



California Environmental Protection Agency  
Department of Toxic Substances Control

**HAZARDOUS WASTE FACILITY PERMIT  
LEACHATE TREATMENT  
PLANT OPERATION  
AND  
CLASS I LANDFILL POST-CLOSURE CARE**

Permit Number: **04-GLN-07**

Facility Name: ***BKK Landfill***  
***2210 South Azusa Avenue***  
***West Covina, California 91792***

Owner Name: ***BKK Corporation***  
***2210 South Azusa Avenue***  
***West Covina, California 91792***

Operator Name: ***BKK Corporation***  
***2210 South Azusa Avenue***  
***West Covina, California 91792***

Facility EPA ID No.: CAD 067 786 749

Effective Date: August 10, 2004

Expiration Date: August 10, 2014

Pursuant to section 25200 of the California Health and Safety Code, this RCRA-equivalent Hazardous Waste Facility Permit for Leachate Treatment Plant Operation and Class I Landfill Post-closure Care is hereby issued to BKK Corporation. The issuance of this Permit is subject to the conditions set forth in Attachment A, which consists of 147 pages and Appendices I through III.

Jose Kou, P.E., Chief  
Southern California Permitting and  
Corrective Action Branch  
Department of Toxic Substances Control

Date:

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ATTACHMENT "A"

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**APPENDICES**

- I. Stipulated Permanent Injunction (Case No. C507317) approved on or about October 28, 1988
- II. U.S. EPA Section 3008h Order (EPA Docket No. RCRA 09-89-0019)
- III. U.S. EPA Section 3008h Order (EPA Docket No. RCRA 09-2000-0003)

**HAZARDOUS WASTE FACILITY PERMIT  
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2210 South Azusa Avenue  
West Covina, California 91792  
EPA ID Number: CAD 067 786 749**

**PART I. DEFINITIONS**

**A. GENERAL APPLICABILITY**

1. All terms used in this Permit shall have the same meaning as those terms have in the California Health and Safety Code, division 20, chapter 6.5, and in the California Code of Regulations, title 22, division 4.5 (Title 22 CCR), unless expressly provided otherwise by this Permit.

**B. SPECIFIC DEFINITIONS**

1. **“DTSC”** as used in this Permit means the California Department of Toxic Substances Control.
2. **“Facility”** as used in this Permit means the BKK Facility, the physical location and description of which is provided in Part II of this Permit. Pursuant to applicable statutes and regulations, a facility includes all contiguous land and structures, other appurtenances, and improvements on the land used for the treatment, transfer, storage, resource recovery, disposal, or recycling of hazardous waste. A hazardous waste facility may consist of one or more treatment, transfer, storage, resource recovery, disposal, or recycling operational units or combinations of these units. For purposes of implementing corrective action under articles 6, 15.5, or 17 of chapter 14 or article 18 of chapter 15 of the California Code of Regulations, title 22, division 4.5, all contiguous property under the control of the owner or operator seeking a permit under the California Code of Regulations, title 22, division 4.5, is termed a “facility.” This definition also applies to facilities implementing corrective action under the Health and Safety Code, section 25187, and the federal Resource Conservation and Recovery Act (RCRA), section 3008 (h). [U.S.C. Title 42, section 6928(h)]
3. **“Permittee”** as used in this Permit means the BKK Corporation.

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4. **“H&SC”** as used in this Permit means the Health and Safety Code.
5. **“Title 22 CCR”** as used in this Permit means the California Code of Regulations, title 22, division 4.5.
6. **"Solid Waste Management Unit" or "SWMU"** means any discernible unit at a facility in which solid wastes have been placed at any time, regardless of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.
7. **“Operation Plan” and “Operation/Post-Closure Plan”** mean the Part B permit application entitled “Permit Application for Operation of the Leachate Treatment Plant and Post-Closure Care of the Class I Landfill at BKK Landfill, West Covina, California,” originally submitted in January 1991, revised February 3, 1992, June 25, 1996, June 30, 1997, August 5, 1997, and November 14, 1997. This document includes Emergency Coordinator information, most recently updated in December, 2003.

**PART II. DESCRIPTION OF THE FACILITY AND OWNERSHIP**

**A. OWNERS**

The Owners of the Facility are the BKK Corporation (BKK), a California corporation, and the City of West Covina (hereafter "Owners"). BKK owns Parcel 3, which contains the Class I landfill, the Class III landfill, the Leachate Treatment Plant (LTP) and the inactive Area D waste disposal area. The City of West Covina owns Parcels 1 and 2. The southern part of Parcel 1 formerly contained some of the inactive Area D waste disposal area.

**B. OPERATOR**

The Operator of the Facility is BKK (hereafter "Operator").

**C. PERMITTEE**

The Permittee as used in this Permit means the Operator listed above (hereafter "Permittee").

**D. LOCATION**

The BKK Facility (the Facility) is located at 2210 South Azusa Avenue in the City of West Covina, County of Los Angeles, State of California. It is situated along Azusa Avenue approximately equidistant between the east-west trending San Bernardino (Interstate 10) and Pomona (State Route 60) Freeways, roughly 20 miles east of downtown Los Angeles (Figure 1). The location of the Facility can be described by the Government Survey Method as: That portion of Rancho La Puente in the City of West Covina, County of Los Angeles known as Lot 3, as shown on a record of survey recorded in Book 85, Pages 10 through 12 inclusive, on file in the Office of the County Recorder in said county.

**E. DESCRIPTION**

The approximately 583-acre Facility sits on previously rural land. Prior to 1976, Home Savings and Loan Association (now Washington Mutual) owned the Facility and leased it to BKK. BKK purchased the Facility in 1976 from Home Savings and Loan and owned the entire Facility until July 17, 2003. On May 29, 2001, BKK divided the Facility into three separate parcels (commonly known as "Parcels 1, 2, and 3") by the recording of a final parcel map with the Recorder's Office of Los Angeles County, California. Parcel 1 encompasses approximately 101.198 acres, Parcel 2 encompasses approximately 56.84 acres, and Parcel 3 encompasses approximately 425.172 acres. Also on May 29, 2001, institutional controls

signed by DTSC, the City of West Covina, and BKK were recorded with the Recorder's Office of Los Angeles County, California. These require, among other things, any owners/occupants of Parcels 1 and 2 to allow access for post-closure care and to not interfere with post-closure care of the Facility. On May 27, 2003, DTSC and the City of West Covina entered into an Agreement and Covenant Not to Sue (Docket No. HSA-A 02/03-174)(commonly referred to as a prospective purchaser agreement), in anticipation of the City's purchase of Parcels 1 and 2. This agreement was circulated for public comment and became final on July 11, 2003. On July 17, 2003, BKK sold Parcels 1 and 2 to the City of West Covina (Figure 2).

The Facility includes an operational Leachate Treatment Plant (LTP) unit, a closed Class I Landfill unit (on Parcel 3), an inactive Class III Landfill unit (currently undergoing closure)(on Parcel 3), and the inactive Area D waste disposal area (on Parcel 3). The inactive Class III Landfill unit and inactive Area D Class II disposal area are considered solid waste management units (SWMUs) for purposes of corrective action. The operational LTP unit treats various hazardous and nonhazardous wastewaters that derive from post-closure care of the closed Class I Landfill unit, management of the inactive Class III Landfill unit, and Resource Conservation and Recovery Act (RCRA) corrective action (Figure 3).

The operational LTP unit comprises approximately ½ acre and the closed Class I Landfill unit comprises approximately 195 acres, both of which are within the 583-acre Facility. The Facility had been designated by the City of West Covina (the local land use authority) for certain landfill and related activities.

The closed Class I Landfill unit ceased receipt of hazardous waste in November 1984, except for asbestos, and of nonhazardous waste in the Summer of 1987. Liquid wastes (e.g., partially treated leachate) were mixed with native soils and disposed of within the Class I Landfill unit until the LTP became operational in 1987. Closure construction was completed in March 1989, and certification of closure was submitted on May 15, 1989. Acknowledgment of the closure certification was provided by the Department of Toxic Substances Control (DTSC) on June 12, 1991. The closed Class I Landfill unit is currently under a post-closure care and maintenance program. The first State hazardous waste facility permit for the LTP became effective June 30, 1987 and expired on June 30, 1992. BKK filed an application for a new permit and the 1987 permit is in effect until this Permit becomes effective.

**F. FACILITY SIZE AND TYPE FOR FEES**

This Permit addresses one large closed hazardous waste disposal unit (the closed Class I Landfill) and one large active permitted hazardous waste management unit (the operating LTP).

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Figure 1 is inserted here: Topography of Surrounding Area

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Figure 2 inserted here: Map showing boundaries of the three parcels

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Figure 3 inserted here: "Special Study Area" Map

**PART III. PERMITTED UNITS AND ACTIVITIES**

**A. INTRODUCTION**

This Permit authorizes operation only of the specific Facility units and activities listed below. Except for site-generated hazardous wastes managed under the California Code of Regulations, title 22, chapter 12, the Permittee shall not treat or store hazardous waste in any unit other than those specified in this Part III. The leachate extracted from the closed Class I Landfill unit, condensate from gas extracted from the closed Class I Landfill unit, and contaminated groundwater extracted from the underlying saturated units are considered to be regulated under this Permit.

**B. REGULATED UNIT DESCRIPTIONS: BKK CLASS I LANDFILL AND LEACHATE TREATMENT PLANT**

1. Descriptions are organized in three sections, which are entitled "Closed Class I Landfill," "Operational LTP," and "Operational Landfill Tanks." Units are presented within each section in the general order of material flow. The unit designations are original/historic, and this numbering often does not sequentially follow material flow (e.g., Tank 1 may not flow into Tank 2, which may not flow into Tank 3, which may not flow into Tank 4, etc.). The unit descriptions specify the immediate source of incoming material, as well as the immediate destination of outgoing material.
2. This Permit allows for the future expansion of the LTP unit to increase the treatment capacity as this becomes necessary to support post-closure care (including RCRA corrective action activities) of the closed Class I Landfill unit and ME-25 (air dryer). Future Tanks T10A and 11A (aeration tanks), ME-5A (clarifier tank), and unit ME-25A (air dryer) are included herein to accommodate that expansion. The Permit also allows for the future piping of landfill gas condensate, leachate and/or groundwater from existing sumps and tanks to the LTP as approved in writing by DTSC.
3. **Closed Class I Landfill Unit**
  - a. Unit Name: Closed Class I Landfill  
  
Location: Central southeastern portion of the Facility, located at 2210 South Azusa Avenue in West Covina, California.  
  
Activity Type: Closed Class I Landfill.

Operation/Status: Closed.

Activity Description: This is a closed landfill. It previously accepted both hazardous and nonhazardous wastes. Hazardous waste receipt, except for asbestos, ceased in 1984, and all other waste receipt ceased in 1987. The waste remains buried within the landfill.<sup>1</sup> The only activities being conducted at this unit are: post-closure monitoring; extraction of landfill gas, leachate, and groundwater (which may be contaminated); landfill fill gas condensate collection and flaring; inspection; maintenance; and RCRA corrective action. A network of groundwater monitoring wells is used to monitor groundwater around the unit. A network of extraction wells is used to remove leachate, landfill gas, landfill gas condensate (which may contain waste constituents), and groundwater (which may be contaminated) from the unit. Corrective action activities are currently being implemented by BKK under U.S. Environmental Protection Agency (U.S. EPA) oversight in accordance with Section 3008h Consent Order Docket Nos. RCRA 09-89-0019 and RCRA 09-2000-0003.

Physical Description: The closed Class I Landfill unit consists of approximately 195 acres of the Facility and contains mixed hazardous and nonhazardous wastes. Approximately 3.4 million tons of liquid and solid hazardous wastes were disposed at the closed Class I Landfill unit, when hazardous waste was reportedly accepted from 1972 to 1984. The closed Class I Landfill unit was placed directly on a bedrock surface exposed by excavation of the overlying weathered shale and sandstone. The solids were covered daily with soils or other material, thereby forming sequences of soil-bounded cells. The ponded liquids were placed by forming depressions within the solid waste, filling the depressions with liquids, then mixing in solids when the ponds stopped draining adequately. The 96 injection wells were drilled into the solid waste prism, but reportedly not into the natural geologic materials. The closed Class I Landfill unit was completed by placing municipal (Class III) waste on the flanks, and topping with a clay cover. The waste was placed in lifts with one foot (typical) of daily cover soil separating the wastes. Large lifts (up to 40 feet) of soil fill were added to certain waste decks and slopes upon cessation of waste receipt in order to shape the landfill for closure. An engineered, compacted earthen cap ( $\leq 10^{-7}$  cm/s permeability), a minimum of five feet thick, covers the entire unit. The cap is vegetated and is typically watered several times daily. A map associated with the closure certification, dated May, 1989, shows the closure boundary of the Class I landfill as well as the purported limits of Class I

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<sup>1</sup> Leachate, landfill gas, landfill gas condensate with waste constituents, and contaminated groundwater and other waste liquids derive from the buried wastes within the closed landfill. The waste liquids are managed in tanks, piping, etc. and elsewhere on-site at the LTP.

waste disposal. This map is Exhibit 6 of the Stipulated Permanent Injunction (SPI) and is also attached to the closure certification. However, in 2002 and 2003, BKK and DTSC discovered that some uncapped waste is outside the purported limits of the Class I disposal area in several locations. Some of this uncapped waste has been determined to be hazardous. DTSC is in the process of addressing this issue.

Maximum Capacity: There is no additional capacity because the Class I Landfill unit is closed.

Waste Source: There is no incoming waste to the closed Class I Landfill unit.<sup>2</sup>

Waste Type: Hazardous and nonhazardous solid and liquid wastes remain buried within the closed Class I Landfill unit. Also in the unit are: leachate, landfill gas that contains hazardous waste constituents, and landfill gas condensate that may contain waste constituents. Groundwater, which contains contaminants derived from the buried wastes, also lies within the perimeter of the landfill.

RCRA Hazardous Waste Codes: D001 through D017; F001 through F012, F019, and F039; K001 through K011, K013 through K043, K048 through K052, K060 through K062, K069, K071, K073, K083 through K087, and K093 through K106; P001, P020, P030, P050, P071, P090 through P092, and P108; U001, U002, U013, U019, U043, U044, U060, U061, U070 through U072, U112, U117, U123, U140, U151, U154, U188, U220, U226, U228 and U239. Note: other than for F039, these RCRA hazardous waste codes are estimates that were converted from State waste codes. The estimates are presented in Section V.A.1 and Appendix A of the "Operation Plan, BKK Sanitary Landfill, West Covina California (Lockman & Associates, August 1, 1983)."

#### **4. Operational Leachate Treatment Plant**

- a. Unit Name: Influent Equalization Tanks T-1, -2, -3, -4, -5 and -6.

Location: Within the Leachate Treatment Plant (LTP) adjoining the southwestern boundary of the closed Class I Landfill unit and southern boundary of the Class III Landfill unit.

Activity Type: Waste equalization.

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<sup>2</sup> When the landfill was open, the waste source was off-site commercial, industrial and residential generators.

Operation/Status: Operating/active.

Activity Description: These hazardous waste treatment tanks receive Class I and Class III Landfill leachate, landfill gas condensate that may contain waste constituents, contaminated liquids derived from previously disposed off-site hazardous waste and other liquids. The liquids are pumped, gravity-fed or transported via vacuum trucks from various locations around the site such as leachate and gas extraction wells, groundwater extraction wells, liquid sumps and gas condensate collection sumps to one or more of these six Influent Equalization Tanks where influent is collected and blended. After collection, liquids are pumped either to the Chemical Adjustment Tanks (Tanks T-9A and T-9B), or directly to the Aeration Tanks (Tanks T-10, T-11, T-10A and T-11A) for treatment. Mixing pumps for each Influent Equalization Tank mix the tank contents and minimize the settling of solids.

Physical Description: The tanks are aboveground, constructed of fiberglass reinforced plastic, and are approximately 12 feet in diameter and 24 feet in height. They have tank level indicators. The tanks are domed and operate at atmospheric pressure and temperature. Gases from the tanks are collected in an off-gas system and vented to flare stations.

Maximum Capacity: 22,000 gallons per tank; maximum LTP treatment flow rate of 100,000 gallons per day (gpd) measured at the exit from the Influent Equalization Tanks (future expansion allowable to 100,000 gpd).

Waste Source: Leachate and landfill gas extraction wells that remove previously disposed hazardous waste and hazardous waste constituents from the closed Class I Landfill unit and the inactive Class III Landfill unit; groundwater extraction wells; the LTP or Air Stripper Effluent Tank T-8 (e.g., for process control samples and recycled effluent that did not meet discharge requirements); secondary containment pads that may capture storm water, and water from retention basins that may contain waste or waste constituents; and, any other waste liquid sources related to post-closure care of the closed Class I landfill unit.

Waste Type: Class I and Class III Landfill leachate; landfill gas condensate (which may contain waste constituents); extracted groundwater (which may be contaminated); recycled effluent (from LTP or air strippers); storm water from the secondary containment pads and retention basins (which may contain waste constituents); and, other waste liquids related to post-closure care of the closed Class I landfill unit.

RCRA Hazardous Waste Code: F039 (applicable to the closed Class I Landfill unit leachate).

- b. Unit Name: Chemical Adjustment Tanks T-9A and T-9B.

Location: Within the LTP unit, near the southwestern boundary of the closed Class I Landfill unit.

Activity Type: Waste chemical adjustment.

Operation/Status: Operating/active/optional.

Activity Description: These hazardous waste treatment tanks may receive liquids from the Influent Equalization Tanks (Tanks T-1, -2, -3, -4, -5 and/or -6). Use of the Chemical Adjustment Tanks is optional. If used, ammonium hydroxide and phosphoric acid are added (as necessary) to waste liquids in Tanks T-9A and T-9B in order to supply nutrients for biological treatment at Tanks T-10, T-10A, T-11, T-11A. Waste liquids flow from the Chemical Adjustment Tanks by overflow drain line to the Aeration Tanks (Tanks T-10, T-11, T-10A and T-11A) for treatment. Waste liquids may bypass the Chemical Adjustment Tanks, and be pumped directly from the Influent Equalization Tanks to the Aeration Tanks for chemical addition within the Aeration Tanks. Either method of operation is acceptable.

Physical Description: The tanks are aboveground, located on platforms, constructed of fiberglass reinforced plastic, and are approximately four feet in diameter and five feet in height. The tanks are covered, and gases from the tanks are vented to the Aeration Tanks and from there to the flare gas system.

Maximum Capacity: 500 gallons per tank.

Waste Source: Influent Equalization Tanks.

Waste type: Waste liquids (see Influent Equalization Tanks).

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

- c. Unit Name: Aeration Tanks T-10 and T-11, and future aeration Tanks T-10A and T-11A.

Location: Within the LTP unit, near southwestern boundary of closed Class I Landfill unit.

Activity Type: Waste aeration and treatment.

Operation/Status: Operating/active.

Activity Description: These hazardous waste treatment tanks receive materials from the Chemical Adjustment Tanks (T-9A and -9B) or from the Influent Equalization Tanks (T-1, -2, -3, -4, -5 and -6). The Aeration Tanks combine biological treatment with a powdered activated carbon treatment system to enhance the removal of dissolved organic compounds and facilitate sludge settling. The average retention time is about 3 days. Two air blowers are utilized to meet the oxygen demand of the microorganisms and achieve proper mixing. The mixed liquor flows by gravity to the Clarifier Tanks (T-ME-5 and -ME-5A). After sludge settlement in the Clarifier Tanks, most of the thickened sludge is returned to the Aeration Tanks to maintain tank biomass.

Physical Description: The tanks are aboveground, constructed of bolted steel, and lined with coal tar epoxy coating. They are approximately 31 feet in diameter and 14 feet in side wall depth. The tanks have visual level indicators. The tanks are domed and operate at atmospheric pressure and temperature. Gases from the tanks are collected in an off-gas system and vented to flare stations.

Maximum Capacity: 83,000 gallons per tank.

Waste Source: Chemical Adjustment and/or Influent Equalization Tanks.

Waste type: Waste liquids (see Influent Equalization Tanks).

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

- d. Unit Name: Clarifier Tank T-ME-5 and future Tank T-ME-5A.

Location: Within the LTP unit, near the southwestern boundary of closed Class I Landfill unit.

Activity Type: Waste clarification.

Operation/Status: Operating/active.

Activity Description: The hazardous waste treatment tank receives mixed liquor from the Aeration Tanks (Tanks T-10, T-11, and future Tanks T-10A and T-11A). The Clarifier Tank (T-ME-5) separates the activated sludge solids from the supernatant effluent using a center feed, peripheral overflow system. Polymer may be added at the influent point to aid sludge settlement. Solids accumulate in the lower portion of the Clarifier Tank (T-ME-5), are scraped to a trough, and are pumped to the Aeration Tanks or Sludge Holding Tanks (T-18 and -19). Secondary effluent flows by gravity to the Effluent Holding Tanks (T-16 and -17). Floating material is skimmed from the surface of the Clarifier Tanks and is deposited in a scum trough which drains to the filtrate drainage sump. A second clarifier tank (i.e., future Tank T-ME-5A) may be added in parallel to the existing unit (Tank T-ME-5) for use as a stand-by unit or to enhance clarification.

Physical Description: The present tank is aboveground, constructed of steel and lined with coal tar epoxy coating. It is approximately 14 feet in diameter and 15 feet in side wall depth. The tank operates at atmospheric pressure and temperature. The future tank will have the same physical description.

Maximum Capacity: 18,100 gallons per tank.

Waste Source: Aeration Tanks.

Waste type: Waste liquids (see Influent Equalization Tanks).

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

- e. Unit Name: Sludge Holding Tanks T-18 and T-19.

Location: Within the LTP unit, near the southwestern boundary of the closed Class I Landfill unit.

Activity Type: Waste sludge storage.

Operation/Status: Operating/active.

Activity Description: These hazardous waste storage tanks receive waste sludge solids from the Clarifier Tank(s) (present T-ME-5 and future T-ME-5A). Sludge is stored to accumulate sufficient quantities for batch processing in the Filter Presses (ME-11 and -12).

Physical Description: The tanks are aboveground, constructed of welded steel, and are lined with coal tar epoxy coating. They are approximately ten feet in diameter and 17 feet in height. The tanks are roofed and operate at atmospheric pressure and temperature. The tanks have high-level switches which automatically shut off the feed pump when the tank is full. Gases from the tanks are collected in an off-gas system and vented to the flare stations.

Maximum Capacity: 10,500 gallons per tank.

Waste Source: Clarifier Tank(s).

Waste type: Waste liquids (see Influent Equalization Tanks).

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

f. Unit Name: Effluent Holding Tanks T-16 and T-17.

Location: Within the LTP unit, near the southwestern boundary of the closed Class I Landfill unit.

Activity Type: Waste storage.

Operation/Status: Operating/active.

Activity Description: These hazardous waste storage tanks receive treated effluent from the Clarifier Tank(s) (present T-ME-5 and future T-ME-5A) and/or the Air Stripper Effluent Tank (T-8). The Effluent Holding Tanks may be operated either in series or parallel. When operated in series, one tank is accumulating effluent and being tested while the other is pumped down. The effluent from the Effluent Holding Tanks (T-16 and T-17) is either used for dust control and irrigation, or recycled back to the Influent Equalization Tanks or the Air Stripper Influent Tank (T-7), depending on the results of the tests.

Physical Description: The tanks are aboveground, constructed of bolted steel and lined with coal tar epoxy coating. They are approximately 25 feet in diameter and 14 feet in height. The tanks have level indicators. In the future, another tank wall ring/section may be bolted to one or both tanks to add approximately 53 inches of additional wall height, thus providing roughly 16,000 gallons of additional capacity per tank.

Maximum Capacity: 54,000 gallons per tank.<sup>3</sup>

Waste Source: Clarifier Tank(s) or Air Stripper Effluent Tank.

Waste type: Waste liquids (see Influent Equalization Tanks).

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

g. Unit Name: Future Filter Presses ME-11 and ME-12.

Location: Within the LTP unit, near the southwestern boundary of the closed Class I Landfill unit.

Activity Type: Waste dewatering by filtration.

Operation/Status: Will be authorized to be operating/active upon the effective date of this Permit.

Activity Description: These hazardous waste treatment units receive sludge from the Sludge Holding Tanks (T-18 and -19) for batch processing. Pressurization causes liquids to flow from behind the filter cloth through the filter ports in the plate, leaving dewatered sludge behind on the filter cloths. Liquids which pass through these filter presses are returned to the Influent Equalization Tanks (T-1, -2, -3, -4, -5 and -6), while the dewatered sludge is transferred to the Air Dryers (ME-25 and future ME-25A) for further dewatering, or dropped into roll-off bins for accumulation and storage. Once in the bins, the dewatered sludge is staged for off-site transport.

Physical Description: The presses are aboveground, constructed of steel, and have approximate dimensions of 15 by six by seven feet in height. The structure holds large frames which support recessed chamber-type plates. The plate-and-frame filters form 40 chambers within the press.

Maximum Capacity: 21.5 cubic feet per press.

Waste Source: Sludge Holding Tanks.

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<sup>3</sup> Another wall section bolted onto these tanks would add roughly 16,000 gallons of additional capacity per tank, for a total maximum capacity of approximately 70,000 gallons per tank.

Waste Type: Sludge from treatment of waste liquids (see Influent Equalization Tanks).

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

- h. Unit Name: Future Air Dryer ME-25 and future Air Dryer ME-25A.

Location: Within the LTP unit, near the southwestern boundary of the closed Class I Landfill unit.

Activity Type: Waste dewatering by enhanced air drying.

Operation/Status: Will be authorized to be operating/active/optional upon the effective date of this Permit.

Activity Description: The Air Dryer (ME-25) further processes dewatered sludge that has been processed in the Filter Presses (ME-11 and -12). The air dryer receives filter cake from the Filter Presses (and/or from roll-off bins), and passes and recirculates ambient air through the filter cake. Through evaporation, the recirculating air picks up water vapor from the filter cake, thereby providing additional dewatering. The humid air coming off the filter cake passes through the dehumidifier unit, wherein liquids are knocked out of the air and returned to the Influent Equalization Tanks (T-1, -2, -3, -4, -5 and -6), and the dehumidified air is recirculated through the air dryer. After processing in the Air Dryer (ME-25 and future 25A), filter cake is placed in roll-off bins wherein the material is staged for off-site transport. A second Air Dryer (i.e. future ME-25A) may be added in the future.

Physical Description: The air dryers are aboveground, constructed of steel, and have approximate dimensions of five by five by three feet in height. They are connected by ducting to an accompanying dehumidifier unit.

Maximum Capacity: 39 cubic feet per Air Dryer unit.

Waste Source: Filter Press and/or roll-off bins.

Waste Type: Dewatered sludge from waste liquids (see Influent Equalization Tanks).

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

- i. Unit Name: Hazardous Waste Roll-Off Bins.<sup>4</sup>

Location: Within or adjacent to the LTP unit, near the southwestern boundary of the closed Class I Landfill unit, or adjacent to Flare Station No. 1 near the northeastern boundary of the closed Class I Landfill unit.

Activity Type: Waste storage.

Operation/Status: Operating/active.

Activity Description: These hazardous waste storage containers accumulate dewatered sludge while the bins are staged underneath the Filter Presses. The roll-off bins may also receive further-dewatered sludge from the Air Dryers (ME-25 and -25A). After sludge accumulation, the bins are staged at specified locations while awaiting subsequent off-site transport to an appropriate waste management facility.

Physical Description: The bins are aboveground, constructed of steel, and have approximate dimensions of eight feet wide by 22 or 24 feet long by five feet in height (dimensions may vary).<sup>5</sup> The bins are typically provided by the Permittee's waste hauling contractor(s) and must be Department of Transportation-approved when in the cycle of transportation on off-site roads. Up to two bins are located underneath the Filter Presses while accumulating dewatered sludge. Up to ten (10) roll-off bins of dewatered sludge may be in use at any one time.

Maximum Capacity: 21 cubic yards per bin.<sup>6</sup>

Waste Source: Filter Presses and/or Air Dryer.

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<sup>4</sup> The roll-off bins described herein are those associated with the LTP that contain dewatered sludge wastes. Other roll-off bins may also be used on site for other waste types. These other waste types are site-generated wastes such as drill cuttings, oily rags and debris, landscape trimmings, etc. If hazardous, site-generated wastes are regulated under the "generator" regulations at 22 CCR 66262 and, as such, are not addressed in this permit issued pursuant to 22 CCR 66264.

<sup>5</sup> Other bin sizes may be used, such as 30- and 40-cubic-yard bins, which have the same approximate base dimensions (i.e., eight by 22 or 24 feet) but have taller height dimensions.

<sup>6</sup> Other bin sizes may be used, such as 30- and 40-cubic-yard bins. The maximum capacity for these bins are 32 and 42 cubic yards per bin, respectively.

Waste Type: Dewatered sludge from waste liquids (see Influent Equalization Tanks).

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

j. Unit Name: Air Stripper Influent Tank T-7.

Location: Within the LTP unit, near the southwestern boundary of the closed Class I Landfill unit.

Activity type: Waste storage.

Operation/Status: Operating/active.

Activity Description: This tank receives waste liquids for subsequent treatment in the Air Stripper Towers. The liquids are pumped from various locations around the site such as groundwater extraction wells, gas wells and gas condensate collection sumps, leachate sumps, Effluent Holding Tanks (T-16 and -17) and other liquid sources. Accumulated liquids are subsequently treated in the Air Stripper Towers.

Physical Description: The tank is aboveground and is constructed of fiberglass-reinforced plastic. It is approximately six feet in diameter and 12 feet in height. The tank has low- and high-level switches that activate and deactivate pumps and blowers for operation of the Air Stripper Towers (ME-1 and -2). The tank also has a high-high level switch which activates an alarm in case of overflow threat. Gas from the tank is collected in an off-gas system and vented to flare stations.

Maximum Capacity: 2,650 gallons.

Waste Source: Groundwater extraction wells; inactive Class III Landfill unit leachate and landfill gas extraction wells; closed Class I Landfill unit leachate and landfill gas extraction wells; the LTP and/or air stripper units (recycled effluent if it warrants further treatment); secondary containment pads; and, retention basins (potentially contaminated surface run-off water).

Waste Type: Waste liquids (see LTP Influent Equalization Tanks).

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

- k. Unit Name: Air Stripper Towers A and B (ME-1 and ME-2).

Location: Within the LTP unit, near the southwestern boundary of the closed Class I Landfill unit.

Activity type: Air stripping of liquids.

Operation/Status: Operating/active.

Activity Description: The air stripping process is a counter-current flow, air/liquid extraction process in which relatively large volumes of air are forced upward through a packed tower. The tower is packed with two to three inch diameter, perforated, plastic balls. Influent waste liquids are pumped to the top of the towers and allowed to flow downward by gravity through the upward stream of air. The packing within the towers causes the influent waste liquids to form films and droplets with large surface areas which are exposed to the air flow. Volatile contaminants dissolved in the liquids are then vaporized into the air and collected through the top of the towers. Gases from the top of the tower are transported through an off-gas blower system to flare stations. Stripped liquids are removed to the Air Stripper Effluent Tank (T-8).

Physical Description: The towers are aboveground, constructed of carbon steel, and are approximately two feet in diameter and 27 feet in height. Tower packing is piled on a grating installed at the four-foot level within each tower, with the top of the packing bed located at the 24-foot level within each tower. Gases from the tower are collected in an off-gas system and vented to flare stations. The design flow rate for each of the two air stripper towers is 108,000 gpd.

Maximum Capacity: 670 gallons per tower.

Waste Source: Air Stripper Influent Tank (T-7).

Waste Type: Waste liquids (see LTP Influent Equalization Tanks).

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

- l. Unit Name: Air Stripper Effluent Tank T-8.

Location: Within the LTP unit, near the southwestern boundary of the closed Class I Landfill unit.

Activity Type: Waste storage.

Operation/Status: Operating/active.

Activity Description: This tank receives air-stripped liquids that have been processed through the Air Stripper Towers (ME-1 and -2). Treated liquids are used on site for irrigation and dust control. If further treatment is necessary prior to on-site use, treated liquids are recycled back through Air Stripper Towers or processed through the LTP unit.

Physical Description: The tank is aboveground and is constructed of fiberglass-reinforced plastic. It is approximately seven feet in diameter and four feet in height. Gas from the tank (if any exists after air-stripping) is collected in an off-gas system and vented to flare stations.

Maximum Capacity: 1,200 gallons.

Waste Source: Air Stripper Towers.

Waste Type: Waste liquids (see LTP Influent Equalization Tanks).

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

## 5. **Operational Landfill Tanks**

a. Unit Name: Nogales Sump.

Location: Southeast side of the closed Class I Landfill unit, below A Bench.

Activity Type: Waste storage.

Operation/Status: Operating/active.

Activity Description: The tank collects leachate, landfill gas condensate, which may contain waste constituents, and extracted groundwater (generally from A Bench and lower elevations) from the closed Class I Landfill unit. It contains a pump that discharges liquids to the LTP unit via pipes.

Physical Description: The tank is aboveground, constructed of double-walled fiberglass-reinforced plastic. Its approximate dimensions are five feet in diameter by ten feet in length. It is set on a concrete slab base with concrete

block walls. The tank vent is connected to the gas header. Collected liquids are pumped to the LTP unit.

Maximum Capacity: 1,600 gallons.

