

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2006-0119

WASTE DISCHARGE REQUIREMENTS  
FOR  
COUNTY OF GLENN  
AND  
PATRICK FOLEY, TRUSTEE, COLEMAN FOLEY MARITAL TRUST  
FOR  
OPERATION, EVALUATION MONITORING, AND CORRECTIVE ACTION  
GLENN COUNTY CLASS III MUNICIPAL SOLID WASTE LANDFILL  
GLENN COUNTY

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

1. Patrick Foley, Trustee, Coleman Foley Marital Trust (hereafter Coleman Foley Trust) own Assessors Parcel Number (APN) 024-220-016 and APN 024-220-005 and leases the parcels to the County of Glenn for Glenn County Class III Municipal Solid Waste Landfill. The County of Glenn and Patrick Foley, Trustee, Coleman Foley Trust, are hereafter jointly referred to as Discharger. The Glenn County Class III, Municipal Solid Waste landfill (hereafter Glenn County Landfill) is located off County Road 33 approximately five miles west of the town of Artois, in Section 35, T21N,R4W, MDB&M, as shown in Attachment A, which is incorporated herein and made part of this Order.
2. The Glenn County Landfill encompasses 193 acres and consists of one existing unlined waste management unit known as Area A, which covers approximately 87 acres, and Expansion Area B, which is located in the northeastern portion of the landfill, as shown in Attachment B, which is incorporated herein and made part of this Order. Expansion Area B is the current location for obtaining borrow soil, and no waste disposal activities have occurred there. A site access road, with no municipal solid waste (MSW) buried beneath it, runs through the center of the site. The facility equipment shop is located near the west end of the site access road. In 2006, the Discharger began placing bales of waste tires on the west end of the access road below the facility equipment shop building. Waste tires are considered inert waste, so this is not a lateral expansion of the Unit. A scale house, recyclable material drop-off area, and a household hazardous waste drop-off area are located near the front gate. Only antifreeze, batteries, used motor oil and filters, and latex paints are accepted at the household hazardous waste drop-off area. Normal hours of operation are from 7:30 a.m. to 5:30 p.m. daily, however no wastes are accepted for disposal after 4:30 p.m. Approximately 87 acres of the site have been used for waste disposal purposes. Most of the facility is located in the northern portion of APN 024-220-016. A small segment of the facility also extends into the northeast section of APN 024-220-005.

3. The landfill site was first leased by Glenn County in July 1971, and began operations in 1972. Previous Waste Discharge Requirements (WDRs) Order No. 95-161 no longer adequately describes the facility.
4. Effective 18 July 1997, the water quality regulations for Class II and Class III disposal facilities formerly contained in Chapter 15, Title 23, California Code of Regulations (CCR) and the solid waste regulations formerly in Title 14, CCR, were consolidated into Chapters 1 through 7, Subdivision 1, Division 2, Title 27, CCR (Title 27 or 27 CCR). These WDRs implement Title 27 regulations and prescribe updated requirements for performing evaluation and corrective action monitoring of the landfill.
5. On 9 October 1991, the United States Environmental Protection Agency (USEPA) promulgated regulations (Title 40, Code of Federal Regulations, Parts 257 and 258, "federal municipal solid waste (MSW) regulations" or "Subtitle D") that apply, in California, to dischargers who own or operate Class II or Class III landfill units at which MSW is discharged. The majority of the federal MSW regulations became effective on the "Federal Deadline", which was 9 October 1993. The Federal Deadline for the Glenn County Landfill is 9 April 1994 pursuant to Title 40, Code of Federal Regulations, Part 258, Subpart A, Section 258.1(e)(2). The Glenn County Landfill is subject to all federal Subtitle D regulations because it accepted MSW after the Federal Deadline and does not qualify for any available exemptions.

### SITE DESCRIPTION

6. The site is located along the eastern fringe of the Coast Range Mountains and ranges in elevation from approximately 250 to 300 feet MSL. The site overlies the Tehama Formation, which caps the Great Valley geologic sequence, and is composed of massive, pale greenish-gray to pale-buff sandy clays with sand and gravel cross-beds. The Tehama Formation is an alluvial flood plain deposit laid down on a low-lying land surface. The Tehama Formation is covered by the Red Bluff Formation, which consists of alluvial fan deposits of reddish-brown clay, silt, sand, and gravel. Based on geologic logs of the on-site monitoring wells, these alluvial deposits are at least 175-feet thick and are predominantly composed of alternating layers of clayey silts and clayey to silty gravel.
7. The laboratory measured hydraulic conductivity of the native soils underlying the borrow area adjacent to the Unit ranges between  $5.4 \times 10^{-5}$  and  $1.9 \times 10^{-6}$  cm/sec, as reported in the 12 July 2002 *Results of Soil Permeability Testing at Glenn County Landfill*.
8. The closest Holocene fault to the Glenn County Landfill that shows surface rupture is the Bartlett Springs Fault, which, at nearest point, is about 30 miles west. This fault has a maximum slip rate of about six millimeters per year (mm/yr), and maximum moment magnitude of 7.1. The landfill roughly overlies a blind thrust fault, the Great Valley (Corning-Willows) Fault; top of rupture is reportedly about 7 kilometers (4 miles) below the landfill. Slip rate is reportedly 0.1 mm/yr. No seismographs have recorded

earthquakes greater than 6 on the Richter Scale within 20 miles of the landfill; ground motion greater than 10% probability of being exceeded in the next 50 years is 10 to 20 %g.

9. Land uses within 1,000 feet of the facility are agricultural. Lands in the vicinity of the landfill are used for winter grazing of livestock, primarily sheep and cattle. The Tehama-Colusa Canal abuts the east boundary of the landfill.
10. The facility receives an average of 17 inches of precipitation per year as measured at the Willows Station. Nearly all the precipitation occurs as rain during the wet season (November - March). Hot dry weather is prevalent during the remainder of the year. The mean pan evaporation is estimated to be 76.28 inches per year as measured at the Willows Station.
11. The 100-year, 24-hour precipitation event is estimated to be 4.0 inches, as depicted on Isopluvials of 100-Year 24-Hour Precipitation For Northern California, NOAA Atlas 2, Volume XI (1890 – 2000).
12. The waste management facility is not within a 100-year flood plain based on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map, Community-Panel Number 0600570350B.
13. The nearest permanent residence to the landfill is approximately 5,000 feet northeast of the eastern parcel boundary. A seasonal residence used by sheepherders is approximately 1,800 feet west of the western parcel boundary. Irrigation water for adjacent agricultural lands is obtained from the Tehama-Colusa Canal.
14. Potable water for the landfill and its employees is provided by bottle water. Water for dust control is obtained from the adjacent Tehama-Colusa Canal via a portable pump. Non-potable water is obtained from on-site wells located in the maintenance building and the nearby household hazardous waste collection and storage facility.

#### **WASTE CLASSIFICATION AND UNIT CLASSIFICATION**

15. The Discharger currently discharges non-hazardous solid waste, including MSW, to the Class III Unit known as Area A. These wastes include paper, plastic, glass, metals, green waste, organic wastes, construction and demolition waste, tire bales, furniture, and appliances. Baled waste tires, which are considered inert waste, are currently being placed on the west end of the site access road that runs through the center of the site. There is no MSW buried beneath this access road and the access road is not considered part of Area A. These classified wastes may be discharged only in accordance with Title 27, California Code of Regulations, Resolution No. 93-62, and the Code of Federal Regulations, Title 40, Part 258 as required by this Order.

16. The site received 23,470 tons of MSW during 2005. Wastes from outside Glenn County are rejected at the gate.

### **SURFACE AND GROUND WATER CONDITIONS**

17. The *Water Quality Control Plan for Sacramento and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
18. Surface drainage on the north side of the landfill is toward an unnamed intermittent tributary of Wilson Creek and surface drainage on the south and west sides of the landfill is toward intermittent White Cabin Creek in the Colusa Trough Hydrologic Subarea (520.21) of the Sacramento Hydrologic Basin. Wilson Creek and White Cabin Creek are both tributaries of the Sacramento River. The Tehama-Colusa Canal abuts the east side of the facility.
19. The designated beneficial uses of the Sacramento River apply to its tributaries, including Wilson Creek and White Cabin Creek. The beneficial uses of the Sacramento River, as specified in the Basin Plan, are municipal and domestic supply, agricultural supply, industrial service and process supply, water contact and non-contact water recreation, warm and cold fresh water habitat, preservation of rare, threatened and endangered species, and groundwater recharge.
20. The first encountered groundwater is about 64 feet below the native ground surface (Well M-7A). Groundwater elevations range from 122 feet MSL to 190 feet MSL. The groundwater appears to be semi-confined based on limited well control. The depth to groundwater fluctuates seasonally as much as 16 feet.
21. The Discharger has an insufficient number of groundwater monitoring wells screened across the first water bearing zone to determine groundwater flow direction or gradient in the uppermost aquifer. Because of this, there does not appear to be an adequate background monitoring point assessing water quality in the uppermost aquifer.
22. There are currently three different groundwater bearing units (referred to as Aquifer 1, Aquifer 3, and Aquifer 4) being monitored at the site. Only one groundwater bearing unit (Aquifer 4) has three monitoring wells (M-4, M-6, and M-7B) screened across it so that a hydraulic gradient and groundwater flow direction can be calculated. There are not a sufficient number of monitoring wells screened across Aquifers 1 and 3 to calculate groundwater flow direction or hydraulic gradient. Based on records from March 2004 to August 2006, groundwater flow direction for Aquifer 4 ranges between S 188 W and N 448 W, groundwater flow gradient ranges between 0.0005 and 0.0016 feet per foot, and groundwater linear velocity ranges between 1.36 and 4.35 feet per year.

23. The designated beneficial uses of the groundwater, as specified in the Basin Plan, are domestic and municipal, agricultural, and industrial supply.

