California Regional Water Quality Control Board
Santa Ana Region

Staff Report

September 7, 2007

ITEM: *11

SUBJECT: Amendments to Waste Discharge Requirements for the Lamb Canyon Sanitary Landfill, Riverside County Waste Management Department, Order No. R8-2007-0044

DISCUSSION:

The Riverside County Waste Management Department (RCWMD, hereinafter discharger), owns and operates the Lamb Canyon Sanitary Landfill (LCSL), a Class III municipal solid waste (MSW) landfill located at 16411 Lamb Canyon Road, Beaumont.

The applicable regulations governing the discharge of non-hazardous MSW to land are contained in Division 2, Title 27, California Code of Regulations (Title 27) and the Code of Federal Regulations Subpart D of Part 258 of Title 40 (Subtitle D). Landfill operations at the LCSL are currently regulated under waste discharge requirements (WDRs) Order No. 81-127, and its amendments, Orders No. 98-99, 01-18, and R8-2006-0054.

The discharger has submitted Joint Technical Document Addendum No. 14, proposing the use of an engineered alternative to the prescribed leachate collection and removal system (LCRS) design.

This order amends the existing WDRs for the LCSL to allow the use of a 9-inch gravel layer, in lieu of the prescribed 12-inch coarse sand layer, for leachate collection and removal as required by 27 CCR, §20340. This will improve the drainage characteristics of the LCRS.

All terms and conditions contained in the existing WDRs for the LCSL that are not amended by this order shall remain in effect and unchanged.

RECOMMENDATION:

Adopt Order No. R8-2007-0044 as presented.

Comments were solicited from the following agencies:

State Water Resources Control Board, Division of Clean Water Program – Joe Mello
State Water Resources Control Board, Office of Chief Counsel – Erik Spiess
California Integrated Waste Management Board, Sacramento – Scott Walker
State Department of Health Services, San Bernardino – Heather Collins
State Department of Toxic Substances Control, Cypress - Karen Baker
Riverside County Waste Management Department – Hans Kernkamp
Riverside County Department of Environmental Health Services, LEA – Laurie Holk/Irene Fellman

California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. R8-2007-0044

Amending Waste Discharge Requirements for
Lamb Canyon Sanitary Landfill
Riverside County Waste Management Department

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. The Riverside County Waste Management Department (RCWMD, hereinafter discharger) owns and operates the Lamb Canyon Sanitary Landfill (LCSL), located at 16411 Lamb Canyon Road (Highway 79). This landfill is located in a portion of Sections 21, 28, and 29, T3S, R1W, SBB&M, at latitude 33°52'30" and longitude 117°0'0". The location of the facility is shown on Attachment A, which is hereby made a part of this order. The landfill site currently encompasses 1,109 acres, 145 acres of which are currently used or being developed as waste management units (WMUs). Waste management units, the permitted disposal area of the landfill site, are shown on Attachment B, which is hereby made a part of this order.

2. On June 12, 1981, Order No. 81-127 was adopted by the Regional Board for landfill operations at the site. Order No. 81-127 contains discharge requirements, provisions, and monitoring and reporting requirements that require the discharger to design and operate the landfill in accordance with Chapter 15, Division 3, Title 23, California Code of Regulations (Chapter 15). Effective June 18, 1997, Chapter 15 was replaced by Title 27, California Code of Regulations (27 CCR), the combined State Water Resources Control Board /California Integrated Waste Management Board AB 1220 regulations for discharges of wastes to land.

3. Order No. 81-127 was subsequently amended by Order No. 98-99, blanket waste discharge requirements (WDRs) requiring all municipal solid waste landfills (MSWLFs) to comply with federal Subtitle D regulations and Title 27 requirements. In March 2001, Orders No. 81-127 and 98-99 were amended by Order No. 01-18 to allow the use of engineered alternatives to the prescriptive liner designs contained in Title 27, California Code of Regulations (27 CCR). The existing WDRs were subsequently amended by Order No. R8-2006-0054 to allow the acceptance of treated woodwaste and designated waste for disposal at WMUs equipped with a composite liner system and leachate collection and removal system (LCRS).

