED ON FUTURE FIELD CONDITIONS.

DRAWING REFERENCE: EMCON

Topographic base map from Golden State Aerial Surveys: 3/2/02.

Golder Associates

DATE	7/25/05
DWN	KMM
APP	TLV
REV	0
PROJECT NO.	053-7465

WDR R3-2007-0023
Attachment C
May 11, 2007

Dimscale: 1 Utscale: 1 Paltscale: 1=1
G:\053-7565\FIGURES\GW-GAS BASE.DWG 7/25/05

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

DRAFT
MONITORING AND REPORTING PROGRAM NO. R3-2007-0023
Waste Discharger Identification No. 3400307001

FOR

CLOSED LOS OSOS CLASS III LANDFILL
SAN LUIS OBISPO COUNTY

PART I: MONITORING AND OBSERVATION SCHEDULE

A. SITE INSPECTIONS

The Discharger shall inspect the Los Osos Closed Class III Landfill (Landfill), according to the following schedule, recording, at a minimum, the following Standard Observations.

1. Site Inspection Schedule:

   a. At least monthly during the wet season **(October 1 through April 30)**, and following each storm event producing a minimum of 1-inch of rain within a 24-hour period.
   b. During the dry season a minimum of one inspection every three months.

2. Standard Observations:

   a. **For Receiving Waters:**
      i. Floating and suspended materials of waste origin; presence or absence, source, and size of affected area.
      ii. Discoloration and turbidity - description of color, source, and size of affected area.
      iii. Evidence of odors - presence or absence, characterization, source, and distance of travel from source.
      iv. Evidence of beneficial use - presence of water-associated wildlife.
      v. Estimated flow rate to the receiving water.
      vi. Weather conditions - wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

   b. **Along the perimeter of the Landfill:**
      i. Evidence of liquid leaving or entering the Landfill, estimated size of affected area, and estimated flow rate (show affected area on map).
      ii. Evidence of odors; presence or absence, characterization, source, and distance of travel from source.
      iii. Evidence of erosion or of exposed waste.
      iv. Inspection of all storm water discharge locations for evidence of non-storm water discharges during dry seasons, and integrity during wet seasons.

   c. **For the Landfill:**
      i. Evidence of ponded water at any point on the Landfill site (show affected area on map).

ii. Evidence of odors; presence or absence, characterization, source, and distance of travel from source.
iii. Evidence of erosion or of daylighted waste.
iv. Compliance with Storm Water Pollution Prevention Plan, insuring that the terms of the general permit is properly complied with.

B. DRAINAGE SYSTEMS INSPECTIONS

The Discharger shall inspect drainage control systems following each storm event that results in rainfall runoff and at least monthly, and record the following information:

1. Condition of facilities and liners, whether storm water storage basins and drainage ditches contain liquids;
2. Any apparent seepage from storage basins or the Landfill site;
3. Steps taken to correct any problems found during inspection and date(s) when taken; and
4. Maintain a photo log of corrections made to the drainage control systems.

C. RAINFALL DATA

The Discharger shall record the following information:

1. Total precipitation (in inches) during each three month period.
2. Number of Storms (≥1-inch in 24-hours) received during the three month period.
3. Return interval of most intense 24-hour storm (e.g. 25 year, 100 year, and so on).

E. LANDFILL GAS EXTRACTION SYSTEM INSPECTIONS

The Discharger shall inspect the landfill gas extraction system and record the following information as appropriate:

1. Monthly - inspect entire landfill gas extraction system for system integrity. Include monthly inspection, maintenance and testing demonstrations in semi-annual monitoring reports;
2. Monthly - Record volume of landfill gas extracted. Report monthly volume and annual sub-totals. Indicate how volume measurement is made;
3. Monthly - Record volume of landfill gas condensate. Report monthly, semi-annual and annual sub-totals in semi-annual reports and report disposal method utilized. When more than one disposal method is used, be volume specific for each method;
4. Annually - submit an annual operational summary for the landfill gas extraction system;
5. Annually - Sample landfill gas in the collection header and analyze for volatile organic compounds (VOCs).
6. Annually - Sample landfill gas condensate and analyze for VOCs; and
7. Semi-annually - Using most recent landfill gas and condensate contaminant concentration data and collection volume, compute contaminant mass removed on a semi-annual basis.
8. Perform routine preventive maintenance with focus on keeping the system at design operation. All scheduled and unscheduled maintenance shall be summarized and reported annually.

F. GROUNDWATER MONITORING

Unless otherwise authorized by the Executive Officer, all new groundwater-monitoring wells shall be incorporated into this monitoring and reporting program, and shall be sampled on a quarterly basis for a minimum of four consecutive quarters. Changes to the monitoring frequency, Monitoring Parameters or Constituents of Concern may be made upon receiving prior written approval from the Executive Officer.