### **GROUNDWATER MONITORING**

24. Five wells make up the current groundwater monitoring system. One of the wells has been constructed with a dual completion (M-7A and M-7B). Two additional wells (M-1 and M-2) that were formerly part of the groundwater monitoring system were destroyed in 2002. The existing monitoring system evaluates water quality in three different groundwater bearing units, referred to as Aquifer 1, Aquifer 3, and Aquifer 4. Former monitoring well M-1 was screened across another aquifer designated as Aquifer 2. Monitoring well M-7A is the only well screened across Aquifer 1. Monitoring wells M-5 and M-8 are screened across Aquifer 3. Former monitoring well M-2 and existing monitoring wells M-4, M-6, and M-7B are screened across Aquifer 4. Groundwater flow direction and gradient can only be calculated for Aquifer 4, due to an insufficient number of wells monitoring Aquifers 1 through 3
25. The Discharger's monitoring program for groundwater at this Unit does not satisfy the requirements contained in Title 27. Title 27, Section 20415(b) requires a sufficient number of monitoring points installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer to provide the earliest possible detection of a release from the Unit. Monitoring points are required to be placed at appropriate locations so background and Point of Compliance groundwater quality can be assessed. Title 27, Section 20415(b) further requires a sufficient number of monitoring points installed at appropriate locations and depths to yield groundwater samples from zones of perched water and other identified zones of saturation so as to provide the best assurance of the earliest possible detection of a release from the Unit. Four different zones of saturation have been identified at the Glenn County Landfill, but the existing groundwater detection monitoring system is only assessing water quality in three of those zones. Only one of the aquifers has three wells screened across it. The upper most aquifer in the vicinity of monitoring point M-7A occurs approximately 60 to 70 feet below ground surface, and only one well is screened across it. Groundwater velocities and flow directions cannot be determined at aquifers with less than three wells screened across them.
26. Volatile organic compounds (VOCs) are often detected in a release from a landfill, and are the primary waste constituents detected in groundwater beneath a municipal solid waste landfill (see Finding No. 31). Since volatile organic compounds are not naturally occurring and thus have no background value, they are not amenable to the statistical analysis procedures contained in Title 27 for the determination of a release of wastes from a Unit.
27. Title 27 CCR Sections 20415(e)(8) and (9) provide for the non-statistical evaluation of monitoring data that will provide the best assurance of the earliest possible detection of a release from a Unit in accordance with Title 27 CCR Section 20415(b)(1)(B)2.-4.

However, Title 27 CCR does not specify a specific method for non-statistical evaluation of monitoring data.

28. The Regional Water Board may specify a non-statistical data analysis method pursuant to Title 27 CCR Section 20080(a)(1). Section 13360(a)(1) of the California Water Code allows the Regional Board to specify requirements to protect underground or surface waters from leakage from a solid waste site, which includes a method to provide the best assurance of determining the earliest possible detection of a release.
29. In order to provide the best assurance of the earliest possible detection of a release of non-naturally occurring waste constituents from a Unit, this Order specifies a non-statistical method for the evaluation of monitoring data.
30. The specified non-statistical method for evaluation of monitoring data provides two criteria (or triggers) for making the determination that there has been a release of non-naturally occurring waste constituents from a Unit. The presence of two non-naturally occurring waste constituents above their respective method detection limit (MDL), or one non-naturally occurring waste constituent detected above its practical quantitation limit (PQL), indicates that a release of waste from a Unit has occurred. Following an indication of a release, verification testing will be conducted to determine whether there has been a release from the Unit, or there is a source of the detected constituents other than the landfill, or the detection was a false detection. Although the detection of one non-naturally occurring waste constituent above its MDL is sufficient to provide for the earliest possible detection of a release, the detection of two non-naturally occurring waste constituents above the MDL as a trigger is appropriate due to the higher risk of false-positive analytical results and the corresponding increase in sampling and analytical expenses from the use of one non-naturally occurring waste constituent above its MDL as a trigger.

### **GROUNDWATER DEGRADATION**

31. Since December 2000, each groundwater monitoring well, including former wells M-1 and M-2, have had at least one detection of a volatile organic compound above its respective practical quantitation limit (PQL). Since May 2002, 1,1-DCA has been detected 16 times above laboratory method detection limits and c-1,2-DCE has been detected 7 times above laboratory method detection limits. In May 2003, c-1,2-DCE and MtBE were identified in soil pore liquid from lysimeter SL-1.
32. On 14 October 2003, 10 dual completion soil gas monitoring wells were sampled for volatile organic compounds using EPA Method TO-14. The gas monitoring wells have shallow (5 to 10 feet below ground surface) and deep (25 to 30 feet below ground surface) screen intervals. The 14 October 2003 soil gas samples were obtained during a period of high atmospheric pressure. Sample results identified 26 different volatile organic compounds (VOCs) found throughout the landfill at varying concentrations. Eighteen of the 20 soil gas probes had at least one detection of VOCs. On 4 and

5 December 2003, additional soil gas samples were obtained during a period of low atmospheric pressure. During the December 2003 soil gas sampling event, VOCs were detected in all but one soil gas probe. These VOC detections in soil gas around the landfill may be an indication that landfill gas migration is contributing to observed groundwater impacts at the site.

33. Leachate seeps have been historically detected along landfill slopes. During the 2005/2006 rainy season, leachate was observed pooling along the toe of western slopes. Samples of the leachate seeps identified 12 different VOCs and four different semi-volatile organic compounds above their respective reporting limits. No means to control leachate seeps exists at the site. The Discharger covered leachate seeps with additional soil after periods of dry weather and once heavy equipment could gain access to the seep locations.
34. The conditions described in Finding Nos. 31, 32, and 33 above support the determination that there is "measurably significant" evidence of a release of waste from the Glenn County Landfill. One VOC detected above its PQL at any point of compliance monitoring well is evidence of a release. Based on these conditions and pursuant to Title 27 CCR, Section 20420(i)(3), the Discharger is required to implement an Evaluation Monitoring Program and a Corrective Action Program.

### **CLOSURE, POST-CLOSURE MAINTENANCE, AND FINANCIAL ASSURANCE**

35. On 7 February 1996, Regional Water Board staff mailed the Discharger a letter discussing review of the 30 October 1995 Preliminary Closure and Post-Closure Maintenance Plan for the Glenn County Landfill. The letter stated that technical review of the Preliminary Closure and Post-Closure Maintenance Plan found the plan to be deficient. There is no record of Regional Water Board staff approving a Preliminary Closure and Post-Closure Maintenance Plan for the Glenn County Landfill.
36. The Discharger will need to submit a Preliminary Closure and Post-Closure Maintenance Plan that meets the requirements of 27 CCR, Section 21769 and includes updated cost estimates for closure construction and post-closure maintenance activities.
37. In 1999, the Discharger submitted a cost estimate for corrective action of all known or reasonably foreseeable releases as required by Title 27 Section 22221. The amount of the approved cost estimate in 1999 was \$353,000.00. The Discharger has established a Pledge of Revenue to demonstrate adequate funds for completing corrective action. This Order requires that the Discharger maintain financial assurance with the California Integrated Waste Management Board (CIWMB) in at least the amount of this cost estimate, including required annual inflation factor adjustments to the total fund balance.
38. Title 27 CCR Sections 21780(c)(3) and (d)(1) [sections promulgated by the CIWMB] require the Discharger to submit the Final Closure and Post-Closure Maintenance Plan, or for the closure of discrete units, the Partial Final Closure and Post-Closure

Maintenance Plan, at least two years prior to the anticipated date of closure. This Order requires the Discharger obtain WDRs from the Regional Water Board with closure and post-closure maintenance requirements prior to closure.

### CEQA AND OTHER CONSIDERATIONS

39. The action to revise waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code Section 21000, et seq., and the CEQA guidelines, in accordance with Title 14 CCR, Section 15301.
40. This Order implements:
  - a. *The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition,*
  - b. The prescriptive standards and performance goals of Chapters 1 through 7, Subdivision 1, Division 2, Title 27, of the California Code of Regulations, effective 18 July 1997, and subsequent revisions;
  - c. The Prescriptive standards and performance criteria of RCRA Subtitle D, Part 258; and
  - d. State Water Resources Control Board (State Board) Resolution No. 93-62, *Policy for Regulation of Discharges of Municipal Solid Waste*, adopted 17 June 1993.
41. Section 13267(b) of California Water Code provides that: "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposed to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who had discharged, discharges, or is suspected of discharging, or who proposed to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports."
42. The technical reports required by this Order and the attached "Monitoring and Reporting Program No. R5-2006-0119" are necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.

### PROCEDURAL REQUIREMENTS

43. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.
44. The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
45. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.
46. Any person affected by this action of the Regional Water Board may petition the State Board to review the action in accordance with Sections 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Board, Office of Chief Counsel, P.O. Box 100, Sacramento, California 95812, within 30 days of the date of issuance of this Order. Copies of the laws and regulations applicable to the filing of a petition are available on the Internet at [http://www.swrcb.ca.gov/water\\_laws/index.html](http://www.swrcb.ca.gov/water_laws/index.html) and will be provided on request.

**IT IS HEREBY ORDERED**, pursuant to Sections 13263 and 13267 of the California Water Code, that Order No. 95-161 is rescinded and that County of Glenn, Patrick Foley, Trustee, and Coleman Foley Marital Trust, their agents, successors, and assigns, in order to meet the provisions of Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

#### A. PROHIBITIONS

1. The discharge of 'hazardous waste' or 'designated waste' is prohibited. For the purposes of this Order, the term 'hazardous waste' is as defined in Title 23, California Code of Regulations, Section 2510 et seq., and 'designated waste' is as defined in Title 27.
2. The discharge of wastes outside of a Unit or portions of a Unit specifically designed for their containment is prohibited. Solid waste shall only be discharged to Area A, with the exception of approved inert wastes (baled tires), which may be discharged to the site access road running through the center of the site. The Discharger shall request approval from Regional Water Board staff to dispose of any inert wastes other than baled waste tires to an area outside of the Unit.

3. The discharge of waste containing greater than 50% moisture to any Unit is prohibited.
4. The discharge of waste to a closed Unit is prohibited.
5. The release of pollutants to the vadose zone or to groundwater is prohibited.
6. The discharge of sediment to surface water in concentrations that exceed water quality objectives is prohibited.
7. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or groundwater is prohibited.
8. The landfill shall not be allowed to cause pollution or a nuisance, as defined by the California Water Code, Section 13050, and shall not cause degradation of any water supply.

**B. DISCHARGE SPECIFICATIONS**

1. Nonhazardous solid waste shall be discharged to Area A only. Lateral expansion and construction of another Unit other than Area A requires revisions of these WDRs.
2. The discharge shall remain within the designated disposal area at all times.

**C. FACILITY SPECIFICATIONS**

1. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order.
2. The Discharger shall immediately notify the Regional Water Board of any flooding, unpermitted discharge of waste off-site, leachate seeps that discharge outside of the Area A footprint, equipment failure, slope failure, or other change in site conditions, which could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.
3. Water used for facility maintenance shall be limited to the minimum amount necessary for dust control, and construction.
4. The Discharger shall maintain in good working order any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.
5. Methane and other landfill gases shall be adequately vented, removed from the Unit, or otherwise controlled to prevent the danger of adverse health effects,

- nuisance conditions, degradation, or the impairment of the beneficial uses of surface water or groundwater due to migration through the unsaturated zone.
6. Surface drainage within the waste management facility shall either be contained on-site or be discharged in accordance with applicable storm water regulations.
  7. The Discharger shall maintain a *Storm Water Pollution Prevention Plan and Monitoring Program and Reporting Requirements* in accordance with State Water Resources Control Board Order No. 97-03-DWQ, or retain all storm water on-site.
  8. The Discharger shall submit **by 15 September each year** a Winterization Plan that describes construction and location of the winter tipping pad, grading activities to prepare the site for winter operations, and erosion and sediment control best management practices to be installed or implemented in preparation for the rainy season. All grading activities and installation of erosion and sediment control features shall be completed **by 15 October annually**.
  9. Submit **by 1 May 2007** a Preliminary Closure and Post-Closure Maintenance Plan that meets the requirements of 27 CCR, Section 21769. Include updated cost estimates for completing closure construction and implementing post-closure maintenance activities.