Waste Source: Closed Class I Landfill unit leachate and landfill gas collection wells; and, extraction wells for groundwater.

Waste Type: Leachate; landfill gas condensate, which may contain waste constituents; and/or, extracted groundwater.

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

b. Unit Name: GP200 Sump.

Location: Southeast side of the closed Class I Landfill unit, below A Bench.

Activity Type: Waste storage.

Operation/Status: Operating/active.

Activity Description: The tank collects gas condensate from the perimeter collection line. Collected liquids in the tank are pumped out and transported to the LTP unit.

Physical Description: The tank is aboveground, single-walled polyvinyl chloride. Its approximate dimensions are two feet in diameter by 11 feet in length. It is set within a half-round corrugated pipe with end caps for secondary containment, on a concrete slab. The tank vent is connected to the gas header. Collected liquids in the tank are pumped out.

Maximum Capacity: 270 gallons.

Waste Source: Perimeter gas extraction wells in the closed Class I Landfill unit.

Waste Type: Landfill gas condensate, that may contain waste constituents, extracted from the closed Class I Landfill unit.

RCRA Hazardous Waste Code: No RCRA code precisely applies.

c. Unit Name: GP400 Sump.

Location: Southwest side of the closed Class I Landfill unit.

Activity Type: Waste storage.

Operation/Status: Operating/active.

Activity Description: The tank collects landfill gas condensate from the perimeter collection line. Liquids in the tank are pumped out and transported to the LTP.

Physical Description: The tank is aboveground, constructed of single-walled polyvinyl chloride. Its approximate dimensions are two feet in diameter by 11 feet in length. It is set within a half-round corrugated pipe with end caps for secondary containment, on a compacted earth slab. The tank vent is connected to the gas header. Collected liquids are pumped out.

Maximum Capacity: 270 gallons.

Waste Source: Perimeter gas extraction wells in the closed Class I Landfill unit.

Waste Type: Landfill gas condensate, which may contain waste constituents, from gases extracted from the closed Class I Landfill unit.

RCRA Hazardous Waste Code: No RCRA code precisely applies.

d. Unit Name: North Access Road Sump 2.

Location: West side of the closed Class I Landfill unit, on North Haul Road.

Activity Type: Waste storage.

Operation/Status: Operating/active.

Activity Description: The tank collects leachate, landfill gas condensate, which may contain waste constituents, from the closed Class I and inactive Class III Landfill units, and extracted contaminated groundwater. It contains a pump which discharges liquids to the LTP via pipe.

Physical Description: The tank is double-walled fiberglass-reinforced plastic, approximately five feet in diameter by ten feet in length, and buried underground. The tank vent is connected to the gas header. Collected liquids are pumped to the LTP.

Maximum Capacity: 1,500 gallons.

Waste Source: Closed Class I Landfill unit, inactive Class III Landfill unit leachate and landfill gas extraction wells; and, groundwater extraction wells.

Waste Type: Leachate, landfill gas condensate, which may contain waste constituents, from the closed Class I Landfill and inactive Class III Landfill units, and/or extracted contaminated groundwater.

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

e. Unit Name: North Access Road Sump 1.

Location: West side of the closed Class I Landfill unit, on the North Haul Road.

Activity Type: Waste storage.

Operation/Status: Operating/active.

Activity Description: The tank collects leachate and landfill gas condensate, which may contain waste constituents, from the closed Class I and inactive Class III Landfill units, and extracted contaminated ground- water from the Class I Landfill unit. It contains a pump that transfers liquids to the LTP via pipe.

Physical Description: The tank is double-walled fiberglass-reinforced plastic. Approximate dimensions are six feet in diameter by 60 feet in length. It is installed vertically underground, with the top end set approximately flush with the ground surface. The tank vent is connected to the gas header. It contains a pump that is used to transfer collected liquids.

Maximum Capacity: 13,000 gallons.

Waste Source: Closed Class I Landfill unit, inactive Class III Landfill unit leachate and landfill gas extraction wells; and, groundwater extraction wells.

Waste Type: Leachate, landfill gas condensate, which may contain waste constituents from leachate from the closed Class I and the inactive Class III Landfill units, and/or extracted contaminated groundwater.

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

f. Unit Name: Leachate Transfer Tanks A and B.

Location: Northeast of the LTP unit, by Barrier 1.

Activity Type: Waste storage.

Operation/Status: Operating/active.

Activity Description: The tanks collect leachate and landfill gas condensate, which may contain waste constituents, from the Class I and III Landfill units, ground water from the Barrier 1 extraction wells (which may be contaminated), and some surface water, which may contain waste constituents, from the drainage basins. The tanks have pumps that transfer liquids to the LTP via pipe.

Physical Description: The tanks are aboveground, constructed of cross-link polyethylene. Their approximate dimensions are 7½ feet in diameter by 11½ feet in height. They have cone bottoms, are supported by steel frames, and are set within concrete vaults. The tank vents are connected to the gas header. The tanks have pumps that are used to transfer collected liquids.

Maximum Capacity: 2,700 gallons per tank.

Waste Source: Closed Class I Landfill unit and inactive Class III Landfill unit leachate and landfill gas extraction wells; groundwater extraction wells; surface water detention basins; V-1/V-2 Drop Tank; and, Flare Station Knockout Tank V-3.

Waste Type: Leachate, landfill gas condensate, which may contain waste constituents from the closed Class I and inactive Class III Landfill units, contaminated ground water and surface water from retention basins, which may contain waste constituents.

RCRA Hazardous Waste Code: F039 (applicable to the Class I Landfill unit leachate).

g. Unit Name: Flare Station Knockout Tank V-1.

Location: At Flare Station No. 2, at the inlet from interior gas system.

Activity Type: Waste storage.

Operation/Status: Operating/active.

Activity Description: The tank removes condensate, which may contain waste constituents, from landfill gas in the header in front of Flare Station No. 2. Collected liquids drain to the V-1/V-2 Drop Tank and from there they are transferred by pump to the LTP unit.

Physical Description: The tank is aboveground, constructed of single-walled fiberglass-reinforced plastic. Its approximate dimensions are six feet in diameter by ten feet in length. It is set within a concrete vault. The tank vent is connected to Flare Station No. 2.

Maximum Capacity: 2,200 gallons.

Waste Source: Closed Class I Landfill and inactive Class III Landfill gas extraction wells.

Waste Type: Landfill gas condensate, which may contain waste constituents, from the closed Class I Landfill and inactive Class III Landfill units.

RCRA Hazardous Waste Code: No RCRA code precisely applies.

h. Unit Name: Flare Station Knockout Tank V-2.

Location: At Flare Station No. 2, at the inlet from interior gas system.

Activity Type: Waste storage.

Operation/Status: Operating/active.

Activity Description: The tank removes condensate, which may contain waste constituents, from landfill gas in the header in front of Flare Station No. 2. Collected liquids drain to the V-1/V-2 Drop Tank and from there they are pumped to the LTP unit.

Physical Description: The tank is aboveground, single-walled fiberglass-reinforced plastic. Its approximate dimensions are four feet in diameter by five feet in length. It is set within a concrete vault. The tank is connected by pipe to the V1/V2 Drop Tank. The tank vent is connected to Flare Station No. 2.

Maximum Capacity: 525 gallons.

Waste Source: Closed Class I Landfill and inactive Class III Landfill gas extraction wells.

Waste Type: Landfill gas condensate, which may contain waste constituents, from the closed Class I Landfill and inactive Class III Landfill units.

RCRA Hazardous Waste Code: No RCRA code precisely applies.

i. Unit Name: Flare Station Knockout Tank V-3.

Location: At Flare Station No. 2, at the outlet from the flare station.

Activity Type: Waste storage.

Operation/Status: Operating/active.

Activity Description: The tank removes gas condensate, which may contain waste constituents, from landfill gas in the header in front of the electrical power plant facility. Collected liquids (if any) are pumped to Leachate Transfer Tanks A and B via pipe.

Physical Description: The tank is aboveground and is constructed of single-walled fiberglass-reinforced plastic. Its approximate dimensions are three feet in diameter by 52 inches in length. The tank is set within a concrete vault. The tank vent is connected to Flare Station No. 2.

Maximum Capacity: 240 gallons.

Waste Source: Closed Class I Landfill and inactive Class III Landfill units gas extraction wells.

Waste Type: Landfill gas condensate, which may contain waste constituents, from the closed Class I Landfill and inactive Class III Landfill units.

RCRA Hazardous Waste Code: No RCRA code precisely applies.

j. Unit Name: V-1/V-2 Drop Tank.

Location: At Flare Station No. 2, at the inlet from the gas system.

Activity Type: Waste storage.

Operation/Status: Operating/active.

Activity Description: The tank collects drained landfill gas condensate, which may contain waste constituents, by pipe from Flare Station Knockout Tanks V-1 and V-2. Collected liquids are pumped to Leachate Transfer Tanks A and B via pipe.

Physical Description: The tank is aboveground and is constructed of single-walled fiberglass-reinforced plastic. Its approximate dimensions are two feet in diameter by seven feet in length. The tank is set within a concrete vault. The tank is connected to the Flare Station Knockout Tanks V1 and V2 and to Leachate Transfer Tanks A and B by pipe. The tank vent is connected to the gas header.

Maximum Capacity: 170 gallons.

Waste Source: Flare Station Knockout Tanks V-1 and V-2.

Waste Type: Landfill gas condensate, which may contain waste constituents, from the closed Class I Landfill and inactive Class III Landfill units.

RCRA Hazardous Waste Code: No RCRA code precisely applies.

#### **PART IV. GENERAL CONDITIONS**

##### **A. PERMIT APPLICATION DOCUMENTS**

1. The permit application documents are the "Operation Plan" and "Operation /Post-Closure Plan" as defined in Part I.B.7. of this Permit, incorporated herein by reference.

##### **B. EFFECT OF PERMIT**

###### **1. General**

- a. The Permittee shall comply with the provisions of division 20 of the California Health and Safety Code, and division 4.5 of California Code of Regulations,

title 22. No specific reference or citation used in this Permit shall be construed as excluding compliance with provisions of the Health and Safety Code or the California Code of Regulations, title 22. The issuance of this Permit by DTSC does not release the Permittee from any liability or duty imposed by federal or state statutes or regulations or local ordinances, except the obligation to obtain this Permit. The Permittee shall obtain and comply with the permits required by other governmental agencies, at the Federal, State and local levels under all applicable laws, including, but not limited to, the applicable land use planning, zoning, hazardous waste, air quality, water quality, and solid waste management laws for the construction and/or operation of the Facility.

- b. The Permittee is permitted to treat and store hazardous waste leachate generated by the closed Class I Landfill unit, waste materials that result from post-closure operations in accordance with the conditions of this Permit and leachate and waste materials generated by other portions of the Facility. Treatment of leachate and waste materials from sources other than the closed Class I Landfill unit shall not interfere with or prevent treatment of leachate and other waste materials from Class I Landfill post-closure care operations and shall not interfere with or prevent the Permittee's compliance with this Permit. The Permittee is permitted to perform the post-closure care activities at the closed Class I Landfill unit for which a permit is required in accordance with plans and specifications approved by DTSC. Other than for site-generated hazardous wastes managed under the California Code of Regulations title 22, chapter 12, any hazardous waste management activities at this Facility not specifically authorized in this Permit are strictly prohibited.
- c. By the issuance of this Permit, the permit application documents identified in Section A above are hereby approved subject to the conditions of this Permit. These permit application documents and any subsequent revisions thereto that have received written approval from DTSC, are incorporated by reference into this Permit and are hereafter referred to as the Operation Plan or the Operation/Post-Closure Plan.
- d. The Permittee shall operate and maintain the LTP unit and perform post-closure care activities at the closed Class I Landfill unit in accordance with the Operation Plan and subsequent revisions, unless otherwise specifically stated elsewhere in this Permit. In the event of any conflict between this Permit and the Operation Plan referenced herein, the more stringent (protective) provisions, as determined by DTSC, shall control.
- e. Compliance with the terms of this Permit does not constitute a defense to any action brought under any other law governing protection of public health or the

environment, including, but not limited, to one brought for any imminent and substantial endangerment to human health or the environment.

- f. DTSC's issuance of this Permit does not prevent DTSC from adopting or amending regulations that impose additional or more stringent requirements than those in existence at the time this Permit is issued and does not prevent the enforcement of these requirements against the Permittee. If DTSC adopts new or amends existing regulations that conflict with regulations that are specifically cited or referenced in the conditions of this Permit, the Permittee shall comply with the applicable new and/or amended regulations unless and until DTSC modifies the Permit accordingly.
- g. Failure to comply with any term or condition set forth in this Permit in the time or manner specified herein will subject the Permittee to possible enforcement action and penalties pursuant to the Health and Safety Code, section 25187.
- h. In addition, failure to submit any information required in connection with the Permit, or falsification and/or misrepresentation of any submitted information, is grounds for termination of the Permit. [Title 22 CCR, §66270.43]
- i. The conditions of California Code of Regulations, title 22, section 66270.30 (Conditions Applicable to All Permits) are incorporated herein. Specific citations to examples of appropriate regulations are as follows: section 66270.30, subsections (a) Duty to comply; (b) Duty to reapply; (c) Need to halt or reduce activity not a defense; (d) Event of noncompliance; (e) Proper operation and maintenance; (f) Permit actions; (g) Property rights; (h) Duty to provide information; (i) (1) through (4) Inspection and entry; (j) (1) through (3) Monitoring and records; (k) Signatory requirements; (l) (1) through (11) Reporting requirements; and (m) Information repository.

## **2. Land Disposal Requirements**

The Permittee shall comply with applicable provisions of the land disposal restrictions found in the California Code of Regulations, title 22, chapter 18, section 66264.73(b)(16).

## **C. COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)**

A mitigated negative declaration has been prepared in accordance with the requirements of Public Resources Code, section 21000 *et seq.* and the Guidelines, section 15070 *et seq.* of the California Code of Regulations, title 14.

**D. CLASS I LANDFILL POST-CLOSURE ENVIRONMENTAL MONITORING**

**1. Air Monitoring**

- a. California Code of Regulations, title 22, section 66270.14(c)(6)(B) requires the Permittee to establish detection monitoring programs for all media, including air. Section 66264.701(a) requires the Permittee to conduct a monitoring and response program for air for the regulated unit. Air monitoring requirements for the closed Class I Landfill unit portion of the Facility are contained in the Permittee's Rule 1150.1 Compliance Plan from the South Coast Air Quality Management District (SCAQMD), and all subsequent revisions thereto. The Compliance Plan and all subsequent revisions thereto are fully incorporated by reference into the environmental monitoring requirements of this part of the Permit. Exhibit 3.3.1-1 to the Operation Plan shall contain the Compliance Plan and all subsequent revisions thereto.
- b. In addition to sampling requirements specified in the Permittee's SCAQMD Rule 1150.1 Compliance Plan, and all subsequent revisions thereto, the Permittee must also monitor for vinyl chloride on a bimonthly (every other month) basis at the "Nogales End" (Sampling Site 3) and "Nogales North of Amar" (Sampling Site 11) stations, and on a semi-annual basis at the Microwave Tower (Sampling Site 1) and Azusa Spillway (Sampling site 2) stations [sampling site numbers as described in "Ambient Air Sampling Plan, BKK Landfill, West Covina, California," final approved version dated October 7, 1994]. Sampling shall be scheduled such that every third bimonthly station sampling event shall coincide with a semi-annual station sampling event. Sampling procedures and analytical protocols shall be in accordance with those described in the "Ambient Air Sampling Plan, BKK Landfill, West Covina, California," final SCAQMD approved version dated October 7, 1994. This document shall be included as an exhibit to the Operation Plan, within ninety (90) calendar days after the effective date of this Permit.
- c. Within one hundred twenty (120) calendar days after the effective date of a permit modification that requires air monitoring for vinyl chloride at stations in addition to those listed in Part IV.D.1.b of this Permit, the Permittee shall submit to DTSC, for review and approval, an Air Monitoring and Response Plan (AMRP) for the additional stations. This AMRP shall incorporate sampling procedures and analytical protocols that are in accordance with those described in the "Ambient Air Sampling Plan, BKK Landfill, West Covina,

California," final SCAQMD approved version dated October 7, 1994. This AMRP shall be included as an exhibit to the Operation Plan.

- d. DTSC will review the requirements cited in Part IV.D.1.b of this Permit for consistency with the corrective action air remedy to be selected by U.S. EPA. DTSC may require this Permit to be modified if new information becomes available upon selection of the U.S. EPA remedy or prior to U.S.EPA's selection of the air remedy that indicates additional analytical parameters and/or air monitoring stations are necessary to ensure protection of human health and the environment.

## **2. Groundwater Monitoring**

### **a. Background**

- (1) Groundwater contamination at the Class I Landfill unit has resulted from using an unlined landfill, mixing liquids with solid waste, ponding of liquid wastes within the waste prism and using liquid disposal wells in the waste prism.
- (2) Data regarding the extent, constituents, and concentrations of constituents within contaminant plumes, and information on rates of plume movement within the shallow portions of the dipping saturated permeable bedrock units have been presented in a number of documents, including the 1988 Site Assessment and Mitigation Work Plan, Book 1 ("SAM Work Plan") (ESI, 1988), the Phase II Hydrogeological Report, which was included in the 1990 "Book I Hydrogeologic Site Characterization (Todd, 1990), the 1993 to 1997 Phase IV Interim Reports, the 1994 to 1996 Interim Remedial Measures Study ("IRMS") Progress Reports, and the 1997 RCRA Facility Investigation ("RFI") - Groundwater Report (Janes Network, 1997) and the "BKK Corporation Response to Agency Comment on Various Groundwater Remediation Reports for the BKK Landfill Site" (BKK, 1998). The RFI - Groundwater Report provides summary detail of the hydrogeology and geochemistry on an area-by-area basis.
- (3) The direction and rate of contaminant migration appears to be highly dependent upon the geologic structure and the lithology. Groundwater and dissolved contaminants appear to move preferentially along the dipping saturated permeable sandstone beds and appear to be at least partially constrained by dipping finer-grained interbeds. The closed Class I Landfill unit liquids (estimated at 500,000,000 gallons;

equivalent to 1,535 acre-feet) may influence groundwater and dissolved contaminant migration, at least within a few hundred feet of the landfill.

- (4) The vertical extent of contamination in a specific dipping permeable saturated bedrock layer of the uppermost aquifer cannot be determined by a well(s) emplaced in an adjacent layer if that layer is made either fully or partially hydrologically discrete by an intervening impermeable or semi-permeable fine-grained layer. Resolution of the remaining questions regarding the vertical extent of contamination in the dipping permeable saturated bedrock layers that comprise the uppermost saturated zone is necessary.
- (5) *Detection Monitoring:* Those portions of the Facility where release(s) have not been detected, where release(s) of additional constituents-of-concern are threatened, or where a new release(s) of already detected constituents-of-concern are threatened, are subject to detection monitoring. [Title 22 CCR §66264.98 ]
- (6) *Evaluation Monitoring:* Those portions of the Facility where the nature and extent of contamination has not been adequately investigated shall be subject to evaluation monitoring. Due to the complexities of the hydrostratigraphy or the physical constraints imposed by the existence of the adjacent inactive Class III Landfill unit, the extent of groundwater contamination in some areas is not fully delineated, especially with regard to the vertical extent of contamination in the dipping saturated permeable bedrock layers. [Title 22 CCR §66264.99 ]
- (7) *Corrective Action Monitoring:* The United States Environmental Protection Agency (U.S. EPA) is lead agency on corrective action under a section 3008(h) order. Groundwater characterization work performed at the perimeter of the Facility and surrounding areas pursuant to that order has progressed to a point enabling selection of a groundwater remedy. However, those portions of the Facility where some remediation is being performed subject to the Stipulated Permanent Injunction (SPI), to which DTSC is a party, described in Part V.B.7 of this Permit, are subject to corrective action monitoring under this Permit as long as the SPI remains in effect. The SPI also contains conditions that otherwise require the Permittee to design and implement additional measures to prevent further contamination beyond the closed Class I Landfill unit boundary. [Title 22 CCR §66264.100]

**b. General Monitoring and Response Program Requirements**

- (1) The LARWQCB adopted Monitoring and Reporting Program No. 7737 ("MRP") in conjunction with Waste Discharge Requirements (WDRs) under Order 87-039 for BKK Corporation in 1996. These WDRs were revised on February 18, 1998. Within ninety (90) calendar days after the effective date of this Permit, the Permittee shall add all the current WDRs, and any subsequent revisions thereto, to the Operation/Post Closure Plan as exhibits. The WDRs are incorporated herein by reference. [Title 22 CCR §§66270.1(d), 66270.13(k)(9), 66270.14(b)(19), and 66270.32(b)(2)]
  
- (2) Within one hundred twenty (120) calendar days after the effective date of this Permit, the Permittee shall submit a Groundwater Quality Monitoring and Response Plan ("GWMRP") for DTSC review and approval, which shall encompass the requirements of the California Code of Regulations, title 22, chapter 14, article 6. The GWMRP shall replace Exhibit 3.4.1-1 (Sampling and Analysis Plan, Groundwater Monitoring Programs) of the Operation/Post-Closure Plan. It shall specifically provide the following: the methodologies for well and piezometer construction, including design, drilling, materials and installation, well development, and well decommissioning, which have been previously reviewed and approved by U.S. EPA and DTSC as part of the RFI Work Plan for "Additional Off-Site Hydrogeologic Studies" (Phase IV), Exhibit I, "Field Manual for Soil Boring and Monitoring Well Drilling, Installation, and Abandonment," the statistical methodologies described in the 1993 RFI Work Plan (Phase IV), Exhibit E, "Statistical Evaluation of Southeast Groundwater Data to Determine Extent of Contamination;" proposed amendments to the statistical methodology including use of intra-well statistics; sample acquisition, preservation, transport, chain-of-custody methodologies which have been described in the "Sampling and Analysis Plan, Groundwater Monitoring Programs" previously included as Exhibit 3.4.1-1 of the Operation Plan; guidance for water level measurement, well purging, sampling, packaging and preserving, chain-of-custody, and analysis of groundwater samples described in the RFI Work Plan (Phase IV), Exhibit A, "Sampling and Analysis Plan, Southeast Area Groundwater Monitoring Program," which had been previously adopted by BKK and DTSC as the site-wide sampling and analysis plan; and, specific reporting, constituent, sampling and analysis, monitoring well requirements of the 1996 MRP No. 7737, the 1998 revision, and any subsequent revisions thereto. If, in preparation of the GWMRP, the Permittee desires to use requirements or standards that are different than those in these documents referenced above, or to

submit modified versions of the documents, the Permittee must obtain written approval of the changes from DTSC. DTSC may approve, approve with conditions or modifications, or deny the proposed changes. The above cited documents and standards and requirements contained in them remain in effect until DTSC provides written approval of changes. [Title 22 CCR §§66264.91(b), 66264.97(b), 66270.14(b)(6) and (7), 66270.14(b)(19), 66270.32(b)(2)]

- (3) This Permit contains conditions in Part IV.D.2. that may require additional monitoring locations to meet the requirements in the California Code of Regulations, title 22, section 66264.90, *et seq.* and the SPI. If DTSC or the Permittee determine that additional wells or piezometers are necessary, the Permittee shall comply with the submittal and other requirements of Part IV.D.2.o(1) of this Permit. [Title 22 CCR §§ 66264.98(l) and (m), 66264.99(h) and (i), and 66264.100(i) and (j), 66270.32(b)(2), 66270.41, 66270.42, and Chapter 20, Appendix I]
- (4) The Permittee shall comply with the results and recommendations of Comprehensive Monitoring Evaluations conducted by DTSC. [Title 22 CCR § 66270.32(b)(2)]
- (5) Within two hundred seventy (270) calendar days after the effective date of this Permit, the Permittee shall submit a report containing cross-sections for those wells specified in this Permit for the groundwater monitoring program, developed from the best data available for them, including other wells, lithologic, and structural data in their vicinity not specifically called out in this Permit. This report shall specifically address the adequacy of individual existing paired wells and cluster wells to monitor: (a) flow along- and cross-strike or flow down and cross-dip within the dipping saturated permeable layers (postulated by BKK in the 1997 “RCRA Facility Investigation-Groundwater” report (RFI Report)<sup>7</sup> submitted to U.S. EPA), and (b) probable migration of dissolved phase or dense non-aqueous phase liquid (DNAPL) contaminants down- or cross-dip within those layers. [Title 22 CCR §§ 66270.14(b)(19) and 66270.32(b)(2)]

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<sup>7</sup> This RFI Report did not contain those detailed cross-sections of the dipping bedrock units at the various monitoring well locations necessary to assure that these existing wells can serve to fully meet the requirements of detection, evaluation, and corrective action monitoring programs in the California Code of Regulations, title 22, sections 66264.98, 66264.99, and 66264.100.

- (6) It is expected that the detection, evaluation and corrective action monitoring and response programs will be affected by new data and that the GWMRP will need to be changed periodically to take advantage of updated information about movement and control of landfill liquids and contaminated groundwater. The Permittee shall submit any revisions to the GWMRP based on this information to DTSC in accordance with the submittal and other requirements of Part IV.D.2.o(1) of this Permit. [Title 22 CCR §§66264.98(l) and (m), 66264.99(h) and (i), and 66264.100(i) and (j), 66270.41, 66270.42, 66270.32(b)(2), and Title 22 CCR Chapter 20, Appendix I]
- (7) Within ninety (90) calendar days after the effective date of this Permit, the Permittee shall revise Appendix C of Exhibit 3.4.1-1 of the Operation Plan to specify the length of time that purge water remains in containers at the well head. [Title 22 CCR §§66264.97(e)(4)(A), 66270.14(b)(19) and 66270.32(b)(2)]
- (8) Within ninety (90) calendar days after the effective date of this Permit, the Permittee shall revise section 5.1 of Exhibit 3.4.1-1 of the Operation Plan to specify that wells will not be pumped dry under any circumstances where volatile organic compounds are constituents of concern (COCs) and to provide protocols to assure sampling in low flow wells produces representative samples. [Title 22 CCR §§264.97(e)(4)(A), 66270.14(b)(19), and 66270.32(b)(2)]

**c. Groundwater Protection Standards and Concentration Limits**

The groundwater protection standard (GWPS), shall consist of the list of constituents of concern (COCs) [Title 22 CCR §66264.93], concentration limits [Title 22 CCR §66264.94], the point of compliance (POC) and all monitoring points [Title 22 CCR §§66264.92 and 66264.95].

**d. Constituents of Concern (COCs)**

- (1) The COCs shall be all waste constituents, reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the closed Class I landfill unit. [Title 22 CCR §66264.93]
- (2) Along with the constituents discussed in Part IV.D.2.d(3) below, the Permittee shall consider the waste types in Table IV.D.2-a below, when it identifies COCs. According to the Permittee, the materials accepted at the Class I Landfill unit when active included the following:

<p><b>Table IV.D.2-a</b> <b>Hazardous Waste Types Deposited in BKK Landfill</b> <b>(1975 through 1984)*</b></p>
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**BKK Corporation**June 30, 2004

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Acid Sludge	Ink Sludge
Acid Solution	Ink Wastewater
Acid Solution w/Metals	Laboratory Chemicals
Acid Solution w/o Metals	Latex Waste
Acid Solution-Neutralized	Lime Sludge
Adhesive	Machine Tool Coolant
Alkaline Sludge	Metal Sludge
Alkaline Solution	Metal Dust and Machining Waste
Alkaline Solution w/Metals	Mud and Water
Alkaline Solution w/o Metals	Oil
Alkaline Solution-Neutralized	Oil Sludge
Alkali Solids	Oil and Water
Alum Sludge	Oil-Containing Waste
A.P.I. Generator Sludge	Unspecified Organic Liquids
Aqueous Solution w/Metals	Organic Monomer Waste
Aqueous Solution w/>10% Organics	Organic Solids
Asbestos-Containing Waste	Paint Waste
Ashes	Paper Sludge/Pulp

**Table IV.D.2-a (continued)**  
**Hazardous Waste Types Deposited in BKK Landfill**  
**(1975 through 1984)\***

Baghouse Waste	Pesticides
Bilge Water	Pesticide Containers
Bio Waste other than Sewage	Pesticide Rinsewater
Blasting Sand	Pharmaceuticals
Brine	Phenolic Waste
Cannery Waste	Phosphate Sludge
Catalyst	Photo-processing Waste
Chemical Toilet Waste	Plating Sludge
Chemicals, Unused	Plating Solution, Acid
Containers, Empty	Plating Solution, Alkaline
Contaminated Equipment	Polychlorinated Biphenyls
Contaminated Sand and Soil	Resin Waste
Cyanide Waste	Scrubber Waste
Degreasing Sludge	Solvent, Halogenated
Detergent and Soap	Solvent, Hydrocarbon
Distillation Bottoms	Solvent, Oxygenated
Drilling Muds	Solvent, Mixed
FCC Waste	Solvent, Unspecified
Filter Cake	Spill Cleanup
Filters, Spent	Stretford Solution
Flux	Sulfide Sludge
Fly Ash	Sump Sediment
Gasoline and Water	Tank Bottom Sediment
Glaze Sludge	Tanning Sludge
Glue	Tetraethyl Lead Sludge
Hair Pulp	Wastewater Treatment Sludge
Heavy Metal Solution	Other Liquids
Heavy Metal Sludge	Misc. Sludge Waste
Ink and Solvent	Other Hazardous Waste

\*Source: Environmental Solutions, Inc., Table 1.4, "BKK Landfill Site Assessment and Mitigation Work plan, book I, Subsurface: Site Characterization," March 15, 1988 - derived from BKK annual waste summaries, 1975 through 1984.

[Title 22 CCR §66264.93]

- (3) To ensure that the COC list is comprehensive, the Permittee shall include on any list of COCs any appropriate constituents provided in Appendix II of 40 CFR Part 258 and in Appendix VIII of the California Code of Regulations, title 22, division 4.5, chapter 11, article 5. The following shall also be considered COCs: (i) any constituent associated with the wastes listed in Table IV.D.2.-a of this Permit; (ii) any constituents of other waste accepted by BKK but not listed in Table IV.D.2.-a, (iii) constituents that have been observed in the leachate analysis program for the closed Class I Landfill and those constituents specifically cited in section C of the 1996 MRP and 1998 revision thereto; and (iv) any constituents found in ground, pore or surface water unless the Permittee demonstrates to the satisfaction of DTSC that the constituent is not reasonably expected to be in or derived from the waste in the closed Class I Landfill unit. The Permittee shall create a list that reflects all the COCs as described above. This list shall be submitted to DTSC for review and approval within ninety (90) calendar days after the effective date of this Permit. [Title 22 CCR §§66264.93, 66264.99(e)(6)]

**e. Concentration Limits**

- (1) The GWPS concentration limits for the Class I Landfill unit shall be the primary and secondary maximum contaminant limits (MCLs) as listed in the California Code of Regulations, title 22, sections 64431 and 64444, or background concentrations as determined in accordance with Part IV.D.2.h of this Permit, whichever are higher for a particular constituent. [Title 22 CCR §66264.94]
- (2) For each COC, the Permittee may submit an application to DTSC for a concentration limit greater than background for purposes of corrective action. [Title 22 CCR §66264.94(a)]

**f. Point of Compliance (POC)**

- (1) The point of compliance (POC) is a vertical surface, located at the hydraulic downgradient limit(s) of the waste management area that extends through the uppermost aquifer underlying the regulated unit. The POC for groundwater for the closed Class I landfill unit shall:
  - (a) Extend vertically through the uppermost aquifer, which is composed of various dipping bedrock layers, to a depth where

each hydrologically discrete layer or group of layers is structurally or lithologically terminated;

- (b) Have hydraulically down-gradient direction(s) that have been determined by a combination of current and historical piezometric and geochemical data; and,
  - (c) Represent the location where groundwater monitoring will be used to evaluate compliance with the GWPS defined in the California Code of Regulations, title 22, section 66264.92 for detection, evaluation and corrective action monitoring. [Title 22 CCR §66264.95]
- (2) The POC monitoring points for the closed Class I Landfill unit shall be established as close to the landfill as practical, and hydraulically down-gradient of the waste management unit. The Permittee shall establish additional POC monitoring points as required by DTSC.<sup>8</sup> [Title 22 CCR §66264.97(b)(1)(B)(3)]
  - (3) DTSC has determined that data gaps in POC monitoring might exist along the "North Haul Road" where existing well-to-well spacings of over 1000 feet exist. POC well spacing shall be determined on a well-by-well basis. Well spacing shall be dependent on the widths and interconnectedness of the dipping permeable saturated bedrock layers, which may affect plume definition. In instances where faults and fractures intersect dipping layers, contaminant plumes may cross boundaries between the dipping permeable saturated bedrock layers and fine-grained interbeds. [Title 22 CCR §66264.97(b)(1)(B)(3)]
  - (4) The Permittee shall, within one hundred eighty (180) calendar days after the effective date of this Permit, provide a report, for DTSC review and approval, on the representativeness of monitoring of the effective uppermost saturated horizon at the existing designated POC wells and a schedule to install additional monitoring wells (within the effective uppermost saturated horizon), as necessary, at the appropriate

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<sup>8</sup> Given the postulates in BKK's 1997 RFI-Groundwater Report for preferential migration along the dipping permeable saturated bedrock layers, which comprise the "uppermost aquifer," and the potential for presence of dense non-aqueous phase liquid (DNAPL), additional POC wells may need to be established cross-dip from the existing shallow POC wells within the same permeable layers to assure that POC monitoring of the "uppermost aquifer" is adequate. POC wells currently are and may continue to also be part of the detection, evaluation, or corrective action monitoring programs.

depths and down-dip relationship to those wells. [Title 22 CCR §66264.97(b)(1)(B)(3)]

- (5) If the Permittee or DTSC determine that the locations of the POC wells do not meet the requirements of the California Code of Regulations, title 22, section 66264.95, the Permittee shall, within ninety (90) calendar days of that determination, comply with the submittal and other requirements of Part IV.D.2.o(1) of this Permit. New POC monitoring wells shall be constructed according to the following requirements:
    - (a) For water table wells, the screened intervals of wells in the shallowest portion of the saturated zone shall be designed to span the water table.
    - (b) Where dipping permeable units are involved, more than one shallowest portion of the saturated zone shall be designed to may be used to fully evaluate the effective uppermost saturated zone at that location.
    - (c) Well drilling, logging, design, construction, completion, development, and reporting shall be in accordance with Parts
  - (a) For water table wells, the screened intervals of wells in the shallowest portion of the saturated zone shall be designed to span the water table.
  - (b) Where dipping permeable units are involved, more than one well must be installed such that down-dip wells in the same unit may be used to fully evaluate the effective uppermost saturated zone at that location.
  - (c) Well drilling, logging, design, construction, completion, development, and reporting shall be in accordance with Parts IV.D.2.b, m, and o of this Permit. [Title 22 CCR §§66264.98(l) and (m), 66264.41, 66270.42, and 66270.32(b)(2)]
- (6) Groundwater monitoring wells that define the location of the POC shall be:

<b>Table IV.D.2-b POC Monitoring Wells</b>	
CW-11A	MW-17B
CW-11B	MW-23B
CW-13A	MW-24B
CW-13C	MW-26A
CW-27	MW-26C
CW-30B	MW-31A
CW-34A	MW-31B
CW-34B	MW-32
	MW-38A
EW-02A1	MW-38C
EW-02B	MW-39A
	MW-39B
OP-14AR*	MW-50AR
OP-14D*	MW-50BR
OP-15B	MW-51A
<b>Table IV.D.2-b POC Monitoring Wells (continued)</b>	
OP-15C	MW-51B
OP-17B	MW-52
OP-20	MW-D2*

\* If not installed by the effective date of this Permit, wells MW-D2, OP-14AR, and OP-14D shall be installed within one hundred twenty (120) calendar days after the effective date of this Permit. New shallow well MW-D2 shall be located approximately 300 feet northeast of well EW-02A in Area 10 along the perimeter of the landfill. [Title 22 CCR §§66264.95(a)]

- (7) The Permittee shall initially sample and evaluate new wells installed along the POC for piezometric and geochemical parameters and determine to which monitoring program each well shall be assigned.
  - (a) The Permittee shall sample each new well in accordance with the GWMRP.
  - (b) The Permittee shall analyze samples from each new well for all the parameters and constituents listed within Part

IV.D.2.h(9) of this Permit until the new well is approved by DTSC to be either (i) incorporated into a particular monitoring program (e.g., detection, evaluation, corrective action) or (ii) dropped from monitoring.