The Groundwater Monitoring Points to be monitored shall include those shown in **Table 1** below. Locations of the Monitoring Points are shown on Attachment 1. For each monitored water-bearing zone, the water level in each well shall be measured during each sampling event. Horizontal and vertical gradients, groundwater flow rate, and direction of groundwater flow for each water-bearing zone shall also be determined. Groundwater elevations for all wells in a given water-bearing zone shall be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction. The observed groundwater characteristics shall be compared with those of previous determinations, noting the appearance of any trends, and of any indications that a change in the hydrogeologic conditions beneath the site has occurred. This information shall be reported in the semi-annual monitoring reports.

G. STORM WATER MONITORING

Unless required more frequently due to an indication of a release, the storm water discharge point(s) shall be monitored in accordance with the facility's State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000001 Waste Discharge Requirements for Discharge of Storm Water Associated with Industrial Activities Excluding Construction (General Permit). Storm water is sampled at the detention basin drainage outlet, which is the last accessible point before the storm water is discharged offsite. Samples are collected for one storm event per year, and within the first hour of discharge. Analytical analysis of the storm water samples includes pH, total suspended solids, specific conductance, oil and grease, and iron. Storm water discharge point(s) shall be monitored in accordance with the facility's General Permit.

H. SURFACE WATER MONITORING

The Discharger shall inspect surface water locations S-1, S-2, and S-3, as shown on Attachment 1, semi-annually and note whether surface water is present and flowing conditions.

I. LANDFILL GAS MONITORING

The Discharger shall monitor soil gas monitoring probes GP-1, GP-2A, GP-2B, GP-3, and gas extraction system monitoring ports MP-1 through MP-6, as shown on Attachment 1, on a quarterly basis.

J. ANALYTICAL MONITORING

The Discharger shall monitor the Landfill monitoring points in accordance with the following schedule(s). Monitoring locations are shown on Attachment 1 and include groundwater monitoring wells, gas collection headers, and surface water locations. Locations shall be sampled for Parameters shown in **Table 2**, and Constituents of Concern shown in **Table 3**.

1. **Groundwater and Surface Water Monitoring Parameters:** Monitoring Points shall be analyzed **semi-annually** for the Monitoring Parameters listed in Table 2. The groundwater and surface water monitoring point locations are shown in Attachment 1.

2. **Landfill Gas Migration Monitoring:** Gas probes and landfill gas extraction system monitoring ports shall be monitored **quarterly** for the monitoring parameters in **Table 4**

except for VOCs. Monitoring results shall be submitted to the Central Coast Water Board in the semi-annual reports and include information specified in Title 27, Section 20934.

3. **Constituents of Concern:** The Constituents of Concern (COC) includes constituents listed in **Table 3**, below. Monitoring for COC shall encompass only those COCs that do not also serve as Monitoring Parameters. Analysis of COCs shall be carried out **once every five years**, at each of the site's groundwater and surface water monitoring points, unless required more frequently due to an indication of a release. Wells that have not previously been sampled for COCs shall be sampled and analyzed for all COCs within three months of this program becoming effective.

4. **Sample Procurement Limitation:** For any given monitored medium, the samples taken from Monitoring Points to satisfy the data analysis requirements for a given Monitoring Period shall be taken within a span not exceeding 30 days, and shall be taken in a manner that ensures sample independence to the greatest extent feasible [CCR Title 27, Section 20415(e)(12)(B)]. Sampling for successive monitoring periods shall occur at least 30 days apart.

TABLE 1
MONITORING POINTS

BW-1[1]	Paso Robles Formation (Background)	X		Table 2	Table 3	Annually
BW-2[1]	Paso Robles Formation (Background)	X		Table 2	Table 3	Annually
MW-1	Franciscan Bedrock	X		Table 2	Table 3	Semi-annually
MW-2	Paso Robles Formation Shallow Zone		X	Table 2	Table 3	Semi-annually
MW-3	Paso Robles Formation Shallow Zone		X	Table 2	Table 3	Semi-annually
MW-4	Alluvium Shallow Zone	X		Table 2	Table 3	Semi-annually
MW-5	Alluvium Shallow Zone		X	Table 2	Table 3	Semi-annually
MW-6	Paso Robles Formation Shallow Zone		X	Table 2	Table 3	Semi-annually
MW-7	Alluvium Shallow Zone	X		Table 2	Table 3	Semi-annually
MW-8	Alluvium Shallow Zone	X		Table 2	Table 3	Semi-annually
MW-9	Alluvium Shallow Zone	X		Table 2	Table 3	Semi-annually
MW-10	Paso Robles Formation Deep Zone		X	Table 2	Table 3	Semi-annually
MW-11	Paso Robles Formation Deep Zone	X		Table 2	Table 3	Semi-annually