#### D. EVALUATION AND CORRECTIVE ACTION PROGRAM SPECIFICATIONS

1. Submit **by 1 February 2007** a work plan prepared by a Professional Civil Engineer or Geologist that proposes to install a sufficient number of groundwater monitoring points at appropriate locations and depths to yield groundwater samples from the uppermost aquifer beneath the Glenn County Landfill. If the Professional Civil Engineer or Geologist determines that the existing groundwater monitoring system meets the requirements of 27 CCR, Section 20415, then a certification statement signed and stamped by the professional described above shall be submitted in place of the work plan.
2. In response to “measurably significant” evidence of a release from the Glenn County Landfill, submit **by 1 February 2007** a technical report in accordance with Title 27 CCR, Section 20420(k)(5) that includes, at a minimum, the following information:
  - a. **Constituents Of Concern (COC) Concentrations** – the maximum concentration of each COC at each monitoring point as determined during the most recent COC sampling event;
  - b. **Proposed Monitoring System Changes** – any proposed additions or changes to the water quality monitoring systems at the Unit necessary to

meet the provisions of Title 27 CCR, Section 20425. Monitoring system changes are necessary to address the deficient groundwater monitoring system described in Finding Nos. 24 and 25. Proposed monitoring system changes must meet the minimum requirements of Title 27 CCR, Section 20415.

- c. **Proposed Monitoring Changes** – any proposed additions or changes to the monitoring frequency, sampling and analytical procedures or methods, or statistical methods used at the Unit necessary to meet the provisions of Title 27 CCR, Section 20425; and
  - d. **Proposed Delineation Approach** – a detailed description of the measures to be taken by the Discharger to assess the nature and extent of the release from the Unit.
  - e. **Demonstrate Compliance With Title 27 CCR, Section 20425** – a description of steps taken to comply with applicable provisions of Title 27 CCR, Section 20425 not specifically addressed in Evaluation and Corrective Action Program Specifications D.2.a-d above.
3. Sample all site groundwater monitoring wells for the Constituents of Concern (COC) listed in Tables I and V of Monitoring and Reporting Program (MRP) No. R5-2006-0119 **during the third calendar quarter of 2007**. Results of the COC sampling event shall be submitted with the Third Quarter 2007 Groundwater Monitoring Report. After completing this initial round of evaluation monitoring sampling, revert back to the COC sampling schedule listed in Table I of MRP No. R5-2006-0119.
  4. Submit **by 1 June 2007** an Initial Engineering Feasibility Study for a Corrective Action Program necessary to meet the requirements of Title 27 CCR, Section 20420(k)(6). At a minimum, the feasibility study shall contain a detailed description of the corrective action measures that could be taken to achieve background concentrations for all COCs.
  5. Submit **by 31 October 2007** an Updated Engineering Feasibility Study pursuant to Title 27 CCR, Section 20425(c). Include a proposal to implement a Corrective Action Program in accordance with Title 27 CCR, Section 20430 based on data collected during the Evaluation Monitoring Program.

## E. MONITORING SPECIFICATIONS

1. The Discharger shall comply with the Evaluation Monitoring and Corrective Action Program provisions of Title 27 for groundwater, surface water, and the unsaturated zone, and in accordance with Monitoring and Reporting Program No. R5-2006-0119.

2. The Discharger shall submit **by 31 October 2007** a Water Quality Protection Standard (WQPS) Report that lists all monitoring parameters and constituents of concern, the concentration limit for each monitoring parameter and constituent of concern, the point of compliance, and all water quality monitoring points in accordance with 27 CCR, Section 20390. A WQPS shall be established for each monitored medium, including groundwater, surface water, and the unsaturated zone. The WQPS Report shall also include proposed data analysis methods in accordance with 27 CCR, Section 20415(e)(7).
3. The Discharger shall comply with the Water Quality Protection Standard as specified in this Order, Monitoring and Reporting Program No. R5-2006-0119, and the Standard Provisions and Reporting Requirements, dated April 2000.
4. The Water Quality Protection Standard for organic compounds, which are not naturally occurring and not detected in background groundwater samples, shall be taken as the detection limit of the analytical method used (i.e., US-EPA methods 8260 and 8270). The repeated detection of one or more non-naturally occurring organic compound(s) in samples above the Water Quality Protection Standard and above the analyte's respective PQL from point of compliance monitoring wells is evidence of a release from the Unit.
5. For each monitoring event, the Discharger shall determine whether the landfill is in compliance with the Water Quality Protection Standard using procedures specified in Monitoring and Reporting Program No. R5-2006-0119 and Title 27 CCR Section 20415(e).
6. The concentrations of the monitoring parameters and constituents of concern in waters passing the Point of Compliance shall not exceed the Water Quality Protection Standard established pursuant to 27 CCR, Section 20390.
7. The Discharger shall submit **by 31 October 2007** for review and approval a Sample Collection and Analysis Plan. The Sample Collection and Analysis Plan shall at a minimum include:
  - a. Sample collection procedures describing purging techniques, sampling equipment, and decontamination of sampling equipment;
  - b. Sample preservation information and shipment procedures;
  - c. Sample analytical methods and procedures;
  - d. Sample quality assurance/quality control (QA/QC) procedures; and
  - e. Chain of Custody control.

8. The Discharger shall provide Regional Water Board staff a minimum of **one week** notification prior to commencing any field activities related to the installation, repair, or abandonment of monitoring devices.
9. For any given monitored medium, the samples taken from all monitoring points and background monitoring points to satisfy the data analysis requirements for a given reporting period shall all be taken **within a span not to exceed 30 days**, unless a longer time period is approved, and shall be taken in a manner that ensures sample independence to the greatest extent feasible. Specific methods of collection and analysis must be identified. Sample collection, storage, and analysis shall be performed according to the most recent version of USEPA Methods, such as the latest editions, as applicable, of: (1) Methods for the Analysis of Organics in Water and Wastewater (USEPA 600 Series), (2) Test Methods for Evaluating Solid Waste (SW-846, latest edition), and (3) Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020), and in accordance with the approved Sample Collection and Analysis Plan.
10. If methods other than USEPA-approved methods or Standard Methods are used, the exact methodology shall be submitted for review and approval prior to use.
11. The **methods of analysis and the detection limits** used must be appropriate for the expected concentrations. For the monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e., "trace" or "ND") in data from background monitoring points for that medium, the 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 or interferences.
12. **"Trace" results** - results falling between the MDL and the practical quantitation limit (PQL) - shall be reported as such, and shall be accompanied both by the estimated MDL and PQL values for that analytical run.
13. **MDLs and PQLs** shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. These MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab, rather than simply being quoted from USEPA analytical method manuals. In relatively interference-free water, laboratory-derived MDLs and PQLs are expected to closely agree with published USEPA MDLs and PQLs.
14. If the laboratory suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived MDL/PQL values, the results shall be flagged accordingly, along with estimates of the detection limit and quantitation limit actually achieved. The **MDL shall always be calculated such that it**

- represents the lowest achievable concentration associated with a 99% reliability of a nonzero result.** The PQL shall always be calculated such that it represents the lowest constituent concentration at which a numerical value can be assigned with reasonable certainty that it represents the constituent's actual concentration in the sample. Normally, PQLs should be set equal to the concentration of the lowest standard used to calibrate the analytical procedure.
15. All **QA/QC data** shall be reported, along with the sample results to which they apply, including the method, equipment, analytical detection and quantitation limits, the percent recovery, an explanation for any recovery that falls outside the QC limits, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recoveries. 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.
  16. Unknown chromatographic peaks shall be reported, flagged, and tracked for potential comparison to subsequent unknown peaks that may be observed in future sampling events. Identification of unknown chromatographic peaks that recur in subsequent sampling events may be required.
  17. The statistical method shall account for data below the practical quantitation limit (PQL) with one or more statistical procedures that are protective of human health and the environment. Any PQL validated pursuant to Title 27 CCR Section 20415(e)(7) that is used in the statistical method shall be **the lowest concentration (or value) that can be reliably achieved** within limits of precision and accuracy specified in the WDRs for routine laboratory operating conditions that are available to the facility. The Discharger's technical report, pursuant to Title 27 CCR Section 20415(e)(7), shall consider the PQLs listed in Appendix IX to Chapter 14 of Division 4.5 of Title 22, CCR, for guidance when specifying limits of precision and accuracy. For any given constituent monitored at a background or downgradient monitoring point, an indication that falls between the MDL and the PQL for that constituent (hereinafter called a "trace" detection) shall be identified and used in appropriate statistical or nonstatistical tests. Nevertheless, for a statistical method that is compatible with the proportion of censored data (trace and ND indications) in the data set, the Discharger can use the laboratory's concentration estimates in the trace range (if available) for statistical analysis in order to increase the statistical power by decreasing the number of "ties".
  18. Background for water samples or soil-pore gas samples shall be represented by the data from all samples taken from applicable background monitoring points

- during that reporting period (at least one sample from each background monitoring point).
19. The Discharger may propose an alternate statistical method [to the methods listed under Title 27 CCR Section 20415(e)(8)(A-D)] in accordance with Title 27 CCR Section 20415(e)(8)(E), for review and approval. Upon receiving written approval, alternate statistical procedures may be used for determining the significance of analytical results for common laboratory contaminants (i.e., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate). Nevertheless, analytical results involving detection of these analytes in any background or downgradient sample shall be reported and flagged for easy reference by Regional Water Board staff.
  20. The Discharger shall use the following non-statistical method for all analytes that are detected in less than 10% of the background samples. The non-statistical method shall be implemented as follows:
    - a. From the constituent of concern or monitoring parameter list, identify each analyte in the **current** sample that exceeds either its respective MDL or PQL. The Discharger shall conclude that the exceedance provides a preliminary indication of a release or a change in the nature or extent of the release, at that monitoring point, if **either**:
      - 1) The data contains two or more analytes that are detected in less than 10% of background samples that equal or exceed their respective MDLs; or
      - 2) The data contains one or more analyte that equals or exceeds its PQL.
    - b. **Discrete Retest** [Title 27 CCR Section 20415(e)(8)(E)]:
      - 1) In the event that the Discharger concludes (pursuant to paragraph 20.a., above) that there is a preliminary indication of a release, then the Discharger shall immediately notify Regional Water Board staff by phone or e-mail and, within 30 days of such indication, collect two new (retest) samples from the monitoring point where the release is preliminarily indicated.
      - 2) For any given retest sample, the Discharger shall include, in the retest analysis, **only the laboratory analytical results for those analytes detected in the original sample**. As soon as the retest data are available, the Discharger shall conclude that there is measurably significant evidence of a release if two or more analytes equal or

exceed their respective MDLs or if one or more analyte equals or exceeds its PQL and shall:

- a) **Immediately** notify the Regional Water Board about any constituent or constituents verified to be present at the monitoring point, and follow up with written notification submitted by certified mail **within seven days** of validation; and
  - b) Comply with ¶21, below if any constituent or constituents were verified to be present.
- 3) Any analyte that is confirmed per this method shall be added to the monitoring parameter list such that it is monitored during each regular monitoring event.
21. If the Discharger determines that there is measurably significant evidence of a release from the Unit at any monitoring point, the Discharger shall **immediately** implement the requirements of **XI. Response To A Release, C. Release Has Been Verified**, contained in the Standard Provisions and Reporting Requirements.