- (c) The Permittee shall submit analytical results in the first scheduled monitoring report after the laboratory data are available, and in accordance with the GWMRP.  
[Title 22 CCR §§66264.97(e)(16) and 66264.98(f)]

- (8) Within ninety (90) calendar days after the effective date of this Permit, the Permittee shall revise Table 1 (Groundwater Wells) of Exhibit 3.4.1-1 and Plate 4 of the Operation Plan to reconcile with this Permit.  
[Title 22 CCR §§66270.32(b) and 66270.14(b)(19)]

**g. Compliance Period**

- (1) The compliance period for the groundwater monitoring and response program shall be the post-closure care period specified in Part V.B.1.a of this Permit. [Title 22 CCR §§66264.117(b)(1), 66264.117(b)(2)(B), 66264.96(a), 66270.32(a), (b)(1) and (b)(2)]
- (2) The compliance period may be extended as DTSC determines it is necessary to protect human health and the environment. [Title 22 CCR §§66264.96(a), 66264.117(b)(2)(B), and 66270.32(b)(1) and (2)]

**h. Background Groundwater Monitoring**

- (1) The Permittee shall implement the background groundwater monitoring program with wells CW-21A, CW-40A, and MW-A1. These three wells are located in areas demonstrated by well water chemistry to not be contaminated and are not immediately hydraulically down-gradient of the closed Class I Landfill unit. Within one hundred twenty (120) calendar days after the effective date of this Permit, the Permittee shall provide a report on lithologic-based variations in non-organic monitoring parameters in the background and other wells and a work plan and schedule, if necessary, to construct or otherwise provide supplemental monitoring wells at appropriate locations to achieve a statistically valid background groundwater monitoring program. Because of natural variations in some inorganic monitoring parameters at these three wells, which may be based upon lithology variations, other wells must be evaluated and incorporated into the GWMRP as

necessary to augment the required background monitoring.

[Title 22 CCR §66264.97(b)(1)(A)]

- (2) Any man-made chemical constituent or reaction product is presumed to not exist in the background groundwater unless specifically identified as background in the GWMRP. The background groundwater concentration of non-natural constituents shall be zero (based on instrument detection limits). The statistical procedures for calculating background concentrations of naturally occurring constituents shall be as described in the GWMRP. [Title 22 CCR §§ 66264.97(e)(7), 66264.97(e)(11), 66264.98 and 66270.32(b)]
- (3) If DTSC or the Permittee determines that revisions to the statistical procedures described in the RFI Work Plan (Phase IV), Exhibit E, "Statistical Evaluation of Southeast Groundwater Data to Determine Extent of Contamination" are necessary to maintain or achieve statistically valid background groundwater monitoring, including changing the number of wells, samples, or the parameters or constituents monitored, the Permittee shall comply with the submittal, notice and other requirements of Part IV.D.2.o(1) of this Permit. [Title 22 CCR §§66264.98(l) and (m), 66264.99(h) and (i), and 66264.100(i) and (j), 66270.32(b)(1) and (2), 66270.41, and 66270.42, and Chapter 20, Appendix I]
- (4) If DTSC or the Permittee determines that any of the background groundwater monitoring wells need to be relocated or that additional wells need to be added in order to satisfy the requirements of background monitoring, the Permittee shall comply with the submittal, notice and other requirements of Part IV.D.2.o(1) of this Permit. [Title 22 CCR §§66264.98(l) and (m), 66264.99(h) and (i), and 66264.(i) and (j), 66270.32(b)(2), 66270.41, and 66270.42, and Chapter 20, Appendix I]
- (5) The Permittee shall sample and analyze each new background groundwater monitoring well, at least once, for the constituents of concern within ninety (90) calendar days after the Permittee or DTSC has determined that the groundwater level in a particular well has stabilized. [Title 22 CCR §66264.99(e)(6) and 66270.32(b)(2)]
- (6) The Permittee shall sample and analyze each new background groundwater monitoring well quarterly for at least four consecutive quarters and until DTSC has determined that the background groundwater quality has been established in accordance with the statistical approach in the GWMRP. [Title 22 CCR §66264.97(e)(6)]

- (7) The Permittee shall sample and analyze all background groundwater monitoring wells in accordance with the GWMRP. Sample acquisition methods, sample preservation, sample transport, and sample chain-of-custody shall be in accordance with the GWMRP. Sample parameters and constituents to be analyzed, and analytical methods, shall be in accordance with this Permit and the 1996 MRP, 1998 revision, and any subsequent revisions thereto. The Permittee shall also include an accurate determination of additional field parameters, temperature and turbidity, at each well, each time groundwater is sampled. (These data are required by the California Code of Regulations, title 22, section 66264.97(e)(13), but were not included in the 1996 MRP and 1998 revision thereto.) [Title 22 CCR §§66264.97(e)(4) and (13)]
  
- (8) The Permittee shall record and report data in accordance with the GWMRP. Laboratory reporting limits shall be, if feasible, method detection limits for organic parameters and instrument detection limits for inorganic parameters. [Title 22 CCR §66264.97(e)(5)]
  
- (9) The Permittee shall sample and analyze all background groundwater monitoring wells specified in Part IV.D.2.h(1) of this Permit and analyze the samples for the following parameters and constituents in accordance with the GWMRP and any subsequent revisions thereto. [Title 22 CCR §66264.97(e)(4)]:

<b>Table IV.D.2-c-1 General Monitoring Parameters</b>			
<b>Parameter</b>	<b>EPA Method</b>	<b>Parameter</b>	<b>EPA Method</b>
Bicarbonate	310.1	Chemical oxygen demand	410.4
Calcium	6010B	Total dissolved solids	160.1
Chloride	300	Total organic carbon	415.1
Fluoride	300	Total organic halides	9020B

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Iron	6010B	Carbon Dioxide	field/lab, field preferred
Manganese	6010B	Dissolved oxygen	field
Nitrate [as N]	300	pH	field
Potassium	6010B	Redox potential	field
Sodium	6010B	Specific conductance	field
Sulfate	300	Temperature	field
		Turbidity	field

<b>Table IV.D.2-c-2 Radionuclide Monitoring Parameters</b>			
Parameter	EPA Method	Parameter	EPA Method
Gross Alpha	900	Radium 226	901.1
Gross Beta	900		

<b>Table IV.D.2-d-1 Constituent-of-Concern Monitoring Parameters Volatile Organic Compounds I</b>			
Parameter	EPA Method	Parameter	EPA Method
acetone	8260B	1,4-dioxane	8260B
benzene	8260B	ethyl benzene	8260B
2-butanone	8260B	methylene chloride	8260B
carbon tetrachloride	8260B	1,1,2,2-tetrachloroethane	8260B
chlorobenzene	8260B	tetrachloroethene	8260B
chloroethane	8260B	toluene	8260B
chloroform	8260B	trans-1,2-dichloroethene	8260B
cis-1,2-dichloroethene	8260B	trichloroethene	8260B
1,2-dichlorobenzene	8260B	1,1,1-trichloroethane	8260B
1,4-dichlorobenzene	8260B	1,1,2-trichloroethane	8260B
1,1-dichloroethane	8260B	vinyl chloride	8260B
1,2-dichloroethane	8260B	xylene (ortho, para, meta)	8260B
1,1-dichloroethene	8260B		

**Table IV.D.2-d-2 Constituent-of-Concern Monitoring Parameters  
Volatile Organic Compounds II**

<b>Parameter</b>	<b>EPA Method</b>	<b>Parameter</b>	<b>EPA Method</b>
sec-butylbenzene	8260B	4-methyl-2-pentanone	8260B
carbon disulfide	8260B	methyl tert-butyl ether	8260B
chloromethane	8260B	naphthalene	8260B
2-chlorotoluene	8260B	n-propylbenzene	8260B
dibromochloromethane	8260B	styrene	8260B
1,2-dibromoethane	8260B	1,2,3-trichlorobenzene	8260B
1,2-dichloropropane	8260B	1,2,4-trichlorobenzene	8260B
2-hexanone	8260B	1,2,3-trichloropropane	8260B
isopropylbenzene	8260B	1,2,4-trimethylbenzene	8260B
p-isopropyltoluene	8260B	1,3,5-trimethylbenzene	8260B

**Table IV.D.2-e  
Constituent-of-Concern Monitoring Parameters  
Non-Volatile Organic Compounds**

<b>Parameter</b>	<b>EPA Method</b>	<b>Parameter</b>	<b>EPA Method</b>
N-nitrosodimethylamine	3520C	p-chloro-benzene sulfonic acid	531M (HPLC)

**Table IV.D.2-f  
Constituent-of-Concern Monitoring Parameters  
Inorganic Chemicals**

<b>Parameter</b>	<b>EPA Method</b>	<b>Parameter</b>	<b>EPA Method</b>
Aluminum	6010B	Lead	7421/6010B
Antimony	7041/6010B	Magnesium	6010B
Arsenic	6010B	Mercury	7471A
Barium	6010B	Molybdenum	6010B
Beryllium	7091/6010B	Nickel	6010
Boron	6010B	Perchlorate	314.0
Cadmium	6010B	Selenium	6010B
Chromium	6010B	Silver	6010B
Cobalt	6010B	Strontium	6010B
Copper	6010B	Sulfide	376.2
Cyanide	9012A/335.2	Thallium	7841/6010B
Hexavalent Chromium	7199	Vanadium	6010B
		Zinc	6010B

- (10) The Permittee may use other U.S. EPA Methods to analyze parameters and constituents that achieve equal or lower detection limits, provided that:
- (a) The Permittee notifies DTSC prior to using the new methods, and new methods are highlighted when the first time results are presented in reports; and,
  - (b) The Permittee recalculates background groundwater concentrations for inorganic parameters and constituents (Tables IV.D.2-c-1, IV.D.2-c-2, and IV.D.2-f) after a sufficient number of analyses are attained using the new

method. [Title 22 CCR §66264.97(e)(4) and (5); Title 22 CCR §66270.32(b)]

- (11) The Permittee shall submit to DTSC calculations and results for background groundwater concentrations for all inorganic parameters and constituents, using data available from the wells designated for background in Part IV.D.2.h(1) of this Permit, within ninety (90) calendar days after the effective date of this Permit. The Permittee may also submit additional, supplemental data supportive of other statistical methodologies for DTSC review and approval. The submitted background groundwater concentrations for inorganic parameters shall be used to determine statistically significant evidence of release(s), evaluate changes in water quality due to release(s), and to demonstrate effectiveness of corrective action for the closed Class I Landfill unit. [Title 22 CCR §§66264.97(e)(10) and 66264.97(e)(12)]
- (12) The Permittee shall perform sampling and analysis quality assurance and quality control (QA/QC) for all sampling and analysis required pursuant this Permit, in accordance with the GWMRP. The work items, methods and materials in the GWMRP are required. However, any references to specific consultants or laboratories are not binding. [Title 22 CCR §§66264.97(e)(12) and 66270.32(b)]
- (13) The Permittee shall perform data analyses and determine background groundwater quality in accordance with the GWMRP. [Title 22 CCR §66264.97(e)(10) and (11)]
- (14) If a determination is made by DTSC or the Permittee that any revisions or modifications of the GWMRP are necessary to incorporate any new or improved technique to detect man-made chemical constituents or reaction products in groundwater, the Permittee shall comply with the submittal, notice and other requirements of Part IV.D.2.o(1) of this Permit. [Title 22 CCR §66264.98(l) and (m), 66264.99 (f), (h) and (i), 66264.100 (i) and (j), 66270.32(b)(1) and (2), 66270.41, 66270.42, and Chapter 20, Appendix I].
- (15) If the Permittee or DTSC determines that a background groundwater monitoring well is producing samples that contain constituents not expected to be found in the background groundwater, or contains constituents that are at concentrations not expected to be found in background groundwater, then the Permittee shall immediately notify DTSC by telephone; shall follow up with

written notification by certified mail within seven (7) calendar days; and shall carry out its responsibilities under California Code of Regulations, title 22, sections 66264.97 and 66264.98 and Part IV.D.2 of this Permit. [Title 22 CCR § 66264.98(k)(7) and (m), and 66270.32(b)(1) and (2)]

If a permit modification is required, the Permittee shall, at a minimum:

- (a) Delete wells exhibiting repeated deviations from the background groundwater monitoring program and incorporate suitable replacements proposed by the Permittee or DTSC; and,
  - (b) Remove data from wells deleted from the background groundwater monitoring program from the calculations of background groundwater quality, and re-calculate the background concentrations. [Title 22 CCR §§ 66264.98(k)(7), 66264.98(l) and (m), 66264.99 (f), (h) and (i), 66270.32(b)(1) and (2), 66270.41, 66270.42, and Chapter 20, Appendix I]
- (16) Within ninety (90) calendar days after the effective date of this Permit, the Permittee shall revise section 10 of Exhibit 3.4.1-1 of the Operation Plan to reflect that all groundwater analyses will be performed by a laboratory certified by the State of California's Environmental Laboratory Accreditation Program (ELAP). [H&SC 25198(b) and Title 22 CCR §§66270.14(b)(19), and 66270.32(b)(2)]
- (17) (a) The Permittee shall comply with all radionuclide sampling requirements contained in this Permit until DTSC provides written approval of the Radionuclide Report discussed below and approves any modifications in the radionuclide sampling requirements in this Permit.
- (b) The Permittee shall submit a Radionuclide Report to DTSC that addresses radionuclides in groundwater. This report is necessary because historical data include groundwater radionuclide concentrations that have exceeded established drinking water standards. This report shall include, but not be limited to, the following: summary and evaluation of all site groundwater data regarding radionuclides; identification of the

sources of radionuclides in site groundwater (e.g., landfill leachate, naturally occurring background, waste types such as petroleum and gas industry wastes); calculations and results for background groundwater concentrations for all sufficiently tested radionuclides using available data; additional sampling to confirm historic data; any proposals to collect additional data to fill any data gaps; and any proposals to modify radionuclide sample collection frequencies specified in this Permit.

The Radionuclide Report shall be submitted to DTSC for review and approval. DTSC may approve, approve with conditions, and/or request revision of the document. Based on review of the approved report, DTSC may find that the radionuclides: (i) may be analyzed at a lesser, equivalent or greater frequency, or (ii) may not have to be analyzed at all.

**i. Detection Groundwater Monitoring**

**Background:** For each monitoring point, the Permittee is required to determine whether there is statistically significant evidence of release from the closed Class I Landfill unit for any monitoring parameters specified in the permit. [Title 22 CCR §66264.98(i)] Although such evidence of release exists for many of the monitoring points and an evaluation monitoring and corrective action program has been instituted, there are portions of the perimeter of the regulated unit where monitoring points have not yielded statistical evidence of a release for all COCs and these points remain in a detection monitoring program. [Title 22 CCR §66264.98(a)]

- (1) The Permittee shall, at a minimum, discharge the responsibilities specified in California Code of Regulations, title 22, section 66264.98. [Title 22 CCR §66264.90]
- (2) In conjunction with an evaluation monitoring program or a corrective action monitoring program, the Permittee shall continue to conduct a detection monitoring program pursuant to the California Code of Regulations, title 22, section 66264.98, as necessary, to provide the best assurance of the detection of subsequent releases from the closed Class I Landfill unit. [Title 22 CCR §66264.91(c)] Detection monitoring points shall be incorporated into the GWMRP in accordance with Part IV.D.2.b(2) of this Permit. [Title 22 CCR §66264.98]

- (3) The Permittee shall install water quality monitoring systems that are appropriate for detection monitoring, comply with the provisions of the California Code of Regulations, title 22, section 66264.97 and implement detection monitoring at locations that allow derivation of statistically significant evidence of release(s) from the regulated unit. Detection monitoring wells shall be:

<p><b>Table IV.D.2-g Detection Monitoring Wells</b></p>
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**BKK Corporation**

June 30, 2004

CW-11A <sup>A</sup>	MW-17B <sup>SA</sup>
CW-11B <sup>SA</sup>	MW-23B <sup>SA</sup>
CW-13A <sup>B</sup>	MW-24B <sup>B</sup>
CW-13C <sup>SA</sup>	MW-26A <sup>B</sup>
CW-27 <sup>SA</sup>	MW-26C <sup>SA</sup>
CW-30B <sup>SA</sup>	MW-31A <sup>B</sup>
CW-34A <sup>B</sup>	MW-31B <sup>SA</sup>
CW-34B <sup>B</sup>	MW-32 <sup>B</sup>
EW-02A1 <sup>B</sup>	MW-38A <sup>B</sup>
EW-02B <sup>B</sup>	MW-38C <sup>B</sup>
	MW-39A <sup>B</sup>
	MW-39B <sup>SA</sup>
	MW-50AR <sup>B</sup>
	MW-50BR <sup>B</sup>
	MW-51A <sup>SA</sup>
	MW-51B <sup>SA</sup>
	MW-52 <sup>B</sup>
	Future MW-D2 <sup>Q</sup>
	Future OP-14AR <sup>Q</sup>
	Future OP-14D <sup>Q</sup>
	OP-15B <sup>B</sup>
	OP-15C <sup>B</sup>
	OP-17B <sup>B</sup>
	OP-20 <sup>SA</sup>
	A = Annual sampling frequency
	B = Biennial sampling frequency
	SA = Semi-annual sampling frequency
	Q = Quarterly sampling as per Part IV.D.2.f(7) for four quarters, then biennial frequency if contaminated or semi-annual frequency if clean.

[Title 22 CCR §66264.98(a), (b) and (g)]

- (4) The detection monitoring program, as incorporated into the GWMRP pursuant to Part IV.D.2.b(2) of this Permit, shall be capable of determining whether a statistically significant evidence of a release(s) from the regulated unit exists. The detection monitoring program shall utilize the background groundwater concentrations determined in accordance with Part IV.D.2.h of this Permit. The Permittee shall compare data collected at monitoring points with the background water quality data in accordance with the methods specified in the GWMRP. [Title 22 CCR §66264.98(i)(1)]
- (5) The Permittee shall implement detection monitoring for the parameters cited in Tables IV.D.2-c-1, IV.D.2-c-2, IV.D.2-d-1, and IV.D.2-d-2, in Part IV.D.2.h(9) of this Permit at the frequency specified in Table IV.D.2-g in Part IV.D.2.i(3) of this Permit. Semi-annual detection monitoring sampling shall not include those volatile organic compounds listed in Table IV.D.2-d-2. [Title 22 CCR §66264.98(e)]
  - (a) Following the initial sampling and analysis, in accordance with Part IV.D.2.b(2) of this Permit, the Permittee shall continue monitoring new wells on a quarterly basis for the same parameters identified in paragraph (5) above until DTSC determines that a particular well shall be sampled at another frequency. [Title 22 CCR §66264.98(f) and (g)]
  - (b) The Permittee shall submit all piezometric and analytical data for each well in detection monitoring to DTSC in the first scheduled monitoring report after the data are available. [Title 22 CCR §66264.97(e)(16)]
- (6) In addition to monitoring for the parameters specified by the California Code of Regulations, title 22, section 66264.98(e), the Permittee shall periodically monitor for all COCs identified pursuant to Parts IV.D.2.d and IV.D.2.h(9) of this Permit and determine whether there is statistically significant evidence of a release for any COC using the statistical procedure specified in the GWMRP. The Permittee shall monitor all detection monitoring wells for all COCs at least every five years. [Title 22 CCR §66264.98(g)]
- (7) The Permittee shall maintain a record of water quality analytical data in a form necessary for the determination of statistical significance under the California Code of Regulations, title 22, sections 66264.98 (g) and (i). [Title 22 CCR §66264.98(h)]

- (8) For each monitoring point specified in Part IV.D.2.i(3) of this Permit, the Permittee shall determine whether there is statistically significant evidence of a release from the regulated unit for any monitoring parameter specified in accordance with the California Code of Regulations, title 22, section 66264.98(e) at a frequency specified in Table IV.D.2-g in Part IV.D.2.i(3) of this Permit. [Title 22 CCR §66264.98(i)]
- (a) The Permittee shall determine whether there is statistically significant evidence of a release within a reasonable amount of time after completion of sampling.
- (b) DTSC may make an independent finding that there is statistically significant evidence of a release from the regulated unit at a monitoring point. If DTSC makes such a finding, the Permittee shall comply with the notification procedures identified in Part IV.D.2.i(9) of this Permit. [Title 22 CCR §66264.98(i)(3)]
- (9) Whenever the Permittee determines that there is statistically significant evidence of a release from the regulated unit for any monitoring parameter or COC at a detection monitoring point, pursuant to the California Code of Regulations, title 22, sections 66264.98(g) or (i), or DTSC makes a finding pursuant to Part IV.D.2.i(8) above, the Permittee shall notify DTSC of the determination and any plans to verify pursuant to section 66264.98(j).
- (10) If resampling pursuant to the California Code of Regulations, title 22, section 66264.98(j)(2) confirms that there is statistically significant evidence of a release from the regulated unit at the detection monitoring point or if the Permittee does not immediately resample pursuant to the California Code of Regulations, title 22, section 66264.98(j)(2), then the Permittee shall follow the requirements of California Code of Regulations, title 22, section 66264.98(k), including the engineering feasibility study for any corrective action measures required for the SPI, as long as it remains in effect.
- (11) Pursuant to required reporting and submittal requirements in California Code of Regulations, title 22, section 66264.98(k)(7), the Permittee may submit a report to DTSC that demonstrates that a source other than the regulated unit caused the evidence of a release, or that the

evidence resulted from error in sampling, analysis or evaluation, or from natural variation in groundwater. [Title 22 CCR § 66264.98(k)(7)]

- (12) The Permittee shall include water quality and elevation data from the detection monitoring program in the periodic and annual reports to DTSC, as specified in Part IV.D.2.o of this Permit. [Title 22 CCR §66264.98(f)]

**j. Evaluation Groundwater Monitoring**

**Background:** Facility investigations and continuing study of the groundwater hydrogeology and geochemistry have identified hazardous constituents in the groundwater underlying the site and beyond the Facility boundary in certain areas. The Permittee is required to implement a GWMRP pursuant to California Code of Regulations, title 22, section 66264.90 *et seq.* This shall include detection, evaluation and corrective action. This Permit specifies the specific elements of each monitoring and response program pursuant to California Code of Regulations, title 22, section 66264.91. [Title 22 CCR §66264.99(a)]

- (1) The Permittee shall, at a minimum, discharge the responsibilities specified in California Code of Regulations, title 22, section 66264.99. [Title 22 CCR §66264.90]
- (2) The evaluation monitoring program shall be used to assess the nature and extent of releases from the regulated unit and to design a corrective action program meeting the requirements of the California Code of Regulations, title 22, section 66264.100. Evaluation monitoring at the Facility is being performed to identify the extent of contamination, the constituents and their concentrations, and rates and directions of plume movement relative to the closed Class I Landfill unit. [Title 22 CCR §66264.99]
- (3) The Permittee shall monitor evaluation wells on a quarterly frequency to evaluate changes in water quality resulting from releases from the regulated unit, in conjunction with the assessment conducted pursuant to the California Code of Regulations, title 22, section 66264.99(b). [Title 22 CCR §66264.99(e)]

- (4) The evaluation monitoring wells shall be:

<b>Table IV.D.2-h Evaluation Monitoring Wells</b>	
MR-05R*	
*If not installed by the effective date of this Permit, well MR-05R shall be installed within one hundred twenty (120) calendar days after the effective date of the Permit.	

[Title 22 CCR §66264.94(a)]

- (5) The Permittee shall incorporate the evaluation monitoring program into the GWMRP in accordance with Part IV.D.2.b(2) of this Permit. Evaluation of the changes in water quality due to the release(s) from the regulated unit shall be based on comparison to background groundwater concentrations determined in accordance with Part IV.D.2.h of this Permit, changes in water quality over time, and statistical methods meeting the requirements of the California Code of Regulations, title 22, section 66264.97(e). [Title 22 CCR §66264.91(b)]
- (6) The Permittee shall implement evaluation monitoring at the locations and frequencies specified in Parts IV.D.2.j(3) and j(4) of this Permit for the parameters specified in Tables IV.D.2-c-1, IV.D.2-c-2, and IV.D.2-d-1. [Title 22 CCR §§66264.91(a)(3) and (b) and 66264.99(a) and (e)(1)]

This shall include, but not be limited to:

- (a) Evaluating the changes in water quality due to release(s) from the regulated unit based on statistical evaluations coupled with interpretations of time-series graphs and other appropriate graphical analyses. [Title 22 CCR §66264.97(e)(14)]
- (b) Following the initial sampling and analysis, in accordance with the GWMRP [see Part IV.D.2.b(2) of this Permit], the

Permittee shall continue monitoring new evaluation monitoring wells on a quarterly basis until DTSC determines that a particular well shall be sampled on a different frequency.

- (c) Submitting all piezometric and analytical data for each well to DTSC in scheduled monitoring reports required by Part IV.D.2.o(2) of this Permit. [Title 22 CCR §66264.97(e)(14)]
  
- (7) Following evaluation of the piezometric and geochemical data for each new evaluation well (if any) installed pursuant to Part IV.D.2.m of this Permit, the Permittee shall submit a report of findings, interpretations, and a recommendation for: (a) inclusion of each new well in a particular monitoring program, and (b) any necessary investigations to further evaluate the vertical and horizontal extent of the release. This report shall be submitted together with the first quarterly report due after four quarters of data have been collected for the new well. [Title 22 CCR §66264.97(e)(16)]
  
- (8) The Permittee shall conduct statistical and graphical analyses for all monitored parameters. The statistical and graphical analyses shall be used to evaluate changes in water quality due to release(s) from the Class I Landfill unit.
  
- (9) The Permittee may submit a report to DTSC intended to demonstrate to the satisfaction of DTSC that a source other than the regulated unit caused evidence of a release or that the evidence resulted from error in sampling, analysis or evaluation, or from natural variation in groundwater. [Title 22 CCR §66264.99(f)]
  
- (10) The Permittee shall analyze samples from evaluation monitoring wells in the affected media for all constituents contained in Appendix IX to the California Code of Regulations, chapter 14 at least annually to determine if additional hazardous constituents are present. [Title 22 CCR §66264.99(e)(6)]
  
- (11) Whenever the Permittee determines the presence of Appendix IX constituents that are not already identified in the Permit as COCs, the Permittee shall notify DTSC in writing within seven (7) calendar days after: (i) the initial analysis; or (ii) the second analysis, if resampling occurs, and report the concentrations of these new constituents. [Title 22 CCR §§66264.99(e)(6)]

- (12) Whenever the Permittee or DTSC determines that new constituents need to be added to the list of COCs specified in the Permit, the Permittee shall comply with the submittal, notice and other requirements in Part IV.D.2.o(1) of this Permit. [Title 22 CCR §§66264.99(h) and (i), 66270.32(b)(1), 66270.41, 66270.42, and Title 22 CCR Chapter 20, Appendix I] If a permit modification is necessary, it shall include at a minimum:
- (a) An identification of the concentration of each new Appendix IX constituent found in the groundwater at each well [Title 22 CCR §66264.99(e)(6)];
  - (b) Any proposed changes to the groundwater monitoring system necessary to meet the requirements of the California Code of Regulations, title 22, section 66264.99; [Title 22 CCR §66264.99(e)(1)];
  - (c) Any proposed changes to the monitoring frequency, sampling and analytical procedures or methods, or statistical methods necessary to meet the requirements of the California Code of Regulations, title 22, section 66264.99. [Title 22 CCR §66264.99(e)(2)]; and
  - (d) A detailed description of the measures taken to assess the nature and extent of the release. [Title 22 CCR §66264.99(b)].
- (13) The Permittee shall submit an annual report to DTSC that describes and shows the: (a) lateral and vertical extent of contamination including appropriate plan view maps and/or other appropriate graphical methods, (b) any significant changes in the constituents or constituent concentrations, and (c) the directions and rates of movement of the contaminant plumes. The first report shall be due on the first March 1 following the effective date of this Permit. [Title 22 CCR §§66264.97(e)(16), 66270.30(1)(4)]
- (14) If the Permittee or DTSC determines that there are statistically significant changes in water quality due to release(s) from the regulated unit or new exceedences of the GWPS, the Permittee shall submit an update to the engineering feasibility report, required under the California Code of Regulations, title 22, section 66264.99(e)(7), to evaluate the best techniques for corrective action to contain, treat, and prevent

recurrence of each new contaminant plume. The report shall be submitted to DTSC within ninety (90) calendar days of establishing an evaluation monitoring program relative to the new exceedence. [Title 22 CCR §66264.99(c)]

- (15) The Permittee shall comply with California Code of Regulations, title 22, sections 66264.99(d)(3) and 66264.99(e)(7) with respect to evaluating changes in water quality and developing plans for containing, treating and preventing recurrence of any new contaminant plumes in the portions of the closed Class I Landfill unit for which DTSC has responsibility subject to the SPI, as long as the SPI remains in effect. If evaluation indicates that the GWMRP does not satisfy the requirements of California Code of Regulations, title 22, section 66264.99, the Permittee shall also comply with submittal and other requirements discussed in Part IV.D.2.o(1) of this Permit. [Title 22 CCR §66264.99(d)(3), 66264.99(e)(7), and 66270.32(b)(1) and (2)]
- (16) Within ninety (90) calendar days after the effective date of this Permit, the Permittee shall correct Table 1 of Exhibit 3.4.1-1 of the Operation Plan to reflect those evaluation monitoring wells specified in Part IV.D.2.j(4) of this Permit. [Title 22 CCR §66270.32]

**k. Corrective Action Monitoring**

**Background:** Corrective action monitoring wells are placed to monitor just beyond known plumes to observe contaminant movement; placed within known plumes to observe contaminant levels and discern new contamination; and, may be, at times, extraction wells at and beyond the POC to observe the return of groundwater conditions to the GWPS. [Title 22 CCR §66264.100] As described in Part VI.A.1 of this Permit, the Permittee has been required to establish a corrective action program for the closed Class I Landfill unit by the March 31, 1989, and September 14, 2000, Consent Orders issued pursuant to RCRA Section 3008(h) by the U.S. EPA. It is anticipated that U.S. EPA will require additional corrective action groundwater monitoring. DTSC is also required by a 1988 Stipulated Permanent Injunction (SPI), described in Part V.B.7, to oversee groundwater extraction upgradient, within, and downgradient of Barrier 1, and in the vicinity of Barrier 2 (between Barrier 2 and the former Corehole 2) area of the landfill. Therefore, that portion of corrective action required by the SPI is subject to corrective action requirements in the California Code of Regulations, title 22, sections 66264.91 and 66264.100 as long as the SPI remains in effect. [Title 22 CCR §66264.100]

- (1) The Permittee shall implement corrective action monitoring for those wells required by the SPI as long as the SPI remains in effect. All other corrective action monitoring shall be performed within the on-going corrective action being overseen by the U.S. EPA under the March 31, 1989 and September 14, 2000, RCRA Section 3008(h) Consent Orders and any other subsequent documents issued by U.S. EPA. The Permittee shall sample and analyze groundwater from the wells identified in Tables IV.D.2-i, IV.D.2-j, and IV.D.2-k of this Permit. [Title 22 CCR §66264.100(c)] These wells shall be incorporated into the GWMRP in accordance with Part IV.D.2.b(2) of this Permit, as corrective action monitoring and extraction wells. [Title 22 CCR §66264.91(b)] Corrective action monitoring wells and sampling frequencies are:

(a)

<b>Table IV.D.2-i Biennial Corrective Action Monitoring Wells</b>	
CW-41AR	EP-01
CW-46	EP-15A
EO-02A	MW-37
EO-02B	MW-C2
	MW-C8
	OP-26A

(b)

<b>Table IV.D.2-j Annual Corrective Action Monitoring Wells</b>
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CW-17A1R CW-37AR* CW-42AR CW-45 CW-47 EO-03 EP-04	EP-09 EP-11 EP-14A MW-B4R*  MW-C10 MW-C11  *BKK requested these wells be placed in the Corrective Action program instead of the Evaluation program.
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(c)

<b>Table IV.D.2-k Biennial Corrective Action Extraction Wells</b>	
EW-01 MW-08 MW-18A MW-19A <sup>A</sup> MW-23AR	MW-24A MW-30 <sup>5</sup> MW-34 MR-01 <sup>A</sup>  A = sampled annually 5 = sampled every five years

[Title 22 CCR §66264.100(d)]

- (2) Corrective action monitoring wells shall be monitored at the frequencies specified in Table IV.D.2-i (sampled biennially) and Table IV.D.2-j (sampled annually) of this Permit for the parameters specified in Tables IV.D.2-c-1, IV.D.2-c-2, and IV.D.2-d-1 of Part IV.D.2.h(9) of this Permit. [Title 22 CCR §66264.100(b)]
- (3) Corrective action extraction wells shall be monitored at the frequencies specified in Table IV.D.2-k of this Permit for the parameters specified in Tables IV.D.2-c-1, IV.D.2-c-2, IV.D.2-d-1, IV.D.2-d-2, IV.D.2-e, and IV.D.2-f of Part IV.D.2.h(9) of this Permit. [Title 22 CCR §66264.91(b)]
- (4) Sampling of these extraction wells may be performed with the existing extraction pumps, if necessary. Additional sampling and analyses, as

necessary for treatment plant influent monitoring, shall be performed, documented, and reported in a manner consistent with the GWMRP. [Title 22 CCR §§66264.100(d) and 66264.91(b)]

- (5) Within one hundred eighty (180) calendar days after the effective date of this Permit, the Permittee shall submit a work plan for installing two groundwater monitoring wells (MW-C12 and MW-C13) to monitor conditions downgradient of Barrier 1 and just upgradient of Parcel 1. Well MW-C12 shall be installed so that it is screened across the water table, while MW-C13 shall monitor a deeper zone. The wells shall be located at either location 18, 19 or 20 as illustrated in Figure 6 of BKK's April 16, 2003 document titled, "Scope of Work for Southern 31 Acres of Parcel 1 at the BKK Landfill Site." The final location shall be based upon groundwater grab sample data collected from locations 18, 19 and 20 as described in the April 16, 2003 document cited above. The groundwater grab sampling shall be incorporated into the work plan if not already completed. The two wells shall be sampled at a quarterly frequency for one year pursuant to Part IV.D.2.f(7) of this Permit. After one year, the wells shall be sampled at a biennial frequency if contaminated or at a semi-annual frequency if clean, for the parameters specified in Tables IV.D.2-c-1, IV.D.2-c-2 and IV.D.2-d-1 of Part IV.D.2.h(9) of this Permit. [Title 22 CCR §§ 66264.100 (a) and 66264.97(a)]

#### **I. Water Level Monitoring**

**Background:** Water level monitoring at the Facility will be performed as required by this Permit and as specified in the SPI (for as long as the SPI remains in effect).