[illegible]		[illegible]		[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MW-12	Paso Robles Formation Deep Zone		X	Table 2	Table 3	Semi-annually
MW-13	Paso Robles Formation Deep Zone	X		Table 2	Table 3	Semi-annually
MW-14	Paso Robles Formation Deep Zone	X		Table 2	Table 3	Semi-annually
S-1	Surface Water Upstream	X		Table 2	Table 3	Semi-annually
S-2	Surface Water Midstream	X		Table 2	Table 3	Semi-annually
S-3	Surface Water Downstream	X		Table 2	Table 3	Semi-annually
Gas Probes	Gas Migration			Table 4 (w/o VOCs)		Quarterly
Gas Collection Header	Collection System			Table 4		Annually
Gas Condensate	Collection System/Sump			VOCs		Annually

(1) Designated background monitoring points.
(2) Sample once every five years for full suite of analytes listed in **Table 3**. Next sampling event is in October 2007.
(3) Semi-annual monitoring shall be performed each April and October and includes water levels for all wells.

TABLE 2
MONITORING PARAMETERS

[illegible]	[illegible]	[illegible]
Ground Water Monitoring Well Water Elevation and Depth [1]	Sounder	0.01 feet
Electrical Conductivity	Field	µmhos/cm
pH	Field	pH Units
ORP	Field	milliVolts
Temperature	Field	°F/°C
Turbidity	Field	NTU
Dissolved Oxygen	Field	Varies
Chemical Oxygen Demand [2]	5220B	mg/L
Chloride [2]	300.0/9253	mg/L
Total Dissolved Solids (TDS) [2]	160.1	mg/L
Manganese (dissolved) [2]	200.8/3015/6020A/6010B	mg/L
Sodium (dissolved) [2]	200.7/3015/6010B	mg/L
Sulfate (as SO_4) [2]	300.0	mg/L
Nitrate (as NO_3) [2]	300.0/353.2	mg/L
VOCs [3]	8260B	µg/L

(1) Water elevation shall be recorded from all monitoring wells and piezometers **semi-annually** and in which measurements are readily accessible

(2) Chloride, manganese (dissolved), sodium (dissolved), nitrate, sulfate, and TDS will be subjected to the statistical evaluation method described in Part II.D. of the Sample and Collection and Analysis Section, herein.

(3) The VOCs include all Volatile Organic Compounds (VOCs) detectable using USEPA Method 8260B including at a minimum all 47 VOCs listed in Appendix I to 40 CFR 258, and all unidentified peaks. VOCs will be subjected to the non-statistical evaluation method described in Part II.E. of the Sample Collection and Analysis Section, herein.

(4) Or most recently approved EPA method that provides the lowest practicable detection limits.

Note: mg/l = milligrams per liter; °F/°C = degrees Fahrenheit and Celsius; NTU = natural turbidity units; µmhos/cm = micro-mhos per centimeter; and µg/l = micrograms per liter.

TABLE 3
CONSTITUENTS OF CONCERN

Antimony	6010B	mg/L
Arsenic	7060A	mg/L
Barium	6010B	mg/L
Beryllium	6010B	mg/L
Cadmium	6010B	mg/L
Chromium	6010B/7196A	mg/L
Cobalt	6010B	mg/L
Copper	6010B	mg/L
Cyanide	9010 or 335.2	mg/L
Lead	7421	mg/L
Magnesium	6010B	mg/L
Mercury	7470A	mg/L
Nickel	6010B	mg/L
Selenium	7740	mg/L
Silver	6010B	mg/L
Sulfide	9030B or 376.1	mg/L
Thallium	7841	mg/L
Tin	6010B	mg/L
Vanadium	6010B	mg/L
Zinc	6010B	mg/L
Chlorophenoxy Herbicides	8151A	µg/L
Organochlorine Pesticides	8081A	µg/L
PCBs	8082	µg/L
Phthalate Esters	8060	µg/L
Phenols	8040	µg/L
Nonhalogenated Volatiles	8015M	µg/L
Semi-Volatile Organic Compounds	8270C	µg/L
VOCs, Appendix II[3] (including oxygenates)	8260B	µg/L

(1) The Discharger shall analyze for all parameters using the USEPA analytical methods indicated above (or updated method), including all constituents listed in Appendix II to 40 CFR, Part 258. Wells that are normally monitored for COCs in Table 2 do not need to be re-sampled for same constituents in Table 3, during COC sampling events. The semi-annual, and COC monitoring event shall be conducted simultaneously.

(2) Or most recently approved EPA method that provides the lowest practicable detection limits.

(3) Oxygenates include methyl tertiary-butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), tertiary-amyl methyl ether (TAME), and tertiary-butyl alcohol (TBA).