#### F. PROVISIONS

1. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.
2. The Discharger shall comply with all applicable provisions of Title 27 and 40 Code of Federal Regulations Part 258 (Subtitle D) that are not specifically referred to in this Order.
3. The Discharger shall comply with Monitoring and Reporting Program No. \_\_\_\_, which is incorporated into and made part of this Order.
4. The Discharger shall comply with the applicable portions of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements for Nonhazardous Solid Waste Discharges Regulated by Title 27 and/or Subtitle D (Title 27 CCR Section 20005 et seq. and 40 CFR 258 et seq.), dated April 2000, which are hereby incorporated into this Order.
5. In the event the Discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the Discharger shall notify the appropriate Regional Water Board office by telephone **as soon as** it or its agents have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing **within two weeks**. The written

notification shall state the nature, time, and cause of noncompliance, and shall describe the measures being taken to prevent recurrences and shall include a timetable for corrective actions.

6. All reports and transmittal letters shall be signed by persons identified below:
  - a. For a corporation: by a principal executive officer of at least the level of senior vice-president.
  - b. For a partnership or sole proprietorship: by a general partner or the proprietor.
  - c. For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected or appointed official.
  - d. A duly authorized representative of a person designated in a, b or c above if;
    - 1) The authorization is made in writing by a person described in a, b, or c of this provision;
    - 2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a Unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
    - 3) The written authorization is submitted to the Regional Water Board.
  - e. Any person signing a document under this Section shall make the following certification:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”
7. The Discharger shall take all reasonable steps to minimize any adverse impact to the waters of the State resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature, extent, and impact of the noncompliance.

8. The owner of the waste management facility shall have the continuing responsibility to assure protection of waters of the state from discharged wastes and from gases and leachate generated by discharged waste during the active life, closure, and postclosure maintenance period of the Unit(s) and during subsequent use of the property for other purposes.
9. The fact that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order shall not be regarded as a defense for the Discharger's violations of the Order.
10. To assume ownership or operation under this Order, the succeeding owner or operator must apply in writing to the Regional Water Board requesting transfer of the Order within 14 days of assuming ownership or operation of this facility. The request must 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 Regional Water Board, and a statement. The statement shall comply with the signatory requirements contained in Provision F.6. and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer of this Order shall be approved or disapproved by the Regional Water Board.
11. The Discharger shall maintain assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the landfill in the amount of the approved cost estimate. The California Integrated Waste Management Board (CIWMB) reviews and approves the financial assurance mechanism that the Discharger uses to demonstrate adequate financial resources for completing corrective action. The CIWMB also requires the Discharger to comply with provisions of Title 27 that require calculation of an annual inflation factor and increases to the financial assurances based on the annual inflation factor calculation.
12. The Discharger shall update the preliminary closure and post-closure maintenance plan (PCPCMP) any time there is a change that will increase the amount of the closure and post-closure maintenance cost estimate. The updated PCPCMP shall be submitted to the Regional Water Board, the Local Enforcement Agency, and the CIWMB. The PCPCMP shall meet the requirements of Title 27 CCR Section 21769, and include a lump sum estimate of the cost of carrying out all actions necessary to close each Unit, to prepare detailed design specifications, to develop the final closure and post-closure maintenance plan, and to carry out the first thirty years of post-closure maintenance. A final (or partial final) closure and post-closure maintenance plan shall be submitted prior to closure and closure shall not be conducted in the absence of closure WDRs.

13. The Discharger shall obtain and maintain assurances of financial responsibility for closure and post-closure maintenance costs in the amount of the cost estimates contained in an approved preliminary or final closure and post-closure maintenance plan, as applicable. The Discharger shall submit a proposed financial assurance mechanism for closure and post-closure maintenance meeting the requirements of Chapter 6, Title 27 to the Financial Assurances Section of the CIWMB. If the CIWMB determines that either the amount of coverage or the mechanism is inadequate, then within 90 days of notification, the Discharger shall submit an acceptable mechanism for at least the amount of the approved cost estimate.
14. The Discharger shall complete the tasks contained in these waste discharge requirements in accordance with the following time schedule:

<u><b>TASK</b></u>	<u><b>COMPLIANCE DATE</b></u>
<b>A. Preliminary Closure and Post-Closure Plan</b>	<b>1 May 2007</b>
Submit a Preliminary Closure and Post-Closure Maintenance Plan in accordance with 27 CCR, Section 21769. (see Facility Specification C.9)	
<b>B. Water Quality Protection Standard Report</b>	<b>31 October 2007</b>
Submit a Water Quality Protection Standard Report in accordance with 27 CCR, Section 20390. (see Monitoring Specification E.2)	
<b>C. Sample Collection and Analysis Plan</b>	<b>31 October 2007</b>
Submit a Sample Collection and Analysis Plan for Executive Officer review and approval. (see Monitoring Specification E.7)	
Submit a work plan proposing installation of a sufficient number of groundwater monitoring wells to meet the requirements of Title 27 CCR, Section 20415. (see Evaluation and Corrective Action Program Specification D.1)	<b>1 February 2007</b>
Submit a technical report in accordance with Title 27 CCR, Section 20420(k)(5). (see Evaluation and Corrective Action Program Specification D.2)	<b>1 February 2007</b>
Submit an Initial Engineering Feasibility Study for a Corrective Action Program necessary to meet the requirements of Title 27 CCR, Section 20430. (see	<b>1 June 2007</b>

**TASK**

**COMPLIANCE DATE**

Evaluation and Corrective Action Program Specification  
D.4)

Submit an Updated Engineering Feasibility Study  
pursuant to Title 27 CCR, Section 20425(c).(see  
Evaluation and Corrective Action Program Specification  
D.5)

**31 October 2007**

**I, PAMELA C. CREEDON**, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 27 October 2006.

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PAMELA C. CREEDON, Executive Officer

DPS/KLC: sae  
8/31/06

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2006-0119  
FOR  
COUNTY OF GLENN,  
PATRICK FOLEY, TRUSTEE, AND COLEMAN FOLEY MARITAL TRUST  
FOR  
OPERATION, EVALUATION MONITORING, AND CORRECTIVE ACTION  
GLENN COUNTY CLASS III MUNICIPAL SOLID WASTE LANDFILL  
GLENN COUNTY

The Discharger shall comply with this Monitoring and Reporting Program, with Title 27, California Code of Regulations, Section 20005, et seq. (hereafter Title 27), and with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements for Nonhazardous Solid Waste Discharges Regulated by Title 27 and/or Subtitle D (27 CCR §20005 et seq. and 40 CFR 258)*, dated April 2000, which are incorporated by reference in Waste Discharge Requirements (WDR) Order No. R5-2006-0119.

**A. REQUIRED MONITORING REPORTS**

<b><u>REPORT</u></b>	<b><u>FREQUENCY</u></b>
1 Groundwater Monitoring (see D.1 below)	Quarterly
2 Annual Monitoring Summary Report	Annually
3 Unsaturated Zone Monitoring (see D.2 below)	Quarterly
4 Leachate Monitoring (see D.3. below)	Semiannually
5 Surface Water Monitoring (see D.4 below) (White Cabin Creek)	Quarterly
6 Winterization Plan (Erosion and Sediment Control Plan)	Annually by 15 September
7 Facility Monitoring Report (see D.5.a below)	Annually by 15 November
8 Response to a Release (Standard Provisions and Reporting Requirement)	As Necessary

**B. REPORTS**

The Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program and as required in Order No. R5-2006-0119 and the Standard Provisions and Reporting Requirements. Reports that do not comply with the required format will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the waste

discharge requirements. In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements or the lack thereof. Data shall also be submitted in a digital format acceptable to the Executive Officer.

Each monitoring report shall include a compliance evaluation summary as specified in Reporting Requirements E.3 below.

Field and laboratory tests shall be reported in each monitoring report. Method detection limits and practical quantitation limits shall be clearly identified for each constituent analyzed. Quarterly, semiannual, and annual monitoring reports shall be submitted to the Regional Water Board in accordance with the following schedule for the calendar period in which samples were taken or observations made:

<u>Sampling Frequency</u>	<u>Reporting Frequency</u>	<u>Reporting Periods End</u>	<u>Report Date Due</u>
Quarterly	Quarterly	31 March	<b>30 April</b>
		30 June	<b>31 July</b>
		30 September	<b>31 October</b>
		31 December	<b>31 January</b>
Semi Annually	Semiannually	30 June	<b>31 July</b>
		31 December	<b>31 January</b>
Annually	Annually	31 December	<b>31 January</b>

**Constituents of Concern shall be monitored in accordance with the frequencies listed in Tables I through IV.**

The Discharger shall submit an **Annual Monitoring Summary Report** to the Regional Water Board covering the previous monitoring year. The annual report shall contain the information specified in Reporting Requirements E.5 below, and a discussion of compliance with the waste discharge requirements and the Water Quality Protection Standard.

The results of **all monitoring** conducted at the site shall be reported to the Regional Water Board in accordance with the reporting schedule above for the calendar period in which samples were taken or observations made.

## **C. WATER QUALITY PROTECTION STANDARD AND COMPLIANCE PERIOD**

The Discharger shall submit a Water Quality Protection Standard Report in accordance with Monitoring Specification E.2 of WDR Order No. R5-2006-0119. For each waste management unit (Unit), the Water Quality Protection Standard shall consist of all monitoring parameters and constituents of concern, the concentration limits for each monitoring parameter and constituent of concern, the point of compliance, and all water quality monitoring points for each monitored medium. The Water Quality Protection Standard, or any modification thereto, shall be submitted in a report for review and approval.