- (1) The Permittee shall monitor water levels in accordance with the GWMRP. [Title 22 CCR §66264.91(b)]
- (2) The Permittee shall monitor water levels at least quarterly in all wells and piezometers listed in Table IV.D.2-1 of Part IV.D.2.m of this Permit. In the vicinity of the Barrier 2 (i.e., between Barrier 2 and Corehole C-2) and the Corehole C-3 area of the landfill, the Permittee shall monitor static water level in all liquid monitoring, extraction, and observation wells on a monthly basis as long as the SPI remains in effect. Table IV.D.2-1 of this Permit specifies the water level monitoring frequency for each well. [Title 22 CCR §66264.91(b)]

The SPI specifies that "BKK shall monitor static water levels on a monthly basis in all liquid monitoring, extraction and observation wells in the vicinity of Barrier 2 and the C-3 area of the Landfill, as directed by DHS in writing. BKK shall monitor static water levels on a quarterly basis in all perimeter gas monitoring, extraction and observation wells including any combination gas and liquid wells between the vicinity of Barrier 2 and the C-3 area of the Landfill as directed by DHS in writing. This data shall be tabulated and plotted on a time scale and maintained at the Landfill, but copies shall be promptly provided upon request to any member of the Interagency Committee." (SPI, page 8, line 19 through page 9, line 2). (Note: DTSC is the successor agency to DHS for purposes of the SPI) [Title 22 CCR §66264.91(b)]

- (3) The Permittee shall monitor water levels in each new well or piezometer at least weekly, until water level recovery can be established, then quarterly thereafter. However, for as long as the SPI remains in effect, monthly monitoring will be required pursuant to Part IV.D.2.1(2) of this Permit for new wells in the vicinity of Barrier 2 and the Corehole C-3 area. For new wells in which water levels do not recover and stabilize, the Permittee shall notify DTSC in writing of such finding and include the rationale for the observed well behavior. Under such circumstances, the Permittee may request DTSC approval to reduce the weekly water level monitoring frequency. [Title 22 CCR §66264.91(b)]
- (4) The Permittee shall submit a hydrograph (water elevations plotted through time) for each new well or piezometer demonstrating water-level recovery, with the next scheduled monitoring report following the determination that water levels have recovered. [Title 22 CCR §66264.91(b)]
- (5) The Permittee shall include in the annual water quality monitoring report, quarterly groundwater table contour maps for all wells that are monitored for water table elevation as well as time-series hydrographs of all groundwater water level data including any monthly data from wells in the vicinity of Barrier 2 and Corehole C-3. The water table contours shall be the fluid elevation at atmospheric pressure and shall not include projections below the Class I or Class III Landfill units. Fluid elevations at individual wells and piezometers within and below the landfill units, determined to be at atmospheric pressure as determined by wells and piezometers, may be added to the groundwater table contour map. [Title 22 CCR §66264.97(e)(15)]

- (a) The annual and quarterly groundwater table contour maps shall include data from all non-pumping wells and piezometers that are monitored pursuant to Part IV.D.2.1(2) of this Permit. [Title 22 CCR §66264.91(b)]
- (b) The groundwater table contour map shall include groundwater elevation printed next to each well and indicator arrows illustrating the directions of groundwater gradient and inferred flow. [Title 22 CCR §66264.91(b)]

**m. Well Construction, Development, and Decommissioning**

**Background:** Well and piezometer construction, including the design, drilling, materials and installation, well development, and well decommissioning methods have been previously reviewed and approved by DTSC and U.S. EPA as part of the corrective action program.

- (1) Until the GWMRP is approved, the Permittee shall drill and construct all monitoring wells, extraction wells and piezometers in accordance with the methods in the RFI Work Plan (Phase IV), Exhibit I, "Field Manual for Soil Boring and Monitoring Well Drilling, Installation, and Abandonment," dated August 1993. Exhibit I may be modified with written approval from DTSC. After the GWMRP is approved, the Permittee shall drill and construct all monitoring wells, extraction wells and piezometers in accordance with the GWMRP. [Title 22 CCR §§66270.14(b)(19) and 66264.97(e)(4), (5), (6), and (7), 66270.31(a), and 66270.32(a), (b)(1) and (b)(2)]
- (2) Geologic logging shall be performed under the direct supervision of a registered geologist. [Title 22 CCR §66264.97(e)(2)]  
All technical submittals and/or reports shall be signed by a registered professional as appropriate to the technical requirements of the work and the Business and Professions Code. [Title 22 CCR §§66264.97(e)(1) and (e)(2), 66270.14(c)(5), (7)(E), and (8)(D), and 66270.32(a), (b)(1) and (b)(2)]
- (3) The Permittee shall submit all field activity logs, lithologic logs, geophysical logs, video logs, and monitoring well, extraction well, or piezometer construction details to DTSC within ninety (90) calendar days after construction of any system or series of monitoring wells or piezometers. Upon written request by DTSC, the Permittee shall submit to DTSC the aforesaid information and data pertaining to any

specific well or piezometer within fourteen (14) calendar days after construction of that well or piezometer is completed. Monitoring well or piezometer development time shall not be construed as part of the construction time and shall not be used to extend the ninety (90) calendar day limit for reporting. [Title 22 CCR §66264.97(e)(16), 66270.31(c), and 66270.32(a), (b)(1) and (b)(2)]

- (4) The Permittee shall commence development of each new groundwater monitoring well, extraction well, or piezometer within fourteen (14) calendar days after completing the construction of that specific new well or piezometer. Existing groundwater monitoring wells and piezometers shall be periodically developed (maintained), as necessary, to ensure proper functioning. [Title 22 CCR §§66264.97(b)(7), 66270.31(a), and 66270.32(a), (b)(1) and (b)(2)]

- (5) The Permittee shall demonstrate the proper functioning of each new groundwater monitoring well by:
  - (a) The stabilization of indicator parameters during well development, in accordance with the RFI Work Plan (Phase IV), Exhibit I until the GWMRP is approved. Exhibit I may be modified with written approval from DTSC. After the GWMRP is approved, this stabilization shall be in accordance with the GWMRP; and,
  - (b) Conducting an initial round of sampling and analyses that indicate that water quality parameters or constituents have not been impacted by well materials or construction.  
[Title 22 CCR §§66264.97(b)(1) and (7), 66270.31(a) and (b), 66270.32(a), (b)(1), and (b)(2)]
- (6) For each new well installed, the Permittee shall submit records of groundwater monitoring well development, to DTSC within sixty (60) calendar days after completion of the well development for that system or series of wells. Upon written request by DTSC, the Permittee shall submit to DTSC the aforesaid records pertaining to any specific well or piezometer within fourteen (14) calendar days after completion of development of that well or piezometer. [Title 22 CCR §§66264.97(e)(16), 66270.31(c), and 66270.32(a), (b)(1) and (b)(2)]
- (7) Within ninety (90) calendar days of the effective date of a permit modification (if applicable) or other written approval from DTSC to replace a well or piezometer no longer capable of yielding representative groundwater samples or groundwater piezometric measurements or an extraction well no longer capable of producing satisfactorily, the Permittee shall replace the well or piezometer. The Permittee shall construct the replacement wells and piezometers to monitor the water-bearing zone in the manner intended for the original device and located as near as practical to the original device, unless DTSC specifies an alternative well design or location. [Title 22 CCR §§66264.97(b)(1), 66270.31(a), and 66270.32(a), (b)(1) and (b)(2)]
- (8) Until the GWMRP is approved, the Permittee shall decommission any well or piezometer in accordance with the RFI Work Plan (Phase IV), Exhibit I. Exhibit I may be modified with written approval from DTSC. After the GWMRP is approved, the Permittee shall decommission any

well or piezometer in accordance with the GWMRP and the following (if not specifically included in the GWMRP).

- (a) The Permittee shall certify well or piezometer decommissioning, which includes a decommissioning report, for each device decommissioned, within sixty (60) calendar days after any system or series of devices is decommissioned. The Permittee shall submit the aforementioned certification to DTSC, upon written request from DTSC, within fourteen (14) calendar days after completion of decommissioning for any specific individual well or piezometer. [Title 22 CCR §§66270.31(c) and 66270.32(a) and (b)(2)];
- (b) The Permittee shall not decommission any well or piezometer without prior written approval from DTSC. If the Permittee desires to decommission a well, it shall provide a written request to DTSC that shall include, at a minimum, the well or piezometer number, the reason(s) for the proposed decommissioning, and the proposed method of decommissioning in accordance with Part IV.D.2.m(8) of this Permit. [Title 22 CCR §§66270.31(a) and 66270.32(a) and (b)];
- (c) The Permittee shall immediately request and seek DTSC's approval to decommission any well or piezometer, under construction or completed, that the Permittee or DTSC determines to be improperly constructed, severely damaged or otherwise failing to seal all but the intended sampling interval or in any other way determined to be a pathway for contaminant migration. [Title 22 CCR §§66264.97(b)(4), (5), (6), and (7), 66270.31(a), and 66270.32(a), (b)(1) and (b)(2)]; and,
- (d) Certification of proper well or piezometer decommissioning shall include, at a minimum, the description of the failure, rationale for the decommissioning method, and if appropriate, a discussion of methods or changes in methods needed to prevent recurrence of the respective type of failure. [Title 22 CCR §66264.97(b)(4), (5), (6), and (7), 66270.31(a), and 66270.32(a) and (b)(2)]

- (9) The following are Facility groundwater wells that are monitored for liquid levels and will eventually be subject to decommissioning: [Title 22 CCR §66264.97(b)(4), (5), (6), and (7)]

<p style="text-align: center;"><b>Table IV.D.2-1</b> <b>Facility Groundwater Wells</b></p>
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CW-05A <sup>Q</sup>	EO-02A <sup>M</sup>	MW-07 <sup>Q</sup>	MW-B4 <sup>Q</sup>
CW-05B <sup>Q</sup>	EO-02B <sup>M</sup>	MW-08 <sup>Q</sup>	MW-B4R <sup>Q</sup>
CW-06 <sup>Q</sup>	EO-03 <sup>M</sup>	MW-17A <sup>M</sup>	MW-B5 <sup>Q</sup>
CW-07A <sup>Q</sup>	EO-04 <sup>M</sup>	MW-17B <sup>M</sup>	MW-B6 <sup>Q</sup>
CW-08B <sup>Q</sup>	EP-01 <sup>M</sup>	MW-18A <sup>Q</sup>	MW-B7 <sup>Q</sup>
CW-09A <sup>M</sup>	EP-02 <sup>M</sup>	MW-18B <sup>Q</sup>	MW-B7R <sup>Q</sup>
CW-09B <sup>M</sup>	EP-03 <sup>M</sup>	MW-19A <sup>Q</sup>	MW-B8 <sup>Q</sup>
CW-10A <sup>M</sup>	EP-04 <sup>M</sup>	MW-19B <sup>Q</sup>	MW-B9 <sup>Q</sup>
CW-11A <sup>M</sup>	EP-05 <sup>M</sup>	MW-20A <sup>Q</sup>	MW-B9R <sup>Q</sup>
CW-11B <sup>M</sup>	EP-06 <sup>M</sup>	MW-20C <sup>Q</sup>	MW-C2 <sup>M</sup>
CW-13A <sup>M</sup>	EP-07 <sup>M</sup>	MW-20E <sup>Q</sup>	MW-C3 <sup>M</sup>
CW-13B <sup>M</sup>	EP-08 <sup>M</sup>	MW-23A <sup>Q</sup>	MW-C4 <sup>M</sup>
CW-13C <sup>M</sup>	EP-09 <sup>M</sup>	MW-23AR <sup>Q</sup>	MW-C5 <sup>M</sup>
CW-15A <sup>M</sup>	EP-10 <sup>M</sup>	MW-23B <sup>Q</sup>	MW-C6 <sup>M</sup>
CW-15B <sup>M</sup>	EP-11 <sup>Q</sup>	MW-24A <sup>Q</sup>	MW-C7 <sup>M</sup>
CW-17A <sup>M</sup>	EP-12 <sup>Q</sup>	MW-24B <sup>Q</sup>	MW-C8 <sup>M</sup>
CW-17A1 <sup>M</sup>	EP-13A <sup>M</sup>	MW-26A <sup>M</sup>	MW-C9 <sup>M</sup>
CW-17A1R <sup>M</sup>	EP-13B <sup>M</sup>	MW-26B <sup>M</sup>	MW-C9R <sup>M</sup>
CW-17B <sup>M</sup>	EP-13C <sup>M</sup>	MW-26C <sup>M</sup>	MW-C10 <sup>M</sup>
CW-18A <sup>M</sup>	EP-14A <sup>M</sup>	MW-29 <sup>M</sup>	MW-C11 <sup>M</sup>
CW-18B <sup>M</sup>	EP-14B <sup>M</sup>	MW-29R <sup>M</sup>	MW-D1 <sup>M</sup>
CW-20A <sup>Q</sup>	EP-15A <sup>M</sup>	MW-30 <sup>M</sup>	OP-14A <sup>M</sup>
CW-20B <sup>Q</sup>	EP-15B <sup>M</sup>	MW-31A <sup>M</sup>	OP-14B <sup>M</sup>
CW-21A <sup>Q</sup>	EP-15C <sup>M</sup>	MW-31B <sup>M</sup>	OP-14C <sup>M</sup>
CW-21B <sup>Q</sup>	EW-D4 <sup>M</sup>	MW-32 <sup>M</sup>	OP-15B <sup>M</sup>
CW-27 <sup>Q</sup>	EW-D5 <sup>M</sup>	MW-34 <sup>Q</sup>	OP-15C <sup>M</sup>
CW-29A <sup>Q</sup>	EW-01 <sup>M</sup>	MW-36AR <sup>Q</sup>	OP-16A <sup>M</sup>
CW-29B <sup>Q</sup>	EW-02A1 <sup>M</sup>	MW-36BR <sup>Q</sup>	OP-16B <sup>M</sup>
CW-30B <sup>Q</sup>	EW-02A2 <sup>M</sup>	MW-36CR <sup>Q</sup>	OP-17A <sup>M</sup>
CW-31A <sup>M</sup>	EW-02B <sup>M</sup>	MW-37 <sup>Q</sup>	OP-17B <sup>M</sup>
CW-31BR <sup>M</sup>	EW-03A <sup>M</sup>	MW-38A <sup>M</sup>	OP-18 <sup>Q</sup>
CW-32A <sup>Q</sup>	EW-03B <sup>M</sup>	MW-38B <sup>M</sup>	OP-19 <sup>Q</sup>
CW-32B <sup>Q</sup>	EW-03C <sup>M</sup>	MW-38C <sup>M</sup>	OP-20 <sup>Q</sup>
CW-34A <sup>Q</sup>	EW-03D <sup>M</sup>	MW-39A <sup>M</sup>	OP-26A <sup>Q</sup>
CW-34B <sup>Q</sup>	MR-01 <sup>M</sup>	MW-39B <sup>M</sup>	OP-26B <sup>Q</sup>
CW-37AR <sup>Q</sup>	MR-03 <sup>M</sup>	MW-50AR <sup>Q</sup>	OW-01 <sup>M</sup>

**Table IV.D.2-1  
Facility Groundwater Wells (cont.)**

CW-37B <sup>Q</sup>	MR-05 <sup>M</sup>	MW-50BR <sup>Q</sup>	OW-D3 <sup>M</sup>
CW-38AR <sup>M</sup>	TSWP-01 <sup>M</sup>	MW-51A <sup>Q</sup>	OW-D4 <sup>M</sup>
CW-39AR <sup>M</sup>	TSWP-02 <sup>M</sup>	MW-51B <sup>Q</sup>	OW-D5 <sup>M</sup>
CW-40A <sup>M</sup>	TSWP-03 <sup>M</sup>	MW-52 <sup>Q</sup>	TOW-1 <sup>M</sup>
CW-41 <sup>M</sup>	TSWP-04 <sup>M</sup>	MW-A1 <sup>M</sup>	TOW-2 <sup>Q</sup>
CW-41AR <sup>M</sup>		MW-B1 <sup>Q</sup>	TOW-3R <sup>Q</sup>
CW-42 <sup>M</sup>		MW-B10 <sup>Q</sup>	TOW-4 <sup>M</sup>
CW-42AR <sup>M</sup>		MW-B11 <sup>Q</sup>	TOW-5 <sup>Q</sup>
CW-43 <sup>M</sup>		MW-B2 <sup>Q</sup>	TOW-6 <sup>Q</sup>
CW-45 <sup>M</sup>		MW-B3 <sup>Q</sup>	TOW-7 <sup>M</sup>
CW-46 <sup>M</sup>			TOW-8 <sup>M</sup>
CW-47 <sup>M</sup>			TOW-9 <sup>M</sup>
Piezometer C <sup>M</sup>			
Piezometer E <sup>M</sup>			
	Q = liquid level monitored quarterly	M = liquid level monitored monthly	

- (10) The Permittee shall evaluate groundwater conditions at wells that are not routinely sampled by sampling each well in the following five well groups for VOCs and 1,4 dioxane as specified in Table IV.D.2-d-1 and IV.D.2-d-2 in Part IV.D.2.h(9) of this Permit. All five well groups shall be sampled and at least one new group shall be sampled each year. When conducting a group sampling, the Permittee shall attempt to sample all the wells in an area (areas are defined in the 1997 RFI Report) within a thirty (30) calendar day or less time span. An entire group shall be sampled within 90 days or less. Any other sampling frequency shall first be approved by DTSC in writing. The Permittee shall report these data, including data evaluation and interpretations, in the corresponding annual groundwater monitoring report specified in Part IV.D.2.o of this Permit. The report shall propose, for DTSC approval, if any of the group wells should be included in the routine groundwater monitoring and response program. Phase II wells have been identified in three groups and may or may not be sampled. A separate Phase II Report shall be submitted to DTSC for review and approval within 90 days of collection of the last sample from each group specified in Tables IV.D.2-n, IV.D.2-o, and IV.D.2-p. Phase II reports shall indicate if Phase II wells should be sampled within 60 days after submittal of the report. The decision to sample Phase II wells shall be based on any anomalous data collected from the group sampling as well as hydrogeological evaluations conducted by the Permittee or DTSC. The well groups shall be as follows:

(a)

<b>Table IV.D.2-m</b>	
<b>Group 1- Groundwater Monitoring Wells for Barrier 1/ Area 1 Focused VOC Monitoring</b>	
CW-29A	OP-19
CW-29B	OP-26B
MW-18B	
MW-19B	

(b)

<b>Table IV.D.2-n</b>	
<b>Group 2 - Groundwater Monitoring Wells for Areas 2, 3, and 4 Focused VOC Monitoring</b>	
CW-09A	MW-C5 - Phase II
CW-09B- Phase II	MW-C6 - Phase II
CW-10A	MW-26B
CW-13B	EP-07
CW-31A	EP-08 - Phase II
CW-31BR	EP-10
CW-41	OW-D5

(c)

<b>Table IV.D.2-o</b>	
<b>Group 3 - Groundwater Monitoring Wells for Areas 5 and 6 Focused VOC Monitoring</b>	
CW-15A	EP-13A
CW-15B	EP-13B - Phase II
CW-42 - Phase II	EP-13C - Phase II
OW-D3	EP-14B
OW-D4	

(d)

<b>Table IV.D.2-p Group 4 - Groundwater Monitoring Wells for Areas 7, 8, and 9 Focused VOC Monitoring</b>	
CW-17A1	MR-03
CW-18A	MW-38B
CW-43 - Phase II	OP-16A
EP-03	OP-16B
EP-05	OP-17A
EW-03A	OW-01
EW-03B	TOW-1
EW-03C	TOW-8

(e)

<b>Table IV.D.2-q Group 5 - Groundwater Monitoring Wells for North Saddle Focused VOC Monitoring</b>	
CW-32A	MW-B6
CW-32B	MW-B7
CW-37B	MW-B7R
MW-B1	MW-B11
MW-B2	TOW-3R
MW-B5	

[Title 22 CCR §§66270.14(b)(19) and 66264.97(b)(1)(B), (C), and (D)]

**n. Groundwater Monitoring System Maintenance**

**Background:** Groundwater monitoring is key to understanding the dynamics of contaminant migration and corrective action. Groundwater monitoring system maintenance shall continue to be a scheduled activity, performed as preventive maintenance to ensure proper operation of all equipment and documentation of all inspections, repairs and modifications. [Title 22 CCR §§66264.91(b), 66270.30(e), 66270.31(a), and 66270.32(b)(2)]

- (1) The Permittee shall maintain all piezometers, monitoring wells and extraction wells that are or may be monitored pursuant to this Permit in good working condition (i.e., yield accurate water chemistry, yield accurate water level data, operative pumping). [Title 22 CCR §§66264.91(b), 66270.30(e), 66270.31(a)]

(2) The Permittee shall implement a preventive maintenance program that includes at least:

(a) Annual inspection and documentation of each well and piezometer for the following:

Well protective casing condition

Locking mechanism

Well exterior labeling

Protective concrete pad and traffic barriers

(as necessary and excluding traffic vaults)

Traffic vault condition

Well-head condition

Brush and debris away from well head

Well cap (water tight if necessary)

Cement well apron/pad present

Unique, identifiable well survey mark

Evidence of standing or ponded water around well or in annulus

Well interior labeling, including well number and measuring point

Annular seal grout level

Water-level measurement

Dedicated pump and appurtenances operation (when well is sampled)

Elevated/excessive turbidity as measured during sampling or completion of well development (when well is sampled or developed).

Other items of interest (located above dedicated pumps, if present) such as blockages, roots, bends in the casing in all wells and piezometers (well deviation and well video survey as necessary)

Timely correction of deficiencies

(b) Inspection and documentation of each well and piezometer conducted at least every five years and whenever pumps are pulled for the following:

Dedicated pump and appurtenances appearance

Sheen or immiscible layers within contaminated wells and piezometers

Depth to sediment/bottom of well

Other items of interest (located below dedicated pumps) such as blockages, roots, bends in the casing (well deviation and well video survey as necessary) Timely correction of deficiencies. [Title 22 CCR §66270.30(e), 66270.31(a), and 66270.32(a), (b)(1), and (b)(2)]

(c) The well and piezometer maintenance schedule and logs shall be available for DTSC review at the Facility. [Title 22 CCR §66270.30(h)]

(3) The Permittee may perform well and piezometer inspection and maintenance in conjunction with chemical or water-level monitoring provided it does not interfere with data collection. [Title 22 CCR §66270.30(e)]

**o. Submittals, Reporting, and Record-keeping**

(1) The Permittee shall carry out applicable submittal, notice and other reporting, evaluation and modification responsibilities in the California Code of Regulations, title 22, sections 66264.98 (k), (l) and (m), and 66264.99(h) and (i), and 66264.100(i) and (j). Events when such responsibilities arise include, but are not limited to, the following:

(a) When DTSC or the Permittee determines that new monitoring points (including wells or piezometers) are necessary, different than those identified in Part IV.D.2.f, h, i, j, k, l and m of this Permit, in order for a program to satisfy the requirements of the applicable regulatory section;

(b) When DTSC or the Permittee determines that new data and information about movement and control of landfill liquids and contaminated groundwater, such as that gained from implementation of corrective measures for the U.S. EPA, indicate that the GWMRP needs to be changed and updated in order to satisfy the requirements of the applicable regulatory section;

(c) When DTSC or the Permittee determines that the background monitoring element needs to be changed in order for a program to satisfy the requirements of the applicable regulatory section;

- (d) When DTSC or the Permittee determines that the GWMRP needs to incorporate new or improved techniques to detect chemical constituents or reaction products in groundwater in order for a program to satisfy the requirements of the applicable regulatory section;
  - (e) When sampling or resampling (if applicable) confirms statistically significant evidence of a release and a change in a program is necessary, such as moving a monitoring point from the detection monitoring program to the evaluation monitoring program; and,
  - (f) When DTSC or the Permittee determines that a program will not meet the requirements of the applicable regulatory section unless new constituents are added to the list of COCs specified in the Permit. [Title 22 CCR §§66264.98(l) and (m), 66264.99(h) and (i), 66264.100 (i) and (j), 66270.32(b)(1) and (2), 662641, 66270.42, and Chapter 20, Appendix I]
- (2) The Permittee shall submit documentation required in Part IV.D.2 of this Permit, for which no other due date is specified in Part IV.D.2, in accordance with the following schedule (the first of these reports will become due at the end of the first full quarter after the effective date of this Permit). Documentation, reports, evaluations, etc. required in Part IV.D.2 of this Permit pursuant to conditions with explicit submittal requirements (e.g. "... within thirty (30) calendar days...") shall adhere to those explicit submittal dates and not the reporting schedule shown in the following table. [Title 22 CCR §66264.97(e)(16)]:

<b>Table IV.D.2-r Reporting Schedule</b>	
<b>Samples Collected or Data Developed During the Quarter</b>	<b>All Summaries, Statistical Analyses, Interpretations, Logs and Data are Due to DTSC by the Following:</b>
January - March April - June July - September October - December	May 15 August 15 November 15 March 1 (include with annual report)

- (3) The Permittee shall submit an annual water quality monitoring report by March 1 of each calendar year. [Title 22 CCR §§66264.97(e)(16) and 66270.31(c) ]
- (4) Within the annual water quality monitoring report, the Permittee shall submit all analytical monitoring data in hard copy form and also on computer diskette/compact disc similar to current LARWQCB MRP formats. The report must include preparation of groundwater contaminant plume maps. The Permittee shall document interpretation and evaluation of quarterly and annual data in the reports and shall assure that the monitoring and response programs are in compliance with California Code of Regulations, title 22. [Title 22 CCR §66270.32(b)(1) and (2)]
- (5) The Permittee may submit a revised reporting schedule to DTSC within ninety (90) calendar days after the effective date of this Permit.
  - (a) The revised reporting schedule shall contain reporting deadlines no less frequent than contained in this Permit.
  - (b) The sampling and analysis schedule shall not be delayed because of the submission of the revised reporting schedule.
  - (c) Unless directed otherwise by DTSC, the Permittee may implement the revised reporting schedule.

**BKK Corporation**

June 30, 2004

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[Title 22 CCR §§66264.97(e)(16), 66270.30(h), 66270(l)(4), 66270.31(c), and 66270.32(b)(1) and (b)(2)]

- (6) The Permittee shall submit copies of all correspondence, findings, notifications, proposals, reports, or plans required by any other regulatory agency, concerning groundwater, vadose zone, or surface water, to DTSC, at the same time the submittal is required to be sent to the respective regulatory agency. [Title 22 CCR §66270.32(b)(1) and (2)]
  
- (7) The Permittee shall record and maintain all groundwater, vadose zone, and surface water data in the operating record in accordance with Part IV.H. of this Permit. Documents or drawings not readily entered into the operating record or that would produce poor copies upon retrieval from the operating record must be referenced in the

operating record and stored at the Facility in a manner that preserves the documents and allows easy retrieval.

[Title 22 CCR §66264.97(e)(16)]

- (8) Environmental monitoring and related records must be maintained for the entire post-closure care period.

[Title 22 CCR §66270.30(j)(2)]

### **3. Soil-pore Liquid Monitoring**

**Background:** California Code of Regulations, title 22, section 66264.97(d) requires the Permittee to establish an unsaturated (vadose) zone monitoring system for each regulated unit. Section 66270.14(c)(6)(B) requires the Permittee to establish detection monitoring programs for all media, including soil-pore liquid. Soil-pore liquid monitoring in the vadose zone is generally performed to provide detection and evaluation monitoring of dissolved-phase and free liquid-phase releases from a regulated unit for earliest possible detection of a release and for data to evaluate changes in water quality in the vadose zone due to a release. Releases have been determined to have occurred from the regulated unit into the vadose zone and groundwater and resultant groundwater quality changes have been observed. Detection, evaluation and corrective action groundwater monitoring programs are in place. Soil-pore liquid monitoring shall consist of:

- (a) (i) liquid monitoring in all perimeter gas monitoring, extraction, and observation wells, including any dual gas/leachate extraction wells (i.e., "combination gas and liquid wells" in accordance with the SPI); and (ii) infiltration or moisture condition monitoring related to functioning of the Class I Landfill unit cover as described in Section 3.3.1.2.2 of the Operation Plan. (An additional program of soil pore-fluid sampling and analysis will not be required by DTSC at this time at the Class I Landfill unit portion of the Facility. DTSC reserves the authority to require additional soil pore-fluid sampling and analysis at a later date.)
- (b) The Permittee shall carry out applicable submittal, notice and other reporting, evaluation and modification responsibilities in the California Code of Regulations, sections 66264.98(k), (l) and (m), and 66264.99(h) and (i), and 66264.100(i) and (j). Events when such responsibilities arise may include, but are not limited to, the following:
- (1) When DTSC or the Permittee determines that samples from new or existing monitoring points are necessary in order for a

program to satisfy the requirements of the applicable regulatory section; and,

- (2) When DTSC or the Permittee determines that new data and information about pore-liquid constituents or extent gained from implementation of monitoring measures for the California Integrated Waste Management Board (CIWMB), the SCAQMD, or the LARWQCB or from corrective action being implemented for U.S. EPA, indicate that a monitoring and response program needs to be implemented for pore-liquid in order to satisfy the requirements of the applicable regulatory section. [Title 22 CCR §§66264.98(l) and (m), 66264.99(h) and (i), 66264.100 (i) and (j), 66270.32(b)(2), 66270.42, and chapter 20, Appendix I]

#### **4. Soil-pore Gas Monitoring**

**Background:** DTSC has determined that the landfill gas contains hazardous constituents and that a monitoring and response program must be conducted for soil-pore gas. [Title 22 CCR §66264.701 (a) and 66264.702(b)] In addition, the California Code of Regulations, title 22, section 66264.310(c) requires the Permittee to prevent lateral migration of waste, gas, and vapor from the landfill. The California Code of Regulations, title 22, section 66270.14(c)(6)(B) also requires soil-pore gas monitoring.