TABLE 4
LANDFILL GAS MONITORING PARAMETERS

Methane	Field	ppm
Carbon Dioxide	Field	ppm
Oxygen	Field	ppm
VOCs	TO-14	

PART II: SAMPLE COLLECTION AND ANALYSIS

A. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analysis specified in this monitoring and reporting program shall be performed according to the most recent version of Standard USEPA Methods (USEPA publication "SW-846"), and in accordance with an Executive Officer approved Sampling and Analysis Plan (SAP). A laboratory certified for these analyses by the State Department of Health Services shall perform the analyses. Specific methods of analysis must be identified. If methods other than USEPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Executive Officer prior to use. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements. Calibration and maintenance records shall be kept and made available upon request by the Central Coast Water Board. Sampling shall occur at a date that allows timely submittal of monitoring reports according to the schedule required by this monitoring and reporting program. In addition, the Discharger is responsible for seeing that the laboratory analysis of all samples from all Monitoring Points meet the following restrictions:

1. **Method Selection:** The methods of analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e., "trace") in historical data for that medium, the SW-846 analytical method having the lowest Method Detection Limit (MDL) shall be selected from among those methods which would provide valid results in light of any Matrix Effects involved.

2. **Trace Results:** Results falling between the MDL and the Practical Quantitation Limit (PQL) shall be reported as "trace", and shall be accompanied by both the (nominal or estimated) MDL and PQL values for that analytical run.

3. **Nominal or Estimated MDL and PQL:** The nominal MDL and PQL shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. Both limits shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab. If the lab suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived MDL/PQL values, the results shall be flagged accordingly and an estimate of the detection limit and/or quantitation limit actually achieved shall be included.

4. **Quality Assurance/Quality Control (QA/QC) Data:** All QA/QC data shall be reported along with the sample results to which it applies. Sample results shall be reported unadjusted for blank results or spike recovery. The QA/QC data submittal shall include the following information:
   a. Method, equipment, and analytical detection limits.
   b. Recovery rates and an explanation for any recovery rate that is outside the USEPA-specified recovery rate.
   c. Results of equipment and method blanks.
   d. Results of spiked and surrogate samples.
   e. Frequency of quality control analysis.
   f. Chain of custody logs.
   g. Name and qualifications of the person(s) performing the analysis.

5. **Common Laboratory Contaminant:** Upon receiving written approval from the Executive Officer, a statistical or non-statistical procedure can be used for determining the significance of analytical results for a constituent that is a common laboratory contaminant (i.e., methylene chloride, acetone, 2-butanone, diethylhexyl phthalate, and di-n-octyl phthalate) during any given Monitoring 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 Regional Board staff.

6. **Unknowns:** Unknown chromatographic peaks shall be identified, quantified, and reported to a reasonable extent. When unknown peaks are encountered, second column or second method confirmation procedures shall be performed to attempt to identify and more accurately quantify the unknown analyte.

7. In cases where contaminants are detected in QA/QC samples (i.e., field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged for easy reference.

B. CONCENTRATION LIMITS

1. The concentration limit for Monitoring Parameters and Constituents of Concern shall be determined as follows:
   a. In cases where the constituent's Method Detection Limit is exceeded in less than ten percent of the historical samples, the MDL is the Concentration Limit.
   b. In cases where the constituent's MDL is exceeded in ten percent or more of the historical sample, a statistically based Concentration Limit must be defined and regularly updated as follows:
      i. Statistically analyze existing monitoring data, and propose, to the Executive Officer, statistically derived Concentration Limits for each Constituent of Concern and each Monitoring Parameter at each Monitoring Point for which sufficient data exists.
      ii. In cases where sufficient data for statistically determining Concentration Limits does not exist the Discharger shall collect samples and analyze for Constituent(s) of Concern and Monitoring Parameter(s) which require additional data. Once sufficient data is obtained, the Discharger shall submit proposed Concentration Limit(s) to the Executive Officer for approval. This procedure shall take no longer than two calendar years.
      iii. Sample and analyze new Monitoring Points, including any added by this monitoring and reporting program, until sufficient data is available to establish a proposed Concentration Limit for all COC and Monitoring Parameters. Once sufficient data is obtained the Discharger shall submit the proposed Concentration Limit(s) to the Executive Officer for approval. This procedure shall take no longer than two calendar years.

2. The Discharger shall review Concentration Limits annually. The past years data will be reviewed for application to revision of Concentration Limits. When appropriate, new Concentration Limits shall be proposed along with technical rationale for proposing the change.