The Water Quality Protection Standard Report shall include, at a minimum, the following information:

### **1. Water Quality Protection Standard**

The report shall:

- a. Identify **all distinct bodies of surface and ground water** that could be affected in the event of a release from a Unit or portion of a Unit. This list shall include at least the uppermost aquifer and any permanent or ephemeral zones of perched groundwater underlying the facility.
- b. Include a map showing the monitoring points and background monitoring points for the surface water monitoring program, groundwater monitoring program, and the unsaturated zone monitoring program. The map shall include the point of compliance in accordance with §20405 of Title 27.
- c. Evaluate the perennial direction(s) of groundwater movement within the uppermost groundwater zone(s).

The Water Quality Protection Standard shall be certified by a California-registered Professional Civil Engineer or Professional Geologist as meeting the requirements of Title 27. If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the Discharger may request modification of the Water Quality Protection Standard.

### **2. Constituents of Concern**

The constituents of concern include all the waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the Unit. The constituents of concern for all Units at the facility are those listed in Tables I through V for the specified monitored medium. The Discharger shall

monitor all constituents of concern in accordance with the frequencies and methods listed in Tables I through V.

**a. Monitoring Parameters**

Monitoring parameters are constituents of concern that are the waste constituents, reaction products, hazardous constituents, and physical parameters that provide a reliable indication of a release from a Unit. The monitoring parameters for all Units are those listed in Tables I through V for the specified monitored medium.

**3. Concentration Limits**

For a naturally occurring constituent of concern, the concentration limit shall be determined as follows:

- a. By calculation in accordance with a statistical method pursuant to §20415(e)(8) of Title 27; or
- b. By an alternate statistical method meeting the requirements of §20415(e)(8)(E) of Title 27.

**4. Point of Compliance**

The point of compliance for the water standard at each Unit is a vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the Unit.

**5. Compliance Period**

The compliance period for each Unit shall be the number of years equal to the active life of the Unit plus the closure period. The compliance period is the minimum period during which the Discharger shall conduct a water quality monitoring program subsequent to a release from the Unit. The compliance period shall begin anew each time the Discharger initiates an Evaluation Monitoring Program.

**D. MONITORING**

The Discharger shall comply with the Evaluation Monitoring Program provisions of Title 27 for groundwater, surface water, and the unsaturated zone, in accordance with Monitoring Specifications E.1 and E.3 of Waste Discharge Requirements, Order No. R5-2006-0119. All monitoring shall be conducted in accordance with a Sample Collection and Analysis Plan, which includes quality assurance/quality control standards, that shall be submitted for review and approval by the Executive Officer.

All point of compliance monitoring wells established for the Evaluation Monitoring Program shall constitute the monitoring points for the groundwater Water Quality Protection Standard. All Evaluation Monitoring Program groundwater monitoring wells, unsaturated zone monitoring devices, leachate, and surface water monitoring points shall be sampled and analyzed for monitoring parameters and constituents of concern as indicated and listed in Tables I through IV and this MRP.

Method detection limits and practical quantitation limits shall be reported. All peaks shall be reported, including those that cannot be quantified and/or specifically identified. Metals shall be analyzed in accordance with the methods listed in Table V.

The Discharger may use alternative analytical test methods, including new USEPA approved methods, provided the methods have method detection limits equal to or lower than the analytical methods specified in this Monitoring and Reporting Program, once approval is granted by the Executive Officer.

## **1. Groundwater**

The Discharger shall operate and maintain a groundwater monitoring system that complies with the applicable provisions of §20415 and §20425 of Title 27 in accordance with an approved Evaluation Monitoring Program. The monitoring system shall be certified by a California-licensed Professional Civil Engineer or Geologist as meeting the requirements of Title 27. The Discharger shall collect, preserve, and transport groundwater samples in accordance with an approved Sample Collection and Analysis Plan.

The Discharger shall determine the groundwater flow rate and direction in the uppermost aquifer and in any zones of perched water and in any additional zone of saturation monitored pursuant to this Monitoring and Reporting Program, and report the results quarterly, including the times of highest and lowest elevations of the water levels in the wells.

Hydrographs of each well shall be submitted showing the elevation of groundwater with respect to the elevations of the top and bottom of the screened interval and the elevation of the pump intake. Hydrographs of each well shall be prepared quarterly and submitted with the Annual Monitoring Summary Report.

Groundwater samples shall be collected from the point-of-compliance wells, background wells, and any additional wells added as part of the approved groundwater monitoring system. Samples shall be collected and analyzed for the monitoring parameters and constituents of concern in accordance with the methods and frequencies specified in Tables I through V.

The monitoring parameters shall also be evaluated each reporting period with regards to the cation/anion balance, and the results shall be graphically presented using a Stiff diagram, a Piper graph, or a Schoeller plot. Samples for the constituents of concern specified in Table I shall be collected and analyzed in accordance with the methods and frequencies listed in Tables I and V.

The existing groundwater monitoring system at Glenn County Landfill consists of five monitoring wells, with one of those wells constructed as a dual completion across two different water bearing formations (M-7A and M-7B). This groundwater monitoring system does not satisfy the requirements contained in Title 27, Section 20415(b), because there are not a sufficient number of monitoring points screened across the upper most aquifer, which occurs approximately 60 to 70 feet below ground surface (bgs), to determine groundwater flow direction and velocity.

A description of the current groundwater monitoring system construction details follows:

Well ID	Service Type	*Location	Depth	Screen Interval
M-4	Compliance	1,000 ft SE of SW Property Boundary	163 ft bgs	152 ft to 162 ft bgs
M-5	Compliance	SE Corner of Area A	120 ft bgs	108 ft to 118 ft bgs
M-6	Compliance	2,850 ft SE of NW Property Boundary	143 ft bgs	132 ft to 142 ft bgs
M-7A	Compliance	750 ft SE of NW Property Boundary	70.2 ft bgs	60 ft to 70 ft bgs
M-7B	Compliance	750 ft SE of NW Property Boundary	145.2 ft bgs	110 ft to 145 ft bgs
M-8	Compliance	1,350 ft S of NW Property Boundary	165.9 ft bgs	144.5 ft to 164.7 ft bgs

\*Locations are estimated  
 bgs = Below Ground Surface

## 2. **Unsaturated Zone Monitoring**

The Glenn County Landfill has one suction lysimeter (SL-1) located at the west side of the landfill approximately 600 feet south of the northwest property boundary. Lysimeter SL-1 consistently produces sufficient soil pore liquids for volatile organic compound analyses.

A sample shall be collected from lysimeter SL-1 quarterly and analyzed for volatile organic compounds using EPA Method 8260B as indicated in Table II. Monitoring shall also include the total volume of soil pore liquids recovered. Lysimeter samples shall be collected, preserved, and transported in accordance with the quality assurance/quality control standards contained in the approved Sample Collection and Analysis Plan.

Unsaturated zone monitoring reports shall be included with the corresponding quarterly groundwater monitoring report and shall include an evaluation of potential impacts of the facility on the unsaturated zone and compliance with the Water Quality Protection Standard.

### 3. **Leachate Monitoring/Seeps**

The Glenn County Landfill has no leachate collection and removal system in place. Many leachate seeps have been observed across the surface of the Unit during wet weather months. During the 2005/2006 winter, leachate was observed seeping out of fill slopes and pooling along the landfill property boundary. During periods of rain, pooled leachate runs off-site. The Discharger is required to keep leachate seeps within the Unit boundary.

From 1 October through 31 May of each year, the Discharger shall inspect Unit surfaces for leachate seeps on a weekly basis. From 1 June through 30 September of each year, the Discharger shall inspect Unit surfaces for leachate seeps on a monthly basis. Inspection dates and observations shall be recorded and submitted with the leachate monitoring report. Upon detection of leachate seeping to the Unit surface, the Discharger shall sample and analyze the leachate at the frequencies and for the constituents listed in Table III. Monitoring shall also include an estimate of the flow rate and total volume of leachate observed. The Discharger shall notify the Regional Water Board **immediately** upon detecting any leachate seeps and follow-up in writing **within seven days** of detecting the leachate seep with a description of actions taken to analyze the liquids and contain the leachate within the Unit (also see Reporting Requirements E.4 below). Leachate monitoring reports shall be included with the corresponding quarterly groundwater monitoring report and shall include an evaluation of potential impacts of the leachate seeps on surface water and groundwater.

### 4. **Surface Water Monitoring**

Surface water runoff from the Glenn County Landfill drains toward White Cabin Creek, located approximately 1,000 feet south of the southern property boundary. White Cabin Creek is an ephemeral stream with flows occurring during wet weather months and precipitation events.

The Discharger shall implement a surface water Evaluation Monitoring Program that complies with the applicable provisions of §20415 and §20425 of Title 27. Monitoring of White Cabin Creek shall include visual observations (See Reporting Requirements E.3.e.3 below) on a weekly basis from 1 October through 31 May of each year. Visual monitoring of White Cabin Creek shall be monthly from 1 June through 30 September of each year. Samples shall be obtained semiannually (provided there is flow in the creek) from points approximately 100 feet upstream (background) and 100 feet downstream

(compliance) of the landfill. Samples shall be analyzed for the monitoring parameters and constituents of concern listed in Table IV. Surface water monitoring reports shall be included with the corresponding quarterly groundwater monitoring report.

## 5. Facility Monitoring

From 1 October through 31 May of each year, facility monitoring shall occur on a weekly basis. From 1 June through 30 September of each year, facility monitoring shall occur on a monthly basis. Facility monitoring shall include the Standard Observations described in Reporting Requirements E.3.f below. The dates and results of the facility monitoring shall be included with each corresponding quarterly groundwater monitoring report.

### a. Facility Inspection

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility. The inspection shall assess damage to the drainage control system, groundwater monitoring equipment (including wells, etc.), and shall include the Standard Observations contained in Section E.3.f., below. Any necessary construction, maintenance, or repairs shall be completed by **31 October**. By **15 November** of each year, the Discharger shall submit an annual report describing the results of the inspection and the repair measures implemented, including photographs of the problem and the repairs.

### b. Storm Events

The Discharger shall inspect all precipitation, diversion, and drainage facilities for damage **within 2 days** following *major storm events*. The inspection shall include the Standard Observations described in Reporting Requirements E.3.f below. Major storm events are defined as 1.0 inch or greater of precipitation within a 24 hour period. Necessary repairs shall be completed **within 30 days** of the inspection. Storm event monitoring results shall be included with each corresponding quarterly groundwater monitoring report. Storm event monitoring shall include the inspection date(s), the person conducting the inspection, and the amount of precipitation received within the 24 hour period. If no precipitation events of 1.0 inch or greater within a 24 hour period occur during the reporting period, then the storm event monitoring report shall state such. Storm event monitoring reports shall be included with each corresponding quarterly groundwater monitoring report.