##### **a. General Monitoring Requirements**

- (1) Within thirty (30) calendar days after the effective date of this Permit, the Permittee shall revise Sections 3.3.5-1 and 3.3.5-2 of the Operation Plan to provide a soil-pore gas monitoring and response plan (SPGMRP), which shall include protocols to assure that representative soil-pore gas samples are collected for all hazardous constituents specified in Part IV.D.4.c of this Permit. [Title 22 CCR §66264.701(b)]
- (2) The monitoring and response plan shall include, at a minimum, the applicable elements of:
  - (a) The protocols for gas probe monitoring, which are part of the SPI, overseen by CIWMB, described in Part V.B.7 of this Permit;

- (b) The protocols for perimeter gas probe monitoring, which are part of the June 20, 2000, amended SCAQMD Rule 1150.1 Compliance Plan and all subsequent revisions thereto;
- (c) The protocols for the perimeter gas monitoring system, which are described in Section 3.3.5-1 of the Operation Plan and the perimeter pore-gas monitoring, which are described in Section 3.3.5-2 of the Operation Plan;
- (d) The protocols for gas sampling, described in the May 1996 "Soil Gas Investigation Work Plan, BKK Landfill, West Covina, California: Revision 2" and the January 1998 "Soil Gas Modeling Field Verification Work Plan," both prepared by Environ Corporation and conditionally approved by U.S. EPA for gas sampling from the perimeter probes;
- (e) The protocols described in the 1997 revised LARWQCB Interim Guidance for Active Soil Gas Investigation and the joint 2003 DTSC and LARWQCB Supplemental Advisory [Title 22 CCR §66264.701(b)]; and
- (f) The protocols for monitoring any accumulated fluids in the perimeter gas monitoring probes.[Title 22 CCR §66270.32(b)]

**b. Environmental Protection Standard**

The environmental protection standard (EPS), shall consist of the list of hazardous constituents (Title 22 CCR §66264.703), concentration limits (Title 22 CCR §66264.704), and the monitoring points (Title 22 CCR §66264.705). [Title 22 CCR §66264.702]

**c. Hazardous Constituents**

The hazardous constituents for the Class I Landfill unit to which the EPS shall apply are listed in Table IV.D.4-a below. The hazardous constituents are the carcinogenic and toxic air contaminants (core group) as required under the June 20, 2000, amended SCAQMD Rule

1150.1 Compliance Plan and those volatile constituents that have been detected through historical groundwater monitoring.

<b>Table IV.D.4-a Hazardous Constituents</b>	
Benzene	Hydrogen Sulfide
Benzyl Chloride	Tetrachloroethylene
Chlorobenzene	(Perchloroethylene)
1,2-Dibromoethane (Ethylene Dibromide)	Tetrachloromethane (Carbon Tetrachloride)
Dichlorobenzene (all isomers)	Toluene
1,1-Dichloroethane (Ethylidene Chloride)	1,1,1-Trichloroethane (Methyl Chloroform)
1,2-Dichloroethane (Ethylene Dichloride)	Trichloroethylene
1,1-Dichloroethene (Vinylidene Chloride)	Trichloromethane (Chloroform)
Dichloromethane (Methylene Chloride)	Vinyl Chloride
cis-1,2-Dichloroethene	Xylene (m+p isomers and o-isomers)
1,4-Dioxane	

[Title 22 CCR §66264.703]

**d. Concentration Limits**

- (1) The EPS concentration limits for soil-pore gas hazardous constituents at the closed Class I landfill unit shall be the concentrations listed in Table IV.D.4-b or background concentrations as determined from background monitoring probes established in accordance with Part IV.D.4.g of this Permit, whichever are higher for a particular constituent. Concentration limits are based on the October 2002, U.S. EPA Region 9 soil gas Preliminary Remediation Goals (PRGs) and CalEPA Modified PRGs for each specific constituent.

[Title 22 CCR §66264.704(a) and (b)]

**Table IV.D.4-b**  
**Concentration Limits for Hazardous Constituents**

<b>Chemical</b>	<b>Health-based Concentration Limits</b>
Benzene	1300 $\mu\text{g}/\text{m}^3$
Benzyl Chloride	21 $\mu\text{g}/\text{m}^3$
Chlorobenzene	60,000 $\mu\text{g}/\text{m}^3$
1,2-Dibromoethane (Ethylene Dibromide)	4.5 $\mu\text{g}/\text{m}^3$
1,4-Dichlorobenzene	800,000 $\mu\text{g}/\text{m}^3$
1,1-Dichloroethane	500,000 $\mu\text{g}/\text{m}^3$
1,2-Dichloroethane	38 $\mu\text{g}/\text{m}^3$
1,1-Dichloroethene	200,000 $\mu\text{g}/\text{m}^3$
cis-1,2-Dichloroethene	37 $\mu\text{g}/\text{m}^3$ **
Dichloromethane (Methylene Chloride)	2,100 $\mu\text{g}/\text{m}^3$
1,4-Dioxane	61 $\mu\text{g}/\text{m}^3$ **
Hydrogen Sulfide	1.0 $\mu\text{g}/\text{m}^3$ **
Tetrachloroethene	330 $\mu\text{g}/\text{m}^3$
Tetrachloromethane (Carbon Tetrachloride)	67 $\mu\text{g}/\text{m}^3$
Toluene	400,000 $\mu\text{g}/\text{m}^3$
1,1,1-Trichloroethane	2,200,000 $\mu\text{g}/\text{m}^3$
Trichloroethene	9.1 $\mu\text{g}/\text{m}^3$
Trichloromethane (Chloroform)	43 $\mu\text{g}/\text{m}^3$
Vinyl Chloride	110 $\mu\text{g}/\text{m}^3$

Xylene (m+p isomers and o isomers)	110 µg/m <sup>3</sup> **
<b>Table IV.D.4-b (continued)</b> <b>Concentration Limits for Hazardous Constituents</b>	
<b>Chemical</b>	<b>Health-based Concentration Limits</b>
[Limits from October 2002 Region 9 Soil Gas PRGs except for * CalEPA Modified PRG ** USEPA Ambient Air PRG]	[risk=10 <sup>-6</sup> with a=1x10 <sup>-3</sup> ] Micrograms per Cubic Meter (µg/m <sup>3</sup> ) and milligrams per Cubic Meter (mg/m <sup>3</sup> )

- (2) The concentration limits for monitoring parameters shall be those in Table IV.D.4-c below. These shall be used to satisfy requirements in the SPI.

<b>Table IV.D.4-c</b> <b>Concentration Limits for Monitoring Parameters</b>	
<b>Parameter</b>	<b>Concentration Limits</b> Parts per Million by Volume (ppmv)
Total organic compounds (TOC) measured as methane	500 ppmv
Total gaseous non-methane organics (TGNMO)	<1 ppmv

**e. Monitoring Points**

- (1) The monitoring points for soil-pore gas shall monitor the unsaturated portion of the vertical surface, located along the perimeter of the Class I Landfill unit, which extends to the uppermost aquifer underlying the regulated unit. [Title 22 CCR §66264.705]
- (2) The monitoring points for soil-pore gas for the closed Class I Landfill unit shall be, at a minimum, the existing perimeter (boundary) gas probe clusters being monitored for the June 20, 2000, amended SCAQMD Rule 1150.1 Compliance Plan and subsequent revisions. All subsequent perimeter gas probe clusters shall be included. [Title 22

CCR §66264.705] The existing gas probe clusters are enumerated in Table IV.D.4-d below:

**Table IV.D.4-d**  
**Perimeter Gas Probe Cluster**  
**Monitoring Points**  
**The wells required by the SCAQMD as of June 2004 are as follows.\***

**BKK Corporation**

June 30, 2004

95.50 A, B, and C	219.41 A, B, C, and D	398.50 A, B, C, and D
99.50 A, B, C and D	220.40 A, B, C, and D	399.50 A, B, C, and D
101.50 A, B, C, and D	221.51 A and B	400.50 A, B, C, and D
103.50 A, B, C, and D	221.60 A and B	401.50 A, B, C, and D
106.50 A, B, C, and D	222.51 A, B, C, and D	402.50 A, B, C, and D
109.50 A, B, C, and D	222.70 A, B, C, and D	403.50 A, B, C, and D
112.50 A, B, C, and D	223.51 A, B, C, and D	404.50 A, B, C, and D
112.85 A, B, C, and D	224.51 A, B, C, and D	405.50 A, B, C, and D
115.50 A, B, C, and D	224.61 A, B, C, and D	406.50 A, B, C, and D
118.50 A, B, C, and D	225.51 A, B, C, and D	407.50 A, B, C, and D
121.50 A, B, C, and D	225.60 A, B, C, and D	408.50 A, B, C, and D
123.50 A, B, C, and D	226.70 A, B, C, and D	409.50 A, B, C, and D
124.50 A, B, C, and D	227.50 A, B, C, and D	410.50 A, B, C, and D
126.25 A, B, C, and D	228.40 A, B, C, and D	411.50 A, B, C, and D
126.50 A, B, C, and D	228.50 A, B, C, and D	412.50 A, B, C, and D
128.25 A, B, C, and D	229.50 A, B, C, and D	413.50 A, B, C, and D
128.50 A, B, and C	230.50 A, B, C, and D	414.50 A, B, and C
128.51 D	231.50 A, B, C, and D	415.50 A, B, and C
131.25 A, B, C, and D	232.50 A, B, C, and D	416.50 A, B, and C
131.50 A, B, C, and D	233.50 A, B, C, and D	417.50 A, B, C, and D
133.15 A, B, C, and D	301.51 A, B, C, and D	418.50 A, B, C, and D
133.25 A, B, C, and D	302.50 A, B, C, and D	419.50 A, B, C, and D
133.50 A, B, C, and D	303.51 A, B, C, and D	420.50 A, B, C, and D
133.60 A, B, C, and D	303.71 A, B, C, and D	421.50 A and B
133.65 A, B, C, and D	303.75 A, B, C, and D	503.20 A
134.15 A, B, C, and D	305.50 A, B, C, and D	503.50 A, B, C, and D
134.25 A, B, C, and D	307.50 A, B, C, and D	503.60 A and B
134.51 A, B, C, and D	309.51 A, B, C, and D	511.50 A, B, C, and D
134.75 A, B, C, and D	311.50 A, B, C, and D	511.60 A
200.50 A, B, C, and D	313.50 A, B, C, and D	520.00 A, B, C, and D
201.51 A, B, C, and D	315.50 A, B, C, and D	523.00 A, B, C, and D
202.25 A, B, C, and D	317.50 A, B, C, and D	525.00 A, B, C, and D
203.25 A, B, C, and D	318.50 A, B, C, and D	527.00 A, B, C, and D
203.50 A, B, C, and D	319.50 A, B, C, and D	530.00 A, B, C, and D
205.25 A, B, C, and D	320.50 A, B, C, and D	532.00 A, B, C, and D
205.51 A, B, C, and D	321.50 A, B, C, and D	534.00 A, B, C, and D
207.25 A, B, C, and D	322.50 A, B, C, and D	535.51 A, B, C, and D
209.51 A, B, C, and D	323.50 A, B, C, and D	553.51 A, B, C, and D

<b>Perimeter Gas Probe Cluster Monitoring Points (continued)</b>		
211.50 A, B, C, and D	324.50 A, B, C, and D	558.40 A, B, C, and D
213.50 A, B, C, and D	325.51 A, B, C, and D	559.80 A, B, C, and D
216.81 A, B, C, and D	390.50 A, B, C, and D	567.50 A, B, C, and D
216.90 A, B, C, and D	391.50 A, B, C, and D	568.10 A, B, C, D, and
215.51 A, B, C, and D	326.50 A, B, C, and D	560.70 A, B, C, and D
215.65 A, B, C, and D	327.50 A, B, C, and D	560.91 A, B, C, and D
216.15 A, B, C, and D	386.50 A, B, C, and D	561.10 A, B, C, and D
216.25 A, B, C, and D	389.50 A and B	562.50 A, B, C, and D
216.81 A, B, C, and D	391.50 A, B, C, and D	568.10 A, B, C, D and E
216.90 A, B, C, and D	392.50 A, B, C, and D	571.50 A, B, C, and D
217.41 A, B, C, and D	393.50 A, B, C, and D	575.50 A, B, C, and D
217.50 A, B, C, and D	394.50 A, B, C, and D	
217.71 A, B, C, and D	395.50 A, B, C, and D	
217.85 A, B, C, and D	396.50 A, B, C, and D	
218.11 A, B, C, and D	397.50 A, B, C, and D	
218.40 A, B, C, D, and E		

\*If there are inconsistencies between the specific gas probe clusters identified in this table and those required by the SCAQMD, the clusters required by the SCAQMD shall apply.

- (3) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, include in a new Exhibit 3.3.1-2 to the Operation Plan, a list of the existing perimeter (boundary) gas probes, keyed to a detailed map showing the positions of each of the probes. This exhibit shall be updated as new gas probe clusters may be added. [Title 22 CCR §§66264.705, 66270.14(b)(19), and 66270.32(b)(2)]
- (4) The Permittee shall include as monitoring points, all additional probes that may be installed under authorization of the SCAQMD Executive Officer pursuant to the June 20, 2000, amended SCAQMD Rule 1150.1 Compliance Plan and all subsequent revisions thereto. [Title 22 CCR §§66264.705 and 66270.32(b)(2)]
- (5) The Permittee shall, within two hundred and seventy (270) calendar days after the effective date of this Permit, provide a report, for DTSC review and approval, on the representativeness of current soil-pore gas monitoring in the existing perimeter (boundary) gas probes as related to

site lithologies and geologic structures and probe construction. [Title 22 CCR §§66264.705, 66270.14(b)(19), and 66270.32(b)(2)]

- (6) Within ninety (90) calendar days of the effective date of approval of any permit modification, submitted as specified in Part IV.D.4.m(1), to make the appropriate changes or additions to the locations of monitoring points, the Permittee shall implement the changes. The Permittee shall construct the soil-pore gas monitoring points as described in the SPGMRP, unless DTSC specifies an alternative design. [Title 22 CCR §66270.32(b)(2)]

**f. Compliance Period**

- (1) The compliance period for the soil-pore gas monitoring and response program shall be the post-closure care period specified in Part V.B.1.a of this Permit. [Title 22 CCR §§66264.117(b)(1), 66264.117(b)(2)(B), 66264.700(d)(2), 66270.32(a), (b)(1) and (b)(2)]
- (2) The compliance period may be extended if DTSC determines it is necessary to protect human health and the environment. [Title 22 CCR §§66264.117(b)(2)(B), 66264.700(d)(2), 66270.32(b)(1), and 66270.50(d)]

**g. Background Soil-pore Gas Monitoring**

- (1) The Permittee shall, within one hundred eighty (180) calendar days after the effective date of this Permit, provide a work plan, for DTSC review and approval, to establish a background monitoring program with appropriate statistical protocols and a sufficient number of background monitoring points, at appropriate locations and depths to yield representative background measurements of soil-pore gas. [Title 22 CCR §§66264.704 and 66264.706]
- (2) The Permittee shall, within ninety (90) calendar days after approval of the work plan required in Part IV.D.4.g(1) of this Permit, install and begin monitoring the background monitoring probes.
- (3) The statistical approach for calculating background concentrations of any naturally occurring constituents shall be based on those approaches described in the California Code of Regulations, title 22, section 66264.97(e)(7). [Title 22 CCR §66264.704(b)]

**h. Detection Monitoring**

- (1) The Permittee shall, at a minimum, discharge the responsibilities specified in California Code of Regulations, title 22, section 66264.706. [Title 22 CCR §66264.706]
- (2) As part of the monitoring and response program required in Part IV.D.4.a(1) of this Permit, the Permittee is required to establish a detection monitoring program for soil-pore gas. [Title 22 CCR §§66264.706 and 66270.14(c)(6)(B)]
- (3) The Permittee shall perform detection monitoring for soil-pore gas at the existing monitoring points enumerated in Part IV.D.4.e(2) of this Permit. [Title 22 CCR §§66264.705, 66264.706(b), and 66264.706(c)]
- (4) The detection monitoring program shall include the June 20, 2000, amended SCAQMD Rule 1150.1 Compliance Plan and any subsequent revisions thereto. [Title 22 CCR §66264.706]
  - (a) The Permittee shall conduct quarterly perimeter probe monitoring at all detection monitoring points for total organic carbon compounds (TOC). The monitoring parameter TOC shall be measured as methane, using a flame ionization detector or other instrumentation as approved by SCAQMD under its June 20, 2000, amended Rule 1150.1 Compliance Plan and any subsequent revisions thereto.
  - (b) The Permittee shall comply with the June 20, 2000, amended SCAQMD Rule 1150.1 Compliance Plan and any subsequent revisions thereto by:
    - (i) Collecting additional samples if the TOC concentration in any of the probes is greater than five (5) percent by volume. One 10-liter bag sample shall be collected from each of those probes with the highest concentrations above 5% TOC (up to a maximum of five probes) and the contents analyzed for total non-methane hydrocarbons (TNMHC), aka TGNMO, and the core group toxic air contaminants specified in Table I of the Rule 1150.1 (Control of Gaseous Emissions

from Municipal Solid Waste Landfill as amended June 20, 2000, and any subsequent revisions); or,

- (ii) If the TOC concentrations in all of the probes are five percent (5%) by volume or less, one 10-liter bag sample from the probe with highest reading shall be collected and the contents analyzed for TNMHC or TGNMO and the core group toxic air contaminants. [Title 22 CCR §§66264.701(c), 66264.706(a), (b) and (c), and 66270.32(b)(2)].
- (5) The detection monitoring program shall include Exhibit 1 “Procedures for On-going Monitoring, Maintenance and Expansion of an Effective Landfill Gas Migration Control System” of the SPI so long as it remains in effect. [Title 22 CCR §66270.32(b)(2)]
- (6) In addition to the amended June 20, 2000, SCAQMD Rule 1150.1 Compliance Plan and any subsequent revisions thereto, the Permittee shall, at a minimum, perform detection monitoring of the perimeter gas probes enumerated in Part IV.D.4.e of this Permit as follows:

- (a) The Permittee shall collect samples on a quarterly basis for analyses specified in Table IV.D.4-b of this Part of this Permit, from a minimum of 30 individual probes from the probe clusters enumerated in Part IV.D.4-d of this Permit. All probes installed subsequent to those enumerated in Table IV.D.4-d of this Permit shall be included in this requirement. Over a five-year cycle, all perimeter probes shall be monitored at least once. [Title 22 CCR §§66270.32(b)(2) and 66270.32]
- (b) The Permittee shall include a sampling schedule, identified by probe cluster, in the SPGMRP required in Part IV.D.4.a(1) of this Permit. [Title 22 CCR §§66270.32(b)(2) and 66270.32]
- (c) The Permittee shall have these samples analyzed by a laboratory that is certified by the State of California's Environmental Laboratory Accreditation Program (ELAP). The Permittee shall ensure that the analyses meet the appropriate detection limits. Appropriate detection limits shall be at or below the concentration limits specified in Table IV.D.4-b of this Part of the Permit. [HSC section 25198 and Title 22 CCR §§66270.32(b)(2)]

[Title 22 CCR §66264.706(b)]

- (7) The Permittee shall monitor any accumulation of liquid in perimeter pore-gas probes specified in Table IV.D.4-d during the gas monitoring required under Part IV.D.4.h(3) of this Permit in order to assure that these probes remain adequate to monitor pore-gas. [CCR §§ 66264.97(e)(13), 66270.30(1)(6), 66270.31(a) and (b), and 66270.32(b)(1) and (2)].
  - (a) The static water level monitoring frequency for determining whether any liquid has accumulated in the perimeter probes in the vicinity of the Barrier 2 and the Corehole C-3 area shall be the frequency required in the SPI (as long as it remains in effect), which is currently quarterly. The frequency for all perimeter probes beyond the vicinity of Barrier 2 and C-3 that serve as monitoring points shall also be quarterly, unless the Permittee receives written direction from DTSC for a different frequency. [Title 22, CCR §§ 66264.97(e)(13), 66270.31(b), and 66270.32(b)(1) and (2)]

- (b) The Permittee shall notify DTSC within two (2) working days, document the occurrence, and submit written documentation within five (5) working days after encountering liquid in any perimeter probe specified in Table IV.D.4-d. [Title 22, CCR §§ 66270.30(1)(6), 66270.32(a) and (b), and 66270.32(b)(1) and (2)]
- (c) If a liquid release is determined to be present in the vadose zone, including any monitoring point specified in Table IV.D.4-d, the Permittee shall carry out applicable submittal, notice and other reporting, evaluation and modification responsibilities in the California Code of Regulations, sections 66264.98(k), (l) and (m), 66264.99(h) and (i) and 66264.100(i) and (j) to provide replacement gas probes if a probe screen is blocked by liquid and to institute soil-pore liquid monitoring as required in California Code of Regulations, title 22, section 66264.97(d). [Title 22, CCR §§ 66164.98(l) and (m), 66264.99(h) and (i), 66264.100 (i) and (j), 66270.31(a) and (b), 66170.32(b)(1) and (2), 66270.42 and chapter 20, Appendix I.]
- (d) The Permittee shall include in the SPGMRP, required in Part IV.D.4.a(1) of this Permit, a detailed description of the procedures and techniques (protocols) for monitoring to determine whether liquids have infiltrated the gas probes identified in Part IV.D.4.e(2) of the Permit. [Title 22, CCR §§ 66270.31(a) and (b) and 66270.32(b)(1) and (2)].

**i. Compliance (Evaluation) Monitoring**

- (1) As part of the monitoring and response program required in Part IV.D.4.a(1) of this Permit, the Permittee is required to establish a compliance (evaluation) monitoring program for soil-pore gas to determine whether the regulated unit is in compliance with the environmental protection standard specified in Part IV.D.4.b of this Permit. [Title 22 CCR §§66264.707 and 66270.14(c)(7)(B)]
- (2) The Permittee shall, within one hundred eighty (180) calendar days after the effective date of this Permit, provide a work plan, for DTSC review and approval, to establish a compliance monitoring program to determine the nature and extent of soil-pore gas that exceeds the concentration limits. [Title 22 CCR §§66264.707 and 66270.32(b)2)]

**j. Corrective Action Monitoring**

Corrective action monitoring of soil-pore gas shall be performed pursuant to the SPI, requirements of the SCAQMD and within the on-going corrective action being overseen by U.S. EPA under the March 31, 1989, and September 14, 2000, RCRA Section 3008(h) Consent Orders. [Title 22 CCR §§66264.707, 66264.708 and 66270.14(c)(7)(B)]

**k. Construction and Decommissioning**

- (1) The Permittee shall continue to construct perimeter monitoring probes that may be used for detection monitoring in compliance with the SPI, so long as it remains in effect, and with the June 20, 2000, amended SCAQMD Rule 1150.1 Compliance Plan and any subsequent revisions thereto. At a minimum, this shall consist of the following:
  - (a) Generally, monitoring depths at each location shall be five feet below the ground surface, one half, one, and one and a half times the vertical depth of the trash nearest the probe location or groundwater, whichever is less. However, geologic conditions identified during drilling shall guide the exact depths selected. In order to comply with the SPI, so long as it remains in effect, if the maximum required depth is less than 50 feet, the minimum number of required depth levels (four) to be monitored may be reduced, if approved by the CIWMB;
  - (b) The strata units most conducive to gas migration shall be monitored;
  - (c) Areal spacing standards shall conform to the specifications of the Closure Plan for the closed Class I landfill unit;
  - (d) Perforation standards shall conform to the specifications of the Closure Plan for the closed Class I landfill unit;
  - (e) Clean sand shall be placed around each probe. This backfill shall extend from a minimum of 6-inches below the perforations to 1-foot above the perforations;
  - (f) Seals between the probes at different depths shall consist of materials with an in-place gas permeability less than or equal to that of the least permeable soils encountered during drilling;

- (g) Each seal shall be a minimum of 5-feet in length, except for the shallow 5-foot probe where a 3-foot seal will be adequate; and,
    - (h) Bore holes shall be logged under the supervision of a certified engineering geologist. Boring logs and as-built drawings shall be attached to the next monthly report, as required in the SPI, so long as it remains in effect.
- (2) The Permittee shall include in the SPGMRP a description for constructing monitoring probes to be used for compliance monitoring required under Part IV.D.4.i of this Permit. This shall include at a minimum the following:
  - (a) Continuous coring/sampling and use of the continuous cores/samples to establish probes within the most permeable lithologic units encountered during drilling; and
  - (b) Use of small internal diameter tubing, such as one eighth inch or another diameter with equivalent performance approved by DTSC. [Title 22 CCR §§66264.701(b), 66270.31 and 66270.32]
- (3) All soil-pore gas monitoring points installed shall be subject to appropriate decommissioning. The Permittee shall decommission

any pore gas monitoring device in accordance with the SPGMRP and the following:

- (a) The Permittee shall certify pore gas monitoring point decommissioning and submit a decommissioning report, for each device decommissioned, within sixty (60) calendar days after any system or series of devices is decommissioned. The Permittee shall submit the aforementioned certification to DTSC, upon written request from DTSC, within fourteen (14) calendar days after completion of decommissioning for any specific individual points; [Title 22 CCR §§66270.31 and 66270.32(b)(1) and (2)]
- (b) The Permittee shall not decommission any soil-pore gas monitoring points without prior written approval from DTSC. If the Permittee desires to decommission a point, it shall provide a written request to DTSC that shall include, at a minimum, the monitoring point number, the reasons for the proposed decommissioning, and the proposed method of decommissioning in accordance with the SPGMRP; [Title 22 CCR §§66270.31 and 66270.32(b)(1) and (2)]
- (c) Certification of proper soil-pore gas monitoring point decommissioning shall include, at a minimum, the reason for the decommissioning, a description of any problem/failure that resulted in the probe needing decommissioning, the rationale for the decommissioning method, and if appropriate, a discussion of methods or changes in methods needed to prevent recurrence of the respective type of failure. [Title 22 CCR §§66270.31 and 66270.32(b)(1) and (2)]
- (4) The Permittee shall construct replacement soil-pore gas monitoring points in the same manner as the original device and located as near as practical to the original device, unless DTSC specifies an alternative design or location. [Title 22 CCR §66270.32(b)(1) and (2)]

**I. Monitoring System Maintenance**

- (1) The Permittee shall maintain all monitoring probes that are or may be monitored pursuant to this Permit in good working condition (i.e., capable of yielding accurate soil-pore gas chemistry for the monitoring required by the Permit). [Title 22 CCR §66270.30(e)]

- (2) The Permittee shall implement a preventive maintenance program that includes at least:
  - (a) Annual inspection of each probe to include inspection and documentation of:
    - Probe cluster protective casing (if any) condition
    - Locking mechanism (if any)
    - Probe exterior labeling
    - Protective concrete pad and traffic barriers (as necessary and excluding traffic vaults)
    - Traffic vault condition
    - Well-head condition
    - Brush and debris away from probe cluster head
    - Individual probe closure (air and water tight)
    - Unique, identifiable probe survey mark
    - Evidence of standing or ponded water around the probe cluster head
    - Annular seal grout condition
    - Presence of liquids in the individual probes
    - Other items of interest such as blockages
    - Timely correction of deficiencies
  - (b) The probe cluster maintenance schedule and logs shall be available for DTSC review at the Facility. [Title 22 CCR §66270.30(h)]
- (3) The Permittee shall incorporate the SPI conditions for monitoring system maintenance into the SPGMRP for so long as the SPI remains in effect. [Title 22 CCR §§66264.701(b) and 66270.30(e)]
  - (a) The Permittee shall replace any broken or inoperable monitoring probes within thirty (30) calendar days of determination unless it is demonstrated that such monitoring probes are unnecessary. [Title 22 CCR §§66264.701(b) and 66270.30(e)]
- (4) The Permittee shall include in the monitoring system maintenance, the June 20, 2000, amended SCAQMD Rule 1150.1 Compliance Plan and any subsequent revisions thereto. [Title 22 CCR §§66264.701(b) and 66270.30(e)]

**m. Submittals, Reporting, and Record-keeping**

- (1) The Permittee shall carry out applicable submittal, notice and other reporting, evaluation and modification responsibilities in the California Code of Regulations, title 22, sections 66264.706(d)(2) and (f), and 66264.707(c)(2)(d)(3) and (e), and 66264.708(h). Events when such responsibilities may arise include, but are not limited to, the following:
  - (a) When the Permittee determines that new monitoring points are necessary, different than those identified in Parts IV.D.4.e, g, h, i, or j of this Permit, in order for a program to satisfy the requirements of the applicable regulatory section;
  - (b) When the Permittee determines that new data and information about emission of gas-phase contaminants from the landfill surface and movement in the pore and fracture space of the unsaturated zone arises from implementation of monitoring measures for the SCAQMD, CIWMB, any other entity or corrective action work for the U.S. EPA, indicate that the SPGMRP needs to be changed and updated in order to satisfy the requirements of the applicable regulatory section;
  - (c) When the Permittee determines that the background monitoring element needs to be changed in order for a program to satisfy the requirements of the applicable regulatory section;
  - (d) When the Permittee determines that the SPGMRP needs to incorporate new or improved techniques to detect chemical constituents or reaction products in pore gas in order for a program to satisfy the requirements of the applicable regulatory section;
  - (e) When sampling or resampling (if applicable) confirms statistically significant evidence of a release and a change in a program is necessary, such as moving a monitoring point from the detection monitoring program to the evaluation monitoring program; and,
  - (f) When the Permittee determines that a program will not meet the requirements of the applicable regulatory section unless new constituents are added to the list of hazardous constituents specified in the Permit. [Title 22 CCR §§66264.706(d)(2) and

(f), 66264.707(c)(2), (d)(3)and (e), 66264.708(h),  
66270.32(b)(2), 66270.42, and Title 22 CCR Chapter 20,  
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- (2) The Permittee shall submit the results of the detection and compliance monitoring within thirty (30) calendar days of the date that analyses are complete. [Title 22 CCR §§66264.706(c), 66264.707(b), and 66270.30(l)(4)]
- (3) The Permittee shall notify DTSC orally within 24 hours of any non-compliance that may endanger human health or the environment and in writing within seven (7) days of any determination by the Permittee that the environmental protection standard is being exceeded at any monitoring point established under California Code of Regulations, title 22, section 66264.705. [Title 22 CCR §§66270.30(l)(6)(A) and 66264.707(c)]
- (4) The Permittee shall submit as-built drawings showing identification numbers, locations, depths, geology, and other pertinent information for the perimeter probes that may be installed in each reporting quarter to DTSC. This may continue to be included in the quarterly report prepared for SCAQMD, a copy of which is submitted to DTSC. [Title 22 CCR §66270.30(h)]
- (5) The Permittee shall submit copies of all correspondence, findings, notifications, proposals, reports, or plans required by any other regulatory agency, concerning soil-pore gas, to DTSC, at the same time as the submittal is required to be sent to the respective regulatory agency. [Title 22 CCR §66270.32(b)(2)]
- (6) The Permittee shall record and maintain all soil-pore gas data obtained in the Operating Record in accordance with Part IV.H of this Permit. Documents or drawings not readily entered into the Operating Record or that would produce poor copies upon retrieval from the Operating Record must be referenced in the Operating Record and stored at the Facility in a manner that preserves the documents and allows easy retrieval. [Title 22 CCR §§66270.32(b)(2) and 66270.30(j)(2)]
- (7) Maintenance of soil-pore gas monitoring and related records is required for the entire post-closure care period. [Title 22 CCR §66270.30(j)(2)]

**5. Surface Water Monitoring**

**Background:** The Upper, Middle, and Lower Detention Basins are permanent to semi-permanent water bodies on the Facility near the closed Class I Landfill unit. They receive water from subdrains and site run-off from rainfall and irrigation, which ultimately discharges to permanent off-site channels, recharges groundwater, and/or evaporates. In addition, springs occur or have been reported to occur on- and off-site.