C. RECORDS TO BE MAINTAINED

Water quality records shall be maintained by the Discharger, and retained for no less than a 30-year period. The period of retention shall be extended during the course of any unresolved litigation or when requested by the Executive Officer. Such records shall show the following for each sample:

1. Identity of sample and of the actual monitoring point designation from which it was taken, along with the identity of the individual who obtained the sample.
2. Date and time of sampling.
3. Date and time that analyses were started and completed, and the name of the personnel performing each analysis.
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used.
5. Chromatographs and calculation of results.
6. A complete chain of custody logs.
7. Results of analyses, and the Method Detection Limit and Practical Quantitation Limit for each analysis.

D. STATISTICAL ANALYSIS

For Detection Monitoring during a COC event, the Discharger shall use statistical methods to analyze COCs that exhibit concentrations that equal or exceed their respective MDL in at least ten percent of applicable historical samples. For routine (i.e., semi-annual) detection monitoring, the Discharger shall apply statistical methods for those Detection Monitoring Parameters defined in **Table 2** of Part I.J. The Discharger may propose and use any statistical method that meets the requirements of California Code of Regulations, Title 27, Section 20414(e)(7). All statistical methods and programs proposed by the Discharger are subject to Executive Officer approval.

E. NON-STATISTICAL METHOD

The Discharger shall use the following non-statistical method for analyzing constituents, which are detected in less than ten percent of applicable historical samples. This method involves a two-step process:

1. From constituents to which the method applies, compile a specific list of those constituents, which exceed their respective MDL. The list shall be compiled based on either data from the single sample or in cases of multiple independent samples, from the sample, which contains the largest number of constituents.

2. Evaluate whether the listed constituents meet either of two possible triggering conditions. Either the list from a single well contains two or more constituents, or contains one constituent, which equals or exceeds its PQL. If either condition is met, the Discharger shall conclude that a release is tentatively indicated and shall immediately implement the appropriate re-test procedure as described in Section F. below.

F. RE-TEST PROCEDURE

1. In the event the Discharger concludes that a release has been tentatively indicated, the Discharger shall carry out the appropriate reporting requirements and, within 30 days of receipt of analytical results, collect two new suites of samples for the indicated COC or Monitoring Parameter(s) at each indicating Monitoring Point, collecting at least as many samples per Monitoring Point as were used for the initial test.

2. Analyze each of the two suites of re-test analytical results using the same statistical method (or non-statistical comparison) that provided the tentative indication of a release. If the test results of either (or both) of the re-tested data suites confirm the original indication, the Discharger shall conclude that a release has been discovered and shall carry out the appropriate requirements.

3. Re-tests shall be carried out only for the Monitoring Point(s) for which a release is tentatively indicated, and only for the COC or Monitoring Parameter(s) which triggered the indication. When a VOC analyte is re-tested the results of the entire VOC test method analyzed shall be reported.

PART III: REPORTING

A. MONITORING AND REPORTING SCHEDULE

A written Monitoring Report shall be submitted **semi-annually** by **July 31st** and **January 31st** of each year. The report shall address all facets of the Landfill's monitoring. Reports shall include, at a minimum, the following:

1. **Letter of Transmittal**
   A letter transmitting a summary of the essential points shall accompany each report. The letter shall include a discussion of violations that occurred since the last such report was submitted. If no new violations have been discovered since the last submittal, this shall be stated in the transmittal letter. Both the monitoring report and the transmittal letter shall be signed by a principal executive officer at the level of vice president. Upon Central Coast Water Board Executive Officer approval, the cited signature can be by a California Registered Civil Engineer or Certified Engineering Geologist who has been given signing authority by the cited signatories. The transmittal letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

2. **Compliance Summary**
   The update shall contain at least:
   a. Discussion of compliance with concentration limits. Release indications and actions taken.
   b. For each monitored groundwater body, calculate groundwater velocity and, based upon water level elevations taken during the Monitoring Period, graphically present groundwater flow direction under and around the Unit.

3. **Graphical Presentation of Analytical Data**
   For each Monitoring Point in each medium, submit, in graphical format, the complete history of laboratory analytical data. Graphs shall effectively illustrate trends and/or variations in the laboratory analytical data (e.g., proper scale). Each graph shall plot a single constituent concentration over time at one (for intra-well comparison) or more (for inter-well comparisons) monitoring points in a single medium. Maximum contaminant levels (MCL) and/or concentration limits shall be graphed along with constituent concentrations where applicable. When multiple samples are taken, graphs shall plot each datum, rather than plotting mean values.

4. **Corrective Action Summary**
   Discuss significant aspects of any corrective action measures conducted during the monitoring period. Calculate pollutant load removed from the sites impacted media by mass (water, gas, leachate) removal system(s). Mass removal calculations shall be based on actual analytical data as required by Part I.E. Present discussion and indications, relating mass removal data to the violation the corrective action is addressing.