## **E. REPORTING REQUIREMENTS**

1. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained throughout the life of the facility including the post-closure period.

Such legible records shall show the following for each sample:

- a. Sample identification and the monitoring point or background monitoring point from which it was taken, along with the identity of the individual who obtained the sample;
  - b. Date, time, and manner of sampling;
  - c. Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;
  - d. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;
  - e. Calculation of results; and
  - f. Results of analyses, and the MDL and PQL for each analysis.
2. A transmittal letter explaining the essential points shall accompany each report. At a minimum, the transmittal letter shall identify any violations found since the last report was submitted, and if the violations were corrected. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. The transmittal letter shall also state that a discussion of any violations found since the last report was submitted, and a description of the actions taken or planned for correcting those violations, including any references to previously submitted time schedules, is contained in the accompanying report.
  3. Each monitoring report shall include a compliance evaluation summary. The summary shall contain at least
    - a. For each monitoring point and background monitoring point addressed by the report, a description of:
      - 1) The time of water level measurement;
      - 2) The type of pump - or other device - used for purging and the elevation of the pump intake relative to the elevation of the screened interval;

- 3) The method of purging (the pumping rate; the equipment and methods used to monitor field pH, temperature, and conductivity during purging; the calibration of the field equipment; results of the pH, temperature, conductivity, and turbidity testing; and the method of disposing of the purge water) to remove all portions of the water that was in the well bore while the sample was being taken;
  - 4) The type of pump - or other device - used for sampling, if different than the pump or device used for purging; and
  - 5) A statement that the sampling procedure was conducted in accordance with the approved Sample Collection and Analysis Plan.
- b. A map or aerial photograph showing the locations of observation stations, monitoring points, and background monitoring points.
  - c. For each groundwater body, a description and graphical presentation of the gradient and direction of groundwater flow under/around the Unit, and the groundwater flow rate, based upon water level elevations taken prior to the collection of the water quality data submitted in the report.
  - d. Laboratory statements of results of all analyses evaluating compliance with requirements.
  - e. A summary and certification of completion of all **Standard Observations** for the Unit(s), for the perimeter of the Unit, and for the receiving waters. Standard observations for active landfill units shall be conducted **weekly** during the wet season (1 October to 31 May) and **monthly** during the dry season (1 June to 30 September). Standard observations for inactive or closed landfill units shall be conducted **monthly** during the wet season (1 October to 31 May) and **quarterly** during the dry season (1 June to 30 September). The Standard Observations shall include:
    - 1) For the Unit:
      - a) Evidence of ponded water at any point on the facility (show affected area on map);
      - b) Evidence of leachate seepage (show affected area(s) on map);
      - c) Evidence of odors - presence or absence, characterization, source, and distance of travel from source;
      - d) Evidence of erosion and/or of day-lighted refuse; and
      - e) Date of inspection and name of person conducting inspection.

2) Along the perimeter of the Unit:

- a) Evidence of liquid leaving or entering the Unit, estimated size of affected area, and flow rate (show affected area on map);
- b) Evidence of leachate seepage (show affected area(s) on map);
- c) Evidence of odors - presence or absence, characterization, source, and distance of travel from source;
- d) Evidence of erosion and/or of day-lighted refuse; and
- e) Date of inspection and name of person conducting inspection.

3) For receiving waters:

- a) Floating and suspended materials of waste origin - presence or absence, source, and size of affected area;
- b) Discoloration and turbidity - description of color, source, and size of affected area;
- c) Evidence of odors - presence or absence, characterization, source, and distance of travel from source;
- d) Evidence of water uses - presence of water-associated wildlife;
- e) Flow rate;
- f) Weather conditions - wind direction and estimated velocity, total precipitation during recent days and on the day of observation;
- g) Date of inspection and name of person conducting inspection.

f. The quantity and types of wastes discharged and the locations in the Unit where waste has been placed since submittal of the last such report.

4. The Discharger shall report by telephone any seepage from the disposal area **immediately** after it is discovered. A written report shall be filed with the Regional Water Board **within seven days**, containing at least the following information:

- a. A map showing the location(s) of seepage;
- b. An estimate of the flow rate;

- c. A description of the nature of the discharge (e.g., all pertinent observations and analyses);
  - d. Verification that samples have been submitted for analyses of the Monitoring Parameters and Constituents of Concern listed in Table III of this MRP, and an estimated date that the results will be submitted to the Regional Water Board; and
  - e. Corrective measures underway or proposed, and corresponding time schedule.
5. The Discharger shall submit an **Annual Monitoring Summary Report** to the Regional Water Board covering the reporting period of the previous monitoring year. This report shall contain:
- a. All monitoring parameters and constituents of concern shall be graphed so as to show historical trends at each monitoring point and background monitoring point, for all samples taken within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents for the period of record for a given monitoring point or background monitoring point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. For any given constituent or parameter, the scale for background plots shall be the same as that used to plot downgradient data. Graphical analysis of monitoring data may be used to provide significant evidence of a release.
  - b. All historical monitoring data, including data for the previous year, shall be submitted in tabular form as well as in a digital file format. The Regional Water Board regards the submittal of data in hard copy and in digital format as "...the form necessary for..." statistical analysis [Title 27 CCR Section 20420(h)], in that this facilitates periodic review by the Regional Water Board.
  - c. A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the waste discharge requirements.
  - d. A map showing the area and elevations in which filling has been completed during the previous calendar year and a comparison to final closure design contours.
  - e. A written summary of the monitoring results, indicating any changes made or observed since the previous annual report.
  - f. A discussion of any observed leachate seeps and steps taken to contain leachate within the Unit. The Annual Summary Report shall also include the results of the any leachate analyses.

MONITORING AND REPORTING PROGRAM NO. R5-2006-0119  
COUNTY OF GLENN AND PATRICK FOLEY, TRUSTEE,  
COLEMAN FOLEY MARITAL TRUST  
FOR OPERATION, EVALUATION MONITORING, AND CORRECTIVE ACTION  
GLENN COUNTY CLASS III MUNICIPAL SOLID WASTE LANDFILL  
GLENN COUNTY

The Discharger shall implement the above monitoring program on the effective date of this Program.

Ordered by:

\_\_\_\_\_  
PAMELA C. CREEDON, Executive Officer

\_\_\_\_\_  
(Date)

DPS/KLC: sae  
8/30/06

**TABLE I**  
**GROUNDWATER EVALUATION MONITORING PROGRAM**

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
<b>Field Parameters</b>		
Groundwater Elevation	Ft. & hundredths, M.S.L.	Quarterly
Temperature	°C	Quarterly
Electrical Conductivity	µmhos/cm	Quarterly
pH	pH units	Quarterly
Turbidity	Turbidity units	Quarterly
<b>Monitoring Parameters</b>		
Total Dissolved Solids (TDS)	mg/L	Quarterly
Chloride	mg/L	Quarterly
Carbonate	mg/L	Quarterly
Bicarbonate	mg/L	Quarterly
Nitrate - Nitrogen	mg/L	Quarterly
Sulfate	mg/L	Quarterly
Calcium	mg/L	Quarterly
Magnesium	mg/L	Quarterly
Potassium	mg/L	Quarterly
Sodium	mg/L	Quarterly
Volatile Organic Compounds (USEPA Method 8260B, extended list specified in Table V)	µg/L	Quarterly
<b>Constituents of Concern (see Table V)</b>		
Total Organic Carbon	mg/L	*Annually
Inorganics (dissolved)	mg/L	*Annually
Semi-Volatile Organic Compounds (USEPA Method 8270C)	µg/L	*Annually
Chlorophenoxy Herbicides (USEPA Method 8151A)	µg/L	**5 years
Organophosphorus Compounds (USEPA Method 8141A)	µg/L	**5 years

\*Annual samples are to be obtained during 3<sup>rd</sup> Quarter each year

\*\*5 Year COC Samples are to be obtained during 3<sup>rd</sup> Quarter of every fifth year, beginning in 2007

**TABLE II**  
**UNSATURATED ZONE EVALUATION MONITORING PROGRAM**

**SOIL-PORE GAS**

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
<b>Monitoring Parameters</b>		
Volatile Organic Compounds (USEPA Method TO-14)	µg/cm <sup>3</sup>	Semiannual
Methane	%	Semiannual

**LYSIMETER (SL-1)**

Historical sample data indicates that lysimeter SL-1 usually produces less than one liter of liquid per sample event. Lysimeter liquids shall be analyzed for Volatile Organic Compounds first, with any remaining liquid analyzed for the Field Parameters and Monitoring Parameters in the order listed below.

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
<b><u>Constituents of Concern</u></b>		
Volatile Organic Compounds (USEPA Method 8260B, extended list specified in Table V)	µg/L	Quarterly

**Field Parameters**

Electrical Conductivity	µmhos/cm	Quarterly
pH	pH units	Quarterly

**Monitoring Parameters**

Total Dissolved Solids (TDS)	mg/L	Quarterly
Chloride	mg/L	Quarterly
Carbonate	mg/L	Quarterly
Bicarbonate	mg/L	Quarterly
Nitrate - Nitrogen	mg/L	Quarterly
Sulfate	mg/L	Quarterly
Calcium	mg/L	Quarterly
Magnesium	mg/L	Quarterly
Potassium	mg/L	Quarterly
Sodium	mg/L	Quarterly

**TABLE III**  
**LEACHATE EVALUATION MONITORING PROGRAM**

Leachate seeps shall be sampled upon detection for the Field Parameters, Monitoring Parameters, and Constituents of Concern listed below. If multiple seeps are present, obtain samples from the two largest seeps that are geographically separated by at least 500 feet across the site. If leachate seeps are persistent or occur repeatedly over the wet weather season, an additional sample shall be obtained and analyzed for the constituents listed below three months after the initial sample(s) were obtained.

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
<b>Field Parameters</b>		
Estimated Total Flow	Gallons	Upon Detection
Estimated Flow Rate	Gallons/Day	Upon Detection
Electrical Conductivity	µmhos/cm	Upon Detection
pH	pH units	Upon Detection
<b>Monitoring Parameters</b>		
Total Dissolved Solids (TDS)	mg/L	Upon Detection
Chloride	mg/L	Upon Detection
Carbonate	mg/L	Upon Detection
Bicarbonate	mg/L	Upon Detection
Nitrate - Nitrogen	mg/L	Upon Detection
Sulfate	mg/L	Upon Detection
Calcium	mg/L	Upon Detection
Magnesium	mg/L	Upon Detection
Potassium	mg/L	Upon Detection
Sodium	mg/L	Upon Detection
<b>Constituents of Concern (see Table V)</b>		
Total Organic Carbon	mg/L	Upon Detection
Inorganics (dissolved)	mg/L	Upon Detection
Volatile Organic Compounds (USEPA Method 8260B, extended list)	µg/L	Upon Detection
Semi-Volatile Organic Compounds (USEPA Method 8270C)	µg/L	Upon Detection
Chlorophenoxy Herbicides (USEPA Method 8151A)	µg/L	Upon Detection
Organophosphorus Compounds (USEPA Method 8141A)	µg/L	Upon Detection

**TABLE IV**  
**SURFACE WATER EVALUATION MONITORING PROGRAM**

Surface water samples shall be obtained upstream (background) and downstream (compliance) from the landfill after the first rain event causing flow in White Cabin Creek. Samples shall be analyzed for the constituents and at the frequencies listed below. A second sample shall be obtained within six months of the first sample if surface water is still present in the creek.