**a. General Monitoring Requirements**

- (1) The Permittee filed a Notice of Intent with the State Water Resources Control Board and enrolled for coverage under the Statewide General Industrial Stormwater Permit (General Permit), which obviated the need for individual waste discharge requirements for the Permittee's discharge of stormwater. The General Permit is hereby incorporated by reference into the environmental monitoring requirements of this Part of the Permit. [Title 22 CCR §66270.32 (b)(2)]
- (2) Within ninety (90) calendar days of the effective date of this Permit, the Permittee shall attach to the Operation/Post-Closure Plan, a copy of the General Permit, and all subsequent revisions thereto, as a new Exhibit 3.3.7-3. [Title 22 CCR §§66264.91(b) and 66270.32(b)(2)]
- (3) Within ninety (90) calendar days after the effective date of this Permit, the Permittee shall submit a Surface Water Quality Monitoring and Response Plan (SWQMRP) to DTSC, which shall encompass the requirements of the California Code of Regulations, title 22, chapter 14, article 6. The SWQMRP shall be included as a new Exhibit 3.4.1.10 of the Operation Plan. Elements of the monitoring and sampling program shall include sample acquisition, preservation, transport, chain-of-custody, analysis methodologies, and reporting requirements. [Title 22 CCR §66264.91(a)]
- (4) The SWQMRP shall include appropriate sampling and analytical methods for surface water that accurately measure the concentration of each COC and the concentration or value of each monitoring parameter. [Title 22 CCR §66264.91(b)]

**b. Water Quality Protection Standard**

The surface-water quality protection standard (SWQPS), required to be established by DTSC for surface water pursuant to the regulations, will consist of the list of constituents of concern (COCs) [Title 22 CCR §66264.93], concentration limits [Title 22 CCR §66264.94], and the point of compliance (POC) [Title 22 CCR §66264.95]. [Title 22 CCR §66264.92]

**c. Constituents of Concern**

The COCs for the closed Class I Landfill unit to which the SWQPS shall apply shall be those defined in Parts IV.D.2.d(1), (2) and (3) of this Permit. [Title 22 CCR §66264.93]

**d. Concentration Limits**

The surface-water concentration limits for the Class I Landfill unit shall be the primary and secondary MCLs as listed in the California Code of Regulations, title 22, sections 64431 and 64444, or background concentrations as determined in accordance with Parts IV.D.2.h and/or IV.D.5.g of this Permit, whichever are higher for a particular constituent. [Title 22 CCR §66264.94]

**e. Point of Compliance**

- (1) The surface-water POC for the closed Class I Landfill unit, to which the SWQPS shall apply, shall be located at all active discharges into the Upper Detention Basin. [Title 22 CCR §66264.95(a)]
- (2) For purposes of surface water, DTSC has determined that additional monitoring points at which the SWQPS shall apply, pursuant to the California Code of Regulations, title 22, section 66264.97, shall be certain springs and surface water bodies located on or near the Facility. [Title 22 CCR §66264.95(a)]
- (3) The POC and additional monitoring points for surface water for the closed Class I Landfill unit shall be the following: [Title 22 CCR §66264.97(d)(1)(B)]
  - (a) Galster Park Spring - located off-site in Galster Park northwest of the closed Class I landfill unit and separated from it by a ridge;

- (b) Miranda Spring - located near the southeast corner of the closed Class I landfill unit (groundwater extraction causes the spring to be dry);
  - (c) Azusa Storm Drain Inlet Area- located off-site between the Lower Detention Basin and Azusa Avenue. The configuration of the area may change or be eliminated in the future due to development;
  - (d) Upper, Middle, and Lower Detention Basins- located west of the administration building and discharging in a series to the Azusa Storm Drain. The configuration of the basins may change in the future due to development;
  - (e) All individual active discharges into the Upper Detention Basin: West Subdrain Discharge, East Subdrain Discharge (aka EPH 03), and the Upper Detention Basin Inlet (located at the eastern edge of the basin where surface water flows into the basin); and
  - (f) Exit of Lower Detention Basin near the west boundary of Parcel 1.
- (4) Because of the transient nature of springs and man-made detention basins, other surface water features on or near the Facility may be identified in the future where the SWQPS shall apply. If, at any time following implementation of Part IV.D.5.e of this Permit, the Permittee or DTSC determines that the location(s) of the POC does not meet the requirements of the California Code of Regulations, title 22, section 66264.95, the Permittee shall comply with Part IV.D.5.m of this Permit. [Title 22 CCR §66264.98(l) and (m)]

**f. Compliance Period**

- (1) The compliance period for the surface water monitoring and response program shall be the post-closure care period specified in Part V.B.1.a of this Permit. [Title 22 CCR §§66264.117(b)(1), 66264.117(b)(2)(B), 66264.96(a), 66270.32(a), (b)(1) and (b)(2)]

- (2) The compliance period for the surface water monitoring and response plan will be periodically reviewed by DTSC and extended as DTSC determines necessary to protect human health and the environment. [Title 22 CCR §§66264.96(a), 66264.117(b)(2)(B), and 66270.32(b)(1)]

**g. Background Surface-water Monitoring**

- (1) As part of the SWQMRP required in Part IV.D.5.a(3) of this Permit, the Permittee shall establish background monitoring for surface water. [Title 22 CCR §66264.97(c)(1)]
- (2) The Permittee shall establish and include within the SWQMRP, required in Part IV.D.5.a(3) of this Permit, a sufficient number of background monitoring points at appropriate locations to yield representative measurements of surface water not affected by a release from the regulated unit. The background groundwater monitoring wells specified in Part IV.D.2.h of this Permit may be used, at a minimum, to establish background for springs and other surface water deriving from underground sources. The Permittee may also propose to use intra-body statistical comparisons in addition to other background comparisons. [Title 22 CCR §66264.97(c)(2)(A)]
- (3) The Permittee shall calculate and submit background groundwater quality concentrations of naturally occurring constituents for DTSC review and approval. It is recognized that the background surface-water quality can also fluctuate. The Permittee may propose a procedure to update background values for a constituent of concern or monitoring parameter. [Title 22 CCR §66264.97(e)(10)]

**h. Detection Monitoring**

- (1) As part of the monitoring and response program required in Part IV.D.5.a of this Permit, the Permittee shall establish detection monitoring for surface water. [Title 22 CCR §66264.91(a)(1) and §66270.14(c)(6)(B)]

- (2) Detection monitoring shall consist of:
  - (a) Monitoring any accumulation of water in existing or future man-made detention basins that serve as the POC or additional monitoring points; and,
  - (b) Monitoring water issuing from springs on or near the Facility. [Title 22 CCR §66264.91(b)]
- (3) The detection monitoring points shall consist of those described in Part IV.D.5.e.(3)(a) and (e), of this Permit. [Title 22 CCR §66264.97(c)(2)(B)]
- (4) Sampling frequency shall be as follows:
  - (a) Galster Park Spring shall be sampled biennially for the parameters specified in Tables IV.D.2-c-1, c-2, d-1 and d-2 of Part IV.D.2.h(9) of this Permit; and,
  - (b) All points listed in Part IV.D.5.e(3)(e) of this Permit shall be sampled quarterly for the parameters specified in Tables IV.D.2c-1, c-2, d-1 and d-2 of Part IV.D.2.h (9) of this Permit. The points listed in Part IV.D.5.e (3)(e) of this Permit shall also be sampled annually for all COCs. [Title 22 CCR §66264.98(f) and (g)]

**i. Evaluation Monitoring**

**Background:** DTSC has determined that there is statistically significant evidence of a release at Miranda Spring from the regulated unit. There has also been statistically significant evidence of a release at the Upper, Middle and Lower Detention Basins, the Azusa Storm Drain Inlet Area, the West Subdrain Discharge, and the East Subdrain Discharge (aka EPH03).

- (1) The Permittee shall, at a minimum, discharge the responsibilities specified in California Code of Regulations, title 22, section 66264.99. [Title 22 CCR §66264.99]
- (2) The Permittee shall establish an evaluation monitoring program for surface water as part of the monitoring and response

program required in Part IV.D.5.a(3) of this Permit. [Title 22 CCR §§66264.91(a)(2) and 66270.14(c)(7)(B)]

- (3) The Permittee shall implement evaluation monitoring. [Title 22 CCR §66264.97(c)(2)(C)] This evaluation monitoring shall consist of the following, at a minimum:
- (a) The Permittee shall determine the nature and extent of contamination, which originated from the closed Class I landfill unit, throughout the surface water bodies and any connected water bodies. [Title 22 CCR §66264.99(b)]
  - (b) The Permittee shall evaluate changes in water quality due to the release(s) from the regulated unit using statistical comparisons coupled with interpretations of time-series graphs and other appropriate graphical analyses. [Title 22 CCR §66264.97(e)(12)]
  - (c) The Permittee shall monitor Miranda Spring, on a quarterly basis, at a minimum, to determine if it is flowing. Miranda Spring is currently dry because of on-going groundwater extraction operations. At any time that Miranda Spring is monitored and observed to be flowing, a water sample shall be collected and analyzed. Following the initial sampling and analysis, the Permittee shall continue monitoring Miranda Spring on a quarterly basis in accordance with the SWQMRP. [Title 22 CCR §66264.99(e)(3)]
  - (d) The monitoring points are listed in Part IV.D.5.e(3)(c), (d), (e) and (f) of this Permit.
  - (e) The Permittee shall collect and analyze samples from the monitoring points specified in Part IV.D.5.i(3)(d) on a quarterly frequency for that subset of COCs that have been reported as indicative of a release under detection monitoring in accordance with Part IV.D.5.h of this Permit. [Title 22 CCR §66264.99(e)(4)]
  - (f) The Permittee shall submit all analytical data for evaluation monitoring points to DTSC in the first

scheduled monitoring report stipulated in Part IV.D.2.o(2) of this Permit. [Title 22 CCR §66264.97(e)(16)]

- (4) The Permittee shall analyze samples from all evaluation monitoring points in the affected media for all constituents contained in Appendix IX of the California Code of Regulations, title 22, chapter 14 at least annually to determine if additional hazardous constituents are present. [Title 22 CCR §66264.99(e)(6)]
- (5) Whenever the Permittee determines that there has been a statistically significant change in water quality concentrations, the Permittee shall notify DTSC in writing within seven (7) calendar days. [Title 22 CCR §66264.99(e)(7)(A)]
- (6) Whenever the Permittee or DTSC determines that there is a statistically significant change in water quality concentrations, the Permittee shall, within ninety (90) calendar days of the determination, follow the procedures to modify the evaluation monitoring program pursuant to California Code of Regulations, title 22, section 66264.99(h) or (i). If a Permit modification is required, it shall include, at a minimum:
  - (a) Identification of the concentration of each Appendix IX constituent found in surface water at each affected monitoring point [Title 22 CCR §66264.99(e)(6)];
  - (b) Any proposed changes to the surface water evaluation monitoring system necessary to meet the requirements of the California Code of Regulations, title 22, section 66264.99 [Title 22 CCR §66264.99(h) and (i)];
  - (c) Any proposed changes to the monitoring frequency, sampling and analytical procedures or methods or statistical methods necessary to meet the requirements of the California Code of Regulations, title 22, section 66264.99 [Title 22 CCR §66264.99(e)(2 through 5)]; and
  - (d) A detailed description of the measures taken to assess the nature and extent of the release.  
[Title 22 CCR §66264.99(b)]

- (7) The Permittee shall submit an annual report to DTSC that describes and shows the nature and extent of contamination, any significant changes in the lateral or vertical extent of contamination, significant changes in the constituents or constituent concentrations, and the direction and rates of movement of the contaminant plumes. The first report shall be due on the first March 1 following the effective date of this permit.

**j. Corrective Action Monitoring**

Any corrective action monitoring of surface water to demonstrate effectiveness of corrective action measures shall be performed within the on-going corrective action being overseen by U.S. EPA under the March 31, 1989, and September 14, 2000, RCRA Section 3008(h) Consent Orders. [Title 22 CCR §66264.100]

**k. Construction, Development, and Decommissioning**

The Permittee shall include in the SWQMRP, required in Part IV.D.5.a(3) of this Permit, a detailed description of the protocols for construction, replacement, and decommissioning of any fixed installations at monitoring points identified in Part IV.D.5.e(3) of this Permit. [Title 22 CCR §§66264.97(b)(4), 66264.91(b), 66270.30(e), 66270.31(a), and 66270.32(b)(1) and (2)]

**l. Monitoring System Maintenance**

The Permittee shall include in the SWQMRP, required in Part IV.D.5.a(3) of this Permit, a detailed description of the protocols for maintenance of any fixed installations at the monitoring points identified in Part IV.D.5.e(3) of this Permit. [Title 22 CCR §§66264.91(b), 66270.30(e), 66270.31(a), and 66270.32(b)(1) and (2)]

**m. Submittals, Reporting, and Record-keeping**

- (1) The Permittee shall carry out applicable submittal, notice and other reporting, evaluation and modification responsibilities in the California Code of Regulations, title 22, sections 66264.98(k), (l) and (m), and 66264.99(h) and (i), and

66264.100(i) and (j). Events when such responsibilities arise include, but are not limited to, the following:

- (a) When DTSC or the Permittee determine that new monitoring points are necessary, different than those identified in Parts IV.D.5.e, g, h, i, or j of this Permit, in order for a program to satisfy the requirements of the applicable regulatory section;
- (b) When DTSC or the Permittee determine that new data and information about discharge of water from the landfill or effect of landfill COCs on surface water, such as springs, gained from implementation of monitoring measures for the LARWQCB or from corrective action activities performed for the U.S. EPA, indicate that the SWQMRP needs to be changed and updated in order to satisfy the requirements of the applicable regulatory section;
- (c) When DTSC or the Permittee determine that the background monitoring element needs to be changed in order for a program to satisfy the requirements of the applicable regulatory section;
- (d) When DTSC or the Permittee determine that the SWQMRP needs to incorporate new or improved techniques to detect chemical constituents or reaction products in surface water in order for a program to satisfy the requirements of the applicable regulatory section;
- (e) When sampling or resampling (if applicable) confirms statistically significant evidence of a release and a change in a program is necessary, such as moving a monitoring point from the detection monitoring program to the evaluation monitoring program; and
- (f) When DTSC or the Permittee determine that a program will not meet the requirements of the applicable regulatory section unless new constituents are added to the list of COCs specified in the Permit. [Title 22 CCR §§66264.98 (k), (l) and (m),

66264.99(h) and (i), 66264.100 (i) and (j),  
66270.32(b)(2), 66270.42, and Title 22 CCR Chapter  
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- (2) Unless another date is specified in Part IV.D.5 of this Permit, the Permittee shall submit all documentation required in Part IV.D.5 in accordance with the schedule in Table IV.D.2-r and Part IV.D.2.o(5). [Title 22 CCR §66264.97(e)(16)]
- (3) The Permittee shall include the surface water monitoring data in the annual water quality monitoring report to be submitted by March 1 of each calendar year in accordance with Part IV.D.2.o of this Permit. [Title 22 CCR §66264.97(e)(16)]

## **E. FINANCIAL RESPONSIBILITY**

### **1. Cost Estimates For LTP Closure and Class I Landfill Post-Closure Care**

- a. The Permittee's latest adjusted LTP closure and Class I Landfill post-closure cost estimates, prepared in accordance with the California Code of Regulations, title 22, sections 66264.142 and 66264.144 and copies of all financial assurance documents including, but not limited to, certificates submitted to DTSC, insurance policies, agreements with insurers, trust agreements, any other agreements with responsible parties and financial assurance providers and documentation of any other types of financial assurance mechanisms approved by DTSC for the Permittee to use to meet financial assurance requirements shall be kept at the Facility during the post-closure period specified in this Permit. The latest adjusted cost estimates shall be included in Exhibit 3.7.1 of the Operation/Post-closure Plan. [Title 22 CCR § 66270.14 (B)(16) and (17)] All previous LTP closure and Class I Landfill post-closure cost estimates and financial assurance documentation as described above that are in the Permittee's possession shall be retained as records pursuant to Part IV.H. of this Permit. [Title 22 CCR § 662670.14 (b)(19) ]
- b. During the post-closure period specified in this Permit, the Permittee shall prepare new LTP closure and/or Class I Landfill post-closure cost estimates, as applicable, within 30 days after DTSC approves a change in the Operation/Post-closure Plan that increases the cost of closure and/or post-closure care, as required by the California Code of Regulations, title 22 sections 66264.142 (c) and 66264.144(c); or if changes in post-closure care activities for the Class I Landfill or operation of the LTP made in accordance

with this Permit increase the cost of closure and/or post-closure care, as applicable. All revisions to the closure and post-closure care cost estimates shall be based on the costs to the Permittee of hiring a third party to conduct closure and post-closure care activities. [Title 22 CCR §§66264.144 (a)(1), 662670.14 (b)(19) and 66270.32(b)(2)]

- c. BKK previously prepared and submitted a cost estimate. DTSC has revised BKK's submittal, which is the approved Cost Estimate (the Cost Estimate). The Cost Estimate includes two components: the cost estimate for closing the LTP and the cost estimate for post-closure care of the closed Class I Landfill. The Cost Estimate has been provided to the Permittee and may be revised subsequent to issuance of this Permit subject to written approval from DTSC. [Title 22 CCR §§66270.14 (b)(19), 66270.32(b)(2), 66264.142 and 66264.144]
- d. Within sixty (60) calendar days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with the California Code of Regulations, title 22 sections 66264.143 and 66264.145, during the post-closure period specified in this Permit, the Permittee shall annually adjust the latest LTP closure and Class I Landfill post-closure cost estimates as specified in the California Code of Regulations, title 22 sections 66264.142(b) and 66264.144(b). [Title 22 CCR §§662670.14 (b)(19) and 66270.32(b)(2)]
- e. The Permittee shall adjust the Class I Landfill post-closure cost estimate for changes such as, but not limited to:
  - (1) Changes in costs for corrective action work required by the SPI, so long as it remains in effect; and,
  - (2) Changes in the technical assumptions used in preparing the post-closure cost estimate to reflect actual current Class I Landfill unit conditions and post-closure care operations. [Title 22 CCR § 66270.32(b)(2)]
- f. The annual adjusted LTP closure and Class I Landfill post-closure cost estimates as described in Part IV.E.1.c. of this Permit and any other adjustments to the cost estimates made during the past year shall be included in the annual reports required under the California Code of Regulations, title 22 section 66264.75(g) for the LTP and 66264.228(r) for the Class I landfill .

**2. Financial Assurance For LTP Closure and Class I Landfill Post-Closure Care**

**a. Financial Assurance General Requirements**

- (1) The Permittee shall comply with the financial assurance requirements of title 22, California Code of Regulations, sections 66264.143 and 66264.145 and this Permit using the closure and post-closure cost estimates identified in Part IV.E.1.c. above and any subsequent revisions based on requirements of the California Code of Regulations and Part IV.E.1. of this Permit. The Permittee shall provide financial assurance in an amount equal to the approved Cost Estimate discussed in Part IV.E.1.c. above within (five) 5 calendar years after the effective date of this Permit pursuant to the Compliance Schedule required in Part IV.E.2.b. below.
- (2) Subsequent to completion of the Compliance Schedule discussed in Part IV.E.2.b. below, the Permittee shall maintain and continue to demonstrate to DTSC compliance with applicable sections of the California Code of Regulations, Article 8, by annually providing documentation of financial assurance in at least the amount of the most recent adjusted Cost Estimate as required in Part IV.E.1. of this Permit. [Title 22 CCR §§66264.143 and 145]
- (3) Whenever the closure and post-closure cost estimate for the operating LTP and/or closed Class I landfill units increase to amounts greater than the cost estimates described in Part IV.E.1.c. above during the five-year compliance period described below and before the Total Financial Assurance Shortfall (defined in Part IV.E.2.b. below) is fully funded, the Permittee shall increase the annual contributions to financial assurance by commensurate amounts so that the total Cost Estimate shall be fully funded by the end of the five (5) year compliance period. If either the LTP cost estimate and/or the Class I landfill post-closure cost estimate increases during the post-closure period specified in this Permit and after the Permittee has otherwise fully complied with its financial assurance obligations required in the Compliance Schedule in Part IV.E.2.b. below, the Permittee shall, within sixty (60) calendar days after the increase, provide additional financial assurance as specified in the California Code of Regulations, title 22, article 8 to cover this increase. Whenever the current LTP closure and Class I landfill post-closure cost estimates decrease during the post-closure period, the face amount of an insurance policy or the amount of financial assurance provided through another approved mechanism may be reduced to the

amount of the current closure and post-closure cost estimate following written approval by DTSC. [Title 22 CCR §§66264.142(b) and 144(b)]

- (4) The Permittee may request reimbursements for post-closure care activities by submitting to DTSC itemized bills for post-closure care expenditures and requesting partial release of financial assurance. Within sixty (60) calendar days after receiving itemized bills for expenditures for post-closure care activities, DTSC may instruct the insurer, trustee or other applicable entity to make reimbursements in those amounts as DTSC specifies in writing, at DTSC's discretion. The Permittee shall provide sufficient information in order for DTSC to determine: [Title 22 CCR §66264.145(e)(5)]
  - (a) whether the post-closure care expenditures are in accordance with the approved Operation/Post-closure Plan or are otherwise justified to comply with post-closure care requirements [Title 22 CCR §§ 66264.145 (a)(12) and (e)(5) and 66270.32(b)(2)];
  - (b) whether the reimbursement request adequately documents that:
    - (i) the expenditures were only for the post-closure care activities required in the Operation/Post-closure Plan, the Post-closure Permit or applicable regulations for post-closure care of the closed Class I Landfill unit and provided for in the Cost Estimate; and
    - (ii) the work was performed [Title 22 CCR §§66264.145 (a)(12) and (e)(5) and 66270.32(b)(2) ] and;
  - (c) whether the closure and post-closure funds that would remain in the insurance policy or other financial assurance mechanism after reimbursement are adequate to cover the full remaining estimated closure and post-closure costs in the approved Cost Estimate (as it may be revised with DTSC approval) as specified in Part IV.E.1 of this Permit. [Title 22 CCR §66270.32(b)(2)]; and
  - (d) whether the Permittee has complied with paragraphs (9) and (10) below.
- (5) The itemized bills that the Permittee submits with the request for reimbursement of post-closure care activities shall consist of spreadsheets that include, at a minimum, the approved Cost Estimate

line items (tasks or personnel) and the columns listed below. This list may be adjusted through written agreement between the Permittee and DTSC.

- (a) Approved cost estimate unit rate;
  - (b) Man-hours or quantity from the approved cost estimate;
  - (c) Approved annual frequency;
  - (d) Planned expenditures; and
  - (e) Variation from planned/approved expenditures and actual expenditures (i.e. the difference between planned/approved and actual expenditures). [Title 22 CCR §66270.32(b)(2)]
- (6) The itemized bills that are submitted with the request for reimbursement of post-closure care activities shall have attachments that, at a minimum, include:
- (a) Receipts, and/or invoices for all external vendor<sup>9</sup> expenditures in excess of \$1000.00 for which reimbursement is requested for post-closure care activities;
  - (b) Documentation for overhead for which reimbursement is requested for post-closure care activities; and,
  - (c) Documentation for all engineering expenditures for which reimbursement is requested for post-closure care activities. [Title 22 CCR §66270.32(b)(2)]
- (7) The Permittee shall not cancel or take any actions that are grounds for cancellation of any insurance policies the Permittee has obtained to meet financial assurance requirements without written approval from DTSC. These types of actions include, but are not limited to, failing to pay premiums or entering into agreements that allow the Class I Landfill and LTP policies to be canceled, even if these premiums have been paid.

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<sup>9</sup> External vendor expenditures include expenditures for work, services, goods etc. that may be provided by affiliates of the Permittee. It does not include the Permittee's internal expenditures for which receipts and invoices are not typically provided such as internal employee labor.

- (8) The Permittee shall provide DTSC with at least sixty (60) days notice before the Permittee agrees to any revisions to any insurance policy, trust agreement, contract agreement or other mechanism that has been obtained or entered into by the Permittee to meet financial assurance requirements. The Permittee shall not agree to any revisions without review and approval by DTSC. The Permittee may notify DTSC and seek written pre-approval from DTSC for a list of non-substantive changes that can be made, such as corrections of grammatical and typographical errors, new telephone numbers and addresses, changes in contact names and addresses, etc. DTSC's approval shall not be unreasonably withheld.
- (9) The Permittee shall not seek reimbursement for amounts above an annual sub-limit approved by DTSC in writing. The Permittee shall also not seek reimbursement from any LTP/Class I landfill closure/post-closure insurance policy, trust or other financial assurance mechanism approved by DTSC, for costs attributable to the closure or post-closure care of the Class III landfill or for other activities not identified in the Operation/Post-closure Plan, the LTP /Class I Post-closure Permit or applicable regulations for closure of the LTP or post-closure care of the closed BKK Class I Landfill unit and provided for in the Cost Estimate (as it may be revised with written approval by DTSC) or otherwise justified.
- (10) The Permittee shall not seek reimbursement from the Class I landfill closure/post-closure policy, Steadfast Policy No. PLC 7969053-4 for post-closure costs added by requirements of this Permit (compared to costs required to implement the Operation/Post-closure Plan, revised June 30, 1997, with further revisions dated August 5 and November 14, 1997) until the Short Term Shortfall (defined in Part IV.E.2.b. below ) is fully funded pursuant to the Financial Assurance Compliance Schedule required in Part IV.E.2.b. below.

**b. Financial Assurance Compliance Schedule**

**Background:** The Permittee has an insurance policy in place with Steadfast Insurance Company (Steadfast ) ( No. PLC 7969053-04) with a face value equal of \$37,142,139 (the Prior Cost Estimate). The policy attached to the Permittee's certificate of insurance dated June 1, 2003 has an annual sublimit of \$1,344,840 and is scheduled to pay reimbursements until 2019. Pay-outs of reimbursements began in approximately 1990, thus, the total amount remaining and available under the Steadfast policy as of June, 2004 is approximately

\$20,000,000 (the “Remaining Assurance of Financial Responsibility” or “RAFR”).<sup>10</sup>

DTSC has established an updated post-closure cost estimate for the Class I Landfill of \$68,268,371<sup>11</sup> and a closure estimate for the LTP of \$1,029,762.<sup>12</sup> The total of these two cost estimates is \$69,298,133 (the “Cost Estimate”).<sup>13</sup> This Cost Estimate addresses closure costs of the LTP and post-closure costs for the Class I landfill for 30 years after the effective date of this Permit. Due to the fact that the current Steadfast policy funds an amount less than the Cost Estimate and expires in approximately 15 years, the Permittee must provide more financial assurance on an annual basis while the Steadfast policy is in place and provide financial assurance for an additional period of time after the expiration of the current policy with Steadfast.

The Cost Estimate (\$69,298,133) exceeds the RAFR estimate (\$20,000,000) by \$49,298,133 (the “Total Financial Assurance Shortfall”).<sup>14</sup> The Permittee must make up this shortfall in financial assurance to meet the requirements of this Permit and the California Code of Regulations.

The average of annual cost under the Cost Estimate is \$2,309,938<sup>15</sup> per year, which exceeds the current annual sublimit of the Steadfast policy (\$1,344,840 per year) by \$965,098 per year.<sup>16</sup> Thus, between the effective date of this Permit and 2019 (expiration date of the Steadfast policy), the Permittee must provide approximately \$965,098 more per year in financial assurance. The total additional financial assurance necessary during the term of the Steadfast

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<sup>10</sup> Estimate provided by Steadfast Insurance Company.

<sup>11</sup> The Permittee and/or DTSC may want to reevaluate this cost estimate at a future date. This Class I Landfill post-closure care cost estimate may be revised with written approval of DTSC.

<sup>12</sup> The Permittee and/or DTSC may want to reevaluate this cost estimate at a future date. This LTP closure cost estimate may be revised with written approval of DTSC.

<sup>13</sup> The Permittee and/or DTSC may want to reevaluate this cost estimate at a future date. The Cost Estimate may be revised with written approval of DTSC.

<sup>14</sup> This average annual amount will change if the Cost Estimate is revised with written DTSC approval.

<sup>15</sup> This amount will change if the Cost Estimate is revised with written DTSC approval.

<sup>16</sup> This amount will change if the Cost Estimate is revised with written DTSC approval.

policy shall be defined as the “Near Term Shortfall.”<sup>17</sup> After the Steadfast policy expires, the Permittee is required to provide an annual average of \$2,309,938 in financial assurance until the end of the 30 year post-closure term imposed by this Permit and the California Code of Regulations.<sup>18</sup> The sum of these payments (from 2019 until the end of the 30-year compliance period) shall be defined as the “Longer Term Shortfall.”<sup>19</sup>

The Permittee has presented financial information to DTSC to demonstrate the Permittee’s inability to fund the Total Financial Assurance Shortfall upon the effective date of this Permit.

- (1) **First Interim Date.** Within one (1) year after the effective date of this Permit, the Permittee shall provide additional financial assurance equal to at least 4% of the Total Financial Assurance Shortfall. These funds shall be applied to the Near Term Shortfall.
- (2) **Second Interim Date.** Within two (2) years after the effective date of this Permit, the Permittee shall provide financial assurance equal to at least 16% of the Total Financial Assurance Shortfall. This amount shall be used to fund the Near Term Shortfall.
- (3) **Third Interim Date.** Within three (3) years after the effective date of this Permit, the Permittee shall provide financial assurance equal to at least 25% of the Total Financial Assurance Shortfall. This amount shall first be used to fund the Near Term Shortfall and any balance shall be applied to the Longer Term Shortfall.
- (4) **Fourth Interim Date.** Within four (4) years after the effective date of this Permit, the Permittee shall provide financial assurance equal to at least 30% of the Total Financial Assurance Shortfall. This amount shall be applied to the Longer Term Shortfall, provided the Near Term Shortfall is fully funded and DTSC does not direct otherwise in writing.

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<sup>17</sup> For example, if this Permit becomes effective in 2004 and the current Cost Estimate has not been revised, the Near Term Shortfall would be approximately \$14,476,470.

<sup>18</sup> The end of the 30-year post-closure period will depend upon the effective date of the Permit.

<sup>19</sup> If this Permit becomes effective in 2004 and the current Cost Estimate has not been revised, the Longer Term Shortfall will be approximately \$34,649,070.

- (5) **Fifth Interim Date.** Within five (5) years after the effective date of this Permit, the Permittee shall provide financial assurance equal to at least 25% of the Total Financial Assurance Shortfall. This amount shall be applied to the Longer Term Shortfall, provided the Near Term Shortfall is fully funded and DTSC does not direct otherwise in writing
- (6) **Notices.**
  - a. At least 60 days prior to each interim date discussed above, the Permittee shall inform DTSC in writing about whether it plans to comply or not comply with the compliance schedule presented above.
  - b. No later than 14 days following each of the deadlines discussed above, the Permittee shall notify DTSC in writing of its compliance or noncompliance with the conditions discussed above. [Title 22, CCR, §66270.33]

**3. Liability Requirements for the LTP**

**a. Sudden Accidental Occurrences**

The Permittee shall have and maintain liability coverage for sudden accidental occurrences for the active LTP unit in the amount of at least \$1 million per occurrence with an annual aggregate of at least \$2 million, exclusive of legal defense costs, for the active LTP unit. [Title 22 CCR §66264.147 (a)]

**b. Notifications**

The Permittee shall notify DTSC in writing within thirty (30) calendar days in the event of the following:

- (1) A Certification of Valid Claim is entered between the Permittee and a third party claimant for liability coverage as described in California Code of Regulations, title 22, section 66264.147(a)(8)(A);
- (2) A claim results in the reduction in the amount of financial assurance provided by the approved financial instrument for liability coverage as described in California Code of Regulations, title 22, section 66264.147(a)(8)(B); and,

- (3) A final court order establishes a judgement issued against the Permittee or an approved financial instrument for a liability coverage for occurrence arising from the operation of the LTP as described in California Code of Regulations, title 22, section 66264.147(a)(8)(C). [Title 22 CCR §66264.147 (a)(8)]

**F. AGENCY APPROVAL/PROPOSED CONTRACTOR/ADDITIONAL WORK**

**1. Agency Approvals**

- a. The Permittee shall revise any plan, work plan, report, specification or schedule in accordance with DTSC's written comments. The Permittee shall submit to DTSC any revised submittals in accordance with a due date specified by DTSC. Revised submittals are subject to DTSC approval or disapproval, with comments and/or modification. [Title 22 CCR §66270.32(b)(2)]
- b. The Permittee shall, upon receipt of the DTSC's written approval, commence work and implement any approved plan or work plan in accordance with the schedule and provisions contained therein. [Title 22 CCR §66270.32(b)(2)]
- c. Any DTSC-approved plan, work plan, report, specification, or schedule related to the Facility, shall be deemed incorporated into this Permit. Any non-compliance with such approved work plans, reports, specifications or schedules shall be considered non-compliance with this Permit. Prior to this written approval, no plan, work plan, report, specification or schedule shall be construed as approved and final. Verbal advice, suggestions, or comments given by DTSC representatives will not constitute an official approval, nor shall any verbal approval or verbal assurance be considered binding. [Title 22 CCR §66270.32(b)(2)]
- d. Any plan, work plan, report, specification, or schedule, approved by U.S. EPA pursuant to a RCRA 3008(h) Order, while that Order is in effect, shall be deemed incorporated into this Permit. Any non-compliance with such approved work plans, reports, specifications or schedules shall be considered non-compliance with this Permit. Prior to written approval, no plan, work plan, report, specification or schedule shall be construed as approved and final. Verbal advice, suggestions, or comments given by U.S. EPA or DTSC representatives will not constitute an official approval, nor shall any verbal approval or verbal assurance be considered binding.