5. **Laboratory Results**
   Laboratory results and statements demonstrating compliance with Part II (Sample Collection and Analysis) and results of analyses performed at the Landfill, outside the requirements of this MRP, shall be summarized and reported.

6. **Sampling Summary**
   a. For each Monitoring Point addressed by the report, a description of: 1) the method and time of water level measurement; 2) the method of purging and purge rate and well recovery time; and 3) field parameter readings.
   b. For each Monitoring Point addressed by the report, a description of the type of sampling device used, its placement for sampling, and a description of the sampling procedure (number of samples, field blanks, travel blanks, and duplicate samples taken; the date and time of sampling; the name and qualification of the person actually taking the samples; description of any anomalies).

7. **Standard Observations**
   A summary of Standard Observations made during the Monitoring Period as described in Part I.A.2.

8. **Map(s)**
   A map or an aerial photograph showing Monitoring Points, relative physical features, and with groundwater contours overlaid on the map or the aerial photograph to the greatest degree of accuracy possible.

B. ANNUAL SUMMARY REPORT

The Discharger shall submit an annual report to the Central Coast Water Board covering the previous monitoring year. The annual Monitoring Period ends on December 31st each year. This report may be combined with the Second Semi-Annual Monitoring Report of the year and shall be submitted no later than **January 31st** each year. The annual report must include the information outlined in Part III.A., above, and the following:

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

2. **Statistical Limit Review**
   Statistically derived concentration limits shall be reviewed annually and revised as necessary. Data collected during the past year shall be discussed and considered for inclusion in, and determination of, proposed limits for the coming year. For statistical limits that are changed from the previous year, include a comprehensive discussion of the proposed limit for Executive Officer review and consideration.

3. **Analytical Data**
   Complete historical analytical data presented in a tabular form on compact disk in Microsoft Excel™ format or in another file format acceptable to the Executive Officer.

Graphical Presentation of Data

All monitoring analytical data obtained during the previous year, presented in tabular and graphical form as well as on compact disk in Microsoft Excel™ format or in another file format acceptable to the Executive Officer.

4. **Map(s)**
   A map, or set of maps, that indicate(s) the type of cover material added to the final cover.

C. CONTINGENCY RESPONSE

1. **Leachate Seep:** The Discharger shall, within 24 hours, report by telephone or electronic mail concerning the discovery of any previously unreported seepage from the Landfill disposal area. A written report shall be filed with the Central Coast Water Board within **seven days**, containing at least the following information:
   a. **Map** - a map showing the location(s) of seepage.
   b. **Flow rate** - an estimate of the flow rate.
   c. **Description** - a description of the nature of the discharge (e.g., all pertinent observations and analysis).
   d. **Location** - Location of sample(s) collected for laboratory analysis, as appropriate.
   e. **Corrective measures** - A summary of corrective measures both taken and proposed.

2. **Physical Evidence of a Release:** If either the Discharger or the Central Coast Water Board Executive Officer determines that there is significant physical evidence of a release pursuant to Title 27, Section 20385(a)(3), the Discharger shall conclude that a release has been discovered and shall:
   a. Within seven days notify the Central Coast Water Board of this fact by certified mail (or acknowledge the Central Coast Water Board's determination).
   b. Carry out the appropriate Release Discovery Response for all potentially-affected monitored media.
   c. Carry out any additional investigations stipulated in writing by the Central Coast Water Board Executive Officer for the purpose of identifying the cause of the indication.

3. **Responses to an Initial Indication of a Release**
   Should the initial statistical or non-statistical comparison (under Part II.D.) indicate that a new release is tentatively identified, the Discharger shall:
   a. Within 24 hours, notify the Central Coast Water Board verbally or via electronic mail as to the Monitoring Point(s) and constituent(s) or parameter(s) involved;
   b. Provide written notification by certified mail within seven days of such determination; and,
   c. Either of the following:
      i Shall carry out a discrete re-test in accordance with Part II.F. If the re-test confirms the existence of a release or the Discharger fails to perform the re-test, the Discharger shall carry out the requirements of Part III.C.4. In any case, the Discharger shall inform the Central Coast Water Board of the re-test outcome within 24 hours of results becoming available, following up with written results submitted by certified mail within seven days, or;
      ii Make a determination, in accordance with Title 27, Section 20420(k)(7), that a source other than the waste management unit caused the release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation or by natural variation in the groundwater, surface water, or the unsaturated zone.