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
<b>Field Parameters</b>		
Temperature	°C	Semiannual
Electrical Conductivity	µmhos/cm	Semiannual
pH	pH units	Semiannual
Turbidity	Turbidity units	Semiannual

**Monitoring Parameters**

Suspended Solids	mg/L	Semiannual
Settleable Solids	mg/L	Semiannual
Total Dissolved Solids (TDS)	mg/L	Semiannual
Carbonate	mg/L	Semiannual
Bicarbonate	mg/L	Semiannual
Chloride	mg/L	Semiannual
Nitrate - Nitrogen	mg/L	Semiannual
Sulfate	mg/L	Semiannual
Calcium	mg/L	Semiannual
Magnesium	mg/L	Semiannual
Potassium	mg/L	Semiannual
Sodium	mg/L	Semiannual
Volatile Organic Compounds (USEPA Method 8260B, extended list specified in Table V)	µg/L	Semiannual

**Constituents of Concern (see Table V)**

Total Organic Carbon	mg/L	**5 years
Inorganics (dissolved)	mg/L	**5 years
Semi-Volatile Organic Compounds (USEPA Method 8270C)	µg/L	**5 years
Chlorophenoxy Herbicides (USEPA Method 8151A)	µg/L	**5 years
Organophosphorus Compounds (USEPA Method 8141A)	µg/L	**5 years

\*\*5 Year COC Samples are to be obtained during 3<sup>rd</sup> Quarter of every fifth year, beginning in 2007

**TABLE V**  
**CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS**

<b><u>Inorganics (dissolved):</u></b>	<b><u>USEPA Method</u></b>
Aluminum	6010
Antimony	7041
Barium	6010
Beryllium	6010
Cadmium	7131A
Chromium	6010
Cobalt	6010
Copper	6010
Silver	6010
Tin	6010
Vanadium	6010
Zinc	6010
Iron	6010
Manganese	6010
Arsenic	7062
Lead	7421
Mercury	7470A
Nickel	7521
Selenium	7742
Thallium	7841
Cyanide	9010B
Sulfide	9030B

**Volatile Organic Compounds:**

**USEPA Method 8260**

Acetone  
Acetonitrile (Methyl cyanide)  
Acrolein  
Acrylonitrile  
Allyl chloride (3-Chloropropene)  
Benzene  
Bromochloromethane (Chlorobromomethane)  
Bromodichloromethane (Dibromochloromethane)  
Bromoform (Tribromomethane)  
Carbon disulfide  
Carbon tetrachloride  
Chlorobenzene  
Chloroethane (Ethyl chloride)  
Chloroform (Trichloromethane)  
Chloroprene  
Dibromochloromethane (Chlorodibromomethane)

**TABLE V**

**CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS**

**Continued**

1,2-Dibromo-3-chloropropane (DBCP)  
1,2-Dibromoethane (Ethylene dibromide; EDB)  
o-Dichlorobenzene (1,2-Dichlorobenzene)  
m-Dichlorobenzene (1,3-Dichlorobenzene)  
p-Dichlorobenzene (1,4-Dichlorobenzene)  
trans- 1,4-Dichloro-2-butene  
Dichlorodifluoromethane (CFC 12)  
1,1 -Dichloroethane (Ethylidene chloride)  
1,2-Dichloroethane (Ethylene dichloride)  
1,1 -Dichloroethylene (1, 1-Dichloroethene; Vinylidene chloride)  
cis- 1,2-Dichloroethylene (cis- 1,2-Dichloroethene)  
trans- 1,2-Dichloroethylene (trans- 1,2-Dichloroethene)  
1,2-Dichloropropane (Propylene dichloride)  
1,3-Dichloropropane (Trimethylene dichloride)  
2,2-Dichloropropane (Isopropylidene chloride)  
1,1 -Dichloropropene  
cis- 1,3-Dichloropropene  
trans- 1,3-Dichloropropene  
Di-isopropylether (DIPE)  
Ethanol  
Ethyltertiary butyl ether  
Ethylbenzene  
Ethyl methacrylate  
Hexachlorobutadiene  
Hexachloroethane  
2-Hexanone (Methyl butyl ketone)  
Isobutyl alcohol  
Methacrylonitrile  
Methyl bromide (Bromomethane)  
Methyl chloride (Chloromethane)  
Methyl ethyl ketone (MEK; 2-Butanone)  
Methyl iodide (Iodomethane)  
Methyl t-butyl ether  
Methyl methacrylate  
4-Methyl-2-pentanone (Methyl isobutyl ketone)  
Methylene bromide (Dibromomethane)  
Methylene chloride (Dichloromethane)  
Naphthalene  
Propionitrile (Ethyl cyanide)  
Styrene  
Tertiary amyl methyl ether  
Tertiary butyl alcohol  
1,1,1,2-Tetrachloroethane  
1,1,2,2-Tetrachloroethane  
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene; PCE)

**TABLE V**

**CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS**

**Continued**

Toluene  
1,2,4-Trichlorobenzene  
1,1,1 -Trichloroethane, Methylchloroform  
1,1,2-Trichloroethane  
Trichloroethylene (Trichloroethene; TCE)  
Trichlorofluoromethane (CFC- 11)  
1,2,3-Trichloropropane  
Vinyl acetate  
Vinyl chloride (Chloroethene)  
Xylene (total)

**Semi-Volatile Organic Compounds:**

**USEPA Method 8270 - base, neutral, & acid extractables**

Acenaphthene  
Acenaphthylene  
Acetophenone  
2-Acetylaminofluorene (2-AAF)  
Aldrin  
4-Aminobiphenyl  
Anthracene  
Benzo[a]anthracene (Benzo[a]anthracene)  
Benzo[b]fluoranthene  
Benzo[k]fluoranthene  
Benzo[g,h,i]perylene  
Benzo[a]pyrene  
Benzyl alcohol  
Bis(2-ethylhexyl) phthalate  
alpha-BHC  
beta-BHC  
delta-BHC  
gamma-BHC (Lindane)  
Bis(2-chloroethoxy)methane  
Bis(2-chloroethyl) ether (Dichloroethyl ether)  
Bis(2-chloro-1-methylethyl) ether (Bis(2-chloroisopropyl) ether; DCIP)  
4-Bromophenyl phenyl ether  
Butyl benzyl phthalate (Benzyl butyl phthalate)  
Chlordane  
p-Chloroaniline  
Chlorobenzilate  
p-Chloro-m-cresol (4-Chloro-3-methylphenol)  
2-Chloronaphthalene  
2-Chlorophenol  
4-Chlorophenyl phenyl ether  
Chrysene

**TABLE V**

**CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS**

**Continued**

o-Cresol (2-methylphenol)  
m-Cresol (3-methylphenol)  
p-Cresol (4-methylphenol)  
4,4'-DDD  
4,4'-DDE  
4,4'-DDT  
Diallate  
Dibenz[a,h]anthracene  
Dibenzofuran  
Di-n-butyl phthalate  
3,3'-Dichlorobenzidine  
2,4-Dichlorophenol  
2,6-Dichlorophenol  
Dieldrin  
Diethyl phthalate  
p-(Dimethylamino)azobenzene  
7,12-Dimethylbenz[a]anthracene  
3,3'-Dimethylbenzidine  
2,4-Dimethylphenol (m-Xylenol)  
Dimethyl phthalate  
m-Dinitrobenzene  
4,6-Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)  
2,4-Dinitrophenol  
2,4-Dinitrotoluene  
2,6-Dinitrotoluene  
Di-n-octyl phthalate  
Diphenylamine  
Endosulfan I  
Endosulfan II  
Endosulfan sulfate  
Endrin  
Endrin aldehyde  
Ethyl methanesulfonate  
Famphur  
Fluoranthene  
Fluorene  
Heptachlor  
Heptachlor epoxide  
Hexachlorobenzene  
Hexachlorocyclopentadiene  
Hexachloropropene  
Indeno(1,2,3-c,d)pyrene  
Isodrin  
Isophorone  
Isosafrole

**TABLE V**

**CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS**

**Continued**

Kepone  
Methapyrilene  
Methoxychlor  
3-Methylcholanthrene  
Methyl methanesulfonate  
2-Methylnaphthalene  
1,4-Naphthoquinone  
1-Naphthylamine  
2-Naphthylamine  
o-Nitroaniline (2-Nitroaniline)  
m-Nitroaniline (3-Nitroaniline)  
p-Nitroaniline (4-Nitroaniline)  
Nitrobenzene  
o-Nitrophenol (2-Nitrophenol)  
p-Nitrophenol (4-Nitrophenol)  
N-Nitrosodi-n-butylamine (Di-n-butylnitrosamine)  
N-Nitrosodiethylamine (Diethylnitrosamine)  
N-Nitrosodimethylamine (Dimethylnitrosamine)  
N-Nitrosodiphenylamine (Diphenylnitrosamine)  
N-Nitrosodipropylamine (N-Nitroso-N-dipropylamine; Di-n-propylnitrosamine)  
N-Nitrosomethylethylamine (Methylethylnitrosamine)  
N-Nitrosopiperidine  
N-Nitrosopyrrolidine  
5-Nitro-o-toluidine  
Pentachlorobenzene  
Pentachloronitrobenzene (PCNB)  
Pentachlorophenol  
Phenacetin  
Phenanthrene  
Phenol  
p-Phenylenediamine  
Polychlorinated biphenyls (PCBs; Aroclors)  
Pronamide  
Pyrene  
Safrole  
1,2,4,5-Tetrachlorobenzene  
2,3,4,6-Tetrachlorophenol  
o-Toluidine  
Toxaphene  
2,4,5-Trichlorophenol  
0,0,0-Triethyl phosphorothioate  
sym-Trinitrobenzene

**TABLE V**

**CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS**

**Continued**

**Chlorophenoxy Herbicides:**

**USEPA Method 8151A**

2,4-D (2,4-Dichlorophenoxyacetic acid)  
Dinoseb (DNBP; 2-sec-Butyl-4,6-dinitrophenol)  
Silvex (2,4,5-Trichlorophenoxypropionic acid; 2,4,5-TP)  
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)

**Organophosphorus Compounds:**

**USEPA Method 8141A**

Atrazine  
Chlorpyrifos  
0,0-Diethyl 0-2-pyrazinyl phosphorothioate (Thionazin)  
Diazinon  
Dimethoate  
Disulfoton  
Ethion  
Methyl parathion (Parathion methyl)  
Parathion  
Phorate  
Simazine

## INFORMATION SHEET

ORDER NO. R5-2006-0119

COUNTY OF GLENN AND PATRICK FOLEY, TRUSTEE, COLEMAN FOLEY MARITAL TRUST  
FOR OPERATION, EVALUATION MONITORING, AND CORRECTIVE ACTION  
GLENN COUNTY CLASS III MUNICIPAL SOLID WASTE LANDFILL  
GLENN COUNTY

Patrick Foley, Trustee, Coleman Foley Marital Trust, owns the land where the Glenn County Class III Municipal Solid Waste Landfill is located. The County of Glenn first leased the land in 1971, and began solid waste disposal operations in 1972. The landfill is located approximately five miles west of the town of Artois.