4. On April 5, 2007, the discharger submitted Joint Technical Document (JTD) Addendum No. 14, requesting the Regional Board's approval to use an engineered alternative to the LCRS design prescribed in the existing WDRs. The discharger has proposed to use a 9-inch-thick gravel LCRS with a permeability of 0.1 cm/s, in lieu of the 12-inch coarse sand layer with a permeability of 0.01 cm/s prescribed in the existing WDRs for the bottom liner system. JTD Addendum No. 14 was considered complete on May 16, 2007.

5. JTD Addendum No. 14 includes technical data and analyses as required by 27 CCR, §20080(b)(1) & (c) to support the use of the proposed engineered alternative LCRS design. Board staff has reviewed the information provided and determined that the 9-inch LCRS design would meet the performance requirements of 27 CCR, §20340 and would provide substantial cost savings to the discharger.

6. The profiles of the prescriptive standard design (PSD) and the revised minimum engineered alternative designs (EAD) for the bottom liner systems are described below, starting from the base of the liner systems:

   Bottom Liner Systems

PSD	**EAD-B1**	**EAD-B2**
Prepared subgrade	Prepared subgrade	Prepared subgrade (12-inch $\leq 1 \times 10^{-5}$ cm/s permeability layer)
24-inch $\leq 1 \times 10^{-7}$ cm/s low permeability layer	24-inch $\leq 1 \times 10^{-7}$ cm/s low permeability layer	60-mil textured HDPE geomembrane and Geosynthetic Clay Liner (GCL) using Bentomat, Bentofix or equivalent
60-mil HDPE liner	80-mil textured HDPE liner	80-mil textured HDPE liner
12-inch ≥0.01 cm/s LCRS drainage layer	12-oz. cushion geotextile and a 9-inch ≥0.1 cm/s LCRS gravel drainage layer **or**	12-oz. cushion geotextile and a 9-inch ≥0.1 cm/s LCRS gravel drainage layer **or**
	12-inch ≥0.01 cm/s LCRS coarse sand drainage layer	12-inch ≥0.01 cm/s LCRS coarse sand drainage layer
8-oz. geotextile filter fabric	8-oz. geotextile filter fabric	8-oz. geotextile filter fabric
24-inch protective soil cover	24-inch protective soil cover	24-inch protective soil cover
Refuse	Refuse	Refuse

7. This order amends Order No. 01-18[1] for LCSL to allow the use of an engineered alternative LCRS design.

8. This project involves the amendment of WDRs for an existing landfill to allow an engineered alternative design for the LCRS system. It does not change the permitted footprint of the landfill. As such, is exempt from the California Environmental Quality Act (Public Resources Code, Section 21100 et seq.) in accordance with Section 15301, Chapter 3, Title 14, California Code of Regulations.

[1] Board Orders No. 81-127 and 98-99 were amended by Order No. 01-18 to allow the use of engineered alternatives to the prescriptive liner designs required under 27 CCR.

9. The Regional Board has notified the discharger and interested agencies and persons of the Board's intent to amend the waste discharge requirements previously adopted for the discharger, and has provided them with an opportunity to submit their written views and recommendations.

10. The Regional Board, in a public meeting, heard and considered all comments pertaining to the proposed amendment of the existing waste discharge requirements for Lamb Canyon Landfill.

IT IS HEREBY ORDERED THAT the discharger shall comply with the following:

1. The following shall replace Item 1 of Order No. 01-18 for LCSL:

   a. The engineered alternative design (EAD) composite liner systems for the waste management units (WMUs) at LCSL shall consist of either EAD-B1 or EAD-B2 for bottom liner systems and EAD-S1 or EAD-S2 for sideslope liner systems, as indicated below starting from the base of the liner systems:

   Bottom Liner Systems

PSD	**EAD-B1**	**EAD-B2**
Prepared subgrade	Prepared subgrade	Prepared subgrade (12-inch $\leq 1 \times 10^{-5}$ cm/s permeability layer)
24-inch $\leq 1 \times 10^{-7}$ cm/s low permeability layer	24-inch $\leq 1 \times 10^{-7}$ cm/s low permeability layer	60-mil textured HDPE geomembrane and Geosynthetic Clay Liner (GCL) using Bentomat, Bentofix or equivalent
60-mil HDPE liner	80-mil textured HDPE liner	80-mil textured HDPE liner
12-inch ≥0.01 cm/s LCRS drainage layer	12-oz. cushion geotextile and a 9-inch ≥0.1 cm/s LCRS gravel drainage layer **or**	12-oz. cushion geotextile and a 9-inch ≥0.1 cm/s LCRS gravel drainage layer **or**
	12-inch ≥0.01 cm/s LCRS coarse sand drainage layer	12-inch ≥0.01 cm/s LCRS coarse sand drainage layer
8-oz. geotextile filter fabric	8-oz. geotextile filter fabric	8-oz. geotextile filter fabric
24-inch protective soil cover	24-inch protective soil cover	24-inch protective soil cover
Refuse	Refuse	Refuse

Sideslope Liner Systems

PSD	EAD-S1	EAD-S2
Prepared subgrade	Prepared subgrade	Prepared subgrade
24-inch $\leq 1 \times 10^{-7}$ cm/s low permeability layer	GCL (Bentomat, Bentofix or equivalent)	GCL (Bentomat, Bentofix or equivalent)
Minimum 60-mil HDPE liner	80-mil textured HDPE liner	80-mil textured HDPE liner
12-inch $\leq 1 \times 10^{-2}$ cm/s drainage layer 8-oz. geotextile filter fabric	16-oz. geotextile filter fabric	Geocomposite drainage layer
24-inch protective soil cover	24-inch protective soil cover	24-inch protective soil cover
Refuse	Refuse	Refuse

b. To comply with the requirements for the EAD composite liner systems described in Item a, above, the discharger shall:

   i. Prepare and submit for the approval of the Executive Officer a CQA/QC plan in accordance with §20323, Title 27, for each unit expansion. A detailed design and drainage plan and construction specifications shall be included with the CQA/QC plan. The preliminary CQA/QC plan shall be submitted at least 120 days prior to start of construction; the final CQA/QC plan shall be submitted at least 60 days prior to start of construction.

   ii. Implement the approved plans such that manufacturing and installation defects in the FML are eliminated or minimized. In no case shall the number of manufacturing defects exceed one pinhole per acre, nor shall the number of installation defects[2] exceed two per acre.

   iii. Provide good contact between the FML and the underlying compacted soil or GCL through proper implementation of the approved CQA/QC plan.

c. The Executive Officer is hereby authorized to approve the use of any of the EAD liner systems described in Item a, above, for future expansions at the site provided that the discharger complies with all other provisions of this order, including the following:

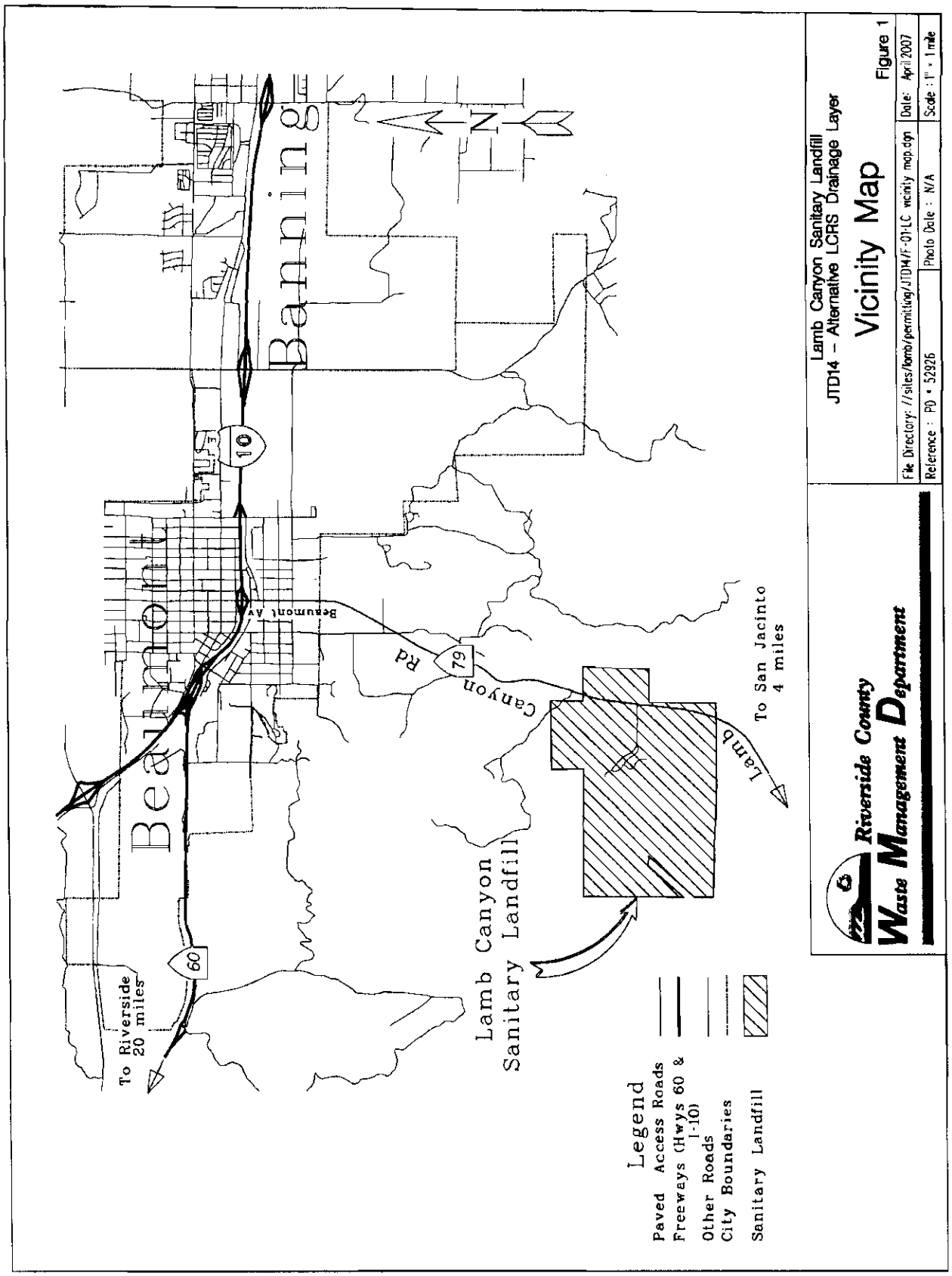
   i. The discharger shall submit the waste management unit design and construction information as required by §20310 through §20370, Title 27 for approval by the Executive Officer. The preliminary information shall be submitted at least 180 days prior to start of construction; the final plans shall be submitted at least 60 days prior to start of construction."