4. **Release Discovery Response**
   If the Discharger concludes that a new release has been discovered the following steps shall be carried out:
   a. If this conclusion is not based upon monitoring for COC, the Discharger shall sample for COC at Monitoring Points in the affected medium. Within 14 days of receiving the laboratory analytical results, the Discharger shall notify the Executive Officer, by certified mail, of the concentration of COC at each Monitoring Point. This notification shall include a synopsis showing, for each Monitoring Point, those constituents that exhibit an unusually high concentration;
   b. The Discharger shall, within 90 days of discovering the release, submit to the Executive Officer a Revised Report of Waste Discharge proposing an Evaluation Monitoring and Reporting Program that:
      i. meets the requirements of Title 27, Sections 20420 and 20425; and
      ii. satisfies the requirements of 40 CFR Section 258.55(g)(1)(ii) by committing to install at least one monitoring well directly down-gradient of the center of the release;
   c. The Discharger shall, within 180 days of discovering the release, submit to the Executive Officer a preliminary engineering feasibility study meeting the requirements of Title 27, Section 20420; and
   d. The Discharger shall immediately begin delineating the nature and extent of the release by installing and monitoring assessment wells as necessary to assure that the Discharger can meet the requirements of Title 27, Section 20425 to submit a delineation report within 90 days of when the Executive Officer directs the Discharger to begin the Evaluation Monitoring Program.

5. **Release Beyond Facility Boundary**
   Any time the Discharger or the Executive Officer concludes that a release from the Unit has migrated beyond the facility boundary, the Discharger shall so notify persons who either own or reside upon the land that directly overlies any part of the plume (Affected Persons).
   a. Initial notification to Affected Persons shall be accomplished within 14 days of making this conclusion and shall include a description of the Discharger's current knowledge of the nature and extent of the release.
   b. Subsequent to initial notification, the Discharger shall provide updates to Affected Persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.
   c. Each time the Discharger sends a notification to Affected Persons (under a. or b. above), the Discharger shall, within seven days of sending such notification, provide the Executive Officer with both a copy of the notification and a current mailing list of Affected Persons.

PART IV: DEFINITION OF TERMS

A. AFFECTED PERSONS

Individuals who either own or reside upon the land which directly overlies any part of that portion of a gas or liquid phase release that may have migrated beyond the facility boundary.

B. CONCENTRATION LIMITS

The Concentration Limit for any given COC or Monitoring Parameter in a given monitored medium shall be either:

1. The constituent's statistically determined background value or interval limit, established using an Executive Officer approved method (Parts II.D. and II.E.); or

2. In cases where the constituent's MDL is exceeded in less than 10% of historical samples, the MDL is the concentration limit defined in Part II.A.1.

C. CONSTITUENTS OF CONCERN (COC)

A broad list of constituents, which are likely to be present in a typical municipal solid waste landfill. The COC parameters include all constituents listed in the Code of Federal Regulations, Title 40, Part 258, Appendix II. The COCs for this Landfill are listed in **Table 3**.

D. MATRIX EFFECT

Any increase in the MDL or PQL for a given constituent as a result of the presence of other constituents, either of natural origin or introduced through a release, that are present in the sample being analyzed.

E. METHOD DETECTION LIMIT (MDL)

The lowest concentration at which a given laboratory, using a given analytical method to detect a given constituent, can differentiate with 99% reliability, between a sample which contains the constituent and one which does not. The MDL shall reflect the detection capabilities of the specific analytical procedure and equipment used by the laboratory.

F. MONITORED MEDIUM

Those media that are monitored pursuant to this MRP (groundwater, surface water, leachate, landfill gas condensate, and other as specified).

G. MONITORING PARAMETERS

A short list of constituents and parameters used for the majority of monitoring activities. The Monitoring Parameters for this Landfill are listed in **Table 2** of this MRP.

H. MONITORING PERIOD (frequency)

The duration of time during which a sampling event must occur. The Monitoring Period for the various media and programs is specified in Part J. and in **Table 1**. The due date for any given report will be 30 days after the end of its Monitoring Period, unless otherwise stated.

I. POINT OF COMPLIANCE (POC)

The Point of Compliance is as defined in CCR Title 27. For the purposes of this Landfill, the POC follows the edge of the Landfill's "Subtitle D Footprint", and extends vertically down through the uppermost water-bearing zone.

J. PRACTICAL QUANTITATION LIMIT (PQL)

The lowest acceptable calibration standard (acceptable as defined for a linear response or by actual curve fitting) times the sample extract dilution factor times any additional factors to account for Matrix Effect. The PQL shall reflect the quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. The PQLs reported by the laboratory shall not simply be restated from USEPA analytical method manuals. Laboratory derived PQLs are expected to closely agree with published USEPA estimated quantitation limits (EQL).

K. RECEIVING WATERS

Any surface water, which actually or potentially receives surface or groundwater, which pass over, through, or under waste materials or contaminated soils.

L. VOLATILE ORGANIC COMPOUND (VOC) COMPOSITE MONITORING PARAMETER (VOC composite)

VOC composite is a composite parameter that encompasses a variety of VOCs. The constituents addressed by the VOC composite Monitoring Parameter include all VOCs detectable using USEPA Methods 8260B (water) and TO-14 (gas).