The site is located along the eastern fringe of the Coast Range Mountains and ranges in elevation from approximately 250 to 300 feet MSL. The site overlies the Tehama Formation, which caps the Great Valley geologic sequence, and is composed of massive, pale greenish-gray to pale-buff sandy clays with sand and gravel cross-beds. The Tehama Formation is an alluvial flood plain deposit laid down on a low-lying land surface. The Tehama Formation is covered by the Red Bluff Formation, which consists of alluvial fan deposits of reddish-brown clay, silt, and gravel.

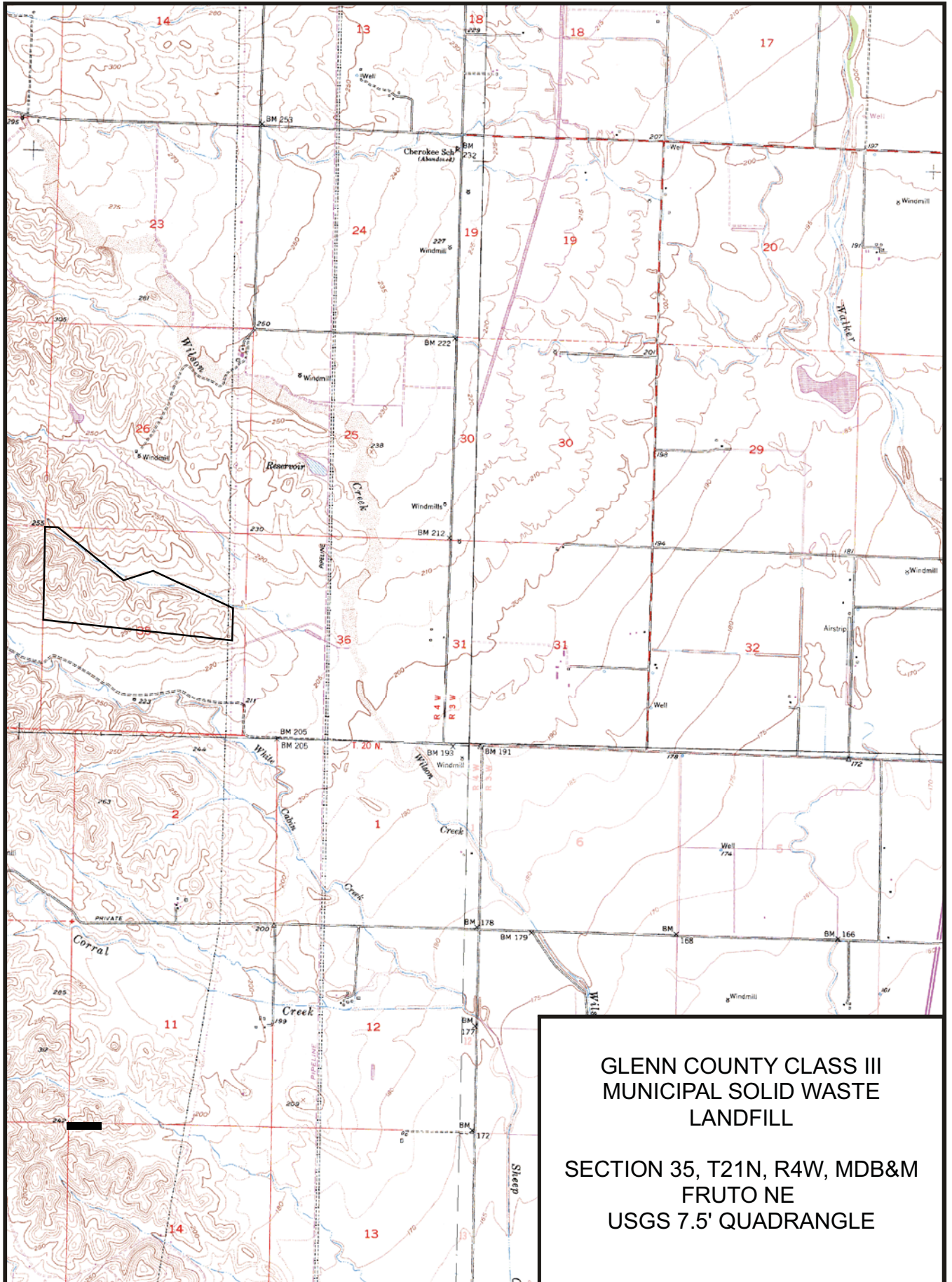
The landfill encompasses 193 acres and consists of one unlined waste management unit covering approximately 87 acres. Only municipal solid wastes are disposed here. A scale house, recyclable material drop-off area, household hazardous waste collection facility, and equipment shop are also located on or directly adjacent to the landfill. A site access road with no wastes buried beneath it runs through the middle of the waste disposal area. Baled waste tires, which are classified as inert waste, are currently being placed on the west end of the site access road.

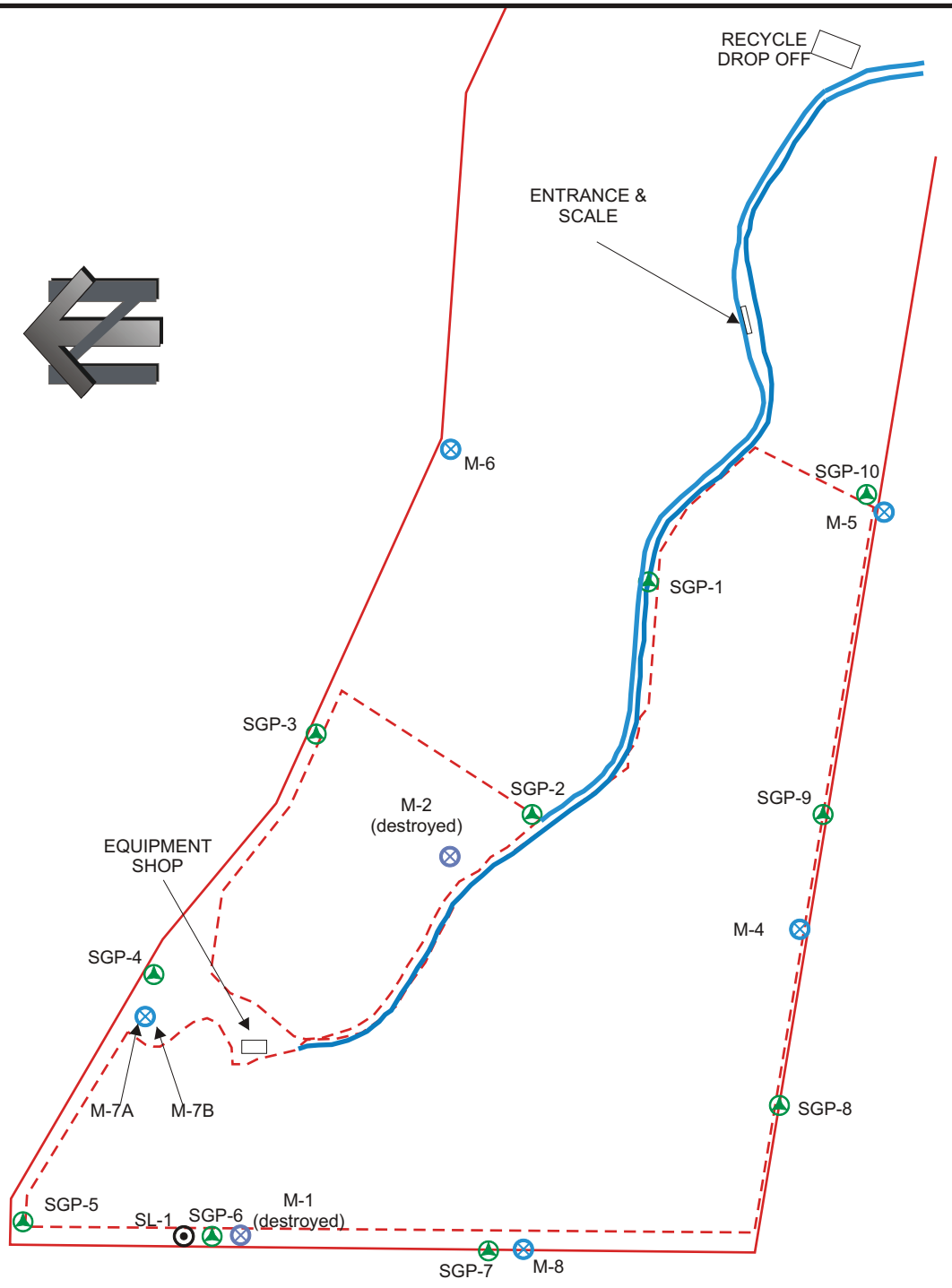
Five wells assessing water quality in four different aquifers make up the current groundwater monitoring system. The existing groundwater monitoring system does not meet the requirements of Title 27, California Code of Regulations, Section 20415 because there are an insufficient number of wells screened across the first water bearing zone, which occurs approximately 60 to 70 feet below ground surface.

Volatile organic compounds have been consistently detected in site wells since December 2000, which indicates a release of waste has or is occurring. Soil pore gas monitoring conducted in October and December 2003 identified 26 different volatile organic compounds. Additionally, numerous leachate seeps have been observed during the last several winters.






This Order revises Waste Discharge Requirements Order No. 95-161 and requires implementation of an Evaluation Monitoring Program and a Corrective Action Program, in accordance with applicable provisions of Title 27.

KLC/DPS: sae  
10/31/06





**LEGEND**

- SUCTION LYSIMETER SL-1 
- MONITORING WELL M-1 
- SOIL GAS PROBE LOCATION SGP-1 
- PROPERTY BOUNDARY 
- LIMIT OF WASTE 



GLENN COUNTY CLASS III  
MUNICIPAL SOLID WASTE  
LANDFILL

GLENN COUNTY

SITE MAP