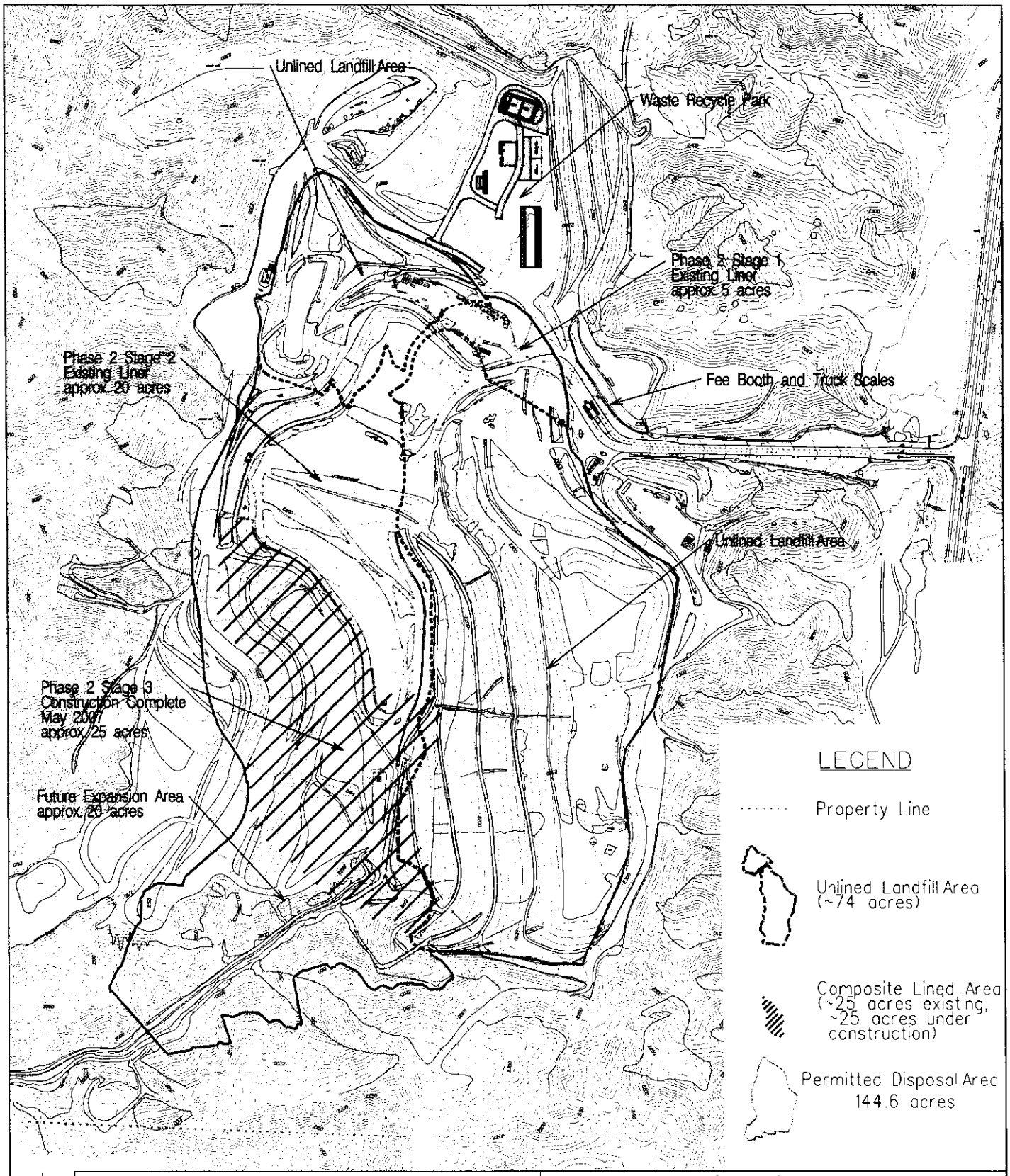
[2] The definitions for the manufacturing (2.2 mm^2 in area) and installation (1 cm^2 in area) defects provided by USEPA Hydrologic Evaluation of Landfill Performance (HELP) Model, User's Guide for Version 3.0, September 1994, shall be used.

2. All terms and conditions contained in the existing WDRs for the LCSL that are not amended by this order shall remain unchanged. Amended or revised provisions contained in this order supersede any conflicting provisions in the existing WDRs.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on September 7, 2007.

Gerard J. Thibeault
Executive Officer


Lamb Canyon Sanitary Landfill
JTD14 – Alternative LCRS Drainage Layer
Vicinity Map
Figure 1
File Directory: //sites/lamb/permitting/JTD14/F-01-LC vicinity map.dgn
Date: April 2007
Reference : PD • 52926
Photo Date : N/A
Scale : 1" = 1 mile
Riverside County
Waste Management Department
Beaumont
Banning
Beaumont Av
Canyon Rd
Lamb
To San Jacinto
4 miles
To Riverside
20 miles
Lamb Canyon
Sanitary Landfill
10
79
60
N
Legend
Paved Access Roads
Freeways (Hwys 60 & I-10)
Other Roads
City Boundaries
Sanitary Landfill



Riverside County
Waste Management Department

Lamb Canyon Sanitary Landfill
JTD14 – Alternative LCRS Drainage Layer

Disposal Area

Figure 2

File Directory: /lamb/permitting/JTD14/F-02-Disposal Area.dgn		Date: April 2007
Reference: PD • 52926	Photo Date: July 2005	Scale: 1" = 600'