**2. Proposed Contractor/Consultant**

- a. All technical work performed pursuant to this Permit shall, when required by statute or regulation, be under the direction and supervision of a California Registered Civil Engineer, Certified Hydrogeologist or Engineering Geologist, licensed in the State of California, with expertise in hazardous waste site cleanup, or other qualified professional as appropriate to the technical requirements of the work. The Permittee's contractor and consultants shall have the technical expertise sufficient to adequately perform all aspects of the work for which they are responsible. [Title 22 CCR §66270.32(b)(2)]
- b. The Permittee shall notify the DTSC Project Coordinator, as part of any technical plan or work plan, of the name, title, and qualifications of the civil engineer, hydrogeologist, engineering geologist and/or any other qualified professional as appropriate to the aspects of the work to be performed, and of any contractors or consultants and their personnel to be used in carrying out technical work under this Permit. The Permittee shall notify DTSC in writing and provide the above-cited information within fourteen (14) calendar days of any subsequent replacement. [Title 22 CCR §66270.32(b)(2)]

**3. Additional Work**

- a. DTSC may determine or the Permittee may propose that certain tasks, including investigatory work, remedial action, engineering evaluation, or procedure/ methodology modifications are necessary in addition to, or in lieu of, the tasks and deliverables included in any work plan or plan approved by DTSC. [Title 22 CCR §66270.32(b)(2)]
- b. DTSC or the Permittee may request in writing that the Permittee perform the additional or replacement work. The request should specify the basis and reasons for DTSC's or the Permittee's determination that the additional or replacement work is necessary. [Title 22 CCR §66270.32(b)(2)]
- c. If required by DTSC, the Permittee shall submit a work plan to DTSC for the additional or replacement work. Such work plan shall be submitted to DTSC according to a reasonable schedule established by DTSC. Upon approval of a work plan, the Permittee shall implement it in accordance with the provisions and schedule contained therein. [Title 22 CCR §66270.32(b)(2)]

**G. SAMPLING/ACCESS**

**1. Sampling**

- a. Notwithstanding any other provisions of this Permit, DTSC retains all of its information gathering and inspection authority and rights including enforcement actions related thereto, under the Health and Safety Code, and any other State or federal statutes or regulations. [Title 22 CCR §66270.32(b)(2)]
- b. The Permittee shall notify DTSC in writing at least fourteen (14) calendar days prior to beginning each separate phase of field work approved under any work plan required by this Permit. If the Permittee believes it must commence emergency field activities without delay, the Permittee may seek emergency telephone authorization from the DTSC Project Coordinator or if the Project Coordinator is unavailable, his/her immediate supervisor, to commence such activities immediately. [Title 22 CCR §66270.32(b)(2)]
- c. At the request of DTSC, the Permittee shall provide to or allow DTSC, other State regulatory agencies, U.S. EPA and their authorized representatives the opportunity, including access at all reasonable times, to the Facility, to take split or duplicate samples of all samples collected by the Permittee pursuant to this Permit. [Title 22 CCR §66270.32(b)(2)]

**2. Sampling Document Availability**

The Permittee shall submit to DTSC upon request the results of all sampling and/or tests or other data generated by its employees, agents, consultants, or contractors pursuant to this Permit. [Title 22 CCR §66270.32(b)(2)]

**3. Access**

- a. DTSC, U.S. EPA, their contractors, employees, and/or representatives are authorized to enter and freely move about the Facility pursuant to this Permit for the purposes of: interviewing Facility personnel and contractors; inspecting records, operating logs, and contracts required under this Permit; reviewing the progress of the Permittee in carrying out the terms of this Permit; conducting such tests, sampling or monitoring as DTSC or its Project Coordinator deem necessary; using a camera, sound recording, or other documentary type equipment; and verifying the reports and data submitted to DTSC by the Permittee. The Permittee shall provide DTSC, U.S. EPA, their contractors, employees and/or representatives access at all reasonable times to the Facility and any other property to which access is required for implementation of this

Permit and shall permit such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Permit. [Title 22 CCR §§66270.30(i) and 66270.32(b)(2)]

- b. Nothing in this Permit limits or otherwise affects DTSC's right of access and entry pursuant to any applicable state or federal law or regulation. [Title 22 CCR §66270.32(b)(2)]
- c. To the extent that work being performed pursuant to this Permit must be done on property not owned or controlled by the Permittee, the Permittee shall use its best efforts to obtain access agreement necessary to complete work required by this Permit from the present owner(s) of such property within thirty (30) calendar days of approval of any workplan for which access is required. Best efforts as used in this paragraph shall include, at a minimum, a certified letter, or equivalent with proof of submittal, from the Permittee to the present owner(s) of such property requesting access agreement(s) to allow the Permittee, DTSC, U.S. EPA and their authorized representatives access to such property and the payment of reasonable sums of money in consideration of granting access. The Permittee shall provide DTSC with a copy of any access agreement(s). In the event that agreements for access are not obtained within thirty (30) calendar days of approval of any workplan for which access is required, or of the date that the need for access became known to the owner or operator, the Permittee shall notify DTSC in writing within fourteen (14) calendar days thereafter regarding both the efforts undertaken to obtain access and its failure to obtain such agreements. In the event DTSC and/or U.S. EPA obtain access, the Permittee shall undertake approved work on such property.

## **H. RECORD PRESERVATION**

1. The Permittee shall retain, during the term of this Permit and any reissued permits, all data, records and documents in its possession gathered or generated in connection with any hazardous waste management activities (such as manifests and other records of disposal), closure and post-closure care, corrective action activities including those required under the SPI, the CERCLA Section 106 Orders, the RCRA Section 7003, 3013, and 3008(h) Orders and those activities undertaken pursuant to this Permit. All such documents shall be stored in a centralized location at the Facility (or other location approved by DTSC) and be made available to DTSC, U.S. EPA or their representatives upon request. The Permittee shall notify DTSC in writing at least ninety (90) calendar days prior to final expiration of this Permit, and shall provide DTSC with the opportunity to take possession of any such records. Such written notification shall

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reference this Permit (including expiration date) and shall be addressed to the DTSC Project Coordinator. [Title 22 CCR §§66264.74(a) and 66270.32]

2. The Permittee shall obtain and retain copies of all data, records and documents gathered or generated by any agent, consultant, or contractor employed by the Permittee to comply with this Permit. [Title 22 CCR §66270.32(b)(2)] The Permittee shall also provide to DTSC any documents these persons produce pursuant to this Permit. “Documents” for purposes of this condition includes, but is not limited to, data, reports, work plans, sampling and monitoring results, analyses and similar documents produced or conducted because they are required by this Permit and/or they are necessary in order for the Permittee to comply with this Permit. “Documents” does not include notes taken at meetings or during telephone calls.
3. All documents pertaining to this Permit shall be stored in a central location at the Facility (or any other location approved by DTSC) to afford ease of access by DTSC and its representative(s). [Title 22 CCR §66270.32(b)(2)]

**PART V. SPECIAL CONDITIONS THAT APPLY TO THE FACILITY'S  
HAZARDOUS WASTE MANAGEMENT UNITS**

**A. LEACHATE TREATMENT PLANT**

**1. Treatment Conditions**

The Permittee shall operate and maintain the LTP system in accordance with Section 3.3.9 of the Operation Plan. The following are additional requirements:

- a. In the event that the concentration of oil or grease in the leachate rises to a point where the efficiency of the treatment process is impaired and the effluent standards are not reached, the Permittee shall install appropriate separation equipment so that the treatment process can function as designed. [Title 22 CCR §66270.32(b)(2)]
- b. Treated effluent is currently discharged to the “one-million gallon reservoir or tank” and mixed with purchased water for subsequent use in dust-control and irrigation. The following conditions shall apply:
  - (1) Any treated effluent that fails to meet the discharge criteria set by the SCAQMD or the LARWQCB for use for dust control or irrigation water and/or that fails to meet the criteria set by the Los Angeles County Sanitation District ("LACSD") for manhole discharge, shall be recycled by the Permittee through the treatment plant until the respective discharge criteria are met. If the respective discharge criteria cannot be met, the effluent shall be managed as hazardous waste. The more stringent of the discharge criteria for individual constituents from any agency shall apply. [Title 22 CCR §66270.32(b)(2)];
  - (2) The Permittee shall continue the current annual average ratio of approximately 1:10 treated effluent to purchased water unless another ratio is approved by DTSC and other appropriate regulatory agencies.
  - (3) The Permittee shall comply with any applicable state, county and/or municipal statutes, regulations and ordinances regarding safe operation and maintenance of the reservoir/tank.
- c. The leachate from the closed Class I Landfill unit is a listed waste. [Title 22 CCR §66261.31] U.S. EPA determined in a May 12, 1997 letter to the City of West Covina (which included attachments), that the treated effluent from the

LTP is not a listed waste, because the leachate from the Class I landfill is mixed with contaminated groundwater. If that determination changes after the effective date of this Permit or the Permittee decides it wants to stop mixing contaminated groundwater with leachate from the Class I landfill for treatment in the LTP, then the Permittee shall not cease the mixing until one of the following occurs:

- (1) The Permittee re-submits an application to U.S. EPA for the delisting of the treated leachate and the application is approved;
- (2) The Permittee establishes a discharge system to a publicly owned treatment works (POTW) permitted pursuant to the Clean Water Act (CWA); or,
- (3) The Permittee undertakes an alternative approved by U.S. EPA and DTSC. [Title 22 CCR §66270.32(b)(2)]

**2. Storage in Containers**

**a. Storage Restrictions.**

- (1) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, revise Section 3.3.9.1 of the Operation Plan to designate specific areas and capacity for storage of the hazardous waste roll-off bins, described in Part III.B.4.i of this Permit, and any other containers holding hazardous wastes. [Title 22 CCR §66270.14(b)(19)]
- (2) The Permittee shall not store hazardous waste roll-off bins and other containers holding hazardous wastes outside of these specific areas. All bins, whether full or empty, which are or have been used for storage of sludge, when not within the LTP units shall only be stored in the specified areas. [Title 22 CCR §66270.32(b)(2)]
- (3) The Permittee shall not store filter cake for more than 270 days and shall not store it in an amount that exceeds the capacity of the allowable number of containers, which is ten (10). [Title 22 CCR §66270.32(b)(2)]

**b. Compatibility of Waste with Containers**

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The Permittee shall use containers that, at a minimum, comply with California Code of Regulations, title 22, section 66264.172.

**c. Containment**

- (1) Each hazardous waste storage area containing wastes regulated under this Permit (except for roll-off bins storing LTP filter-cake wastes that do not contain free liquid) shall comply with California Code of Regulations section 66264.175(b). The Permittee shall store any LTP filter cake waste determined to contain free liquids in secondary containment areas. Transfer of LTP filter cake waste, with or without free liquids, from one container to another shall be conducted in secondary containment areas. [Title 22 CCR §66264.175 (b) and (d)]
- (2) The Permittee shall not construct any new secondary containment areas nor rebuild or extend any existing secondary containment areas across Holocene faults unless the faults can be demonstrated to DTSC's satisfaction by the Permittee's engineer's report to be incapable of surface rupture. [Title 22 CCR §§66264.175(c), 66270.14(b)(11)A(2), 66270.32(b)(1) and (2)]
- (3) In addition to the requirements of item (1) above, the containment system shall be constructed so that surface water run-off is contained and surface water run-on is excluded. [Title 22 CCR §66264.175(d)]
- (4) The storage area shall be sloped or otherwise designed and operated to collect and remove liquid resulting from precipitation. Spills, leaks and precipitation shall be promptly removed from the containment area to prevent any overflow. [Title 22 CCR §§66264.175(d)(1) and 66270.32(b)(1) and (2)]

**3. Manifest System**

For the LTP filter cake or any other hazardous waste that must be shipped off-site, the Permittee shall comply with the manifesting requirements for generators of hazardous waste as described in the California Code of Regulations, title 22, division 4.5, chapter 12, article 2. [Title 22 CCR §66270.32(b)(2)]

**4. Analysis of Waste**

- a. The Permittee shall, upon the effective date of this Permit, follow the written waste analysis plans described in Sections 2.5 and 3.3 and associated Exhibits 2.5.8-1 and 3.3.9-1 of the Operation Plan and any other waste analysis requirements in California Code of Regulations, title 22, sections 66264.13 (a) and (b) and 66264.17. In addition, within one hundred twenty (120)

calendar days of the effective date of this Permit, the Permittee shall submit for DTSC review and approval:

- (1) A revision of Section 2.5.1 of the Operation Plan to require that: (a) samples of the raw leachate from the closed Class I Landfill unit be analyzed for all COCs (as described in Part IV.D.2.d of this Permit) during the annual characterization; and (b) the quarterly fingerprinting analyses from each particular leachate source area include all COCs that have been previously identified in the leachate, gas or groundwater up to that quarter. Samples shall be obtained prior to the introduction of and dilution by extracted groundwater, condensate from gas extraction (aside from any liquid that condenses within the well itself), leachate from the inactive Class III landfill, or any other fluids. [Title 22 CCR §§ 66264.13(a), 66270.30(j)(1), 66270.31(a) and (b), and 66270.32(b)(1) and (b)(2)]
  
- (2) A revision of Table 2.5.2 of Section 2.5 of the Operation Plan and Table 1 of Exhibit 2.5.8-1 to:
  - (a) Require that samples of the raw leachate from the Class I landfill be tested at least annually for a gamma scan, gross alpha and gross beta;
  - (b) Include analyses for radium 226 and 228 in order to reconcile these tables with Table 1 (LTP Analytical Parameters) of Section 3.3 of the Operation Plan; and
  - (c) Include the methodological criteria cited in footnote 3 to Table 1 of Section 3.3 of the Operation Plan.  
[Title 22 CCR §§66260.32(b)(1) and (b)(2), 66264.13(a), 66270.30(j)(1), and 66270.31(a) and (b)]
  
- (3) A revision and update of Section 2.5 of the Operation Plan to:
  - (a) Identify any other leachate source areas and evaluate whether samples need to be obtained from the leachate being extracted from these other source areas. This is in addition to the samples being obtained from the following leachate source areas already specified in the Operation Plan: (i) a gas well at Barrier 1, (ii) a gas well at Barrier 2, (iii) a gas well in proximity to the upper former drum disposal area, (iv) a gas well in

proximity to the lower former disposal area, and (v) the D-bench well; and

- (b) Provide the rationale for selecting each specific leachate extraction well to represent different leachate source areas.

[Title 22 CCR §§ 66270.30(j)(1), 66270.31(a) and (b), and 66270.32(b)(1) and (2)]

- (4) A revision and update of Section 2.5 of the Operation Plan to indicate that the Permittee shall obtain written permission from DTSC prior to treating leachate obtained from a new on-site source. The request to treat leachate from a new on-site source shall include a complete analysis of the waste from the new source, the proposed dilution factors by which the new waste will be mixed with the existing leachate streams, and an explanation of any proposed minor changes in the operation of the LTP relating to the new leachate.

- (a) This analysis shall include, at a minimum, GC/MS analysis for volatile organic compounds, acid/base/neutral extractables, pesticides, polychlorinated biphenyls (PCBs), heavy metals, cyanides, arsenic, dioxins and furans, perchlorate, N-nitrosodimethylamine (NDMA), p-chloro-benzene sulfonic acid (pCBSA), gross alpha, gross beta, and a gamma scan.

- (b) These tests shall include data pertaining to the compatibility of wastes with the tanks used for treatment of these wastes.

- (c) Based upon the above information, when a leachate from a new on-site source introduced into the plant, the frequency of analysis for the influent, effluent, and filter cake may be increased to that described for the start-up mode specified in the Operation Plan. The increased waste analysis frequency shall be continued for at least one month or as directed by DTSC. The Permittee shall arrange to have copies of the laboratory results sent from the laboratory directly to the regulatory agencies.

- (d) The Permittee shall, within sixty (60) days of the initial treatment of leachate from a new on-site source, submit a report to DTSC, U.S. EPA, the LARWQCB and the SCAQMD. In order to confirm the adequate treatment of the new leachate,

the report shall describe the results of all the analyses performed during the treatment of the new leachate.  
[Title 22 CCR §§ 66264.13(a)(1), 66270.30(j), 66270.31 and 66270.32(a),(b)(1) and (b)(2)]

- b. The Permittee shall, within one hundred twenty (120) calendar days of the effective date of this Permit, submit to DTSC a revised waste analysis plan for the Class I landfill unit (Exhibit 2.5.8-1 of the Operation Plan) for DTSC review and approval. This is necessary in order to satisfy the requirements of California Code of Regulations, title, section 66264.13(a)(4) and (b) for obtaining representative samples of the waste and raw leachate and performing analyses at a frequency that ensures such analyses are current. The revised waste analysis plan shall include, at a minimum:
- (1) Sampling, at least annually, of leachate extraction wells (horizontal and vertical) that is representative of potential chemical and characteristic variations in raw leachate, based on available knowledge of historic disposal patterns or past raw leachate analyses. The basis for determining that the specific sampling points, such as those in the January 1995 "Waste Sampling and Analysis Plan," are representative shall be provided as well as the basis for excluding other potential sampling points.
  - (2) A detailed description of the procedures and techniques for sample collection and analysis of representative waste and raw leachate from the Class I landfill extraction wells (horizontal and vertical), locations, frequencies, construction details, and the basis for proposing that the waste is representative.
  - (3) Acknowledgment that an additional primary objective of the waste analysis plan is to ensure recognition of any additional COCs that enter the waste stream, so that the LTP waste analysis plan may be modified to test for those additional COCs and additional treatability studies may be performed as appropriate.
  - (4) Protocols for substitution of other existing sampling points in a particular leachate source area if the initial sampling points are dry, if the material in them is too dense to be sampled, or if the initial sampling points are not maintained, rehabilitated or replaced.

- (5) Updated tables of U.S. EPA analytical methods in Exhibit 2.5.8-1 of the Operation Plan that include all applicable methods and additional sampling rationale based on Part V.A.4.b(3) of this Permit.
  - (6) A statement that DTSC will be notified two (2) weeks in advance of (i) the annual characterization and quarterly fingerprinting sampling for leachate at the leachate source areas, and (ii) the annual characterization sampling of gas condensate at the 1040D-B Line Camlock.
  - (7) A statement that the analytical results of the annual characterization and quarterly fingerprinting sampling shall be reported to DTSC each year in the quarterly and annual groundwater monitoring reports.  
[Title 22, CCR, §§ 66264.13(a)(4), 66264.13(b), 66270.30(j)(1) and 66270.32(b)(1) and (b)(2)]
- c. The Permittee shall, within one hundred twenty (120) calendar days of the effective date of this Permit, submit a revised waste analysis plan for the LTP (Exhibit 3.3.9-1 of the Operation Plan), for DTSC review and approval, which includes, at a minimum:
- (1) A statement that within thirty (30) calendar days of the disclosure of additional COCs in the annual analyses of raw leachate or in contaminated groundwater, that these additional COCs will be added to the constituents being tested in the treated effluent.
  - (2) Revisions to Tables 1, 2 and 3 of Exhibit 3.3.9-1 of the Operation Plan that reflect the requirement to add constituents identified in analyses of raw leachate or contaminated groundwater to the analyses performed on the treated effluent.  
[Title 22, CCR, §§ 66264.13(a)(4), 66264.13(b), 66270.30(j)(1) and 66270.32(b)(1) and (b)(2)]
- d. The Permittee shall repeat the analyses in the waste analysis plan at least annually to ensure that they are accurate and up-to-date. [Title 22 CCR §§ 66264.13(a)(4) and 66270.32 (b)(2)]
- e. The procedures in the waste analysis plan shall conform to a quality assurance program. This quality assurance program shall be in accordance with current U.S. EPA practices (Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods SW-846, 3rd edition) or equivalent methods approved by DTSC; and, at a minimum, ensure that the Permittee maintains

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properly functional instruments; uses approved sampling and analytical methods; assures the validity of sampling and analytical procedures; and, performs correct calculations. [Title 22 CCR §§66264.13(b)(3) and 66270.32(b)(1) and (b)(2)]

- f. Samples taken for the purpose of monitoring shall be representative of the monitored activity. [Title 22 CCR §66270.32(b)(1) and (b)(2)]
- g. The Permittee shall retain records in its possession of all LTP monitoring information collected pursuant to requirements of regulatory agencies such as U.S. EPA, DHS, DTSC, LARWQCB and SCAQMD as part of the operating record until closure of the LTP unit. [Title 22 CCR §66264.73(b)]
- h. Records of monitoring information shall include:
  - (1) The date, exact place, and time of sampling or measurement (including sample ID number);
  - (2) The individual(s) who performed the sampling or measurements;
  - (3) The date(s) analyses were performed;
  - (4) The individual(s) who performed the analyses;
  - (5) The analytical techniques or methods used (including quantification limits);
  - (6) The results of such analyses (specifying units of measure); and
  - (7) The description(s) of disposal of collected water samples after analysis if the samples were in the possession of the Permittee.  
[Title 22 CCR §§66264.73(b) and 66270.32(b)(1) and (2)]
- iii. The laboratory work conducted for the purpose of monitoring and reporting required by this Permit for the LTP unit shall be performed by a laboratory certified by the State of California's Environmental Laboratory Accreditation Program (ELAP) pursuant to California Code of Regulations, title 22, division 4, chapter 19. If the Permittee wishes to use its own laboratory, it must obtain certification pursuant to the Health and Safety Code, chapter 6.5, division 20, article 8.5. [H&SC 25198 and Title 22 CCR §66270.32(b)(2)]

## **5. Inspections**

- a. The Permittee shall follow the requirements of California Code of Regulations, title 22, section 66264.15.

- b. The Permittee shall, at a minimum, inspect the following aspects of the tank systems in accordance with California Code of Regulations, title 22, section 66264.195 and the written inspection schedule in the Operation Plan:
- (1) High tank level monitors and liquid level gauges, at least once each operating day, to ensure that the levels are appropriate and the monitors and gauges are in good working order [Title 22 CCR §66264.195(a)];
  - (2) Data obtained from monitoring equipment (described in Table 3.5-1 of the Operation Plan), at least once each operating day, to ensure that the tank is being operated according to its design [Title 22 CCR §66264.195(b)(2)];
  - (3) The level of waste in the tank, at least once each operating day, to ensure compliance with the Operation Plan [Title 22 CCR §§66264.195(b)(4) and 66270.32(b)(2)];
  - (4) The construction materials of, and the area immediately surrounding the tank, at least weekly, to detect corrosion or leaking of fixtures or seams [Title 22 CCR §66264.195(b)(3)]; and
  - (5) All ancillary tank equipment (e.g. aboveground piping, welded flanges, etc.) that has not been provided with secondary containment shall be inspected on a daily basis. [Title 22 CCR §66264.193(f)].  
[Title 22 CCR §§66264.15(b)(1) and 66270.32(b)(2)]
- c. In accordance with California Code of Regulations, title 22, section 66264.15 and the written inspection schedule of the Operation Plan, the Permittee shall conduct inspections, including but not limited to, the following:
- (1) Treatment process equipment, at least weekly, to ensure that it is in good working order [Title 22 CCR §66264.195(b)(2)];
  - (2) Process and operations monitoring equipment (described in Table 3.5-1 of the Operation Plan), at least once each operating day, to ensure that the treatment process or equipment is being operated according to its design [Title 22 CCR §66264.195(b)(2)];
  - (3) The construction materials (except for tank shell integrity as specified in Part V.A.5.f of this Permit) of the treatment process or equipment, at

least weekly, to detect corrosion or leaking of fixtures or seams [Title 22 CCR §66264.195(b)(1)];

(4) The construction materials (except for tank shell integrity as specified in Part V.A.5.f of this Permit) of, and the area immediately surrounding discharge confinement structures, at least weekly, to detect obvious signs of leakage [Title 22 CCR §66264.195(b)(1)]; and

(5) Areas used for container storage or transfer, at least weekly, looking for leaking containers and for deterioration of containers and the containment system(s) [Title 22 CCR §§66264.174 and 66270.32(b)(2)].

[Title 22 CCR §§66264.15(b)(1) and 66270.32(b)(2)]

- d. The Permittee shall remedy any functional deterioration or malfunction of equipment or structures related to the ability of the LTP to safely and effectively treat wastewater that an inspection identifies as soon as possible to ensure that the problem does not lead to an environmental or human health hazard. When a hazard is imminent or has already occurred that may or does threaten human health and the environment, appropriate remedial action, as may be described in the contingency plan, shall be taken immediately. [Title 22 CCR §66264.15(c)]
- e. The Permittee shall record inspections in an inspection log or summary and shall keep these records pursuant to Part IV.H. of this Permit. [Title 22 CCR §66264.15(d)]
- f. At least once every two (2) years, or as specifically recommended in writing by the tank manufacturer, whichever is more frequent, all tanks shall undergo an internal inspection to verify the integrity of the tank shell and of the internal coating or lining. The minimum approved wall thickness for fiberglass reinforced plastic tanks and for steel tanks with linings or coatings shall be the minimum thickness of the tank specified by the manufacturer. [Title 22 CCR §§ 66264.194, 66264.195(e), 66264.196 and 66270.32(b)(2)]
- g. The Permittee shall, within ninety (90) calendar days of the effective date of this Permit, revise Table 3.3.9-1 of the Operation Plan to include tank wall thickness information, that, at a minimum, shall consist of the minimum wall thickness specified by the manufacturer for all tank units in the LTP.

- h. Any fiberglass tank that shows wall thinning to less than the minimum approved thickness or any steel tank with a liner or coating that shows corrosion that may lead to cracks or leaks or wall thinning to less than the minimum approved thickness is not allowed and, shall be removed from service until properly repaired or replaced. [Title 22 CCR §§ 66264.191 - 66264.196 and 66270.32(b)(2)]

## **B. CLASS I LANDFILL POST-CLOSURE CARE**

### **1. General Post-Closure Care Conditions**

- a. The Permittee shall conduct the post-closure care identified in this Permit for the closed Class I Landfill unit. For purposes of establishing financial assurance, it is understood that care shall continue for a minimum of thirty (30) years after the effective date of this Permit. The original post-closure period for this Facility began in 1989. Due to the nature of the waste that will remain on the Facility in perpetuity and the extent of contamination discussed in this Permit and numerous other documents on file with DTSC, U.S. EPA and other regulatory agencies, DTSC finds the extended post-closure period established pursuant to this Permit is necessary to protect human health and the environment. DTSC reserves the authority to periodically extend the compliance period identified for this Facility in this Permit and require additional financial assurance to cover the costs of extended post-closure care. The Permittee may apply to shorten the post-closure care period. [Title 22 CCR §§66264.117 (b)(1), 66264.117 , 66264.310, 66270.32(a), (b)(1), and (b)(2), and 66270.50(d)]
- b. The Permittee shall perform the monitoring specified in this Permit and pursuant to California Code of Regulations, title 22, article 6, section 66264.90 *et seq.* as applicable and article 17, section 66264.700 *et seq.*
- c. The Permittee shall maintain the integrity and effectiveness of the final cover, including making repairs as necessary, to correct the effects of settling, subsidence, erosion, storms, droughts and other events. Compliance with this condition includes maintaining the integrity of the final cover to prevent the downward entry of water into the closed landfill throughout a period of at least 100 years. To help prevent downward entry of water, the Permittee shall only apply dust control fluids to the final cover when necessary to minimize generation of dust. [Title 22 CCR §§66264.310(a)(1), 66264.310(b)(1), 66270.32(a), 66270.32(b)(1), and 66270.32(b)(2)]

- d. The Permittee shall continue to maintain and operate the leachate management system, including leachate collection, removal, transportation and treatment, until leachate is no longer detected. [Title 22 CCR, § 66264.310]
- e. The Permittee shall prevent run-on and run-off from eroding or otherwise damaging the closed Class I Landfill unit final cover. [Title 22 CCR 66264.310]
- f. The Permittee shall provide and maintain protective vegetation over the closed Class I Landfill unit to the extent necessary to minimize desiccation, cracking, and erosion of the final cover by wind and rain while not affecting the integrity of the final cover by root penetration. The Permittee shall maintain vegetation that enables the final cover to meet the requirements of this Permit and federal and State regulations. The Permittee shall ensure that the root system of the vegetation does not degrade or diminish the integrity of the final cover. [Title 22 CCR §§66264.228(e)(14), 66264.310(a)(1) and 66264.310(a)(7)]
  - (1) The Permittee shall, within one hundred twenty (120) calendar days after the effective date of this Permit, provide a work plan, for DTSC review and approval, to ensure that root systems of the current protective vegetation have been selected and maintained such that they do not penetrate through or otherwise degrade or diminish the integrity of the final cover, which is supposed to function to prevent infiltration of water into the closed Class I Landfill unit. [Title 22 CCR §§66264.310(a)(1), 66264.228(e)(14), and 66270.32(b)(2)]
  - (2) The Permittee shall, within one hundred and eighty days (180) calendar days after approval of the work plan required in Part V.B.1(f)(1) of this Permit, provide a report, for DTSC review and approval, on the status of root system penetration of the current protective vegetation. [Title 22 CCR §§66264.310(a)(1), 66264.228(e)(14), and 66270.32(b)(2)]
- g. The Permittee shall continue to operate and maintain the systems for control, collection, conveyance, and destruction of landfill gases from the closed Class I Landfill unit, which contain hazardous waste or hazardous constituents, until such time as such gas is no longer detected or hazardous waste or hazardous constituents are no longer detected in the landfill gas as measured in situ. [Title 22 CCR 66264.310(d)]

- h. The Permittee shall not allow any use of the closed Class I Landfill unit described in Part III.B.3 of this Permit that will disturb the integrity of the final cover, any components of the environmental control (containment) systems, or the function of the closed Class I Landfill unit's monitoring systems during the post-closure care period. The Permittee shall provide to DTSC for review and approval, a technical report demonstrating that any use(s) proposed for the closed Class I Landfill unit will meet the requirements of this Part of the Permit. The report shall be provided to DTSC at least one hundred and twenty (120) calendar days before such use is proposed to be initiated. [Title 22 CCR §§66264.117(d) and (f) and 66270.32(b)(2)]
- i. The Permittee shall conduct all post-closure care activities in accordance with the provisions of the Operation/Post-closure Plan. [Title 22 CCR §66264.117(e)]
- j. The Permittee shall notify DTSC within 24 hours of discovery of a major break to the landfill cover, the gas headers, or branch lines of the interior or exterior gas control systems (as defined in Part V.B.1.q of this Permit). The Permittee shall summarize in the annual report due to DTSC, any repair of a major break such as those described above that is found to extend beyond two (2) calendar days from the initiation of the work. [Title 22 CCR §§66264.228(r), 66264.310(c) and (d), and 66270.32(b)(1) and (2)]
- k. (1) The Permittee shall stake or otherwise mark in the field and repair within twenty (20) business days, or before the next rainstorm, whichever occurs first, cracks in or erosion of the final cover that do not emit gas as described below.
  - (A) Settlement cracks that are large enough to accommodate the end of a standard wooden survey lathe with a thickness of no more than 1/4 inch to a vertical depth of at least three (3) inches into the final cover;
  - (B) Settlement cracks that extend more than one foot through the final cover pursuant to section 3.3.1.2 of the Operation Plan;
  - (C) Any severe shrinkage cracks as described in section 3.3.1.3.6 of the Operation Plan; and
  - (D) Any surface erosion noted in the inspections conducted after each rainfall pursuant to section 3.3.1.2 of the Operation Plan.

[Title 22 CCR §§66264.228(r), 66264.310(c) and (d),  
66270.30(1)(6)(A), and 66270.32(b)(2)]

- (2) The Permittee shall eliminate ponding within forty-eight (48) hours after the end of a storm, and adjust the grading and drainage within twenty (20) business days or before the next rainstorm, whichever occurs first. If completion of any of this work is not possible, the Permittee shall immediately notify DTSC, document the occurrence, undertake temporary measures as necessary to minimize ponding and infiltration, document its efforts and any difficulties and submit documentation to DTSC within one (1) week of the occurrence. For purposes of this Permit, “ponding” does not include puddles created by, and approximately the size of tire tracks and boots. The Permittee may submit a revision to the Operation Plan to DTSC for review and approval that provides specifics for assessing ponding for purposes of implementing this condition. Within sixty (60) days of approval by DTSC, the revision shall be incorporated into the Operation Plan.