All reports required in this MRP are required pursuant to California Water Code Section 13267. Any person affected by this action of the Regional Board may petition the State Water Resources Control Board (State Board) to review the action in accordance with section 13320 of the California Water Code and Title 23, California Code of Regulations, Section 2050. The petition must be received by the State Water Resources Control Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request.

ORDERED BY: _____
Executive Officer

DATE: _____

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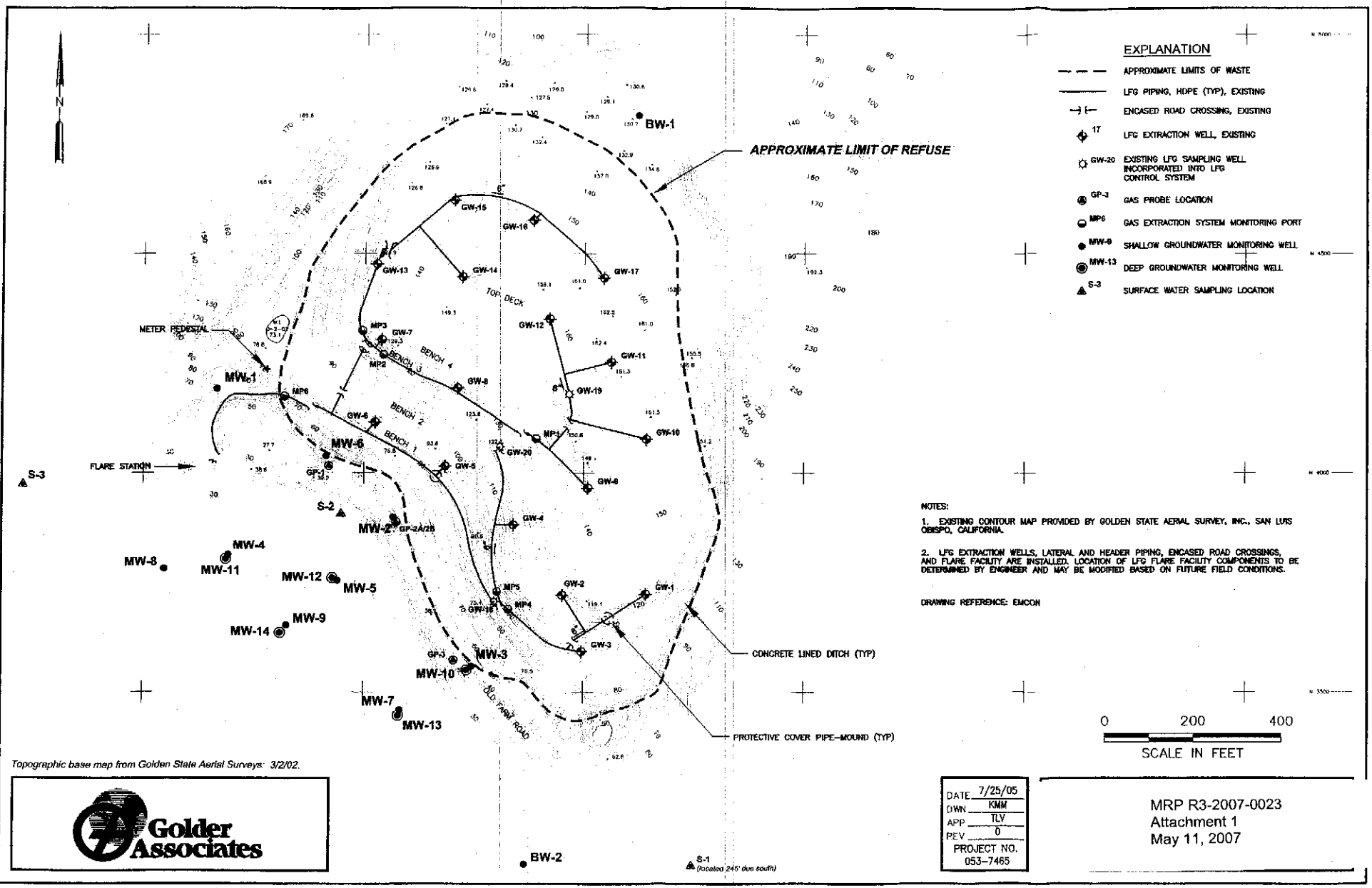

Golder Associates

DATE	7/25/05
DWN	KMM
APP	TLV
REV	0
PROJECT NO.	053-7465

MRP R3-2007-0023
Attachment 1
May 11, 2007

Dimscale: 1 Lscale: 1 Plotscale: 1=1
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