[Title 22 CCR §66270.32(b)(2)]

- l. The Permittee shall complete all repairs on cracks in or erosion of the final cover, that may emit gas or allow infiltration within twenty (20) business days, or before the next rainstorm, whichever occurs first. The Permittee shall also comply with the June 20, 2000, amended SCAQMD Rule 1150.1 Compliance Plan guidelines that required initiation of repair within 48 hours of discovery. If completion of this work is not possible within these timeframes, the Permittee shall immediately notify DTSC of this determination, take temporary measures as necessary to minimize infiltration and landfill gas emissions, document its efforts and any difficulties and submit the documentation to DTSC within one (1) week of the occurrence. [Title 22 CCR §§66264.310(b)(1), 66270.30(1)(6)(A), and 66270.32(b)(2)]
- m. The "Qualified Person" discussed in Section 3.3.1.3.10 of the Operation Plan shall be an independent, qualified person, registered in California as a professional engineer or certified in California as an engineering geologist. The "Inspection Technician" shall be under the direct supervision of the “Qualified Person.” The “Qualified Person” shall demonstrate span-of-control and shall sign-off on and approve all repairs. [Title 22 CCR §§66264.228(g)(4) and 66270.32(b)(2)]
- n. Landfill cover repairs related to cracks, gaps, sloughing, etc., exceeding twenty (20) cubic yards or one (1) foot in vertical thickness shall be observed and documented by a qualified person, registered in California as a professional

engineer or certified in California as an engineering geologist. [Title 22 CCR §§66264.228(g)(4) and 66270.32(b)(2)]

- o. The Permittee shall surface its roads or have vehicles or equipment on site that can provide all-weather access to and on the closed Class I Landfill unit at all reasonable times and in the event of an emergency. [Title 22 CCR §66270.32(b)(2)]
- p. The Permittee shall maintain the interior and perimeter gas collection wells and probes, and install additional wells and probes as may be necessary to continue routine gas collection efficiencies and monitoring effectiveness. [Title 22 CCR §§66264.310(d), 66270.30(e) and 66270.32(b)(2)]
- q. The Permittee shall isolate or repair breakages detected to the gas headers and branch lines. Major breaks shall be isolated or repaired within 24 hours of discovery, and minor breaks shall be isolated or repaired within a reasonable schedule to ensure no significant threat to human health or the environment. Major breaks are defined as those that involve header or branch line pipes of 12 inches or greater in diameter, and have gas at the point of the break in a positive pressure condition (i.e. not under vacuum). Minor breaks are those that involve branch line pipes of less than 12 inches in diameter or have gas at the point of the break in a negative pressure condition (i.e. under vacuum). [Title 22 CCR §§66264.310(d), 66270.30(d), and 66270.32(b)(2)]
- r. The Permittee's inspection of all blowers shall include inspection of bearings and leak testing of seals at a frequency either recommended by the manufacturer or as denoted in Table 3.5.-1 of the Operation Plan, which is based on a 15-year operational history. [Title 22 CCR §§66264.228(k), 66264.310(d), 66270.30(d) and (e), and 66270.32(b)(2)]
- s. The Permittee shall maintain the integrity and effectiveness of the perimeter fence, including making repairs as necessary, to correct the effects of aging, storms, intentional or accidental breaching, and other events. Complete fence line inspections shall be performed on a quarterly basis at a minimum. The Permittee shall remedy any breaching of the fence as soon as practicable, but no more than 48 hours after discovery when a hazard is imminent (e.g. when a breach is large enough to allow unauthorized entry by a person). Other breaches shall be repaired within 72 hours of discovery. [Title 22 CCR §§66264.14, 66264.15, 66270.32(b)(1), and 66270.32(b)(2)]

**2. Specific Post-closure Care Conditions**

**a. Liquids Management**

- (1) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, revise Plate 5 of the Operation Plan to show the northerly leachate collector, MW-30, extraction wells pumping contaminated groundwater, existing piping connections to the LTP, all buried leachate/condensate transfer pipes, and locations of leachate and condensate sampling points as described in the Waste Analysis Plan. [Title 22 CCR §§66264.14(b)(19) and 66270.32(b)(2)]
- (2) The Permittee shall retain onsite its records regarding compliance with the California Code of Regulations, title 22, chapter 14, article 10 for all tanks/sumps that contain hazardous waste. [Title 22 CCR §66264.191(b)]
- (3) The Permittee shall comply with the California Code of Regulations, title 22, chapter 14, article 10 for all hazardous waste tanks. As part of this compliance, the Permittee shall, unless allowed otherwise by the regulations, within ninety (90) calendar days of the effective date of this Permit: [Title 22 CCR §66264.190(b)(2)]
  - (b) Provide leak detection systems for all hazardous waste double walled underground tanks and underground tank secondary containment systems [Title 22 CCR §66264.193(b), (c)(3), and (e)(2)];
  - (b) Provide leak detection systems for all hazardous waste aboveground tank secondary containment systems [Title 22 CCR §66264.193(b), (c)(3), and (e)(2)];
  - (c) Document that all vaults that serve as secondary containment systems for tanks specifically comply with the California Code of Regulations, title 22, section 66264.193(e)(2) [Title 22 CCR §66264.193]; and
  - (d) Document that all ancillary equipment for tanks specifically comply with the California Code of Regulations, title 22, section 66264.193(f). This requirement does not apply to ancillary equipment located under the cap, but does apply to ancillary equipment located within the cap.

[Title 22 CCR §66264.193]

[Title 22 CCR §§66264.190 - 200]

- (4) For all portions of piping systems used to collect and/or convey hazardous waste, exclusive of perforated drains and similar collection components and piping systems buried beneath the final cover of the closed Class I Landfill unit, the Permittee shall either install secondary containment and leak detection systems or replace all such buried piping with aboveground piping within three (3) years after the effective date of this Permit (other than the aforementioned exceptions), and visually inspect the aboveground portions of the piping systems for leaks on a daily basis in accordance with the California Code of Regulations, title 22 section 66264.193(f). Pursuant to the California Code of Regulations, title 22, section 66270.33(a)(2)(B), interim requirements for replacement of buried piping shall include submission of a work plan that contains schedule elements for replacement and progress reports on replacement. The work plan shall be submitted to DTSC for review and approval within one hundred eighty (180) calendar days after the effective date of this Permit. The interim date for reporting on achievement of interim replacement elements is herein specified to be one (1) year from the effective date of this Permit and annually thereafter. Pursuant to the California Code of Regulations, title 22, section 66264.195(b) the Permittee shall inspect at least once each operating day the above-ground portions of the tank systems (including piping), data from the leak detection systems, construction materials and the areas immediately surrounding the tank systems. [Title 22 CCR §§66270.33(a)(2) and 66270.32(b)(2)]
- (5) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, provide to DTSC a plan and schedule for abandonment and replacement of any clogged horizontal wells and drains that cannot be unclogged (this is not a requirement to abandon or replace existing horizontal wells or drains that may now be dry but are otherwise functional and may be used for future seep control as necessary). The Permittee shall include in the plan a method for determining which of the existing horizontal wells are dry but functional and which are clogged. For clogged wells, the plan shall identify which wells should be abandoned, fixed or replaced, as necessary. [Title 22 CCR §66270.14(b)(19)]

- (6) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, revise Plate 8 of the Operation Plan to show a schematic diagram of a dual gas/leachate extraction well, wellhead and manifold connections. Any leachate and condensate sampling ports shall also be shown. [Title 22 CCR §66270.14(b)(19)]
- (7) The Permittee shall provide a plan and schedule for DTSC review and approval, at least ninety (90) calendar days before the Permittee installs piping between the LTP and any of the following landfill tanks used for landfill gas condensate, which may contain waste constituents from leachate: the GP200 Sump, GP400 Sump, Flare Station Knockout Tank V-1, Flare Station Knockout Tank V-2, Flare Station Knockout Tank V-3, and V-1/V-2 Drop Tank. [Title 22 CCR §66270.32(b)(2)]
- (8) The Permittee shall preserve the integrity of the leachate collection system and perform maintenance in accordance with California Code of Regulations, title 22, section 66270.30(e). [Title 22 CCR §§66270.30(e) and 66270.32(b)(1)]
- (9) At least annually, the Permittee shall collect accurate liquid level data from all well probes intercepting leachate related to the Class I Landfill unit. These data shall be reported in the quarterly groundwater monitoring report following the monitoring event and annually to DTSC by March 1 of the following calendar year. After three years of data are collected, the Permittee shall prepare graphs of the liquid level data for each well and include the graphs in the annual report. To request a change in the number and/or locations of liquid level monitoring points, the Permittee shall prepare a report, for DTSC review and approval, that provides detailed rationale and supporting data for inclusion and exclusion of certain wells/probes. Until the report is approved by DTSC, the Permittee shall continue to collect liquid level data from all wells annually. [Title 22 CCR §§66270.30(e) and 66270.32(b)(1)]

**b. Interior Gas Control System**

- (1) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, submit to DTSC for review and approval, a revised inspection schedule with additional checklist detail for the interior gas control system and shall revise the Operation Plan to incorporate this schedules. The inspection schedule (Table 3.5-1) in section 3.5 of the Operation Plan and the gas collection inspection forms in Exhibit 3.3.4-3 of the Operation Plan shall be revised to include a more detailed list

of inspection elements such as connectors, couplings, slip joints, seals, piping, etc. This list shall include, at a minimum: (A) the specific conditions to be observed (such as piping flexure); (B) elements of integrity to be considered (such as leakage at slip joints); (C) indications of deterioration to be checked; and (D) other factors that indicate leakage, such as perturbations at the cogeneration plant. [Title 22 CCR §§66264.15, 66270.14(b)(19) and 66270.30(e)]

- (2) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, submit to DTSC for review and approval, a revision of Table 3.5-1 of the Operation Plan to show which specific elements of the inspection schedule are inspected on a daily basis and which are inspected on a monthly basis. The revision shall also include inspection observations at system elements to be made by the more rigorous “on-foot” method referred to in footnote 1 to Table 3.5-1 of the Operation Plan, at the same time as other daily activities occur, such as at “Flagged” gas wells (those previously found to have temperatures greater than 125 degrees Fahrenheit and at gas wells where adjustments are being made. [Title 22, CCR §§66270.14(b)(19) and 66270.30(e)]
  
- (3) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, revise section 3.3.4 of the Operation Plan to:
  - (a) Justify the adequacy of conducting the required daily inspection as a visual inspection “from within a vehicle” and reliance on a monthly “more rigorous version” involving “on-foot scrutiny of each well” [as discussed in footnote 1 to Table 3.5-1 (Inspection Plan and Schedule) of the Operation Plan];
  - (b) Provide adequate details about how the daily visual inspections of the various system elements are conducted “from within a vehicle;”
  - (c) Correct inconsistencies between frequency of monitoring of the gas wells as stated in footnote 1 to Table 3.5-1 (Inspection Plan and Schedule) and section 3.3.4.3 of the Operation Plan; and
  - (d) Explain and reconcile, if necessary, inconsistencies between frequency of “at least monthly” specific monitoring of the

system elements, “weekly monitoring,” and the “daily inspections of the Gas Crew” in section 3.3.4.3 of the Operation Plan.

[Title 22 CCR §§66164.15, 66270.14(b)(19) and 66270.30(e)]

- (4) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, submit to DTSC for its review and approval, an inventory listing of spare pipes, fittings, and other supplies necessary for the maintenance of the gas collection systems. Thereafter, the Permittee shall maintain such inventory at the closed Class I Landfill unit and shall revise the Operation Plan to incorporate the approved inventory. [Title 22 CCR §§66270.14(b)(19) and 66270.30(e)]
- (5) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, include a new plate at a scale of 1 inch equals 25 feet (unless another appropriate scale is approved by DTSC) in the Operation Plan to show all Interior Gas Control System condensate transfer pipes, interior system dual gas/leachate wells, and highlight the existing piping connections between those dual gas/leachate wells and/or the LTP and intermediate tanks and sumps. [Title 22 CCR §§ 66270.14(b)(19) and 66270.32(b)(2)]
- (6) The Permittee shall, within one hundred eighty (180) calendar days after the effective date of this Permit, include a new plate in the Operation Plan to specifically show the Leachate Control System, and Interior and Perimeter Gas Control System piping and locations of leachate and condensate sampling points with respect to dual gas/leachate extraction wells at a scale of 1 inch equals 25 feet (unless another appropriate scale is approved by DTSC). [Title 22 CCR §§66270.14(b)(19) and 66270.32(b)(2)]
- (7) The Permittee shall, within one hundred eighty (180) calendar days after the effective date of this Permit, include a new table in the Operation Plan. The Permittee shall maintain and update the table as necessary when new interior gas extraction wells are added or demolished at the Facility. The table shall specifically:
  - (a) identify each deep vertical gas and gas/liquid extraction, shallow vertical gas and horizontal gas extraction well; and
  - (b) show construction details, including location, total depth, casing diameter and materials, boring diameter, perforated interval,

**BKK Corporation**

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geologic units penetrated, liquids encountered, type of pump (if so equipped), and length of all seals and plugs.

[Title 22 CCR §§ 66270.14(b)(19) and 66270.32(b)(2)]

**c. Perimeter Gas Control System**

- (1) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, correct Figure 3.3.5-2 of the Operation Plan to show a perimeter well instead of an interior well and re-submit it to DTSC. [Title 22 CCR §§ 66270.14(b)(19) and 66270.32(b)(2)]
- (2) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, clarify the equipment listed in the Operation Plan used for monitoring perimeter gas probes versus the equipment listed in Exhibit 3.3.5-1 of the Operation Plan and provide the clarification to DTSC. [Title 22 CCR §§ 66270.14(b)(19) and 66270.32 (b)(2)]
- (3) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, submit to DTSC for review and approval, a revision to Section 3.3.5.3 of the Operation Plan, which shall include additional descriptive detail of inspection elements and monitoring protocols for the perimeter gas control system. The revision shall include a more detailed description of the types of problems to be checked for at the perimeter gas control system and how the inspection will be performed. Upon approval by DTSC, the Permittee shall incorporate this revision into the Operation Plan. Inspections shall be performed in accordance with Title 22 CCR §66264.15 and any other relevant regulations. The detailed description of inspection elements shall include, at a minimum:
  - (a) The specific conditions to be observed (such as liquid levels in the monitoring probes) and methodologies for such observations;
  - (b) Gas sampling and monitoring parameter protocols, e.g. purging;
  - (c) Assurance that analyses shall be performed by a laboratory certified by the State of California's Environmental Laboratory Accreditation Program (ELAP),<sup>20</sup>
  - (d) Elements of integrity to be considered (such as leakage at slip joints for extraction wells); and

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<sup>20</sup> Field instruments used to obtain quantitative data, and air/gas laboratories are not subject to this requirement.

- (e) Indications of deterioration to be checked, with respect to various aspects of the perimeter gas control system, such as connectors, couplings, slip joints, seals, piping, etc.  
[Title 22 CCR §§66270.14(b)(19) and 66270.32(b)(2)]
- (4) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, submit to DTSC, a revision to Section 3.3.5.4 of the Operation Plan for DTSC review and approval. The revision shall specify the manner in which future well and probe location, depth, construction, and design, including the length of slot perforations, will be determined. The Permittee shall also describe the qualifications of the personnel making such determinations. [Title 22 CCR §§66264.701(b) and 66270.32(b)(2)]
- (5) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, revise and submit to DTSC, Section 3.3.6 of the Operation Plan to include a more detailed description of how the flare stations are managed and monitored, the nature of the "callout system" (page 3.3.6-2) and exactly what happens if an alarm is tripped or a problem occurs at either flare station when operators are not on duty. [Title 22 CCR §§66270.14(b)(19) and 66270.32(b)]
- (6) The Permittee shall, within three hundred sixty (360) calendar days after the effective date of this Permit, submit to DTSC, a technical report, for DTSC review and approval, evaluating the effectiveness of the existing perimeter control and monitoring system in terms of relationships of individual perimeter control well and probe construction and design to surrounding lithology. A specific contention in the Operation Plan that must be demonstrated in this report is that gas will not migrate off-site from under the decks to pass the perimeter probes. This is a technical report that shall be performed and signed by a registered professional as appropriate to the technical requirements of the work and the Business and Professions Code. [Title 22 CCR §66270.32(b)(2)]
- (7) The Permittee shall, within one hundred eighty (180) calendar days after the effective date of this Permit, include a new plate in the Operation Plan to show all perimeter gas control system condensate transfer pipes, perimeter gas control system dual gas/leachate wells, other perimeter gas extraction wells, and highlight the existing piping connections for the dual gas/leachate wells. [Title 22 CCR §§ 66270.14(b)(19) and 66270.32(b)(2)]

- (8) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, include a new table in the Operation Plan concerning gas extraction wells as described below. The Permittee shall maintain and update the table as necessary when perimeter gas extraction wells are added or demolished. The table shall specifically:
  - (a) identify each perimeter gas extraction well; and
  - (b) show construction details, including location, total depth, casing diameter and materials, boring diameter, perforated interval, geologic units penetrated, liquids encountered, type of pump (if so equipped), and length of all seals and plugs.[Title 22 CCR §§ 66270.14(b)(19) and 66270.32(b)(2)]

**d. Rainfall Run-on and Run-off Controls**

- (1) The Permittee shall, at least two hundred seventy (270) calendar days prior to the date it intends to undertake a project, submit to DTSC for review and approval, the revised design and location of detention/retention basins and a schedule for installing them. Any proposal must not hydraulically impact Barrier 1 nor exacerbate seepage along the former historical Puente Creek channel. [Title 22 CCR §66270.32(b)(2)]
- (2) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, submit to DTSC for review and approval, a description of how the actual soil accumulation in debris basins and other drainage facilities will be monitored and cleaned out as part of the drainage system maintenance. [Title 22 CCR §§66264.228(e)(13) and (15), 66270.14(b)(19), 66270.30(e), and 66270.32(b)(2)]
- (3) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, revise and submit to DTSC for review and approval: (a) Plates 14, 14B and 14C of the Operation Plan so they are consistent with the description in section 3.3.7.1 of the Operation Plan with respect to the deck inlets; and, (b) Plate 14 of the Operation Plan or the text so that they are consistent regarding the size of the outlet pipe from Debris Basin 1. [Title 22 CCR §§66270.14(b)(19) and 66270.32(b)(2)]
- (4) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, revise Section 3.3.7.2 and Table 3.5-1 of the Operation Plan and submit the revision to DTSC for review and

approval. The revision shall provide for inspection of the major drainage system components (i.e. mainline drains, bench drains, gunnite ditches, trapezoidal channels and retention basins) bi-weekly (every other week) during those periods of the rainy season (October 15 - April 15) that have had rain in the preceding two-week period and the next calendar day after every individual storm of 1.0 inch or more in twenty-four (24) hours. The inspection schedule plan shall list all elements of the drainage system, potential problems that each element shall be checked for, frequency of inspection, and the manner in which each item shall be inspected. [Title 22 CCR§ §66270.14(b)(19) and 66270.32(b)(2)]

- (5) For the Nogales Debris Basin, the Permittee shall, within one hundred eighty (180) calendar days after the effective date of this Permit, submit a report for DTSC review and approval, on the current and historical effectiveness of run-on/run-off controls from the date of the Class I Landfill unit closure certification to the effective date of this Permit. The report must summarize all significant incidents, BKK actions and outcomes relative to run-off from the landfill. This is a technical report and shall be prepared by and signed by a registered professional as appropriate to the technical requirements of the work and the Business and Professions Code. [Title 22 CCR §§66270.14(b)(19) and 66270.32(b)(2)]

**e. Vegetative Cover**

- (1) The Permittee shall, within ninety (90) calendar days after the effective date of this Permit, provide a report for DTSC review and approval that evaluates the ability of current protective vegetation over the closed Class I Landfill unit, as one element of the cover system, to help maintain the integrity and effectiveness of the final cover as required by the California Code of Regulations, title 22, section 66264.310(b)(1). This report shall include a discussion of related issues pertinent to this evaluation. Such related issues may include (if applicable) a historical chronological summary of closed Class I Landfill unit vegetative cover and associated problems (from the date of closure to the effective date of this Permit), soil nutrient assessments, test plots, and the vegetative cover's current effectiveness in minimizing desiccation, cracking, and erosion by wind and rain of the clay cover. [Title 22 CCR §§66264.310(b)(1) and 66270.32(b)(2)]

- (2) In the report required in Part V.B.2.e (1) above, the Permittee shall also propose any revisions, if necessary to the schedule, procedures, monitoring protocols, and checklist in the Operation/Post-closure Plan to assure compliance with the California Code of Regulations, title 22 section 66264.310(b)(1) post-closure requirements to maintain adequate vegetative cover on the Class I Landfill unit. [Title 22 CCR §§66264.228(e)(14), 66264.310(b)(1), and 66270.32(b)(2)]
- (3) The Permittee shall submit to DTSC for review and approval, any proposed changes to the final cover, including changes to the vegetative cover on the closed Class I Landfill unit for a determination by DTSC about whether: (i) the plan meets the requirements of the California Code of Regulations and conditions of this Permit concerning adequate vegetative cover and other requirements for post-closure care of the landfill final cover; and (ii) whether the Operation/Post-closure Plan needs to be modified before the new vegetation plan can be implemented (note: changes in the Operation/Post-closure Plan may require a permit modification).[Title 22 CCR §§ 66264.228(e)(14), 66264.310(b)(1), and 66270.32(b)(2)]

**f. Seismic**

- (1) The Permittee shall, within three hundred sixty (360) calendar days after the effective date of this Permit, submit a work plan for DTSC review and approval, for preparation of a technical report using the most current information and data on the seismic hazards that may affect the integrity and effectiveness of the final cover of the closed Class I Landfill unit, operational LTP units, groundwater extraction and monitoring wells, leachate and gas extraction systems, gas, groundwater and leachate conveyance piping and tanks, and landfill slope and cover stability. The work plan is a technical geological/geophysical report and shall be prepared by or under the direction of, and shall be certified by, a geologist registered in California and any other registered professional appropriate to the technical requirements of the work. [Title 22 CCR §66270.14(a)] The information provided shall be of such quality as to be acceptable to geologists experienced in identifying and evaluating seismic activity as described in the California Code of Regulations, title 22, section 66270.14(b)(11)(A). [Title 22 CCR §§66264.118(d)(4), 66270.14(b)(19) and 66270.32(b)(2)]

The Permittee shall, within one hundred eighty (180) calendar days after the approval of the work plan, submit the technical report for

DTSC review and approval. The report is a technical geological/geophysical report and shall be prepared by or under the direction of, and shall be certified by, a geologist registered in California and any other registered professional appropriate to the technical requirements of the work. [Title 22 CCR §66270.14(a)] The Permittee shall, within ninety (90) calendar days after approval of the report by DTSC, revise and update Section 2.2.4 (Seismicity) of the Operation Plan. [Title 22 CCR §66270.32(b)(2)]

**3. Notices and Use of Property**

The Permittee shall provide to DTSC all post-closure notices (including documents associated with any and all deed restrictions, land use covenants and similar instruments) pursuant to California Code of Regulations, title 22, section 66264.119 and any other provisions of statutes and regulations.

**4. Operation /Post-closure Plan Changes**

The Permittee shall submit a written notification of or request for a permit modification to authorize a change in the Operation/Post-closure Plan, at a minimum, whenever changes in operating plans or Facility design affect the Operation/Post-closure Plan or other events occur that affect the Operation/Post-closure Plan. This request must be in accordance with California Code of Regulations, title 22, section 66264.118(d) and applicable requirements of the California Code of Regulations, title 22, chapters 20 and 21, including section 66270.42. The Permittee must submit a written request for a permit modification at least sixty (60) calendar days prior to the proposed change in Facility design or operation, or no later than sixty (60) calendar days after an unexpected event has occurred that has affected the Operation/Post-closure Plan. This requirement does not apply to those changes in the Operation/Post-closure Plan specifically required by and identified in conditions in this Permit. [Title 22 CCR §66264.118(d)]

**5. Certification of Completion of Post-closure Care**

No later than sixty (60) calendar days after completion of the established post-closure care period for the hazardous waste disposal unit, the Permittee shall submit to DTSC, by registered mail, a certification that the post-closure care for the hazardous waste disposal unit was performed in accordance with the specifications in the Operation/Post-closure Plan. The certification must be signed by the Permittee and an independent professional engineer, licensed in the State of California. Documentation supporting the independent, registered professional engineer's certification must be furnished to DTSC upon request until DTSC releases the Permittee from the financial

assurance requirements for post-closure care. [Title 22 CCR §§66264.120 and 66264.145(j)]

## **6. Continuing Closure Requirements**

**Background:** Closure certification was acknowledged by the U.S. EPA on May 15, 1989, subject to a variance being granted with respect to the applicable State regulations (California Administrative Code (CAC) title 22, section 67418). The variance was granted for the cover design, subject to specific conditions, in light of anticipated settlement of the landfill and presumed likelihood of maintenance problems associated with a typical multi-layered cover.

- a. The Permittee shall, within three hundred and sixty (360) calendar days after the effective date of this Permit, submit a technical report to DTSC for review and approval that evaluates the behavior of the final cover. The technical report shall include a historical summary and evaluation of settlement, cracking (depth, persistence, etc.), and crack maintenance required (especially with regard to the time for "healing" with application of water) from closure through the effective date of this Permit. The report shall include a graphic display of information. [Title 22 CCR §§ 66264.310 (a), (b)(1) and (4) and 66270.32(b)(2)]

The technical report shall utilize the historical monitoring data and shall evaluate the effectiveness of the vadose zone monitoring stations described in Section 3.3.1.2.3 of the Operation/Post-Closure Plan for monitoring rate and amount of percolation and maintaining the water balance in the final cover. The report shall evaluate whether there are an adequate number of tensiometer stations (Section 3.3.1.2.3 of the Operation/Post-Closure Plan) to representatively monitor the range of soil moisture conditions and rate and amount of percolation through the final cover over the entire cover. This report shall be signed by a registered professional as appropriate to the technical requirements of the work. [Title 22 CCR §§ 66264.310 (a), (b)(1) and (4) and 66270.32(b)(2)]

- b. If, after review of the technical report, DTSC determines that it is necessary, the Permittee shall establish an additional number of stations to representatively monitor the soil moisture conditions and rate of percolation through the final cover over the entire 195 acres. The Permittee shall submit a work plan for establishing additional monitoring stations for DTSC's review and approval within ninety (90) calendar days of a written request by DTSC. [Title 22 CCR §§ 66264.310 (a), (b)(1) and (4) and 66270.32(b)(2)]

- c. The Permittee shall, within two hundred seventy (270) calendar days after the effective date of this Permit, submit a detailed work plan for DTSC review and approval for installing gas monitoring probes along the perimeter of the Class I Landfill unit between the Class I and Class III landfills. The Permittee shall install the probes within ninety (90) days of approval of the work plan. At a minimum, the section of the perimeter to be considered for installing probes shall approximate the length between the groundwater wells MW-23AR and CW-34A. The gas monitoring probes shall satisfy: (1) the California Code of Regulations, title 22 requirements; and (2) the conditions specified in the December 23, 1986 U.S. EPA letter, with attachments, regarding approval with modifications of the final Closure Plan. [Title 22 CCR §§ 66264.701(a), 66264.705 and 66264.228(e)(5)]
- d. The Permittee shall maintain and perform repairs to the final cover pursuant to: (1) the California Code of Regulations, title 22; and (2) the same or more stringent standards as included in the final Closure Plan and the conditions specified in the December 23, 1986, U.S. EPA letter, with attachments, regarding approval with modifications of the final Closure Plan. These include rock fragment diameter, permeability (including pass/fail limits) and testing (including laboratory permeability, moisture and shear tests). [Title 22 CCR §§ 66264.310(a)(1), (2) and (6), (b)(1) and (4), 66270.30(e) and 66270.32(b)(1) and (2)]
- e. The Permittee shall continue to use the average annual ratio of approximately 1:10 treated effluent to purchased water for on-site dust control and irrigation. The Permittee may, at any time, submit documentation and request DTSC review and approval for a different ratio that meets the requirements of regulatory agencies and is protective of the vegetative cover. [Title 22 CCR §§ 66270.32(b)(1) and (2)]

## **7. Stipulated Permanent Injunction Requirements**

- a. A final Stipulated Permanent Injunction ("SPI") was approved by Judge Norman L. Epstein of the Los Angeles Superior Court on or about October 28, 1988. The SPI pertains to an action brought in July 1984 by the City of West Covina against parties that included the BKK Corporation, the State of California Department of Health Services ("DHS") (DTSC is the successor agency to DHS); Air Resources Board ("ARB"); SCAQMD, and; LARWQCB.
- b. The SPI and its provisions still remain in effect today. A copy of the SPI is attached hereto as Appendix I and the SPI and its requirements are

incorporated into this Permit by reference as long as the SPI remains in effect.  
[Title 22 CCR §66270.32(b)(2)]

**C. MITIGATION ACTIVITIES REQUIRED UNDER CEQA**

The Permittee shall implement the following mitigation measures addressed in the Mitigated Negative Declaration:

1. The Permittee shall, pursuant to Part IV.D.1.b, monitor for vinyl chloride with the following station array:
  - (a) On a bi-monthly basis at the "Nogales End" (Sampling Site 3) and "Nogales North of Amar" (Sampling Site 11) stations; and,
  - (b) On a semi-annual basis at the "Microwave Tower" (Sampling Site 1) and "Azusa Spillway" (Sampling Site 2) stations [sampling site numbers as described in "Ambient Air Sampling Plan, BKK Landfill, West Covina, California," final approved version dated October 7, 1994].  
[Title 22 CCR §66270.32(b)(2)]
2. The Permittee shall, in order to avoid impacts to the closed Class I Landfill unit final cover, maintain protective vegetation with root systems that do not penetrate through or otherwise degrade or diminish the integrity of the landfill cover. The vegetation and its root systems shall not interfere with the cover's function of preventing infiltration and reducing emissions of gases into the air. [Title 22 CCR §66270.32(b)(2)]
3. The Permittee shall, within one hundred twenty (120) calendar days after the effective date of this Permit, submit to DTSC for review and approval, a plan for monitoring and reporting of accumulations in debris basins in order to preclude or minimize sediment deposition on Nogales Street. This plan shall be based on the description and report that shall be submitted in accordance with Part V.B.2.d(2) and (5) of this Permit. It shall include frequent monitoring of the stormwater basins and cleanup as indicated by the monitoring. [Title 22 CCR §66270.32(b)(2)]
4. The Permittee shall develop and submit a report within ninety (90) calendar days after the effective date of this Permit regarding the effectiveness of the current protective vegetation protocols in Part V.B.2.e (1) and (2) of this Permit. The protective vegetation over the closed Class I Landfill unit during the post-closure care period must minimize desiccation, cracking, and erosion by wind and rain of the final cover. The Permittee shall establish adequate monitoring protocols to assure vegetative cover

achieves the foregoing objectives on the closed Class I Landfill unit. [Title 22 CCR §§66264.228(e)(14), 66264.310(a), and 66270.32(b)(2)]

**D. COMPLIANCE SCHEDULES**

**Reporting Requirements**

The Permittee shall notify DTSC and submit reports of compliance or noncompliance with, or any progress reports on, interim or final requirements contained in any compliance schedule of this Permit, no later than fourteen (14) calendar days after each scheduled date of compliance. Any conditions in this Permit that require revisions to the Operation/Post-closure Plan or submittals concerning the Operation/Post-closure Plan within a certain time frame (i.e. “The Permittee shall, within sixty (60) days of effective date of this Permit revise the Operation Plan to...”), including tables and plates within the Operation/Post-closure Plan, are compliance schedule items. Other examples of compliance schedules are the continuing closure requirement in Part V.B.6.c and the financial assurance compliance schedule in Part IV.E.2.b. [Title 22 CCR §§ 66270.30(1)(5) and 66270.33(a)(3)]

**PART VI. CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS**

**A. CORRECTIVE ACTION**

1. The Permittee is required to conduct Corrective Action at the Facility pursuant to the Health and Safety Code section 25200.10. Corrective Action has been carried out under two Consent Orders issued pursuant to Section 3008(h) of the Federal Resource Conservation and Recovery Act ("RCRA"), as amended, 24 U.S.C. Section 6928(h), to which BKK Corporation ("BKK") and the U.S. Environmental Protection Agency ("U.S. EPA") are parties and which became effective on March 31, 1989 (U.S. EPA Docket No. RCRA-09-89-0019) and on September 14, 2000, (U.S. EPA Docket No. RCRA-9-2000-0003). These Consent Orders are fully incorporated into this Permit by reference, and are included as Appendices II and III. The U.S. EPA is the lead agency for corrective action and it oversees corrective action requirements. Future consent orders will also be incorporated into this Permit by reference.
2. Section VIII of the March 31, 1989, Consent Order indicates that the Order extends to the selection of the remedy(ies) for the affected medium(ia) by U.S. EPA. The U.S. EPA selected the remedy for groundwater on February 10, 2000, and proposes to select a remedy for air in the future. Section III of the September 14, 2000, Consent Order indicates that the Order's objectives include implementation of the corrective measures (remedy) selected by U.S. EPA to remediate groundwater at the Facility.
3. Certain portions of the Facility are also subject to correction action under the SPI, as described in Part IV.D.2.a.(7) of this Permit.

**B. BACKGROUND**

1. For a description and background on the Facility, see Parts I, II and III of this Permit, incorporated herein by reference.
2. The Facility includes the Class I (hazardous) Landfill RCRA unit, which is now closed, and the active Leachate Treatment Plant ("LTP") RCRA units, which were constructed in accordance with the approved Closure Plan. The other solid waste management units ("SWMUs") are the Class III (nonhazardous) landfill on Parcel 3, and the remaining portion of the inactive "Area D" landfill on Parcel 3.
3. Four (4) SWMUs have been identified in the 1989 RCRA Section 3008(h) Order. The first SWMU, the closed Class I Landfill unit has released and may be releasing

hazardous waste or hazardous waste constituents into the environment. The SWMUs are as follows in Table VI.1:

**TABLE VI.1**  
**SOLID WASTE MANAGEMENT UNITS**  
**BKK LANDFILL**  
**WEST COVINA, CALIFORNIA**

<b>Unit Name</b>	<b>Status</b>	<b>Waste Received/Generated</b>
Class I Landfill	Closed	Listed wastes F, K, P, U, asbestos, municipal trash
Leachate Treatment Plant/Air Stripper	Active	Leachates/sludge/effluent/ contaminated ground- water
Class III Landfill	Inactive	Municipal trash, asbestos
Class II "Area D" Landfill	Inactive	Municipal trash

## **Disclaimer for Web Postings of Permit Attachments**

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